**6/22 Performance check after adding x<ysum and u<beta\*x constraints**

20x20x50, five trials comparing lcf to slsf with default 80% comp, upper bound for u was accidentally left at 1000

lcfobjs =

86.5365 206.1887 190.1321 209.4666 208.4317

slsfobjs =

169.8749 199.4121 218.3258 210.7113 230.5906

menusizes =

3.1500 4.1000 3.8000 3.7500 3.9000

pquants =

0.0400 0.0400 1.7400 2.0000 2.0000

0.0400 0.3000 0.8318 1.0243 2.0000

0.0400 0.2400 1.2800 2.0000 2.0000

0.0400 0.0800 0.8000 1.1664 2.0000

0.0400 0.2900 0.7946 1.0523 1.9200

**2nd experiment with min comp $5, x<sum\_s y, u< beta\*x**

lcfobjs =

120.5194 182.2411 112.9758 181.0011 131.3316

slsfobjs =

175.8045 201.8956 183.3215 226.1138 193.2976

menusizes =

4.0500 1.6000 2.7000 3.2000 1.4500

pquants =

0.0400 0.0400 0.2200 0.6451 1.9922

0.0400 0.4800 1.3600 2.0000 2.0000

0.0400 0.2643 0.5429 2.0000 2.0729

0.0400 0.0811 0.7400 1.1600 2.0000

0.0400 0.2928 0.8000 2.0000 2.0868

compquants =

0.3297 0.5894 0.8111 1.4414 3.1491

0.2266 0.6048 0.8659 1.2936 1.9209

0.4314 0.7045 0.8862 1.0843 2.3317

0.2638 0.5004 0.7331 0.9458 1.9149

0.4621 0.5467 0.7707 1.3437 3.6920

**3rd experiment with buffer=0.75, results are pretty good**

lcfobjs =

195.2799 204.8918 191.3725 235.8383 151.8013

slsfobjs =

209.3840 220.1458 192.4800 195.3928 170.9756

menusizes =

2.4500 1.4000 2.2500 2.2000 4.0000

pquants =

0.0267 0.1860 0.4775 0.8533 1.6198

0.0267 0.1600 1.3333 1.3333 2.0487

0.0267 0.2132 0.6386 1.3333 1.8704

0.0267 0.1070 0.6667 1.2407 1.7448

0.0267 0.0733 0.2133 0.7400 1.5406

compquants =

0.2363 0.5222 0.7533 1.0023 2.9213

0.3257 0.4831 0.7638 1.0961 1.7891

0.3918 0.5643 0.6570 1.0351 2.3801

0.2435 0.3733 0.5418 0.7139 1.7159

0.3191 0.5830 0.7780 0.9613 1.8130

>>

**4th experiment same as 3rd, good results**

lcfobjs =

219.5050 223.2277 163.6512 142.6191 172.8270

slsfobjs =

244.3166 226.7157 186.3784 164.9512 184.0651

menusizes =

3.3500 4.4000 4.7000 4.9500 4.2500

pquants =

0.0267 0.0267 0.2835 0.6697 1.3333

0.0267 0.1067 0.4800 0.8067 2.0820

0.0267 0.1333 0.4000 0.7399 1.9218

0.0267 0.2133 0.3955 0.8384 2.0851

0.0267 0.1581 0.4513 0.9114 1.8313

compquants =

0.1714 0.4629 0.6109 1.0444 2.2860

0.2805 0.4667 0.5822 1.0225 2.0375

0.2847 0.5821 0.7776 1.1419 2.7152

0.2347 0.5515 0.7702 0.9003 2.3336

0.2153 0.5956 0.8049 0.8574 1.7078

**5th experiment also with 60% fare comp min results are even better**

lcfobjs =

207.7863 196.5181 174.8943 236.4692 237.0951

slsfobjs =

225.0064 170.1051 190.7965 222.2907 218.6486

menusizes =

4.9000 4.5000 4.8000 4.8000 4.9000

gaps =

0.3676 0.4056 0.3319 0.3489 0.3358

pquants =

0.0267 0.2400 0.4219 0.6737 2.0420

0.0267 0.2426 0.4267 0.8057 1.7067

0.0267 0.1883 0.3467 0.5745 1.8406

0.0267 0.2800 0.5849 1.0371 2.0690

0.0533 0.2672 0.5067 0.8300 1.8235

compquants =

0.6000 0.6000 0.6000 0.7720 1.6204

0.6000 0.6000 0.6000 0.7157 1.6397

0.6000 0.6000 0.6253 0.9037 1.3969

0.6000 0.6000 0.6245 0.8925 1.8807

0.6000 0.6000 0.6000 0.9242 1.6648

**Now with buffer=1, results are very slightly worse, mid-sized menu?**

lcfobjs =

209.7989 242.9534 209.1055 226.4437 228.0069

slsfobjs =

216.4765 234.0096 212.9262 229.3229 214.6406

menusizes =

4.5500 4.2000 1.7500 4.8500 2.5500

gaps =

0.2126 0.2081 0.3576 0.3171 0.2632

pquants =

0.0200 0.0400 0.2788 0.5036 1.9860

0.0200 0.0754 0.3657 0.6892 1.9781

0.0200 0.4571 1.0000 1.0064 2.0570

0.0396 0.2310 0.4600 0.8110 1.9964

0.0200 0.3184 0.7965 0.9752 1.9398

compquants =

0.6000 0.6000 0.6456 0.8267 1.9103

0.6000 0.6000 0.6101 0.7829 2.2554

0.6000 0.6000 0.7492 1.0292 2.2565

0.6000 0.6000 0.6116 0.8564 2.5768

0.6000 0.6000 0.7162 0.9687 3.0085

**Now with min comp=50%(buffer=1), results are around same, menus kinda small?**

lcfobjs =

228.7815 181.8618 228.5481 219.9119 170.2212

slsfobjs =

226.6849 187.3645 228.1727 212.8566 204.2549

menusizes =

1.9000 4.7500 2.2000 3.7500 1.9500

gaps =

0.3045 0.3302 0.2773 0.1561 0.4155

pquants =

0.0200 0.2448 0.8573 1.0000 1.7029

0.0200 0.1400 0.2605 0.5111 1.6179

0.0200 0.2800 0.5799 1.0000 1.7935

0.0200 0.1025 0.3903 0.8270 2.0915

0.0200 0.2468 0.6020 1.0000 1.4967

compquants =

0.5000 0.5000 0.6043 0.8809 2.0385

0.5000 0.5000 0.5370 0.6676 2.5317

0.5000 0.5000 0.6342 0.8262 1.6821

0.5000 0.5226 0.6206 1.0156 1.6667

0.5000 0.5000 0.6591 0.8259 1.2183

>>

**Now with min comp=70%(buffer=1), results are all pretty close to slsf, mid-sized menus**

lcfobjs =

199.0940 198.7272 210.4929 206.9146 221.4866

slsfobjs =

201.7857 202.0051 212.0314 200.8739 210.4393

menusizes =

2.2000 4.6500 4.9000 2.5500 4.9500

gaps =

0.3866 0.3708 0.3907 0.3006 0.3876

pquants =

0.0619 0.5184 0.6604 0.9648 1.7199

0.0200 0.3577 0.5923 1.0169 1.9229

0.0305 0.3112 0.5079 0.7979 1.9254

0.0200 0.4765 0.7312 0.9968 1.9232

0.0200 0.4367 0.6960 1.0556 2.0983

compquants =

0.7000 0.7000 0.7000 0.7000 1.2749

0.7000 0.7000 0.7000 0.7521 1.3796

0.7000 0.7000 0.7000 0.7058 1.6711

0.7000 0.7000 0.7000 0.8652 1.9901

0.7000 0.7000 0.7000 0.7000 1.2474

**7th experiment (again with buffer=0.75 and min 60%), LCF mean 206, SLSF 212**

lcfobjs =

264.8852 249.3861 141.5150 230.6083 179.5549 181.6111 191.6941 199.7502 207.5250 211.4332

slsfobjs =

259.9740 237.0891 183.3605 264.1906 202.9374 183.0938 188.4463 182.2152 207.4989 214.3918

menusizes =

4.7000 4.8000 4.4000 2.4500 4.4000 4.5500 4.4500 4.6500 4.8000 2.2000

gaps =

0.3247 0.2186 0.4582 0.4031 0.3338 0.3757 0.3948 0.4203 0.3518 0.3552

pquants =

0.0267 0.3116 0.5547 0.9114 2.0901

0.0267 0.0800 0.3954 0.7667 1.9408

0.0267 0.1322 0.3523 0.6533 1.9079

0.0774 0.4275 0.8726 1.3333 1.8780

0.0267 0.2400 0.4004 0.7055 1.7318

0.0267 0.2267 0.3529 0.7008 1.6561

0.0267 0.2329 0.4412 0.8570 2.0248

0.0267 0.2729 0.5361 0.8450 2.0636

0.0267 0.2525 0.4000 0.6933 1.9025

0.0267 0.4785 0.9925 1.3067 2.0185

compquants =

0.6000 0.6000 0.6326 0.8193 2.5643

0.6000 0.6000 0.6235 0.7748 1.4742

0.6000 0.6000 0.6306 0.7793 1.3956

0.6000 0.6000 0.6793 0.9756 1.6786

0.6000 0.6000 0.6012 0.7801 1.2788

0.6000 0.6000 0.6668 0.8407 2.3414

0.6000 0.6000 0.6000 0.7757 1.4367

0.6000 0.6000 0.6586 0.8788 2.3927

0.6000 0.6000 0.6249 0.8183 3.2010

0.6000 0.6000 0.7206 0.8547 2.2609

**8th experiment (buffer=0.75 and min 60%) but now f=15 all i and max pay is Chat-10, LCF mean 339, SLSF 349**

lcfobjs =

371.7482 338.4620 322.9168 351.0424 339.2820 346.0330 328.0976 344.6502 351.1477 295.4540

slsfobjs =

381.0591 357.9924 324.5982 346.4464 358.2090 360.4583 345.7332 353.3958 362.8894 303.6637

menusizes =

2.1500 4.6000 4.4000 4.9500 1.5000 4.7500 1.6000 1.7500 4.4500 1.8000

gaps =

0.2203 0.3012 0.3260 0.3039 0.2733 0.2606 0.3470 0.2843 0.3017 0.4037

pquants =

0.0371 0.4182 1.0133 1.3333 2.0670

0.0267 0.3312 0.5471 0.7973 1.8936

0.0267 0.3041 0.6436 0.9367 1.9890

0.0267 0.2005 0.4678 0.7776 2.0052

0.0381 0.7976 1.3333 1.3333 1.3333

0.0541 0.2950 0.4982 0.7597 2.0025

0.1808 0.8000 0.8267 1.3757 1.7453

0.0534 0.5097 0.8596 1.3333 1.5742

0.0267 0.2583 0.4828 0.7781 1.5380

0.0267 0.3077 0.7344 1.3333 1.8908

compquants =

0.6000 0.6000 0.6168 0.9288 1.3444

0.6000 0.6000 0.6564 0.9457 2.9575

0.6000 0.6000 0.6318 0.9824 2.1108

0.6000 0.6000 0.6506 0.7877 1.5250

0.6000 0.6000 0.8119 1.1163 1.6716

0.6000 0.6000 0.6327 0.8700 1.3377

0.6000 0.6000 0.8312 1.1207 2.1460

0.6000 0.6158 0.7956 1.2396 2.0286

0.6000 0.6000 0.6000 0.8155 2.2931

0.6000 0.6000 0.8437 1.1695 1.5872

**9th experiment (buffer=0.75 and min 60%) but now f=5 all i, results were not good, was like original tests, and the number of rejections was 8-12 per trial, on trial 5 the outputted solution was 0s so it terminated**

**10th experiment (buffer=0.75 and min 60%) but now f\in [1,15], results were not good but slightly better than 9th experiment, rejections were around 7**

**11th experiment (b=0.75, min 60%) but now f=15,beta=Chat-alpha-10, objs and rejs are ok**

lcfobjs =

334.2705 320.1597 361.7608 306.0724 392.2543

slsfobjs =

340.4108 339.0252 367.8403 346.5473 357.9609

lcfrejs =

0.2743 3.2855 1.6900 2.6875 1.3501

slsfrejs =

1.3440 1.7311 0.6900 1.8304 1.0985

menusizes =

1.7500 4.5000 4.7500 1.4500 4.7000

gaps =

0.2692 0.2843 0.3033 0.3245 0.3429

pquants =

0.1793 0.5600 1.2000 1.3333 2.0957

0.0267 0.2399 0.3733 0.7480 1.7522

0.0267 0.2172 0.4035 0.7200 2.0343

0.0267 0.7776 0.9867 1.3333 1.6678

0.0267 0.2443 0.4119 0.6897 1.7329

compquants =

0.6000 0.6067 0.7880 1.2236 2.8387

0.6000 0.6000 0.6896 0.9388 1.5140

0.6000 0.6000 0.6000 0.8157 1.6266

0.6000 0.6000 0.9128 1.1103 1.5550

0.6000 0.6000 0.6000 0.6888 1.7542

**12th experiment (b=0.75, min 60%) but now f=[1,15],beta=Chat-alpha-r+5, objs are very similar and rejs are only a bit worse than slsf**

lcfobjs =

231.2566 220.0281 213.3318 215.7194 202.8749

slsfobjs =

231.4110 228.1668 217.7819 209.2667 193.3210

lcfrejs =

1.8077 3.3826 0.5727 1.5183 2.2281

slsfrejs =

1.0850 0.7240 1.0329 1.3835 1.4402

menusizes =

4.6000 4.9500 2.5500 4.6500 4.6500

gaps =

0.3808 0.3846 0.3705 0.2244 0.4110

pquants =

0.0267 0.2898 0.5333 0.8500 1.9240

0.0267 0.2155 0.3327 0.5856 1.2469

0.0267 0.3467 0.7897 1.3067 2.0632

0.0267 0.0720 0.3220 0.6335 1.7636

0.0267 0.2649 0.4218 0.7355 1.9706

compquants =

0.6000 0.6000 0.6000 0.7515 1.4272

0.6000 0.6000 0.6000 0.6909 1.6620

0.6000 0.6000 0.6512 0.9800 2.6566

0.6000 0.6000 0.6575 0.8380 2.4182

0.6000 0.6000 0.6000 0.8307 1.4880

**With fixed menu**

**13th experiment (b=0.75, min 60%) but now f=[1,15],beta=Chat-alpha-r+5, objs and rejs are worse than slsf (204 vs 222)—the solver finds the 10% gap menu for all 5 trials in an average of 30 seconds**

lcfobjs =

258.4418 223.1945 145.2925 179.8031 215.4447

slsfobjs =

255.0450 228.4320 205.9841 188.7108 232.6698

lcfrejs =

1.3115 2.8430 6.8556 5.4914 4.3272

slsfrejs =

0.7129 0.9967 2.2692 4.8588 2.6870

menusizes =

4.6000 4.5500 4.5000 3.8000 4.5000

gaps =

0.0884 0.0906 0.0859 0.0996 0.0905

pquants =

0.0191 0.3194 0.4533 0.9322 1.9611

0.0091 0.1896 0.3556 0.5546 2.0222

0.0267 0.1946 0.3200 0.5067 1.2450

0.0499 0.2124 0.3339 0.5278 1.9054

0.0267 0.2133 0.3256 0.5957 1.9478

compquants =

0.6000 0.6000 0.6782 0.8468 1.7252

0.6000 0.6000 0.6000 0.6752 1.3987

0.6000 0.6000 0.6273 0.7366 2.0523

0.6000 0.6000 0.6548 0.8156 1.4713

0.6000 0.6000 0.6106 0.7113 1.6909

**14th experiment (b=0.5, min 60%) but now f=[1,15],beta=Chat-alpha-r+5, objs slightly better (215 vs 207)and rejs are slightly worse than slsf**

lcfobjs =

221.4988 216.0791 234.7158 219.7073 185.5634

slsfobjs =

203.0012 209.4521 228.7927 225.5296 171.2485

lcfrejs =

2.8248 1.1926 1.7222 1.3114 1.7655

slsfrejs =

2.4498 1.0752 1.4631 1.4799 1.3846

menusizes =

4.2000 4.5000 4.7500 4.6000 4.8000

gaps =

0.1009 0.1091 0.0892 0.1757 0.1351

pquants =

0.0800 0.2800 0.4351 0.7006 1.5200

0.0400 0.2478 0.4400 0.7204 2.0708

0.0400 0.2300 0.3766 0.7408 2.0993

0.0091 0.2794 0.5187 0.7640 1.9284

0.0255 0.2396 0.4699 0.6423 1.5157

compquants =

0.6000 0.6000 0.6577 0.7369 1.3774

0.6000 0.6000 0.6653 0.8828 1.5441

0.6000 0.6000 0.6177 0.7737 1.2907

0.6000 0.6198 0.7400 0.8422 1.3674

0.6000 0.6000 0.6592 0.7682 1.8996

**15th experiment same as 14, (b=0.5, min 60%?) but now f=[1,15],beta=Chat-alpha-r+5, objs slightly better in every trial (223 vs 215) and rejs are sometimes worse than slsf**

lcfobjs =

222.1518 219.5726 221.4053 244.6390 208.0929

slsfobjs =

217.0010 214.5064 211.4919 229.9811 202.1149

lcfrejs =

2.0584 1.9794 2.9555 1.5185 0.9979

slsfrejs =

2.4584 1.7218 2.0905 1.6637 1.2109

menusizes =

4.3000 4.0000 4.5500 4.3500 3.3000

gaps =

0.1098 0.1092 0.0990 0.1178 0.1366

pquants =

0.0400 0.2400 0.5485 0.9966 1.8785

0.0400 0.3200 0.4800 0.9028 1.9731

0.0400 0.2800 0.4096 0.7251 1.9422

0.0800 0.3236 0.5504 0.7651 1.6805

0.1821 0.4070 0.5715 0.9166 1.9300

compquants =

0.6000 0.6057 0.6971 0.8995 1.4944

0.6000 0.6114 0.6972 0.8699 1.4944

0.6000 0.6000 0.6070 0.7631 1.6667

0.6000 0.6000 0.6696 0.8541 1.2772

0.6000 0.6000 0.7341 0.9595 3.1249

**16th experiment, (b=0.5, min 50%) but now f=[1,15],beta=Chat-alpha-r+5, objs overall better trial (210 vs 198) and rejs are sometimes worse than slsf**

lcfobjs =

213.1582 170.8033 247.0552 238.6458 182.8347

slsfobjs =

183.8279 176.2317 213.8452 240.1815 176.6000

lcfrejs =

2.6960 3.3074 1.3372 1.4610 2.6051

slsfrejs =

2.7455 2.6363 1.2484 0.4116 1.8821

menusizes =

4.1500 3.8000 4.3500 4.9000 4.5500

gaps =

0.1782 0.2440 0.1052 0.1061 0.1725

pquants =

0.0353 0.3000 0.5200 0.7600 1.3468

0.0258 0.2400 0.4400 0.6982 1.9857

0.0400 0.2353 0.4400 0.9037 2.0129

0.0238 0.2000 0.4000 0.6700 2.0642

0.0400 0.2400 0.4000 0.7454 1.8731

compquants =

0.5000 0.6052 0.7304 0.8201 3.1562

0.5000 0.5807 0.6866 0.8522 1.3372

0.5000 0.5000 0.5882 0.7381 1.9456

0.5000 0.5391 0.7128 0.7934 1.5273

0.5000 0.5990 0.6718 0.8339 1.6667

**17th experiment, (b=0.75, min 70%) but now f=[1,15],beta=Chat-alpha-r+5, objs overall slightly better (212 vs 209) and rejs are sometimes worse than slsf**

lcfobjs =

185.4615 243.0066 201.2706 235.4905 199.0147

slsfobjs =

189.3513 236.9771 190.5571 230.5722 201.3781

lcfrejs =

1.2511 1.6539 1.5904 2.3076 1.4937

slsfrejs =

1.3562 1.1804 1.4485 1.2942 1.5978

menusizes =

4.9500 4.4500 4.9500 4.5500 4.7500

gaps =

0.0903 0.0797 0.0823 0.0741 0.0788

pquants =

0.0587 0.3563 0.5737 0.8055 2.0753

0.0084 0.4000 0.5611 0.9834 2.0764

0.0453 0.2933 0.5049 0.8272 2.0246

0.0372 0.3454 0.4800 0.7141 1.9983

0.0163 0.2984 0.5090 0.7861 2.0508

compquants =

0.7000 0.7000 0.7000 1.1512 1.7423

0.7000 0.7000 0.7000 0.7132 1.4144

0.7000 0.7000 0.7000 0.7740 1.4687

0.7000 0.7000 0.7000 0.7126 1.5871

0.7000 0.7000 0.7157 0.9076 2.0929

**Time Trials**

LCF, menu not fixed

**18th experiment, (b=0.75, min 60 %, f=[1,15]) timelims 10s, 30s, 60s**

lcfobjs =

0 0 0 0 0

176.8338 152.2171 180.4585 218.1503 120.7023

176.8339 203.9427 226.2646 215.3979 169.7908

lcfrejs =

20.0000 20.0000 20.0000 20.0000 20.0000

1.2834 3.0000 5.0000 1.7309 4.4504

1.2834 3.1331 2.6531 3.1711 2.5345

menusizes =

0 0 0 0 0

1.6500 1.2000 0.9500 2.2000 1.6000

1.6500 4.5500 4.7500 4.7500 4.4500

gaps =

1.0000 1.0000 1.0000 1.0000 1.0000

0.4553 0.5639 0.5393 0.3836 0.5565

0.4553 0.4070 0.3697 0.3690 0.4065

ans =

0

169.6724

198.4460

LCF, menu not fixed

**19th experiment, (b=0.5, min 50 %, f=[1,15]) timelims 10s, 30s, 60s, 90, 120**

lcfobjs =

174.3835 0 0 0 0

174.5058 135.6972 190.9738 167.2945 200.4109

208.8147 206.8413 190.9907 167.2945 212.8678

216.0022 199.5339 190.9696 204.6322 217.2452

233.8772 191.2453 215.7233 220.7701 241.2240

lcfrejs =

2.9895 20.0000 20.0000 20.0000 20.0000

2.9900 5.0615 0.4275 5.3750 0.7346

2.1586 2.4049 0.4293 5.3750 4.2573

1.8043 2.5917 0.4260 1.0209 4.0970

2.0096 3.5710 0.4012 2.7993 0.5961

menusizes =

1.8500 0 0 0 0

1.8500 2.2500 2.4000 1.3000 3.8500

4.8000 4.8500 2.4000 1.3000 4.6000

3.5000 4.8500 2.4000 3.0000 4.6000

4.9500 4.8000 4.0000 4.7000 4.3000

gaps =

0.5490 1.0000 1.0000 1.0000 1.0000

0.5490 0.6462 0.4585 0.5678 0.5369

0.4084 0.4510 0.4307 0.5678 0.4808

0.3591 0.4510 0.4307 0.4377 0.4808

0.3476 0.4216 0.3720 0.4001 0.3769

objaves =

34.8767

173.7764

197.3618

205.6766

220.5680

LCF, menu not fixed

**20th experiment, (b=0.75, min 60 %, f=[1,15]) timelims 60s, 90, 120, 150, 180, 210—not worth 210, seems best is 150 or 180, a couple trials decrease obj with extra time but only a bit and improvements have higher magnitude**

lcfobjs =

188.9763 205.2662 239.3317 200.6624 177.5359

188.9760 193.3069 234.4324 206.5282 187.4534

196.6077 223.9193 234.1514 196.0688 187.8490

207.4615 218.2977 234.9299 203.0726 198.4553

204.3487 225.0995 234.5980 195.8399 194.2420

205.5442 224.9356 239.3693 190.9354 192.5063

lcfrejs =

2.4610 2.5969 0.7027 1.7464 3.4688

2.4610 3.0089 0.5773 1.5674 2.8877

1.5534 2.2482 0.5843 2.0417 2.8691

1.4410 2.5103 0.5698 1.8010 3.1424

1.8074 2.3547 0.5967 3.9881 3.2100

1.6491 2.3248 0.9996 4.4894 3.2903

menusizes =

1.6000 4.7500 4.6000 4.7500 1.6000

1.6000 4.7500 4.4500 4.7500 4.0000

4.5500 4.8500 4.4500 4.7500 4.0000

5.0000 4.9000 4.4500 4.7500 4.7500

5.0000 4.9000 4.4500 4.9500 4.7500

5.0000 4.9000 4.8000 4.9500 4.7500

gaps =

0.2596 0.3418 0.3833 0.3336 0.3339

0.2596 0.3418 0.2353 0.3042 0.2656

0.1690 0.2134 0.2353 0.3042 0.2383

0.1575 0.2009 0.2035 0.2762 0.1649

0.1575 0.2009 0.2035 0.2127 0.1649

0.1575 0.1757 0.1671 0.2127 0.1649

objave =

202.3545

202.1394

207.7192

212.4434

210.8256

210.6582

Comparing solns with diff times to SLSF

**21st experiment, (b=0.75, min 60 %, f=[1,15]) timelims 60s, 90, 120, 150, 180, 210**

lcfobjs =

208.8741 206.7149 202.3144 226.1116 230.0779 218.5485 216.1692

207.3040 217.7647 199.3892 225.7606 214.6923 215.0330 214.5325

206.2916 217.7036 202.4910 226.0738 215.1152 214.6630 215.0714

225.5788 218.5401 190.2530 226.1244 219.6711 213.7051 217.6547

223.6411 213.3778 206.4409 241.7891 212.5573 211.9406 218.6600

223.6493 218.8937 211.4302 241.7793 217.7251 210.1659 220.1705

slsfobjs =

217.6757 194.1833 191.3643 213.3652 220.0879 206.8240 199.7677

lcfrejs =

1.9491 1.4770 2.1139 2.3233 3.1629 1.6206 1.2656

1.4546 1.2620 2.2107 2.3538 1.8089 1.7156 1.4863

1.4737 1.2090 1.8724 2.3241 1.8066 1.7437 1.4496

2.2392 1.1462 0.8433 2.3366 1.7494 1.5475 1.4169

2.1391 1.3874 2.1648 2.7953 2.6499 1.7630 1.4839

2.1548 1.1572 2.0543 2.6325 2.5146 1.8249 1.3540

slsfrejs =

1.6279 2.1098 2.1791 1.7526 3.9610 1.1388 2.1697

menusizes =

4.7500 4.8000 4.6500 2.1500 4.7000 4.8500 4.1500

4.6500 4.6500 4.6500 2.1500 3.2000 4.8500 4.1500

4.6500 4.6500 4.6500 2.1500 3.2000 4.5000 4.1500

4.9500 4.6500 3.7500 2.1500 3.7500 4.7000 4.6000

4.9500 4.9000 4.7500 4.7500 4.6000 4.7000 4.6000

4.9500 4.9000 4.7500 4.7500 4.6000 4.7000 4.6000

gaps =

0.3859 0.3789 0.4139 0.3085 0.3833 0.2608 0.2119

0.2507 0.2119 0.3825 0.2799 0.3031 0.2215 0.2119

0.2215 0.2119 0.3825 0.2595 0.3031 0.1489 0.1914

0.1540 0.1853 0.3479 0.2595 0.2714 0.1408 0.1697

0.1540 0.1843 0.2030 0.1881 0.2602 0.1390 0.1697

0.1540 0.1843 0.2030 0.1881 0.2602 0.1136 0.1697

ans =

215.5444

213.4966

213.9157

215.9325

218.3438

220.5449

**22nd experiment, (b=0.75, min 60 %, f=[1,15]) timelims** 60,150,200,300,500

lcfobjs =

197.9580 211.1257 233.6722 217.9563 204.4493 234.4501 195.8653

208.6710 216.1714 224.7993 231.3451 203.5471 241.1199 206.4322

204.8431 210.6535 243.1150 221.4659 199.3235 240.7568 212.8860

206.8970 214.0406 240.7545 229.0452 215.6295 240.6506 217.9068

199.9166 217.4368 224.1176 215.2698 224.4679 230.5965 212.2931

slsfobjs =

198.5491 215.7160 210.2583 222.7138 213.8001 223.7473 215.6738

lcfrejs =

1.7744 2.3661 1.2323 3.4854 2.6228 1.2044 3.0680

3.6314 2.1986 1.1835 2.6437 1.7307 1.0809 1.3353

3.7230 2.7656 0.8776 3.1866 2.4254 1.5749 1.9185

3.0564 1.2874 1.0368 1.7270 2.8247 1.9887 1.9599

3.5707 2.5260 1.9239 4.0844 2.4698 2.2826 2.7278

slsfrejs =

3.2388 1.0705 0.3072 1.9501 3.0763 0.5618 1.8902

gaps =

0.3056 0.3722 0.4094 0.3419 0.4215 0.4150 0.3998

0.1572 0.3239 0.2949 0.2989 0.4029 0.2858 0.2984

0.1572 0.2737 0.2168 0.2968 0.3826 0.1972 0.2348

0.1166 0.2199 0.1691 0.2385 0.2165 0.1635 0.1768

0.0852 0.0902 0.0930 0.0848 0.1113 0.0874 0.0870

menusizes =

4.7500 4.8000 4.6500 5.0000 4.8000 4.9000 4.7000

4.8000 4.8000 2.9000 5.0000 3.3500 3.3500 4.1000

4.8000 5.0000 4.9000 5.0000 3.4500 4.8500 4.9500

4.5500 4.6500 4.5000 4.5500 4.8000 4.8500 4.9000

4.5500 4.7000 4.8000 4.9000 4.6000 4.9500 4.7500

Diff Sample Sizes

**23rd experiment, (b=0.75, min 60 %, f=[1,15]) timelims 150, sampsizes =** 5,10,20,50,80,100,150]; Surprising but sample size 5 is the best or very near best for every trial, rejections are slightly worse than slsf

lcfobjs =

270.5484 182.9280 180.5049 198.4760 197.8311 252.4188 229.9457

270.0604 175.7103 164.2099 179.3615 168.8865 248.5764 230.8297

271.0152 175.0078 155.8984 198.6095 155.8711 215.0515 222.3930

272.6194 168.1049 162.1373 206.0210 189.6970 232.1101 211.7178

270.2030 128.3015 179.8530 175.1451 195.9620 249.0214 204.3384

262.8681 127.2767 165.5612 190.7664 169.0440 231.5869 197.0544

0 0 0 0 0 0 0

slsfobjs =

257.6708 176.1854 172.4996 195.2706 197.7586 237.9203 225.3625

Lcf-slsf =

12.8776 6.7426 8.0052 3.2055 0.0725 14.4985 4.5832

12.3896 -0.4751 -8.2897 -15.9091 -28.8721 10.6560 5.4672

13.3443 -1.1776 -16.6012 3.3389 -41.8875 -22.8688 -2.9696

14.9485 -8.0805 -10.3624 10.7504 -8.0616 -5.8102 -13.6447

12.5322 -47.8839 7.3534 -20.1254 -1.7966 11.1010 -21.0241

5.1972 -48.9087 -6.9384 -4.5041 -28.7146 -6.3335 -28.3081

-257.6708 -176.1854 -172.4996 -195.2706 -197.7586 -237.9203 -225.3625

lcfrejs =

1.3446 3.5564 2.1534 3.2246 2.3264 1.9195 2.6586

1.7016 4.0716 4.7002 4.9883 4.5234 2.3736 2.3195

1.1689 4.1449 5.0360 3.6521 5.6862 4.1637 2.9437

0.3104 1.8842 4.4381 2.3667 2.8624 2.6680 1.6932

1.9771 1.0542 2.6525 4.3361 1.9993 2.0772 2.3054

1.8996 4.8322 3.9126 3.5456 2.3854 3.0183 1.0960

20.0000 20.0000 20.0000 20.0000 20.0000 20.0000 20.0000

slsfrejs =

0.6402 3.2906 2.2514 2.8256 2.5516 1.6364 1.6085

menusizes =

3.2500 3.7000 3.2000 2.7000 3.8000 2.7000 3.9000

3.3500 4.9500 4.9000 4.9000 4.5500 2.6500 4.2000

4.0000 4.6500 4.9500 4.6500 5.0000 5.0000 4.7000

4.2500 3.3000 4.9500 5.0000 4.7500 4.9500 3.7000

4.8500 1.7500 5.0000 2.2500 4.5500 4.7500 1.5500

5.0000 4.3500 4.9500 4.8500 4.6500 4.8500 4.9500

0 0 0 0 0 0 0

gaps =

0.0839 0.0908 0.0757 0.0899 0.0780 0.0845 0.0884

0.0837 0.0893 0.0907 0.0753 0.0882 0.0885 0.0832

0.0866 0.0917 0.0700 0.0909 0.0962 0.0431 0.0889

0.1843 0.3801 0.3507 0.3058 0.2771 0.2740 0.3620

0.3022 0.5888 0.3297 0.4778 0.3773 0.3309 0.4129

0.2929 0.6185 0.4069 0.3158 0.4464 0.3371 0.4991

1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000

objave =

216.0933

205.3764

199.1209

206.0582

200.4035

192.0225

0

**24th experiment, (b=0.75, min 60 %, f=[1,15]) timelims 500 (same as 23 with diff time limit), sampsizes =** 5,10,20,50,80,100,150]; ugh sample size 5 is no longer best, between the two experiments, 50 did best possibly bc after 50 time runs out

runtimes =

4.8645 4.8142 1.6241 3.7789 4.2989 2.3691 2.4234

20.5481 21.1263 7.0569 15.0463 24.2977 12.4765 14.7978

65.6656 50.3780 28.7688 49.4567 60.7272 139.6716 46.1274

400.5008 497.6252 296.1299 503.2311 503.0299 305.2349 381.6906

506.7869 507.7363 507.2450 507.9922 507.4757 507.3001 506.4015

509.8873 510.5037 511.2597 511.4187 511.9414 511.1852 511.7795

563.7430 696.4923 702.8074 671.6475 582.6822 624.9415 545.2704

lcfobjs =

215.2838 194.9059 188.8989 273.7141 190.2409 193.0725 196.9112

200.4536 176.9764 181.5593 275.7244 204.1706 193.4412 196.0281

210.8644 201.1625 188.0610 287.6641 211.2732 183.3009 194.5718

215.4729 212.8649 187.9668 289.0552 213.9811 187.1733 200.7877

196.9210 212.1522 181.0794 278.4848 197.2476 181.5598 203.0857

209.4165 183.8206 181.9387 282.1404 204.4612 178.4062 187.7250

175.2934 198.2972 191.4754 290.1581 212.0103 170.8230 194.647

slsfobjs =

213.5270 196.6544 182.3736 262.6284 224.0895 198.8315 189.384

Lcf-slsf=

1.7568 -1.7484 6.5254 11.0857 -33.8485 -5.7590 7.5268

-13.0734 -19.6779 -0.8143 13.0959 -19.9188 -5.3903 6.6437

-2.6626 4.5082 5.6874 25.0356 -12.8163 -15.5307 5.1874

1.9459 16.2105 5.5933 26.4267 -10.1084 -11.6582 11.4032

-16.6060 15.4978 -1.2942 15.8564 -26.8419 -17.2717 13.7013

-4.1105 -12.8337 -0.4349 19.5120 -19.6282 -20.4253 -1.6594

-38.2336 1.6428 9.1018 27.5297 -12.0792 -28.0085 5.2630

lcfrejs =

2.1666 2.9615 2.0238 2.2774 4.3092 3.1261 2.7808

3.9040 4.3224 2.8539 2.2613 4.1420 3.2360 2.8995

3.0219 3.5161 2.4090 1.2254 3.4817 4.9153 3.8316

2.7857 3.5770 2.9425 2.2675 3.9786 2.9765 3.4352

3.2790 2.7130 2.8083 1.2173 1.7580 4.1704 3.0863

3.1832 2.0393 2.6581 2.4095 4.1124 1.5543 0.9698

2.6595 3.2217 2.3062 2.0208 4.1867 1.4773 2.5123

slsfrejs =

0.7949 2.1341 2.1757 1.3127 2.8749 1.3877 2.8082

menusizes =

3.6500 3.9500 2.9000 2.8500 3.3500 2.8500 2.8500

4.9500 4.8500 2.6000 4.6000 4.9500 4.1500 2.7000

4.9000 4.5500 3.9000 4.6000 4.7000 4.7000 4.9000

4.7500 5.0000 4.5500 4.8000 4.9000 4.7500 4.9000

5.0000 5.0000 4.7500 3.6500 3.7000 4.8500 4.9500

4.8500 4.9500 4.7500 5.0000 4.9500 4.7000 4.6000

4.8500 5.0000 4.9500 5.0000 4.9000 4.5500 4.8000

gaps =

0.0867 0.0893 0.0854 0.0907 0.0888 0.0802 0.0838

0.0380 0.0780 0.0875 0.0862 0.0907 0.0878 0.0883

0.0888 0.0847 0.0771 0.0890 0.0867 0.0488 0.0744

0.0808 0.0891 0.0711 0.1315 0.1282 0.0864 0.0823

0.2739 0.2802 0.1977 0.2874 0.3589 0.1956 0.2253

0.2703 0.3581 0.2605 0.2756 0.2947 0.3592 0.3169

0.5775 0.3486 0.2859 0.3312 0.3239 0.4198 0.4130

objave =

207.5753

204.0505

210.9854

215.3288

207.2187

203.9869

204.6721

**25th experiment, (b=0.75, min 60 %, f=[1,15]) timelim 500 (same as 24 with fixed menu), sampsizes =** 5,10,20,50,80,100,150]; ave performance is pretty similar across all sizes, tho only some sizes are worse sometimes (I bet rerunning would change which ones)

runtimes =

0.5575 0.4019 0.2595 0.4537 0.3029 0.3296 0.4521

1.0715 0.6708 0.6575 0.6773 0.7837 0.6125 0.8244

3.2337 2.5660 2.3330 2.2058 2.1395 1.9069 2.9551

23.8607 13.5878 12.5204 13.4617 14.9906 7.2649 14.6522

342.9168 37.4457 50.2096 41.6516 41.9425 24.1720 45.7019

109.9501 77.3840 80.4608 72.4843 36.3802 34.1634 96.6338

399.1296 366.9221 242.3453 220.1120 175.9378 231.9792 217.3041

lcfobjs =

223.1052 215.9421 203.6465 241.2287 262.2120 244.2328 203.7531

233.4808 206.6933 200.7106 237.8154 264.3984 247.0136 202.4956

230.2201 205.9197 194.3703 238.5657 263.8924 249.1464 199.2367

229.8602 215.5367 200.0032 238.2306 257.9466 247.9964 204.0847

230.4435 217.6908 204.0336 236.0995 265.5593 247.8258 201.3354

228.4142 215.1125 203.7957 236.2758 263.3963 246.3600 204.2193

227.5551 215.7165 202.5516 242.1608 259.5513 245.1192 190.6645

slsfobjs =

221.8670 209.8249 200.4707 235.0291 246.7357 236.9290 197.2432

Lcf-slsf =

1.2382 6.1173 3.1758 6.1996 15.4763 7.3037 6.5099

11.6139 -3.1316 0.2399 2.7863 17.6627 10.0846 5.2524

8.3531 -3.9052 -6.1004 3.5366 17.1567 12.2174 1.9935

7.9932 5.7118 -0.4675 3.2015 11.2109 11.0674 6.8414

8.5765 7.8659 3.5629 1.0704 18.8236 10.8967 4.0922

6.5473 5.2876 3.3249 1.2467 16.6606 9.4310 6.9761

5.6881 5.8916 2.0809 7.1317 12.8157 8.1901 -6.5787

lcfrejs =

1.5339 3.4359 1.3339 1.8205 0.8521 2.5480 2.6530

1.7191 3.3668 0.9351 1.8660 0.7191 2.3819 2.3811

1.7174 3.2938 0.6387 1.9679 0.8607 2.3037 2.5583

1.9287 3.6516 1.1206 1.9717 0.2744 2.3905 2.7270

1.9462 3.5173 1.4031 2.1105 0.8345 2.3099 2.6970

1.1601 3.7527 1.4273 2.1963 0.9108 2.4709 2.3563

2.1060 3.4304 1.4765 1.2625 1.0911 2.5959 2.5983

slsfrejs =

1.5838 3.2564 1.7993 1.1649 0.9534 2.3643 2.2017

menusizes =

4.7500 4.2500 4.4500 4.5500 4.6500 3.5500 4.0500

gaps =

0.0646 0.0220 0.0690 0.0227 0.0767 0.0286 0.0297

0.0899 0.0791 0.0894 0.0777 0.0477 0.0678 0.0544

0.0852 0.0872 0.0803 0.0891 0.0522 0.0809 0.0745

0.0904 0.0886 0.0866 0.0548 0.0632 0.0833 0.0903

0.0601 0.0895 0.0759 0.0539 0.0528 0.0779 0.0836

0.0896 0.0704 0.0750 0.0592 0.0645 0.0638 0.0900

0.0749 0.0747 0.0885 0.0907 0.0117 0.0683 0.0467

objave =

227.7315

227.5154

225.9073

227.6655

228.9983

228.2248

226.1884

**26th experiment, fixed menu (b=0.5, min 60 %, f=[1,15]) timelim 500 (same as 24 with b=0.5), sampsizes =** 5,10,20,50,80,100,150]; ave performance is pretty similar across all sizes, tho only some sizes are worse sometimes (I bet rerunning would change which ones)

runtimes =

0.5554 0.4964 0.5961 0.7446 0.3485 0.5400 0.4035

1.0038 1.5726 1.3564 1.1327 0.8644 1.4264 1.0404

3.8828 5.9083 9.6379 4.6303 2.9361 11.3589 3.3742

25.1184 39.1061 477.4878 26.7830 18.3413 63.2434 21.7189

86.7026 139.6970 507.1415 120.8361 48.3229 349.9170 78.7950

138.3728 162.6774 510.8619 236.4922 87.6816 511.0574 511.3304

321.6877 477.3466 571.1623 502.2346 147.9835 422.3420 176.4087

lcfobjs =

229.3642 227.6520 190.2378 234.4161 230.4641 193.7589 206.0482

227.9915 231.5230 185.5695 235.6839 227.3290 194.7076 205.8691

227.8720 232.3775 191.3687 236.8638 230.1401 191.9638 203.6417

230.5868 232.3640 187.7271 234.6749 229.2723 193.2081 201.5163

230.3969 232.4175 187.8069 233.1387 229.7051 194.5719 200.5111

227.1842 229.9486 186.2613 234.2955 230.2726 187.4379 203.2754

225.1106 231.7988 189.5425 236.1373 229.2755 196.0174 204.9424

slsfobjs =

216.5179 221.9181 188.3470 224.7423 222.4223 183.4739 210.2454

lcf\_sub\_slsf =

12.8463 5.7339 1.8907 9.6738 8.0418 10.2850 -4.1972

11.4736 9.6049 -2.7775 10.9416 4.9067 11.2337 -4.3763

11.3541 10.4594 3.0217 12.1215 7.7178 8.4899 -6.6037

14.0689 10.4459 -0.6199 9.9325 6.8499 9.7342 -8.7290

13.8790 10.4994 -0.5401 8.3964 7.2828 11.0980 -9.7343

10.6663 8.0305 -2.0858 9.5531 7.8503 3.9640 -6.9699

8.5927 9.8807 1.1955 11.3950 6.8532 12.5435 -5.3030

lcfrejs =

1.0507 0.2683 1.8969 0.1669 0.5468 0.6771 1.5053

1.1175 0.4259 1.8618 0.1102 0.7015 0.7467 0.9836

1.2662 0.7142 2.1492 0.3201 0.5241 1.4710 0.9922

1.1788 0.6324 2.2502 0.4726 0.4759 1.3266 0.7485

1.1237 0.5612 1.9869 0.5016 0.4549 1.4243 0.8177

1.0950 0.9020 1.9527 0.4101 0.4923 1.3128 0.8084

1.1530 0.3929 2.0295 0.1690 0.3554 0.9911 1.2604

slsfrejs =

1.3632 1.0774 2.8767 0.3360 1.0852 1.7430 1.9623

menusizes =

4.1000 4.7500 4.5500 4.4500 4.2500 4.6000 4.3000

gaps =

0.0777 0.0817 0.0883 0.0429 0.0698 0.0868 0.0602

0.0810 0.0825 0.0849 0.0870 0.0842 0.0894 0.0720

0.0884 0.0894 0.0904 0.0630 0.0759 0.0770 0.0842

0.0874 0.0909 0.0899 0.0823 0.0892 0.0881 0.0892

0.0856 0.0818 0.1056 0.0872 0.0868 0.0885 0.0801

0.0900 0.0743 0.1029 0.0878 0.0771 0.1039 0.0920

0.0897 0.0900 0.1495 0.0698 0.0905 0.0878 0.0844

lcfobjaves =

215.9916

215.5248

216.3182

215.6213

215.5069

214.0965

216.1178

**27th experiment, Driver welfare (b=0.75, min 80 %, f=[1,15]) timelim 500 sampsizes =** 50]; clearly lower expected performance than slsf

lcfobjs =

230.7512 199.4778 173.1948 192.8034 223.8479 178.1591 215.9864 189.9516 219.9988 165.9795

slsfobjs =

237.9629 209.6504 184.1774 202.1075 229.6137 192.9537 217.7335 206.4963 225.8624 199.394

lcfrejs =

0.4094 0.8870 0.4052 3.1388 0.8918 0.9791 1.1449 1.2181 0.1689 1.0560

slsfrejs =

0.2670 0.9142 1.7302 3.8269 1.3754 1.8430 1.6619 2.4159 0.5709 3.2787

menusizes =

4.7500 4.8500 3.2000 4.9000 4.8500 4.5500 4.8500 4.4000 4.6000 3.7500

gaps =

0.2254 0.3736 0.3626 0.4280 0.3380 0.3480 0.3018 0.3098 0.3668 0.3438

compquants =

0.8000 0.8000 0.8000 0.8140 1.6324

0.8000 0.8000 0.8000 0.8007 1.6667

0.8000 0.8000 0.8000 0.8377 1.7242

0.8000 0.8000 0.8000 0.9337 1.7784

0.8000 0.8000 0.8000 0.8004 1.6477

0.8000 0.8000 0.8000 0.8649 1.6168

0.8000 0.8000 0.8000 0.8000 2.0531

0.8000 0.8000 0.8242 1.1275 3.0134

0.8000 0.8000 0.8000 0.8000 1.3046

0.8000 0.8000 0.8000 1.0942 1.6667

**28th experiment, Driver welfare (b=1, min 80 %, f=[1,15]) timelim 500 sampsizes =** 50 (same as 27 but b=1); every trial has lower performance than slsf

lcfobjs =

186.8521 200.3981 237.2006 188.9878 154.4296 174.4429 188.0845 183.6949 199.9566 181.2952

slsfobjs =

197.6843 213.9634 237.7889 199.9400 162.0110 183.8350 201.7994 199.3082 209.3484 199.6064

lcfrejs =

1.2115 1.4360 0.3996 1.3233 3.5971 1.9102 1.9976 1.7496 1.0785 1.4582

slsfrejs =

1.6890 2.2181 0.8220 1.9199 3.7521 1.5538 2.5839 1.5686 1.8760 1.352

menusizes =

4.8500 3.5500 4.8000 4.3000 4.8000 4.0500 4.6500 4.8500 4.5500 4.8500

gaps =

0.3789 0.2722 0.2496 0.2324 0.3205 0.2909 0.3627 0.3069 0.3634 0.2830

compquants =

0.8000 0.8000 0.8000 0.8000 1.9274

0.8000 0.8000 0.8000 0.9204 1.6667

0.8000 0.8000 0.8000 0.8042 1.4495

0.8000 0.8000 0.8000 0.8391 1.6374

0.8000 0.8000 0.8000 0.8000 1.6667

0.8000 0.8000 0.8000 0.8611 1.8202

0.8000 0.8000 0.8000 0.8000 1.4910

0.8000 0.8000 0.8000 0.8000 1.1866

0.8000 0.8000 0.8000 0.8831 1.8241

0.8000 0.8000 0.8000 0.8403 2.0435

**29th experiment, Driver welfare (b=0.75, min 80 %, f=[1,15]) fixed menu timelim 500 sampsizes =** 50; every trial has lower performance than slsf

lcfobjs =

221.5714 201.2132 205.6790 207.4073 231.1248 238.5236 210.7530 207.8731 195.5818 231.3914

slsfobjs =

224.1622 206.8692 207.1960 208.6361 235.6737 243.8326 216.5904 207.7354 201.2459 233.6164

lcfrejs =

0.0413 0.3246 1.4065 2.1120 0.1294 0.5182 0.3890 1.6164 0.1982 0.0284

slsfrejs =

0.1254 0.3969 1.8046 2.2809 0.6594 1.3162 1.0271 2.5516 0.2488 0.1664

menusizes =

4.6000 3.6000 4.3500 4.2500 4.2500 4.9500 4.7000 4.0000 4.6000 4.7000

gaps =

0.0798 0.0367 0.0696 0.0730 0.0809 0.0563 0.0801 0.0876 0.0588 0.064

compquants =

0.8000 0.8000 0.8000 0.8000 1.4032

0.8000 0.8000 0.8000 0.8000 1.2812

0.8000 0.8000 0.8000 0.8000 1.4869

0.8000 0.8000 0.8000 0.9138 1.3444

0.8000 0.8000 0.8000 1.1831 1.8754

0.8000 0.8000 0.8000 0.8000 1.3669

0.8000 0.8000 0.8000 0.8246 1.6543

0.8000 0.8000 0.8000 0.8130 1.0865

0.8000 0.8000 0.8000 0.8101 1.4833

0.8000 0.8000 0.8000 0.8000 1.5332

Lcf ave =

215.1119

Slsf ave =

218.5558

**30th experiment, Iterative (b=0.75, min 60 %, f=[1,15]) timelim 30 sampsizes =** 10, 5 iterations (100 for slsf with 30 sec lim); every trial has higher performance than slsf!

lcfobjs =

247.4815 179.6282 228.0132 236.9517 217.9428 185.0816 191.1184

slsfobjs =

236.4557 163.7846 201.0711 221.8143 199.3626 174.5269 183.1678

lcfrejs =

1.7063 2.7928 2.6478 1.8672 1.9975 5.7918 3.3412

slsfrejs =

1.1302 4.1900 3.2878 0.6266 2.6685 5.6064 4.8627

menusizes =

4.5000 4.5000 4.7000 4.8500 4.6000 4.2500 3.9500

gaps =

0.0585 0.0871 0.0908 0.0858 0.0771 0.0901 0.0791

compquants =

0.6000 0.6000 0.6000 0.7245 1.3603

0.6000 0.6000 0.6230 0.8954 1.8083

0.6000 0.6000 0.6006 0.7399 1.2724

0.6000 0.6000 0.6000 0.6455 1.6667

0.6000 0.6000 0.6000 0.8692 1.4376

0.6000 0.6000 0.6350 0.7724 1.2682

0.6000 0.6000 0.6445 0.8688 1.4321

menudiffs =

57 55 66 67 63 58 56

50 61 71 42 68 68 53

47 69 67 64 65 68 63

50 68 56 66 63 41 50

cumcompdiffs =

88 73 81 92 92 76 69

116 105 119 127 120 107 105

135 126 139 141 142 134 125

145 140 157 161 157 146 136

154 156 170 174 171 156 144

avelcfobj =

212.3168

aveslsfobj =

197.1690

**31st experiment, Iterative (b=0.75, min 60 %, f=[1,15]) same as 30, timelim 30 sampsizes =** 10, 5 iterations (100 for slsf with 30 sec lim); every trial has higher performance than slsf again!

lcfobjs =

194.2271 236.1338 184.8636 232.6219 247.9861 195.2651 252.0258

slsfobjs =

184.1421 224.1503 171.1214 211.1224 230.1375 177.0172 242.5808

lcfrejs =

3.2817 2.4365 4.3478 1.9944 2.2428 2.2895 1.8093

slsfrejs =

2.8021 2.2608 3.5686 1.7297 2.0870 2.6831 1.0037

menusizes = 4.6000 4.3500 4.2500 4.9000 4.9500 4.4500 4.8000

gaps

0.0898 0.0700 0.0905 0.0766 0.0902 0.0835 0.070

compquants =

0.6000 0.6000 0.6334 0.8050 1.1819

0.6000 0.6000 0.6000 0.7334 1.4858

0.6000 0.6000 0.6000 0.7786 1.4048

0.6000 0.6000 0.6008 0.7653 2.0371

0.6000 0.6000 0.6000 0.8190 1.9499

0.6000 0.6000 0.6325 0.8357 1.3758

0.6000 0.6000 0.6230 0.8697 1.666

menudiffs =

61 54 66 78 65 75 69

55 52 66 55 62 61 63

56 53 71 60 69 63 54

54 54 61 65 64 59 61

cumcompdiffs =

89 84 77 90 92 85 95

117 109 112 127 124 121 125

134 127 135 144 151 145 143

147 143 153 159 168 159 158

158 151 161 173 181 171 169

avelcfobj =

220.4462

aveslsfobj =

205.7531

**32nd experiment, Iterative (b=0.75, min 60 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 10 iterations (100 for slsf with 30 sec lim); every trial has higher performance than slsf again! (except exactly 1 iteration and only by a trivial amound)



lcfobjs =

234.3920 176.5467 179.9631 240.3274 238.6576

260.8432 193.4821 194.7723 238.6144 244.8206

262.7434 189.6094 192.0629 244.5321 231.0433

258.7826 195.3344 196.7283 245.9286 245.7682

248.7723 194.8517 185.8853 245.1081 251.0749

256.8500 201.6802 196.9220 246.8528 246.4366

268.1332 185.2769 197.0512 247.7631 247.1705

260.9231 198.4005 197.6280 246.1210 247.7565

264.0747 200.0453 197.3540 245.3954 240.2253

258.9504 198.3981 194.1718 244.9770 246.3684

slsfobjs =

241.0696 180.4642 186.2478 220.7333 224.8443

lcfrejs =

2.1765 2.4276 4.1319 0.3329 2.3085

1.2286 3.1801 3.1175 0.6935 0.9736

1.3564 3.7550 3.7566 1.0663 1.6235

0.6658 2.7768 3.4253 0.8185 1.7509

1.3627 3.3148 3.1697 1.2343 2.1340

0.9407 2.3611 3.3191 0.7920 1.4046

0.9856 2.6214 3.5770 0.7694 1.8543

0.8410 3.0509 3.2344 0.8396 2.2570

1.4760 3.4382 3.1091 0.9215 1.7091

1.2853 3.1779 3.1735 0.5986 1.5000

slsfrejs =

0.2013 1.1687 3.2493 0.9134 0.6024

menusizes =

4.9000 4.7500 3.9500 4.8500 4.9000

4.8000 4.6000 4.2500 4.5500 4.9000

4.7000 4.1000 4.2500 4.7000 4.8000

4.9000 4.4500 4.0000 4.8000 4.3500

4.8000 4.3000 4.0500 4.7000 4.4500

4.9500 4.2500 4.3000 4.8000 4.3500

4.8500 4.3500 4.2000 4.7000 4.4500

4.6000 3.9500 4.1500 4.7000 4.6000

4.5000 3.9500 4.3000 4.6500 4.7500

4.9500 4.1500 4.2500 4.7000 4.5000

gaps =

0.0489 0.0817 0.0902 0.0856 0.0889

0.0511 0.0703 0.0906 0.0472 0.0727

0.0589 0.0689 0.0907 0.0493 0.0559

0.0887 0.0759 0.0897 0.0552 0.0773

0.0537 0.0901 0.0883 0.0582 0.0728

0.0873 0.0836 0.0909 0.0580 0.0748

0.0660 0.0771 0.0871 0.0732 0.0773

0.0682 0.0767 0.0904 0.0629 0.0393

0.0853 0.0647 0.0862 0.0576 0.0680

0.0902 0.0723 0.0902 0.0602 0.0661

nontrivialvals =

74 69 64 64 73

70 63 64 60 75

65 58 62 60 74

68 57 59 66 64

66 60 65 67 63

64 57 66 66 66

67 54 65 63 66

61 43 65 66 71

58 50 68 58 71

69 58 66 62 6

avelcfobj =

257.4465 193.3625 193.2539 244.5620 243.9322

aveslsfobj =

210.6719

menudiffs = 70 61 60 52 64

58 42 50 41 62

60 43 43 44 57

68 39 49 46 50

51 43 43 50 50

56 46 36 42 50

59 46 53 48 45

48 30 49 43 53

67 42 47 45 55

cumcompdiffs =

95 93 75 96 96

129 118 107 120 127

144 127 121 136 149

165 136 130 147 161

173 143 143 157 169

179 148 152 163 174

186 155 159 168 176

194 163 163 173 182

201 167 167 179 188

208 168 170 181 193

**33rd experiment, Iterative (b=0.75, min 70 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 10 iterations (100 for slsf with 30 sec lim); every trial has higher performance than slsf again, tho every trial’s initial soln was better than slsf

lcfobjs =

276.3700 195.9673 212.7618 226.9203 264.6291

273.9214 199.5085 212.8439 220.0402 269.3295

276.8995 198.4313 220.7025 227.1414 271.2836

275.4881 193.4486 210.8084 227.4127 265.4370

278.3564 201.0790 221.6095 227.6308 270.6954

279.4666 198.1912 220.7451 228.0502 269.1825

276.7640 202.1455 219.9421 227.7039 269.4910

274.1146 194.2372 219.4432 227.6513 271.0472

278.4069 196.6861 221.1427 228.1198 271.0155

278.9234 199.2436 223.0843 224.9224 268.5084

slsfobjs =

257.1855 190.4848 207.4015 213.7548 247.8406

lcfrejs =

0.9055 2.3358 2.1108 1.1857 0.2388

 0.3116 2.2763 1.4798 0.9056 0.1736

0.2401 2.6142 2.0879 1.2053 0.0682

0.5320 2.1707 1.0830 1.5652 0.3480

0.7368 2.1255 1.7219 1.0781 0.0845

0.7074 2.0564 2.5502 1.2836 0.1368

0.3588 1.8397 2.1816 1.0051 0.1450

0.6033 3.1986 2.0679 1.2558 0.1543

1.1603 1.6499 2.1632 1.5237 0.2471

1.0871 1.5961 2.1343 1.3267 0.0794

slsfrejs =

0.4215 2.8643 2.7027 1.3421 0.1401

menusizes

4.5500 4.1500 4.3500 4.4500 4.4000

4.8500 4.3500 4.7500 4.6000 4.7500

4.8000 3.8500 4.4500 4.7500 4.8500

4.6500 4.5500 4.6500 4.6500 4.1500

4.7000 4.1000 4.5000 4.3500 4.9500

4.4500 4.1000 4.3000 4.4500 4.7500

4.7000 4.3500 4.3500 4.5000 4.8000

4.6500 3.9500 4.5500 4.7000 4.6500

4.7000 4.6000 4.1500 4.6000 4.8500

4.6500 4.5500 4.3500 4.2000 4.5500

gaps =

0.0637 0.0686 0.0662 0.0514 0.0802

0.0599 0.0875 0.0370 0.0795 0.0340

0.0717 0.0827 0.0602 0.0849 0.0741

0.0857 0.0719 0.0565 0.0675 0.0455

0.0736 0.0742 0.0735 0.0782 0.0276

0.0711 0.0691 0.0422 0.0775 0.0823

0.0904 0.0852 0.0697 0.0512 0.0840

0.0821 0.0657 0.0838 0.0700 0.0551

0.0636 0.0670 0.0624 0.0419 0.0860

0.0491 0.0667 0.0435 0.0577 0.0742

nontrivialvals =

59 70 69 58 60

69 74 69 61 70

70 63 66 65 74

65 77 72 64 56

66 69 69 57 71

58 68 67 58 69

64 72 64 58 69

62 59 65 60 69

64 75 61 60 69

65 75 66 50 64

avelcfobj =

276.8711 197.8938 218.3084 226.5593 269.0619

aveslsfobj =

223.333

menudiffs =

38 58 64 47 35

35 48 64 45 38

29 56 48 48 34

27 63 43 36 30

21 38 40 28 32

21 39 39 29 25

15 48 38 24 35

23 53 34 36 36

21 39 32 24 30

cumcompdiffs =

91 82 87 89 88

113 113 121 114 109

125 124 137 130 126

132 137 147 137 132

137 144 153 141 141

139 147 158 144 148

139 151 160 150 154

142 156 161 153 155

147 160 164 155 157

147 164 165 155 158

**34th experiment, Iterative (b=0.75, min 80 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 7 iterations (100 for slsf with 30 sec lim); rarely performs as well as slsf even after iterating, unfortunately it seems only improving driver pay is not gonna work out :/

lcfobjs =

190.0205 228.2553 202.7828 210.0645 170.8949

191.4282 226.3649 201.0405 202.3853 175.9663

192.0412 228.3969 203.6464 211.7160 173.9861

191.4358 226.0190 205.1350 209.1800 171.4458

188.7799 227.0281 204.4524 208.0456 177.9371

188.3285 226.8382 204.0231 209.2028 172.8131

186.1397 222.2024 203.0510 209.9459 174.4305

slsfobjs =

188.2330 230.4551 207.4529 211.7860 173.1504

lcfrejs =

1.7759 1.3120 0.1596 2.2763 1.8883

1.4238 1.7465 0.3177 1.6489 0.9420

1.3865 1.2725 0.5942 2.1902 0.7164

1.3108 0.8726 0.5831 1.7114 0.9296

1.6172 1.8399 0.4587 1.8039 0.7183

1.0506 1.7530 0.4995 1.7521 1.1035

0.5347 2.1537 1.0644 1.7164 0.6293

slsfrejs =

2.3717 2.0440 0.8145 2.3077 2.8398

menusizes =

4.5500 4.6500 4.9000 4.2500 4.5000

4.8000 4.6500 4.5500 4.6000 4.7500

4.8000 4.6000 4.5000 4.6000 4.4500

4.7000 4.7000 4.8000 4.5000 4.8500

4.6000 4.6500 4.9000 4.5500 4.7500

4.3500 4.6500 4.9000 4.6000 4.7500

4.6000 4.2000 4.1500 4.5500 4.7500

gaps =

0.0518 0.0699 0.0651 0.0618 0.0823

0.0839 0.0734 0.0893 0.0701 0.0636

0.0655 0.0869 0.0739 0.0657 0.0718

0.0443 0.0558 0.0710 0.0775 0.0828

0.0879 0.0867 0.0699 0.0762 0.0516

0.0500 0.0432 0.0539 0.0761 0.0780

0.0528 0.0668 0.0883 0.0574 0.0792

nontrivialvals =

66 70 70 58 68

65 68 63 62 73

69 66 61 64 66

71 72 67 59 76

64 68 63 62 76

60 66 67 63 74

66 59 58 62 77

avelcfobj =

189.7391 226.4435 203.4473 208.6486 173.9248

aveslsfobj =

202.2155

menudiffs =

55 64 57 53 59

42 63 43 62 52

50 60 50 48 56

50 65 44 55 42

43 58 42 33 54

41 65 41 33 56

cumcompdiffs =

91 93 98 85 90

121 125 123 115 122

132 141 133 135 138

143 154 150 145 150

149 162 163 151 159

157 168 171 158 169

161 172 176 159 180

**35th experiment, Iterative (b=0.75, min 75 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 7 iterations (100 for slsf with 30 sec lim); if we only allow slight pay decrease to 75% it’s usually better than slsf but def not always



lcfobjs =

222.7107 199.8281 214.3281 189.6933 249.4335

220.4793 204.7466 215.1765 188.0752 250.2515

220.4762 205.5056 212.8850 195.9164 250.3667

223.7949 201.3260 208.6231 195.6248 246.0031

222.0116 199.3441 213.5072 196.1189 248.6194

216.1717 202.9748 214.8468 195.8875 251.7509

222.3584 203.3810 214.0656 195.7670 250.3092

slsfobjs =

216.6562 198.5506 204.9890 193.1859 244.3981

lcfrejs =

0.7536 1.1900 0.8563 2.2391 0.9111

0.6007 1.2325 0.9306 2.4582 0.7367

1.2994 1.4760 0.6737 2.3290 0.5637

1.6104 1.2475 0.7059 2.0371 0.3312

1.2455 1.3866 0.9889 1.6343 0.3300

0.5988 1.4063 0.6209 2.1989 0.5277

1.2902 1.3603 1.0160 1.9367 0.4123

slsfrejs =

1.8631 2.2002 1.1092 2.7784 0.7755

menusizes =

4.9500 4.3000 4.8500 4.6500 4.9500

4.4500 4.4500 5.0000 4.6500 4.9000

4.7000 4.4500 4.9500 4.5000 4.8500

4.7500 4.3500 4.1500 4.6500 4.6000

4.8000 4.4000 5.0000 4.5500 4.6500

4.8500 4.4500 4.8500 4.7000 4.6500

4.6500 4.1000 5.0000 4.6500 4.8000

gaps

0.0582 0.0577 0.0574 0.0694 0.0553

0.0663 0.0756 0.0381 0.0881 0.0903

0.0527 0.0837 0.0778 0.0733 0.0384

0.0519 0.0776 0.0862 0.0651 0.0543

0.0714 0.0732 0.0613 0.0848 0.0625

0.0543 0.0827 0.0545 0.0756 0.0682

0.0654 0.0572 0.0587 0.0764 0.0187

nontrivialvals =

76 65 68 69 68

67 65 65 69 63

69 62 66 70 67

71 60 52 70 58

73 63 67 65 65

71 64 68 69 59

70 57 68 70 62

avelcfobj =

221.1432 202.4437 213.3475 193.8690 249.5335

aveslsfobj =

211.5560

menudiffs =

42 55 43 52 49

41 42 39 43 49

45 44 36 41 39

35 55 41 50 39

41 53 39 43 38

48 45 29 47 31

cumcompdiffs =

99 86 97 91 99

115 115 120 117 123

131 130 131 131 141

146 139 135 136 149

153 150 142 144 150

161 153 143 149 157

165 160 143 154 163

compportion80 = mmm should double check these values are correct

0.0625 0.0450 0.1225 0.0850 0.1825

0.0750 0.0725 0.1350 0.1000 0.2125

0.1075 0.0900 0.1350 0.1175 0.2250

0.1250 0.1125 0.1400 0.1375 0.2325

0.1200 0.1300 0.1425 0.1550 0.2375

0.1500 0.1275 0.1450 0.1575 0.2500

0 0 0 0 0.2575

compportionmin =

0.9125 0.9150 0.9025 0.9225 0.9250

0.8950 0.8925 0.8850 0.8975 0.9125

0.8950 0.8825 0.8675 0.8825 0.8950

0.8875 0.8850 0.8650 0.8850 0.8975

0.8675 0.8850 0.8575 0.8800 0.8900

0.8750 0.8775 0.8575 0.8775 0.8800

0 0 0 0 0.8850

**36th experiment, Iterative (b=0.75, min 60 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 7 iterations (100 for slsf with 30 sec lim);

lcfobjs =

187.2890 269.0438 173.6999 247.9348 169.4592

219.1161 284.1849 184.8031 251.6094 184.9809

219.5833 286.0679 195.1176 244.0790 193.9631

218.0363 284.0647 193.9137 250.2113 195.6339

211.8365 283.8326 199.6662 256.3337 193.8719

214.9708 271.5762 196.5604 252.6334 191.3859

220.4552 283.7932 203.3015 255.4704 196.3776

slsfobjs =

210.8961 254.3930 185.6662 226.2556 190.3102

lcfrejs =

3.1564 0.6326 4.9229 1.7754 2.1731

1.0759 0.4503 4.5710 1.7440 3.5303

1.0669 0.3262 3.8912 1.3533 3.5965

 1.7436 0.2350 3.7575 1.9411 3.4419

1.7187 1.2690 3.8870 1.8999 3.2901

1.9397 0.7737 4.8577 1.6336 3.4975

0.8693 0.0729 3.1449 1.8000 3.8961

slsfrejs =

0.5724 0.5420 4.0326 1.7606 2.2780

menusizes =

4.9000 4.4000 4.2500 4.9500 4.3000

4.6500 4.8000 4.3000 4.8500 3.9000

4.7500 4.9000 4.2500 4.5500 4.0500

4.7500 4.6500 4.5500 4.6000 4.0000

4.7000 4.8000 4.5000 4.7500 3.9500

4.6500 4.7500 4.5000 4.5000 3.7500

4.5500 4.9000 4.3000 4.7000 3.7000

gaps =

0.0503 0.0346 0.0907 0.0865 0.0835

0.0604 0.0591 0.0904 0.0669 0.0366

0.0734 0.0742 0.0898 0.0703 0.0825

0.0774 0.0704 0.0904 0.0899 0.0865

0.0725 0.0735 0.0907 0.0777 0.0772

0.0612 0.0563 0.0905 0.0783 0.0467

0.0778 0.0781 0.0902 0.0848 0.0772

nontrivialvals =

72 61 69 76 57

74 65 70 75 57

73 65 65 69 58

73 62 73 64 56

72 70 69 68 57

71 70 72 65 54

70 71 70 68 56

avelcfobj =

213.0410 280.3662 192.4375 251.1817 189.3818

aveslsfobj =

213.5042

menudiffs =

63 76 59 62 76

52 76 65 60 71

50 59 72 63 63

49 55 53 63 61

55 45 68 69 52

46 61 62 60 53

cumcompdiffs =

93 86 81 95 83

121 124 110 124 117

137 146 131 145 142

145 159 152 158 153

152 166 161 171 164

159 175 167 184 167

166 186 171 194 171

compportion80 =

0.2000 0.0575 0.0575 0.0725 0.2050

0.2075 0.0975 0.0850 0.0875 0.2225

0.2250 0.1225 0.0950 0.1125 0.2350

0.2325 0.1450 0.1125 0.1250 0.2350

0.2400 0.1550 0.1200 0.1375 0.2475

0.2625 0.1675 0.1275 0.1625 0.2600

0 0 0 0 0.2725

compportionmin =

0.9525 0.9575 0.9675 0.9575 0.9725

0.9300 0.9225 0.9475 0.9300 0.9500

0.9200 0.9075 0.9300 0.9150 0.9375

0.9200 0.9050 0.9075 0.9100 0.9275

0.9250 0.8925 0.8975 0.9075 0.9200

0.9225 0.8875 0.9000 0.9150 0.9175

0 0 0 0 0.9200

**37th experiment, Iterative (b=0.75, min 60 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 7 iterations (100 for slsf with 30 sec lim); Shows the LCF objective from the solution is not an accurate indicator of quality (not shocking but yeah)

lcfsimobjs =

238.7838 243.0945 250.2062 237.0606 289.2712

250.9903 238.7764 251.0885 241.2689 277.7003

250.6694 237.2876 246.2101 239.9504 286.9675

243.7499 236.9569 245.4909 239.8795 291.4801

244.3541 237.4689 249.8562 228.6795 288.6649

246.5118 242.0322 243.1749 241.5027 284.1447

248.2642 234.4082 244.5724 231.7571 280.9705

lcfobjs =

 214.7905 203.1743 215.9145 199.9564 268.5019

223.6385 214.9278 224.2066 221.2032 274.5587

228.2234 216.1478 215.7918 214.2259 279.6259

228.7772 218.0916 222.3092 217.8318 271.1173

231.0452 218.9628 226.7211 217.5316 275.5358

235.5712 215.4809 215.9431 221.7025 274.1303

230.2112 212.8049 222.5828 220.5934 270.7305

slsfobjs =

200.3402 214.2530 217.6346 197.6900 242.4025

lcfrejs =

3.1495 2.7746 2.5801 2.6679 1.4469

2.1302 2.5962 2.7076 1.8731 1.5136

1.6778 2.3054 2.7416 1.5890 1.2952

2.6136 2.1872 2.1373 1.8461 1.2685

2.4011 2.8574 2.3727 1.5187 1.9695

1.0003 3.2148 2.4488 2.0698 0.9523

2.3492 3.5046 2.7091 1.0928 1.3254

slsfrejs =

3.7956 2.2731 1.5914 1.4100 0.7556

menusizes =

4.0000 4.8000 4.2000 4.6500 4.1500

4.4500 4.6500 4.6000 4.8500 4.1000

4.9500 4.8500 4.5000 4.8000 4.9500

4.3000 4.5500 4.5500 4.8000 4.9500

4.4000 4.7500 4.2500 4.7000 4.8000

4.4500 4.6000 4.2000 4.6500 4.6500

4.5000 4.6500 4.3500 4.8000 4.6000

gaps =

0.0787 0.0706 0.0773 0.0838 0.0709

0.0655 0.0867 0.0745 0.0456 0.0674

0.0605 0.0904 0.0888 0.0695 0.0685

0.0593 0.0886 0.0896 0.0751 0.0556

0.0746 0.0909 0.0713 0.0838 0.0729

0.0772 0.0668 0.0905 0.0549 0.0603

0.0599 0.0863 0.0803 0.0864 0.0798

nontrivialvals =

64 76 69 70 60

64 70 75 73 56

80 71 73 72 75

68 70 66 70 70

72 73 68 70 76

72 73 69 72 73

72 75 68 72 74

avelcfobj =

227.4653 214.2272 220.4956 216.1493 273.4572

aveslsfobj =

214.4641

menudiffs =

61 67 60 64 53

80 58 68 69 53

81 46 61 62 76

62 50 58 58 65

57 55 71 59 65

65 39 67 65 6

cumcompdiffs =

77 94 83 93 81

112 124 116 127 107

148 139 137 153 131

166 146 149 167 158

177 154 159 176 172

183 159 169 185 188

187 165 176 197 198

compportion80 =

0.2125 0.1050 0.0950 0.0500 0.1100

0.2275 0.1175 0.1275 0.0650 0.1350

0.2350 0.1275 0.1500 0.0900 0.1450

0.2275 0.1275 0.1675 0.1000 0.1675

0.2375 0.1325 0.1675 0.1225 0.1725

0.2500 0.1425 0.1675 0.1200 0.1875

0.2500 0.1525 0.1675 0.1250 0.207

compportionmin =

0.9500 0.9450 0.9700 0.9400 0.9325

0.9150 0.9250 0.9500 0.8900 0.9150

0.8950 0.9175 0.9450 0.8775 0.9000

0.8800 0.9050 0.9300 0.8675 0.8975

0.8700 0.9000 0.9225 0.8725 0.8875

0.8725 0.9050 0.9200 0.8600 0.8750

0.8650 0.8925 0.9050 0.8475 0.8775

**38th experiment, Iterative (b=0.75, min 60 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 7 iterations (100 for slsf with 30 sec lim);

lcfsimobjs =

240.8164 240.7745 277.8653 277.1600 256.7210

240.5808 237.0895 272.4425 279.4429 256.3481

235.1529 236.0598 265.3024 278.7572 251.4285

239.1618 242.4576 265.7432 277.7496 259.6209

237.9300 238.3805 269.7271 280.0777 258.5071

236.5567 241.8957 264.0247 279.9119 252.4189

235.8822 238.7529 265.1180 277.5588 251.5406

lcfobjs =

206.2707 206.2669 231.3729 255.2535 216.2394

217.6349 210.9471 246.6087 265.0242 222.8792

231.5344 210.7785 251.3136 275.6519 222.7378

227.3109 204.9115 255.5474 276.1342 226.7305

226.2946 211.7166 249.4440 271.6643 219.2616

229.0598 204.8303 248.6406 274.5680 224.6688

231.9877 210.9758 248.2197 272.8423 220.4948

slsfobjs =

206.2669 212.8000 235.5646 242.3899 226.5339

lcfrejs =

2.7199 2.5046 2.6509 1.2640 3.2559

2.9096 2.5281 2.0609 1.2989 2.5409

2.2323 1.9643 2.3812 1.0356 2.9401

2.5088 2.5702 1.8950 1.0164 2.3127

2.4541 2.3425 2.0591 0.7539 2.2808

2.1235 1.9535 1.6253 0.8548 3.0458

2.2687 1.7792 2.5284 0.9899 2.6419

slsfrejs =

2.3840 0.9642 0.1480 0.4528 1.7139

menusizes =

4.6500 4.7500 4.8000 4.6000 4.1500

4.3500 4.8500 4.8500 4.7500 4.4000

4.2000 4.8000 4.8500 4.8000 4.4000

4.1500 4.9500 4.7000 4.6500 4.7500

4.2000 4.9500 4.6500 4.8000 4.8000

4.3000 4.8500 4.5500 4.8000 4.5500

3.9000 4.8000 4.4000 4.6000 4.4000

gaps =

0.0853 0.0634 0.0682 0.0854 0.0621

0.0895 0.0763 0.0903 0.0361 0.0864

0.0876 0.0792 0.0832 0.0493 0.0737

0.0676 0.0796 0.0768 0.0589 0.0846

0.0788 0.0897 0.0623 0.0422 0.0835

0.0893 0.0760 0.0850 0.0471 0.0828

0.0641 0.0707 0.0761 0.0489 0.0840

nontrivialvals =

77 77 79 62 63

73 76 75 59 67

68 79 74 64 64

64 77 72 61 75

67 78 74 64 75

70 79 73 64 68

59 79 66 62 66

avelcfobj =

224.2990 208.6324 247.3067 270.1626 221.8589

aveslsfobj =

224.7111

menudiffs =

80 64 61 67 63

49 59 56 53 66

39 55 55 61 79

47 56 63 55 77

46 62 62 50 63

50 57 51 48 63

cumcompdiffs =

92 92 96 89 82

128 122 126 119 114

141 145 142 136 130

150 157 155 154 153

159 164 167 164 168

167 173 178 170 178

173 182 184 177 187

compportion80 =

0.1225 0.1275 0.1175 0.1050 0.1200

0.1450 0.1375 0.1325 0.1225 0.1325

0.1775 0.1500 0.1375 0.1300 0.1375

0.1875 0.1500 0.1425 0.1475 0.1450

0.2100 0.1600 0.1550 0.1575 0.1575

0.2250 0.1750 0.1700 0.1700 0.1700

0.2375 0.1975 0.1675 0.1875 0.1725

compportionmin =

0.9600 0.9275 0.9450 0.9500 0.9525

0.9500 0.9150 0.9250 0.9175 0.9250

0.9350 0.8925 0.9100 0.8975 0.9175

0.9325 0.8800 0.9025 0.8900 0.9050

0.9350 0.8725 0.9000 0.8800 0.8875

0.9300 0.8800 0.8875 0.8875 0.8800

0.9300 0.8700 0.8925 0.8850 0.8825

**39th experiment, Iterative w/ mini perf (b=0.75, min 60 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 7 iterations (100 for slsf with 30 sec lim); Mini performance analysis is 100 rand samples—for 20x20 should take around 2 extra secs per iteration, takes around 2.5 hours total

returnedobjs =

247.0925 172.4636 198.4169 242.8095 263.5332

lcfobjs =

 238.0974 163.9123 182.6803 232.9109 249.6129

246.4041 171.2623 181.9578 239.7115 261.3362

243.7510 166.3884 199.7142 239.4224 258.9336

247.0925 176.2747 198.4169 242.6569 258.7023

241.2212 166.5623 197.7734 240.0031 259.9073

247.4982 172.4636 202.7079 242.8095 263.3822

241.5368 178.8636 191.3261 238.5740 256.0752

248.9895 168.3280 205.0740 241.0523 259.3103

240.7930 176.3923 195.8165 238.6233 263.5332

249.1925 170.5818 205.9817 238.1833 261.4393

slsfobjs =

221.4034 164.9617 193.3838 214.3397 233.886

lcfrejs =

2.3374 5.0022 3.3205 1.4443 0.8608

2.6423 4.8668 2.9992 1.1944 0.6689

2.5059 4.5823 3.3107 1.6481 0.5533

2.5563 4.8166 3.2241 0.7118 0.6046

2.3893 4.5911 3.2954 0.4368 0.6787

2.3379 5.3632 3.6392 0.6760 0.6689

2.3107 5.1945 2.7735 0.2513 0.4455

2.5945 4.7829 3.0058 0.5114 0.7669

2.2110 5.3204 2.5617 0.5203 0.5472

2.4114 5.0446 3.3504 0.5704 0.4990

slsfrejs =

2.7896 5.2880 3.0505 1.0184 0.0562

menusizes =

4.2500 3.8000 4.8500 3.9000 4.6500

4.5500 3.6500 4.7000 4.2000 4.7000

4.5000 4.0500 4.6500 4.5000 4.9000

4.5000 4.0000 4.7000 4.5500 4.9000

4.4500 3.9500 4.4000 4.4500 4.8000

4.4000 3.8000 4.5000 4.8000 4.8500

4.6000 3.7500 4.6500 4.6500 4.8000

4.5500 3.7500 4.4500 4.6000 4.9000

4.6000 3.7500 4.5000 4.7500 4.7500

4.3500 3.6000 4.4000 4.5500 4.8000

avelcfobj =

244.4576 171.1029 196.1449 239.3947 259.2233

aveslsfobj =

205.5950

menudiffs =

66 51 73 60 53

55 46 67 46 60

62 57 57 47 60

53 55 66 46 56

59 51 62 41 41

52 53 57 45 55

43 50 60 37 58

49 52 47 39 53

45 45 58 44 45

cumcompdiffs =

82 69 87 76 89

115 94 123 108 117

135 114 142 125 140

153 129 152 140 155

165 137 158 149 167

169 144 163 158 172

173 153 173 164 180

178 157 176 169 187

183 163 183 172 192

185 166 188 176 199

bestobjest =

258.4265 189.0265 209.6959 244.4954 265.7067

guessbestiter

4 6 4 6 9

estobjs =

217.7764 172.7830 185.0134 214.4244 233.4985

241.2132 173.8408 178.3562 241.1716 251.1145

242.5788 161.8186 183.4688 237.7770 248.7209

229.9747 183.9097 198.8672 242.6620 252.1844

258.4265 178.7229 209.6959 239.2219 261.2333

234.7366 181.6813 182.4920 242.0935 259.6737

240.3265 189.0265 199.6281 244.4954 265.2584

233.7883 172.0238 166.3286 236.0909 261.7252

249.7516 179.3923 204.1380 243.3456 260.0965

237.5596 185.0307 202.5355 237.7161 265.7067

243.9922 182.1129 202.4912 230.3949 259.0231

compportion80 =

0.0650 0.0900 0.0950 0.1000 0.0600

0.0900 0.1075 0.1175 0.1450 0.0700

0.1025 0.1225 0.1325 0.1650 0.0900

0.1075 0.1300 0.1350 0.1825 0.1050

0.1150 0.1225 0.1450 0.2000 0.1150

0.1200 0.1225 0.1525 0.2075 0.1150

0.1250 0.1325 0.1675 0.2225 0.1375

0.1250 0.1375 0.1625 0.2350 0.1350

0.1300 0.1400 0.1800 0.2500 0.1550

0.1400 0.1500 0.1900 0.2575 0.1675

compportionmin

0.9625 0.9800 0.9475 0.9525 0.9300

0.9275 0.9700 0.9275 0.9325 0.9100

0.9100 0.9575 0.9125 0.9300 0.8825

0.9025 0.9525 0.9075 0.9275 0.8750

0.9000 0.9375 0.9050 0.9150 0.8625

0.8875 0.9450 0.9125 0.9200 0.8650

0.8875 0.9350 0.9050 0.9050 0.8675

0.8800 0.9400 0.9025 0.9150 0.8600

0.8825 0.9350 0.8975 0.9075 0.8625

0.8850 0.9425 0.8925 0.9075 0.8575

**40th experiment, Iterative w/ mini perf (b=0.75, min 60 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 7 iterations (100 for slsf with 30 sec lim); **Mini performance analysis is 100,** same as 39

returnedobjs =

259.8018 181.5480 208.7271 220.0959 215.9758

lcfobjs =

258.1722 180.0740 198.7562 214.5249 210.7739

255.9321 181.5480 212.2961 215.5154 215.9758

255.6521 184.0598 209.7943 220.2558 215.3225

264.1118 188.9294 203.4578 219.3646 204.0168

249.8712 185.9805 207.2727 217.7271 223.9191

257.5759 181.3851 214.0690 218.2377 214.0998

251.4070 180.3425 208.7271 217.1545 221.9943

259.8018 183.1621 218.5854 220.4072 222.7413

253.4366 180.6082 209.9820 220.4675 215.7951

252.8262 183.1976 205.7507 220.0959 226.8551

slsfobjs =

234.9497 185.7766 194.7390 195.4626 222.4869

lcfrejs =

0.9344 4.2148 1.8862 2.2635 2.7128

1.1728 4.0086 2.6983 2.2933 3.3575

0.3634 3.4923 2.4283 2.5390 4.1717

1.2404 3.4623 2.4327 3.1050 4.0715

0.7054 3.3930 1.9272 1.7441 3.8350

0.8717 3.4976 2.4340 2.4340 3.7802

1.4100 4.1677 2.3215 2.2694 4.1620

0.8908 3.9603 2.6505 2.4884 3.6564

0.7972 3.9919 1.6404 2.7043 4.1334

1.1325 3.5848 2.3969 2.5406 3.4590

slsfrejs =

0.8294 2.9915 0.6269 2.6939 1.4250

menusizes =

4.8500 4.8500 4.9000 4.4500 4.6500

4.9500 4.5500 4.5000 4.2000 4.5500

4.9500 4.3500 4.5000 4.3500 4.8000

4.7500 4.3000 4.8000 4.1500 4.6000

4.8500 4.5000 4.8000 4.2000 4.3000

4.8500 4.4500 4.7500 4.0500 4.5000

4.6500 4.6500 4.6500 3.9000 4.7000

5.0000 4.5000 4.9000 4.1500 4.6000

5.0000 4.4500 4.4500 3.8500 4.6000

4.8500 4.6500 4.7500 3.8500 4.4000

avelcfobj =

255.8787 182.9287 208.8691 218.3751 217.1494

aveslsfobj =

206.6830

menudiffs =

60 62 64 55 86

70 60 74 55 73

 66 53 66 58 74

54 66 62 49 74

56 55 61 51 70

56 64 64 55 68

61 61 59 47 54

46 67 55 42 62

65 54 62 42 60

cumcompdiffs =

97 91 96 84 93

126 117 124 106 134

151 138 146 123 158

163 148 159 139 178

174 161 168 148 186

177 165 179 154 198

185 169 187 160 200

187 174 194 162 206

193 180 199 166 208

197 184 206 169 212

bestobjest =

guessbestiter =

8 2 7 10 2

estobjs =

234.6195 190.3097 196.0080 193.3192 220.7584

260.2681 182.0342 203.9285 207.2374 210.1716

255.2130 200.1966 211.5604 217.1453 241.9367

257.7641 182.0872 203.7612 221.9614 233.9598

260.1818 189.8498 209.7675 219.3345 205.3690

235.0534 187.9612 211.5030 213.2299 211.5752

256.1959 170.7284 208.5734 211.2998 212.8744

257.6040 175.4736 223.8994 216.4616 229.5194

270.1454 169.8076 208.9025 218.9544 237.1349

251.3680 178.9113 214.6465 211.5391 227.8979

247.8196 188.9391 204.8324 222.8286 223.8370

compportion80 =

0.1175 0.0950 0.0800 0.0900 0.0450

0.1225 0.1050 0.0775 0.1100 0.0775

0.1450 0.1200 0.0925 0.1175 0.1000

0.1475 0.1300 0.1125 0.1300 0.0975

0.1700 0.1375 0.1075 0.1375 0.1100

0.1800 0.1375 0.1175 0.1400 0.1125

0.1900 0.1500 0.1200 0.1525 0.1125

0.1975 0.1450 0.1225 0.1575 0.1175

0.2075 0.1625 0.1350 0.1600 0.1175

0.2225 0.1675 0.1375 0.1625 0.1275

compportionmin =

0.9250 0.9475 0.9500 0.9450 0.9400

0.8900 0.9250 0.9325 0.9300 0.9325

0.8800 0.9375 0.9100 0.9200 0.9175

0.8600 0.9250 0.9050 0.9125 0.9000

0.8625 0.9200 0.8950 0.9025 0.9000

0.8725 0.9275 0.8950 0.8925 0.9025

0.8625 0.9250 0.8925 0.9000 0.9000

0.8575 0.9150 0.8825 0.8975 0.8925

0.8625 0.9200 0.8750 0.8975 0.9050

0.8650 0.9000 0.8725 0.8900 0.8800

**41st experiment, Iterative w/ mini perf (b=0.75, min 60 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 7 iterations (100 for slsf with 30 sec lim); **Mini performance analysis is 200**

returnedobjs =

226.3888 207.6732 286.7943 181.8192 175.1395

lcfobjs =

210.9336 189.0691 272.1165 164.0379 157.3194

214.7303 191.1695 276.9524 136.5204 171.9975

213.3495 197.1544 285.4511 176.9313 178.3391

218.3990 209.5436 285.1688 168.2561 183.9835

217.8007 205.1554 286.8029 181.1424 172.4914

226.3888 204.1812 286.7943 181.8192 169.8762

215.4448 207.6732 291.8438 180.2593 175.1395

slsfobjs =

201.7610 185.4513 248.7982 160.0446 183.7027

lcfrejs =

2.7074 3.6115 2.1818 2.5406 6.5154

3.5620 3.1492 2.3655 4.4257 7.0404

2.3254 2.5464 1.4758 2.3913 6.1200

 2.7247 2.9949 1.6785 2.1454 5.7960

2.8944 1.9440 1.5078 1.9849 6.5735

3.7492 2.4017 1.5299 2.2505 6.5387

2.8523 2.8056 1.4140 1.6165 6.0276

slsfrejs =

1.5780 3.0657 1.6280 1.8969 5.2599

menusizes =

4.8000 4.0500 4.3500 4.6000 4.0500

4.5000 4.6000 4.6500 4.4000 3.8000

4.4500 4.2500 4.8500 4.4500 3.4500

4.5500 4.2500 4.8500 4.4000 3.7500

4.5000 4.5500 4.6000 4.4000 3.9000

4.6000 4.4500 4.6500 4.2500 4.3500

4.3500 4.3500 4.9500 4.4500 4.2000

avelcfobj =

216.7209 200.5638 283.5900 169.8524 172.7352

aveslsfobj =

195.9515

menudiffs =

62 67 72 104 69

55 61 60 99 57

56 52 66 57 50

49 64 55 68 59

66 60 57 59 55

59 48 54 70 6

cumcompdiffs =

93 81 87 84 81

121 118 126 135 112

139 139 151 150 126

149 146 165 157 141

159 163 170 165 151

174 172 178 173 161

183 177 187 183 167

bestobjest =

222.7035 212.5354 294.9452 180.4975 192.1354

guessbestiter =

6 7 6 6 7

estobjs =

191.0105 182.8572 244.9539 164.8106 186.2854

212.9450 199.0695 260.4038 176.2961 165.4651

218.8150 192.0432 284.7393 133.6367 172.4746

218.3113 203.4692 291.9791 178.0234 183.7403

216.8928 211.2309 286.3469 169.7736 181.4904

212.6712 209.3249 287.8996 179.7856 184.8234

222.7035 206.9511 294.9452 180.4975 185.8851

219.4514 212.5354 289.9878 179.4389 192.1354

compportion80 =

0.0550 0.1075 0.1375 0.0900 0.0925

0.0850 0.1275 0.1475 0.1225 0.1100

0.1150 0.1575 0.1575 0.1250 0.1200

0.1225 0.1775 0.1650 0.1300 0.1225

0.1425 0.1850 0.1575 0.1375 0.1250

0.1600 0.1850 0.1625 0.1550 0.1325

0.1800 0.1925 0.1625 0.1550 0.1400

compportionmin =

0.9550 0.9450 0.9475 0.9375 0.9525

0.9300 0.9275 0.9350 0.9250 0.9425

0.9275 0.9225 0.9025 0.9025 0.9350

0.9200 0.9100 0.8850 0.9000 0.9425

0.9175 0.9025 0.8750 0.8950 0.9100

0.9075 0.9025 0.8575 0.8875 0.9125

0.9100 0.8950 0.8600 0.8900 0.9025

**42nd experiment, Iterative w/ mini perf (b=0.75, min 60 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 7 iterations (100 for slsf with 30 sec lim); **Mini performance analysis is 500**

returnedobjs =

214.1121 198.4799 202.9466 202.8179 226.3769

lcfobjs =

203.8374 184.1724 179.1274 192.0262 226.3769

214.1121 184.9908 187.2260 201.9049 230.7170

210.2664 198.5578 196.3947 211.3852 232.7821

214.1431 191.6910 192.1488 202.2329 228.6974

208.8209 198.4799 191.3648 202.8179 228.8043

220.1479 203.0604 193.8732 205.5966 235.8844

218.7317 202.7993 193.0287 203.7727 231.6448

slsfobjs =

207.7110 177.8946 202.9466 196.1016 224.2048

lcfrejs =

3.8421 2.8276 3.8614 3.8826 1.9857

3.6163 1.8633 2.8355 3.7514 2.6860

4.2869 3.2031 2.7558 2.7696 3.0600

3.9834 3.1555 3.9274 3.7139 3.5186

3.5954 2.6128 3.2762 3.4985 2.6740

3.7390 2.4046 2.9548 3.0163 2.1094

3.9132 2.6338 3.3965 3.3338 3.0226

slsfrejs =

3.2914 1.7692 2.5219 1.9287 2.5382

menusizes =

4.0000 4.7000 4.7500 4.7500 4.7000

4.1500 4.6500 4.5000 4.5000 4.5500

4.5500 3.7000 4.3500 4.5500 4.9000

4.5000 4.3500 4.4000 4.4500 4.7500

4.4500 4.8000 4.4000 4.3500 4.6500

4.3000 4.4500 4.0000 4.4500 4.3000

4.1000 4.5500 4.0000 4.6000 4.4000

avelcfobj =

212.8656 194.8217 190.4520 202.8195 230.7010

aveslsfobj =

201.7717

menudiffs =

53 77 95 77 63

64 59 73 53 73

55 47 79 56 69

51 55 78 56 58

45 47 78 50 63

52 46 66 51 58

cumcompdiffs =

77 91 91 91 90

105 131 134 126 121

127 143 157 144 147

140 153 177 155 162

147 163 193 164 178

155 168 196 172 185

161 173 205 175 193

bestobjest =

220.0598 206.5363 203.9521 213.0493 239.1283

guessbestiter =

2 5 0 5 1

estobjs =

207.4761 177.2667 203.9521 193.5266 222.6103

202.0665 189.5441 175.8005 196.8598 239.1283

220.0598 188.0806 188.4657 205.5408 236.3612

213.3359 197.6209 196.4764 198.0326 234.9900

214.1510 195.1372 192.4270 202.5906 229.2297

205.1264 206.5363 180.1172 213.0493 227.2109

209.7267 200.6374 195.0914 204.7645 235.3493

215.5235 196.8341 194.9122 192.7254 236.9769

compportion80 =

0.0975 0.1900 0.2000 0.0425 0.1375

0.1050 0.2100 0.2375 0.0725 0.1475

0.1200 0.2150 0.2475 0.0800 0.1675

0.1275 0.2200 0.2700 0.0800 0.1750

0.1425 0.2250 0.3075 0.0950 0.1925

0.1550 0.2275 0.3125 0.0975 0.2025

0.1675 0.2350 0.3150 0.1125 0.1875

compportionmin =

0.9650 0.9600 0.9675 0.9425 0.9250

0.9525 0.9250 0.9525 0.9325 0.9000

0.9350 0.9250 0.9500 0.9175 0.8800

0.9275 0.9200 0.9450 0.9000 0.8750

 0.9225 0.9025 0.9400 0.9150 0.8750

0.9175 0.9025 0.9475 0.9025 0.8725

0.9250 0.9050 0.9375 0.8975 0.8625

**43rd experiment, Iterative w/ mini perf (b=0.75, min 60 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 7 iterations (100 for slsf with 30 sec lim); **Mini performance analysis is 100, but will run another 100 & compare with slsf est before updating best soln**

returnedobjs =

227.3243 262.5648 232.2074 239.4412 253.5662

lcfobjs =

210.4422 252.7646 221.2938 231.6402 231.2945

157.1528 236.5556 219.7014 227.5611 249.4493

227.3212 262.5648 218.1725 214.0093 240.1525

227.3243 241.2216 224.2926 239.4412 252.8562

222.9369 263.1759 231.4298 229.0105 253.5052

224.4865 253.5587 229.5157 237.4870 253.5662

224.1636 255.2014 232.2074 240.4128 254.7058

slsfobjs =

210.7885 234.6379 221.5514 226.3585 224.3579

lcfrejs =

2.1999 3.1749 3.9077 3.5833 2.0831

4.2203 2.2961 3.3444 3.7297 1.7880

1.9138 2.5785 3.2091 3.5861 1.6161

1.6728 2.3361 4.0145 2.8530 1.3092

2.3539 2.6299 2.5392 2.4971 1.7001

1.7157 2.9742 3.8445 2.0297 1.1384

2.4621 2.4804 3.1100 2.5309 0.9804

slsfrejs =

0.9074 1.6632 3.2770 2.7637 0.1793

menusizes =

4.7000 5.0000 4.5000 4.3500 4.9000

4.8500 4.8000 4.6000 4.1500 4.8500

4.4500 4.8000 4.3500 4.8000 4.7500

4.7500 4.9000 4.2500 4.3500 4.7000

4.5500 4.7500 4.6500 4.8500 4.6500

4.5000 4.8500 4.3000 4.5000 4.8500

4.4000 4.8000 4.2500 4.6000 4.650

avelcfobj =

213.4039 252.1489 225.2305 231.3660 247.9328

aveslsfobj =

223.5389

menudiffs =

109 70 64 66 65

108 72 55 55 90

58 70 68 53 73

56 63 52 66 65

59 62 57 55 70

58 49 51 58 68

cumcompdiffs =

94 94 83 83 97

148 127 112 113 127

164 152 128 128 157

179 167 146 141 179

186 177 156 152 186

194 190 165 158 197

200 198 168 168 206

bestobjest =

232.6529 262.7054 233.5813 240.5581 257.1759

guessbestiter =

4 3 7 4 6

estobjs =

202.3615 233.3131 227.4775 224.3559 225.2537

221.2324 247.1823 220.7795 226.4398 226.1675

175.7587 233.2245 221.4580 228.3244 224.0171

221.8062 263.5946 229.4198 232.6990 252.7164

226.9058 252.5874 211.5288 244.1364 251.2975

224.4422 260.9516 228.0379 235.9538 259.8635

225.2505 245.5294 226.4041 234.3702 258.2583

227.9000 249.4903 232.2234 235.4763 248.4068

failedsecond =

0 0 0 0 0

0 0 0 0 0

0 0 1 0 0

0 0 0 0 0

0 0 1 0 0

0 0 0 0 0

0 0 0 0 0

compportion80 =

0.1025 0.0350 0.0700 0.0975 0.0225

0.1350 0.0625 0.1000 0.1200 0.0325

0.1550 0.0800 0.1275 0.1300 0.0425

0.1650 0.0925 0.1500 0.1425 0.0650

0.1700 0.1000 0.1625 0.1525 0.0625

0.1775 0.1100 0.1675 0.1550 0.0825

0.1850 0.1275 0.1750 0.1825 0.0975

compportionmin =

0.9525 0.9100 0.9625 0.9725 0.9125

0.9400 0.8950 0.9400 0.9525 0.8775

0.9125 0.8775 0.9400 0.9350 0.8400

0.9000 0.8675 0.9375 0.9275 0.8175

0.8950 0.8600 0.9275 0.9125 0.8150

 0.8925 0.8550 0.9225 0.9125 0.8250

0.8900 0.8525 0.9125 0.9200 0.8225

**44th experiment, Iterative w/ mini perf (b=0.75, min 60 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 7 iterations (100 for slsf with 30 sec lim); **Mini performance analysis is 500, but will run another 500 & compare with slsf est before updating best soln (same as 43)**

returnedobjs =

223.5174 219.8865 259.8383 264.2571 257.0580

lcfobjs =

214.2215 189.1402 243.1241 254.5678 223.3851

228.8477 216.2702 252.3738 263.2776 246.1345

221.6684 219.8865 259.8383 262.6329 252.0568

229.8113 220.8191 256.6165 262.2962 253.5958

223.5174 218.6621 248.7087 260.6465 242.8989

230.3332 220.9089 257.8764 264.2571 257.0580

233.5859 213.2153 252.8641 264.3667 250.4680

slsfobjs =

219.9411 187.9108 254.9002 230.0271 230.5377

lcfrejs =

2.7848 2.2779 2.4421 2.6188 3.2174

2.0854 2.1589 2.2576 1.9857 2.6665

2.7955 1.6286 2.0198 2.0797 3.1254

2.4978 2.0715 2.0498 2.2353 3.0061

2.2623 1.6592 2.6594 2.5392 3.0438

1.8452 1.4878 2.2988 2.2008 2.7476

2.8124 2.0434 2.4124 1.7869 3.2418

slsfrejs =

1.3238 2.1027 1.2291 0.6930 1.9308

menusizes =

4.6000 4.2000 4.7000 4.9000 4.7000

4.6500 4.1500 4.4000 4.4500 5.0000

4.7000 3.5000 4.8000 4.0500 4.5000

4.5500 4.4000 4.5000 4.5000 4.9000

4.5500 4.2500 4.7500 4.6500 4.6000

4.5000 4.3500 4.7000 4.8000 4.7000

4.5000 4.2500 4.6500 4.7000 4.6000

avelcfobj =

225.9979 214.1289 253.0574 261.7207 246.5139

aveslsfobj =

224.6634

menudiffs =

67 63 84 83 86

71 53 70 60 66

65 58 66 59 62

54 55 59 67 62

51 64 57 55 52

54 60 65 58 62

cumcompdiffs =

91 82 93 96 93

122 114 130 130 136

145 126 155 145 160

157 146 165 162 178

169 157 178 175 192

172 168 186 182 198

179 173 193 189 203

bestobjest =

227.0218 221.2496 269.0717 265.9429 264.8718

guessbestiter =

5 3 3 6 6

estobjs =

222.3017 191.0989 254.4021 231.4902 227.2795

225.0614 189.8434 248.0209 253.5973 220.9659

222.7010 210.6708 248.0995 264.2577 231.7800

229.1329 223.5130 268.7391 257.6906 248.3866

228.5351 219.7817 261.5139 259.9115 259.4555

232.4557 216.3162 263.9286 256.8594 247.8271

237.7388 216.9918 268.9141 267.1893 257.6598

221.2024 212.7047 264.3397 261.5519 251.5831

failedsecond =

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

1 0 0 0 0

0 0 0 0 0

compportion80 =

0.1700 0.0375 0.0575 0.0425 0.0800

0.1900 0.0575 0.0875 0.0625 0.0950

0.1800 0.0675 0.1025 0.0750 0.0975

0.1825 0.0750 0.1050 0.0900 0.1075

0.1950 0.0875 0.1100 0.1000 0.1125

0.2075 0.1075 0.1025 0.1100 0.1200

0.2100 0.1225 0.1100 0.1175 0.1225

compportionmin =

0.9500 0.9500 0.9625 0.9125 0.9450

0.9250 0.9300 0.9425 0.8950 0.8900

0.9075 0.9225 0.9150 0.8900 0.8825

0.8950 0.8925 0.8950 0.8700 0.8650

0.8950 0.8975 0.8900 0.8650 0.8525

0.8875 0.8900 0.8825 0.8425 0.8375

0.8825 0.8950 0.8700 0.8375 0.8425



**45th experiment, Iterative w/ mini perf (b=0.75, min 60 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 7 iterations (100 for slsf with 30 sec lim); **Mini performance analysis is 200, but will run another 200 & compare with slsf est before updating best soln**

**returnedobjs =**

**214.2118 214.4119 222.7644 199.0065 231.5886**

**lcfobjs =**

**201.8872 203.3480 201.8287 186.4282 208.1165**

**202.4675 212.0317 222.7644 195.7556 216.3430**

**210.1145 212.0759 211.6307 191.9178 203.8478**

**211.6193 204.5212 224.7759 191.4556 213.7365**

**214.2118 214.4119 219.7187 197.8144 222.8485**

**215.2453 211.5413 220.2339 201.0458 224.6464**

**218.6178 211.3695 218.7160 200.0621 213.4173**

**slsfobjs =**

**199.5488 191.0620 212.5294 199.0065 231.5886**

**lcfrejs =**

**2.6017 0.5346 2.2580 3.2262 3.4649**

**1.6126 1.3473 1.5679 2.8334 3.4812**

**2.6201 2.1391 2.2417 2.3812 4.2969**

**2.2146 1.2560 1.5635 2.5531 4.0459**

**2.6204 1.8638 2.0032 2.4150 3.5664**

**3.0488 1.7357 2.1401 2.6817 3.2957**

**2.5452 1.5461 2.0412 2.7580 3.4749**

**slsfrejs =**

**1.0795 1.2597 0.7945 1.1851 1.2649**

**menusizes =**

**4.9000 4.7500 4.8000 4.4000 4.5500**

**4.4500 4.5500 4.6500 4.1000 4.3000**

**4.6500 4.5500 4.5500 4.3500 4.4000**

**4.6000 4.1500 4.4500 4.3500 4.4000**

**4.6500 4.3000 4.7500 4.5000 4.1500**

**4.5500 4.5500 4.4000 4.8000 4.4000**

**4.7500 4.6000 4.7000 4.5500 4.5000**

**avelcfobj =**

**210.5948 209.8999 217.0955 194.9256 214.7080**

**aveslsfobj =**

**206.7471**

**menudiffs =**

**73 50 67 54 79**

**62 56 54 55 70**

**47 50 62 58 70**

**55 51 56 53 77**

**52 53 61 46 71**

**54 47 50 53 68**

**cumcompdiffs =**

**97 93 95 86 85**

**128 114 125 109 118**

**147 133 139 129 143**

**163 142 152 142 165**

**171 151 157 150 176**

**179 160 162 157 185**

**186 173 167 167 191**

**bestobjest =**

**222.6335 215.6619 223.1630 199.0885 222.5784**

**guessbestiter =**

**5 5 2 0 0**

**estobjs =**

**200.6967 186.7343 214.0710 199.0885 222.5784**

**203.3702 209.1423 214.8297 188.6847 207.2757**

**205.6833 217.1034 225.7911 179.9709 221.8241**

**219.7067 215.3265 215.0249 189.2470 217.2543**

**211.9308 202.1922 217.1439 195.6474 219.6615**

**218.6066 218.1260 218.6969 188.9293 221.1856**

**220.3065 211.3416 221.9606 202.3064 226.2040**

**217.1474 206.2772 224.8319 213.0500 217.7244**

**failedsecond =**

**0 0 1 0 0**

**0 0 0 0 0**

**0 0 0 0 0**

**0 0 0 0 0**

**0 0 0 0 0**

**0 0 0 1 1**

**0 0 1 1 0**

**compportion80 =**

**0.1550 0.0950 0.0975 0.1650 0.0950**

**0.2050 0.1050 0.1300 0.1775 0.1150**

**0.2100 0.1175 0.1350 0.1875 0.1325**

**0.2300 0.1425 0.1475 0.1925 0.1375**

**0.2325 0.1325 0.1550 0.1925 0.1425**

**0.2400 0.1550 0.1725 0.1900 0.1500**

**0.2400 0.1725 0.1675 0.1925 0.1525**

**compportionmin =**

**0.9550 0.9500 0.9600 0.9650 0.9625**

**0.9475 0.9325 0.9400 0.9500 0.9500**

**0.9350 0.9225 0.9375 0.9325 0.9350**

**0.9175 0.9225 0.9200 0.9300 0.9350**

**0.9025 0.9175 0.9225 0.9225 0.9175**

**0.9075 0.9125 0.9225 0.9300 0.9000**

**0.8925 0.9075 0.9250 0.9125 0.9000**

****

**46th experiment, Iterative w/ mini perf (b=0.75, min 60 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 7 iterations (100 for slsf with 30 sec lim); **Mini performance analysis is 200, but will run another 200 & compare with slsf est before updating best soln (same as 45)**

returnedobjs =

214.5216 242.4800 234.5761 243.3982 230.4399

lcfobjs =

195.3425 223.2906 221.0037 225.6936 225.0274

214.2560 234.2707 221.6618 219.6652 238.3998

214.6759 242.7459 230.5492 250.6324 240.6976

205.4921 241.9915 219.5460 237.4039 227.8151

214.5216 226.4172 236.1309 245.0133 232.5295

218.8230 243.8708 234.5761 237.7159 234.9958

214.3020 242.4800 235.3692 249.5924 230.4399

slsfobjs =

194.5915 233.7934 211.9974 243.3982 236.9064

lcfrejs =

2.8380 3.1663 3.6214 2.6889 1.6527

1.2783 3.2372 2.8619 1.9121 1.4273

2.2078 3.2465 2.0945 1.3536 1.3046

1.9646 3.0423 2.6058 1.2239 1.3963

1.5761 3.7803 2.4668 1.8090 1.8643

1.3844 3.3531 2.5596 2.6614 1.0581

1.4593 3.4621 2.2553 1.6480 1.8732

slsfrejs =

1.1829 2.2003 3.1350 0.5584 0.8497

menusizes =

4.3000 4.8500 4.0000 4.9500 4.7500

4.5500 4.5000 4.4000 4.9500 4.6000

4.9000 4.6000 4.1500 4.7000 4.7500

4.7000 4.5500 4.4000 4.9000 4.8000

4.8000 4.7000 4.2000 4.7000 4.7000

4.8500 4.6500 4.4500 4.4500 4.8500

5.0000 4.6500 4.2000 4.7500 4.7500

avelcfobj =

211.0590 236.4381 228.4053 237.9595 232.8436

aveslsfobj =

224.1374

menudiffs =

63 79 60 84 61

69 80 55 71 49

58 57 51 50 41

50 57 46 62 64

45 59 37 73 53

51 56 45 68 42

cumcompdiffs =

83 94 78 94 94

118 129 109 134 122

142 150 128 154 135

155 159 139 166 147

163 168 147 177 158

168 174 154 186 162

177 180 163 192 164

bestobjest =

207.5561 245.8466 246.1927 245.3610 239.1855

guessbestiter =

5 7 6 0 7

estobjs =

192.6556 235.1853 211.6991 245.3610 238.0296

197.9370 198.4557 221.8177 232.5344 232.6660

182.2524 231.7522 232.4508 245.5652 240.7102

216.9492 250.9471 238.1401 239.8472 242.6043

199.2502 231.6004 221.3036 228.3072 234.9805

222.5950 242.9234 246.9951 243.0064 235.9558

191.3959 235.5249 231.9181 218.0579 234.1319

 201.0002 256.1109 232.3768 241.1502 243.6052

testedtwice =

1 0 1 0 0

0 0 1 1 1

1 1 1 0 1

0 0 0 0 0

1 0 1 0 0

0 0 1 0 0

0 1 0 0 1

failedsecond =

0 0 0 0 0

0 0 0 1 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

compportion80 =

0.0375 0.0975 0.1975 0.0500 0.1175

0.0600 0.1150 0.2075 0.0825 0.1525

0.0750 0.1325 0.2175 0.1125 0.1675

0.0925 0.1325 0.2250 0.1125 0.1800

0.0925 0.1275 0.2275 0.1300 0.1800

0.1050 0.1450 0.2325 0.1350 0.1875

0.1150 0.1525 0.2375 0.1400 0.1800

compportionmin =

0.9450 0.9500 0.9475 0.9400 0.9675

0.9150 0.9300 0.9250 0.8925 0.9525

0.8925 0.9300 0.9075 0.8900 0.9400

0.8950 0.9150 0.9075 0.8750 0.9350

0.8900 0.9125 0.8975 0.8675 0.9275

0.8850 0.9025 0.8950 0.8575 0.9325

0.8725 0.9000 0.8875 0.8550 0.9200

**47th experiment, Iterative w/ mini perf (b=0.75, min 60 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 7 iterations (100 for slsf with 30 sec lim); **Mini performance analysis is 200, but will run another 200 & compare with slsf est before updating best soln (same as 45,46)**

returnedobjs =

219.5302 240.4268 237.1692 204.7603 254.7693

lcfobjs =

211.3078 235.6791 225.3146 183.9678 245.1690

219.5302 236.0691 235.7994 204.7603 245.7777

212.0191 238.3113 236.8225 203.0205 245.6647

227.1045 238.8674 237.1692 198.2164 244.5980

229.5548 241.0830 212.7971 205.8952 249.0972

213.6894 239.8930 236.5640 210.4276 254.7693

229.3376 240.4268 241.6918 211.1458 250.8029

slsfobjs =

223.8531 227.1595 204.5019 188.7629 205.2072

lcfrejs =

3.2385 0.9026 3.4440 5.3996 2.1149

2.8028 1.1342 3.3945 2.7238 1.6685

2.7637 1.3239 3.6723 2.3218 1.5502

2.6611 1.2358 3.0068 3.3071 1.0455

2.5579 1.2133 2.8312 2.5579 1.9389

3.4020 1.0030 2.8295 3.1098 1.2964

2.2663 1.3599 2.6175 2.2956 1.6720

slsfrejs =

0.5618 0.9883 2.0988 2.0061 1.5953

menusizes =

4.9500 4.6000 3.5000 4.2000 4.5500

4.5500 4.6000 4.0000 4.4000 4.5500

4.8500 4.4000 4.3500 4.5000 4.2500

4.8000 4.6000 4.3000 4.0500 4.5500

4.5500 4.4500 4.6000 4.5500 4.5500

4.7000 4.4000 3.9000 4.6000 4.1500

4.5500 4.5000 3.9500 4.2000 4.6000

avelcfobj =

220.3634 238.6185 232.3084 202.4905 247.9827

aveslsfobj =

209.8969

menudiffs =

76 60 52 84 58

76 56 49 76 58

55 50 53 71 66

53 53 52 58 68

75 47 46 61 72

65 42 37 70 53

cumcompdiffs =

99 89 70 83 89

131 119 101 125 116

153 134 120 149 137

168 147 136 159 153

174 154 150 167 166

185 163 155 174 180

193 167 158 179 184

bestobjest =

241.9455 240.3813 248.5997 216.3149 255.9744

guessbestiter =

2 7 4 2 6

estobjs =

222.3163 227.1365 205.4552 187.9043 204.7919

209.0153 238.9173 231.6991 197.0898 232.9790

228.7265 234.2657 237.5208 200.9334 244.6501

219.0069 239.1253 230.7588 199.4454 255.6145

238.4167 238.6318 240.8060 199.9766 248.9564

219.9112 238.4934 219.4744 208.0685 244.2677

226.5551 241.1244 234.4598 206.5031 256.9932

231.9919 242.3968 237.4262 216.0704 252.4392

testedtwice =

0 1 1 1 1

1 0 1 1 0

0 1 0 0 1

0 0 1 0 0

0 0 0 0 0

0 1 0 0 1

0 1 0 0 0

failedsecond =

0 0 0 1 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

compportion80 =

0.0700 0.1025 0.0425 0.1250 0.2625

0.0900 0.1425 0.0725 0.1375 0.2625

0.1025 0.1650 0.0850 0.1525 0.2700

0.1075 0.1750 0.1000 0.1550 0.2825

0.1000 0.1850 0.1150 0.1650 0.2875

0.0925 0.2025 0.1200 0.1575 0.2875

0.1075 0.2150 0.1375 0.1900 0.2875

compportionmin =

0.9275 0.9625 0.9525 0.9525 0.9050

0.9050 0.9575 0.9325 0.9325 0.8875

 0.8850 0.9425 0.9150 0.9025 0.8825

0.8650 0.9325 0.9125 0.8950 0.8825

0.8625 0.9250 0.9125 0.8850 0.8750

0.8625 0.9250 0.9250 0.8825 0.8725

0.8475 0.9250 0.9125 0.9000 0.8700

**48th experiment, Regression Training (b=0.75, min 60 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 7 iterations (100 for slsf with 30 sec lim); **Mini performance analysis is 200, but will run another 200 & compare with slsf est before updating best soln**

lcfobjs =

278.5194 285.3556 280.1899 234.3851 228.5345

223.7693 261.9722 243.3632 224.1670 209.1037

243.1736 208.6823 75.0297 249.2781 228.9484

263.3391 230.9932 207.4324 251.6931 249.4848

259.4562 233.1775 250.3740 195.3808 217.3186

209.9632 233.9723 209.3277 239.3474 243.2126

204.8965 135.4691 279.3518 224.3552 232.4248

247.0093 244.4165 214.8970 263.5034 249.7569

195.6519 203.1220 210.1616 194.6976 270.3846

255.1499 227.5151 231.1760 213.2818 176.5744

estobjs =

276.2214 277.6915 285.0360 236.9787 231.2700

224.6493 255.3813 240.2189 231.3183 208.3588

244.7203 209.5824 78.9448 249.8713 236.0860

259.4925 235.3027 206.6853 252.0390 257.4194

257.7846 232.1267 235.3504 201.9213 217.5230

219.3963 234.9736 211.6997 260.2374 245.7677

220.9828 162.1539 276.7397 217.3142 231.1445

255.6071 252.0987 208.4207 262.6187 253.9149

190.1162 206.4199 209.4853 185.6402 271.0522

259.0390 235.6134 221.9415 217.4990 172.9879

lcfsimobjs =

276.9309 295.4826 298.2719 244.3859 244.0418

240.2996 256.9832 268.2783 245.9858 237.1134

257.3335 236.8731 93.5397 261.7144 241.3516

277.3653 249.8786 223.4922 263.7689 274.1882

270.6800 251.3030 275.8172 244.5824 223.9236

252.6401 245.2993 232.3960 284.0206 268.8452

252.0368 211.2520 298.3616 246.9310 257.0541

276.2883 252.9594 246.1692 271.6465 259.3082

212.3954 228.5597 231.3155 232.4108 267.9247

268.1175 248.8585 252.9397 241.5195 226.6701

estrejs =

0.7769 2.2171 0.9911 0.5451 3.8664

3.5208 0.8977 1.9609 1.7922 1.1504

0.7706 2.2986 11.6122 1.9583 2.0471

2.0466 3.0197 0.5964 0.2453 2.0034

2.8300 1.5000 1.5723 2.4514 2.1039

2.7740 1.2842 2.2924 1.9774 1.2857

2.9452 6.2150 1.0400 4.1933 3.4303

2.1931 1.3966 4.1229 1.4056 1.2897

1.3664 1.9449 3.1472 5.7681 1.0769

3.6653 2.0432 3.0871 2.4018 3.2631

menusizes =

4.6500 3.8000 4.8500 4.7000 4.4500

4.4500 4.7000 4.9000 4.4000 5.0000

4.4000 4.3500 1.4000 4.5500 4.7000

4.7000 4.6000 4.7500 4.9500 4.8000

4.6000 4.7000 4.8000 4.8500 4.3500

5.0000 4.6000 4.3500 4.8000 4.8500

4.7500 4.4500 4.8000 4.3500 4.3500

4.8500 4.7500 4.9000 4.5000 4.6500

4.3000 4.7000 4.1500 4.1000 4.6500

4.1500 3.8500 4.5500 4.6500 4.9000

avepij =

0.3493 0.4169 0.3140 0.3511 0.2543

0.3004 0.4313 0.3149 0.3213 0.3576

0.3619 0.2821 0.4266 0.3472 0.3350

0.2812 0.3416 0.3397 0.3562 0.3093

0.3291 0.3512 0.3669 0.2955 0.3731

0.2941 0.3269 0.3345 0.3519 0.3408

0.3323 0.2105 0.4244 0.2618 0.2455

0.3031 0.2661 0.2488 0.3624 0.3316

0.3061 0.3407 0.2604 0.3207 0.3012

0.3308 0.3687 0.3131 0.2762 0.3193

pijover5 =

118 159 109 123 70

89 163 99 108 127

119 96 160 117 114

93 105 127 118 84

106 116 122 76 143

75 114 124 113 108

98 45 149 86 62

89 73 80 120 106

114 120 81 114 92

105 138 103 91 103

pijequal1 =

49 52 34 44 26

33 72 36 47 48

51 33 60 52 53

45 47 65 47 37

43 41 45 29 65

33 47 41 48 44

43 17 79 29 21

39 34 42 66 40

39 55 31 34 38

46 71 36 21 28

avelcfobj =

238.0928 226.4676 220.1303 229.0089 230.5743

compportion80 =

0.1200 0.0675 0.1925 0.1000 0.2025

0.1600 0.2650 0.0975 0.2575 0.1000

0.1750 0.1500 0.1550 0.1800 0.2125

0.2700 0.1725 0.3225 0.1900 0.1900

0.2150 0.1150 0.1500 0.1575 0.2675

0.0825 0.1150 0.1650 0.1600 0.1550

0.1850 0.2100 0.1175 0.0900 0.1500

0.1350 0.0850 0.1150 0.2525 0.1175

0.1175 0.1625 0.2125 0.1625 0.1600

0.0850 0.0900 0.1900 0.1125 0.1000

compportionmin =

0.9150 0.9450 0.9075 0.9375 0.9025

0.8725 0.9375 0.9225 0.9100 0.9300

0.9425 0.9100 0.9425 0.8900 0.8800

0.9175 0.8900 0.9200 0.9075 0.8775

0.9050 0.9300 0.9025 0.9275 0.9300

0.9425 0.9475 0.9600 0.8725 0.8850

0.9000 0.9625 0.9425 0.9400 0.8625

0.8750 0.8800 0.9150 0.8750 0.9275

0.9475 0.9275 0.8975 0.9425 0.8925

0.9425 0.9650 0.9125 0.9375 0.9450

b =

0.8906

0.1628

1.3532

13.8878

-112.6596

0.4747

-0.4448

-0.7295

-8.0473

-29.0052

bint =

0.6945 1.0866

-0.0661 0.3917

-1.0179 3.7242

0.5079 27.2677

-251.3277 26.0086

0.1810 0.7683

-0.8108 -0.0788

-1.3604 -0.0985

-42.6568 26.5621

-73.5099 15.499

r =

1.8781

6.3390

2.8725

2.8057

2.3075

1.0232

-12.7196

-4.7664

2.3017

-2.0968

-3.8488

1.8297

2.4321

-2.3046

4.3217

-1.3885

-13.4638

0.0589

-4.3048

-4.7923

-8.1011

4.0012

2.1610

0.8874

11.8961

-3.2530

1.2716

6.4998

1.7072

4.9743

-5.5684

-6.6003

4.8102

3.5392

1.7132

-17.8626

5.1614

5.4095

-0.7361

-5.2968

4.5859

-1.4708

-5.3163

0.8089

2.0471

0.5375

8.1796

-1.1608

4.0211

3.6433

Elapsed time is 0.089159 seconds.



regruntime =

0.0893

iters =

3 1 6 1 6

7 6 2 7 2

2 7 3 7 7

6 7 5 6 6

7 2 3 2 6

1 2 1 7 6

7 6 1 2 6

7 5 7 6 2

1 2 6 3 6

1 1 4 2 1

runtimes =

14.3840 30.8414 92.1647 2.7186 74.4992

51.4318 15.8482 8.9061 104.4191 35.1903

9.2362 173.9378 103.2054 70.4848 68.1511

27.7166 130.3743 21.4923 22.8222 98.3767

35.8060 27.6420 27.3620 26.1096 22.6625

2.4966 9.9066 31.1915 23.2106 57.5957

183.6920 198.0421 2.5092 18.0708 150.6320

209.7941 15.0515 145.4330 47.0729 35.1700

31.1840 35.4844 49.5626 94.0298 18.8642

31.4004 4.3105 102.6399 35.5686 3.3836

Totregerr=

209.5564

Estobjerr = 260.4313

**49th experiment, Regression Training (test set) (b=0.75, min 60 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 1-7 iterations (100 for slsf with 30 sec lim); **Mini performance analysis is 200, but will run another 200 & compare with slsf est before updating best soln**

lcfobjs =

198.3178 184.2549 281.0762 180.0288 262.3764

211.2756 229.4472 235.4632 161.0214 198.8256

256.9729 151.3070 202.2166 234.5478 255.7481

230.5914 205.3001 207.0071 191.3095 215.8848

208.2766 185.2891 239.7250 217.6883 236.4046

234.2388 236.4756 225.0732 252.4537 240.1631

192.4237 285.2489 235.8711 215.5072 205.1390

236.8631 220.0612 230.9072 244.9301 256.0498

210.3374 221.4927 199.5744 222.1028 231.6085

220.3708 231.8761 232.8404 237.1039 191.3965

estobjs =

200.6623 184.3444 290.1882 187.5392 259.4874

220.9643 217.7006 237.6807 159.9189 203.7863

264.3564 163.8875 213.4336 235.2759 263.1729

235.6750 207.2611 213.3282 187.3595 230.6227

206.2740 187.0301 239.6130 240.8328 228.9691

225.9188 229.8788 224.3195 259.3259 230.5186

198.4734 288.2368 248.2128 213.1349 205.3385

229.3969 216.7893 232.6105 251.2361 258.7181

217.0562 229.9157 198.7895 227.1163 230.1515

227.8650 231.9255 232.6936 238.4495 197.1973

lcfsimobjs =

207.2108 209.5487 317.3764 217.4343 279.4715

228.4137 250.0122 253.2734 205.5707 209.3174

278.1950 198.3578 219.6664 236.3480 284.3209

248.6255 243.4841 228.9527 228.3889 266.1262

214.9355 200.7376 260.4486 243.7953 268.2595

263.0262 265.2249 255.4721 281.0589 253.2364

209.7210 296.5207 259.0508 223.8748 228.7445

265.8677 251.3108 250.4546 290.7029 273.0942

237.5101 262.9678 217.5229 236.7816 229.2571

249.3356 250.4291 249.7936 244.9354 236.1112

estrejs =

2.1465 3.5189 1.1332 2.7630 3.0509

3.1140 3.5654 0.8770 3.5057 3.1943

2.1911 5.4558 2.0089 1.0187 2.3697

0.6435 3.1696 2.2323 2.6759 2.6909

1.6102 3.3609 1.5867 2.1718 3.3063

3.4447 3.5628 3.6879 2.9568 0.9877

3.0725 1.0583 2.3791 3.8121 3.9846

2.1807 1.3550 1.6160 2.8185 1.4080

2.2981 2.0266 2.4301 1.9701 0.4878

2.0764 1.8038 3.5048 1.7737 3.0239

menusizes =

4.4000 4.1500 4.5500 4.5500 4.6500

4.2500 4.6500 4.9000 4.6000 4.2500

4.3500 4.0500 4.7000 4.8000 4.9500

4.6500 4.7500 4.4500 5.0000 4.7000

4.5500 4.1500 4.6500 4.6000 4.7500

4.8500 4.7000 4.7000 4.7000 4.7000

4.0000 4.7000 4.3500 3.5000 3.8000

4.6000 4.4500 4.4500 4.4500 4.4500

4.3000 4.8000 4.7000 4.6500 4.3000

4.9500 4.6500 4.2500 4.5000 4.6500

avepij =

0.3419 0.2481 0.3188 0.2644 0.3166

0.2350 0.2466 0.4495 0.2405 0.2527

0.2835 0.2375 0.3180 0.3154 0.3045

0.3397 0.2798 0.3069 0.3246 0.2787

0.3681 0.3429 0.2884 0.3081 0.3006

0.3143 0.2913 0.2977 0.2523 0.3543

0.2275 0.3187 0.2564 0.3732 0.2656

0.2935 0.2691 0.2995 0.3791 0.3720

0.3640 0.2821 0.2972 0.2744 0.3790

0.3465 0.2412 0.2845 0.3136 0.3600

pijover5 =

120 77 101 91 95

66 76 155 71 87

77 59 93 109 95

114 71 102 106 72

134 118 86 95 77

110 88 87 67 117

73 98 71 135 88

87 82 96 121 133

130 84 90 93 140

107 75 84 108 121

pijequal1 =

47 27 37 27 37

36 37 70 26 36

24 15 35 48 35

46 27 34 34 31

72 49 37 46 25

37 37 39 22 44

36 41 26 56 35

34 26 41 41 59

60 35 38 39 66

43 25 32 33 39

iters =

6 5 4 1 5

5 5 2 6 6

6 6 5 5 2

4 7 4 1 5

5 1 4 4 4

2 6 5 6 4

2 6 3 1 4

2 3 2 2 5

3 5 5 5 6

7 6 5 1 1

runtimes =

44.3246 138.4240 46.4033 31.9041 34.6988

22.9093 62.8925 26.2120 288.0710 172.4968

80.4486 169.2330 32.0527 58.6401 21.7997

37.9421 161.9561 76.3353 5.5499 118.7272

75.7481 30.9910 12.5906 78.6445 80.2127

50.7578 189.9500 99.4153 33.6982 59.4153

48.6786 119.2571 40.9150 31.6993 45.2150

65.0522 87.7162 41.9521 64.0801 118.3027

88.4361 102.9514 35.4814 79.1038 40.5551

67.8685 74.9416 125.6049 6.1421 32.4652

avelcfobj =

219.9668 215.0753 228.9754 215.6694 229.3597

compportion80 =

0.1100 0.1475 0.1700 0.1325 0.0725

0.0875 0.2150 0.1000 0.1850 0.1900

0.1225 0.1525 0.1500 0.1750 0.1225

0.1875 0.1650 0.1325 0.1700 0.1025

0.2225 0.1850 0.1875 0.1900 0.2150

0.1650 0.1350 0.1275 0.1650 0.0700

0.2175 0.1150 0.1575 0.0875 0.1975

0.1200 0.1175 0.1150 0.1500 0.1925

0.1875 0.0850 0.1925 0.1400 0.2100

0.1600 0.1025 0.2400 0.0875 0.1125

compportionmin =

0.9050 0.9500 0.8850 0.9400 0.8825

0.9100 0.9250 0.9100 0.9300 0.9150

0.8925 0.9050 0.8700 0.9075 0.9275

0.9300 0.8700 0.9150 0.9325 0.8850

0.9200 0.9550 0.8800 0.9325 0.8800

0.9200 0.8850 0.8975 0.8825 0.8900

0.9675 0.8900 0.9075 0.9525 0.9450

0.9450 0.9350 0.9425 0.9300 0.9025

0.9175 0.8975 0.9175 0.9025 0.9050

0.8350 0.8775 0.8975 0.9250 0.9350

R=

1.49552144713414

-2.10535962826771

0.430065358569550

0.108128493082035

-9.53290081408113

-2.28225063622239

-2.59265205903822

-9.31816105590045

4.48988378432730

2.75554387166676

-7.60326806130746

-13.8938004637034

4.52399499054064

-7.24767458924103

-0.674123916077235

-9.07134497483438

-0.0550794120512137

-8.87095878836144

5.61398549588458

-3.19800177632339

12.8377620640096

3.65659849938859

5.76240263792778

5.77108274858355

-4.81251408138630

-4.72099243324209

5.95450757393667

-0.278605491931671

-6.60259369298871

-7.02733638206146

8.65910281801808

-7.71079893157031

-4.18625747615511

2.94047623105368

16.5914079310447

6.27100559533523

-5.35110692088057

7.05005993499626

2.59590628269638

5.44182095063854

-3.28757040168961

-1.33860297830714

9.14010667905714

8.34178248106539

-12.1792652685059

-11.5688244608561

-4.12336623516273

3.17853785033537

-7.21869032354147

6.20581457917916

totregerr =

286.6676

estobjerr =

 272.2726

**50th experiment, Regression Training (test set 2) (b=0.75, min 60 %, f=[1,15]) perf each iter, timelim 30 sampsizes =** 10, 1-7 iterations (100 for slsf with 30 sec lim); **Mini performance analysis is 200, but will run another 200 & compare with slsf est before updating best soln**

lcfobjs =

195.0782 188.4686 160.2117 261.9495 198.2566

209.3873 192.8260 244.2178 216.5303 233.1604

227.6598 247.4392 179.2174 263.3072 223.4102

230.9091 233.5115 219.7586 221.0271 260.2277

201.1530 194.7728 254.1419 207.6825 168.4192

221.1557 217.3364 231.1615 221.3674 230.9897

183.6186 219.6517 241.0246 198.5311 179.0103

225.3410 297.6404 182.0541 265.2669 229.1125

218.3171 232.0313 298.5458 221.9426 196.9093

231.2664 257.5639 250.4947 217.5756 219.5456

estobjs =

189.7727 203.9569 167.9835 261.0063 199.3956

217.1802 219.1355 252.9211 218.6217 226.3113

220.2260 248.4524 176.9461 252.1004 225.6921

235.8339 229.4641 220.0844 220.5002 261.8220

202.7184 193.4975 246.9210 208.8244 171.1387

215.2651 206.4507 232.2207 239.4202 232.8883

177.5750 222.8362 242.5324 197.5949 164.6463

226.9498 299.5528 186.4904 261.2746 220.8650

218.5037 225.3027 299.2017 218.9432 201.8813

226.3788 253.7316 261.2080 218.8646 215.8395

lcfsimobjs =

210.0432 261.1993 183.7758 267.5603 221.7656

237.9863 233.9325 281.2879 256.1405 245.5365

258.5116 273.0436 204.6221 272.5110 233.2033

250.1072 279.2184 224.8884 240.6071 286.8237

227.0208 214.1156 277.9938 225.3750 215.9779

226.9199 252.2234 241.2704 263.9816 237.1566

239.6833 238.1612 259.2179 201.5735 216.5862

248.3428 319.1075 207.4499 269.9807 272.6224

233.9364 277.7706 314.8726 236.9641 209.4314

251.3929 263.8867 273.4377 251.4984 251.3222

estrejs =

2.8201 3.8830 4.7942 1.1284 3.0424

2.0976 2.8262 2.1413 2.1057 2.5843

2.8067 2.0450 5.1181 2.4331 1.7890

3.9578 4.2024 0.8851 1.4416 1.7466

3.1493 3.5778 3.6112 2.9565 5.6764

1.7974 4.7626 1.4920 3.1809 1.4690

6.3018 1.5092 1.6447 4.6677 2.1762

2.7983 1.3090 3.2131 1.1000 3.4463

1.8206 3.7331 1.2135 2.8480 2.9533

1.8621 0.8353 3.3378 3.4411 2.4808

menusizes =

4.7000 4.9500 3.8500 4.4000 4.2500

4.9000 4.7500 3.8500 4.9500 4.6000

4.6000 4.5000 4.6500 4.9000 4.4500

4.3500 4.9000 4.0500 4.4500 4.7000

3.7000 4.2000 4.4500 4.6000 4.1000

4.5500 4.4000 4.6500 4.8000 4.4500

4.3500 4.5000 4.7500 3.6500 4.7500

3.9500 5.0000 4.1000 4.9000 4.9000

4.5500 4.7500 4.8500 4.6500 4.1000

4.7000 4.9000 4.7500 4.4000 4.7000

avepij =

0.3677 0.2653 0.2585 0.3856 0.2152

0.2799 0.3238 0.3671 0.3536 0.2916

0.2768 0.2268 0.2616 0.2983 0.3334

0.3127 0.2383 0.3273 0.3365 0.3246

0.2162 0.2838 0.2858 0.2739 0.2575

0.3828 0.2828 0.3721 0.2650 0.3492

0.2833 0.3828 0.3711 0.2823 0.3050

0.3434 0.4229 0.2545 0.4052 0.2807

0.3015 0.2884 0.3916 0.2566 0.2728

0.2968 0.3876 0.3573 0.2498 0.2902

pijover5 =

128 62 75 142 68

87 113 121 114 99

75 66 74 93 112

97 68 115 115 97

63 97 82 85 83

132 85 124 70 116

89 121 118 93 100

119 141 72 143 82

99 81 145 75 102

99 136 121 74 89

pijequal1 =

56 22 24 49 21

39 39 37 43 40

24 23 25 47 43

45 27 50 45 41

33 38 30 24 28

63 34 53 27 47

31 58 46 36 37

45 48 26 57 37

41 29 50 30 57

41 52 56 32 30

iters =

3 4 1 3 5

1 2 1 1 5

5 3 4 5 5

4 2 7 3 5

5 4 3 5 1

5 5 2 4 7

1 2 3 7 2

1 6 7 5 6

5 2 3 6 7

2 4 5 4 5

runtimes =

16.0925 115.8719 30.9921 27.1388 74.4243

3.3358 53.2361 31.5468 15.8077 47.8262

43.9513 40.2617 78.1786 67.4555 56.6989

13.5267 8.8370 59.6183 37.0547 58.9310

20.2219 118.3558 17.0500 26.6897 33.7458

75.6444 143.7381 6.5873 84.9606 134.5756

34.5536 50.9483 17.2157 75.3940 10.2975

31.1592 26.2261 145.3483 48.2838 110.0635

106.8875 63.5210 20.4719 88.5253 143.3733

41.2145 14.5966 67.5431 16.1598 28.9044

avelcfobj =

214.3886 228.1242 226.0828 229.5180 213.9041

compportion80 =

0.1375 0.1125 0.1250 0.1375 0.1275

0.1850 0.0925 0.1225 0.1475 0.2475

0.0950 0.0750 0.0825 0.2600 0.0975

0.1125 0.1025 0.2350 0.2125 0.1825

0.2050 0.1950 0.1525 0.1150 0.0350

0.2400 0.1150 0.1400 0.1350 0.1050

0.1150 0.1350 0.1625 0.2050 0.0750

0.0375 0.0975 0.1350 0.1775 0.1125

0.2025 0.1475 0.0950 0.1400 0.2700

0.1825 0.1075 0.2000 0.1525 0.1375

compportionmin =

0.9100 0.9125 0.9700 0.9025 0.9325

0.9675 0.9325 0.9600 0.9425 0.9175

0.8850 0.9025 0.9300 0.8950 0.8775

0.9550 0.9400 0.9075 0.9325 0.8975

0.9200 0.9450 0.9050 0.9000 0.9800

0.9075 0.8975 0.9275 0.9050 0.8875

0.9550 0.9025 0.8825 0.9275 0.9025

0.9675 0.8650 0.8800 0.8825 0.8825

0.9050 0.9425 0.8875 0.9225 0.9575

0.9300 0.9150 0.9150 0.9275 0.8875

totregerr =

281.3459

estobjerr =

255.9346

**51st experiment, Strawman Test (b=0.75, min 60 %, f=[1,15]) perf each iter, sampsizes =** 10, (100 for slsf with 30 sec lim); **We do 4 tests, slsf, lcf with the same menu as slsf, a menu with 80% comp and 5 random items per driver, and a menu with 80% comp and the 5 items with highest pij—thankfully we show that the simple solns can’t compare to our optimized ones**

slsfobjs =

233.9238 207.0846 201.3443 198.3281 188.0457

lcfobjs =

230.9994 234.7602 216.9971 214.0954 189.6417

randobjs =

142.4974 126.6974 127.7128 95.3881 92.5303

top5objs =

220.4297 205.7071 110.5995 -13.3915 -46.9511

**52nd experiment, Lower SLSF Pay (b=0.75, min 60 %, f=[1,15]) perf each iter, slsf comp is fixed at 60% doing the second test w/ 200, sampsizes =** 10, (100 for slsf with 30 sec lim);

returnedobjs =

280.7983 213.1669 220.7718 215.5485 208.5369

lcfobjs =

279.2155 207.8091 226.8480 205.7927 210.9626

282.7957 203.8601 230.4067 213.0517 209.2391

272.6326 195.8226 221.3534 209.7204 208.5369

278.7082 208.0916 229.2552 215.5485 218.1768

281.7029 202.4471 220.7718 210.4902 217.4967

273.6977 213.1669 226.8977 195.9787 213.6805

280.7983 210.9400 220.7135 189.0676 216.7226

slsfobjs =

271.2555 192.2676 199.7322 201.4887 204.7891

lcfrejs =

1.3695 2.7620 3.4201 4.8110 3.1238

1.2695 2.1058 2.4745 3.4669 2.6060

0.6564 1.6323 2.1567 4.7130 2.8028

1.6925 2.3923 2.9837 4.2176 3.1880

1.3953 1.9495 2.8436 4.3636 2.8165

1.3318 2.2226 2.2940 3.9833 3.6353

1.3390 2.8452 3.1260 4.4625 3.1521

slsfrejs =

3.4521 5.9321 5.8608 6.6435 5.8133

menusizes =

4.3000 4.1000 4.6500 4.2000 4.3500

4.7000 4.2000 4.9500 4.6500 4.5500

4.9000 4.5000 4.8500 3.8500 4.4000

4.7500 4.4500 4.9000 4.7000 4.2500

4.3500 4.2000 4.6000 4.1500 4.3500

4.4000 4.3000 4.7500 4.2500 4.3000

4.6500 4.4500 4.6000 4.5500 4.1500

avelcfobj =

278.5073 206.0196 225.1780 205.6643 213.5450

aveslsfobj =

213.9066

menudiffs =

64 58 64 63 54

54 54 74 66 51

51 51 75 57 51

54 45 58 61 56

43 40 65 64 67

41 43 53 60 47

cumcompdiffs =

86 82 93 84 87

121 108 126 117 116

137 128 151 129 135

149 137 161 142 143

160 144 168 149 152

165 147 178 159 161

170 154 187 165 168

bestobjest =

284.0408 219.3925 233.4598 209.1633 221.8570

guessbestiter =

7 6 5 4 3

estobjs =

272.1798 187.0205 211.4588 206.4196 210.9306

274.1906 210.0518 227.2551 211.2281 220.5615

278.6079 197.8608 228.8584 217.2356 218.2947

260.8158 200.2084 223.2446 208.8633 216.3625

276.7832 205.5281 223.6838 220.0120 218.5927

284.5341 202.1925 230.7419 206.5758 219.7623

278.8646 215.7796 229.7154 193.5415 219.2488

280.3445 210.5666 231.3564 203.7941 207.9249

testedtwice =

1 1 1 1 1

0 0 0 1 1

0 0 0 0 1

0 0 0 1 0

1 0 1 0 0

1 1 0 0 0

1 0 0 0 0

failedsecond =

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

compportion80 =

0.0725 0.0300 0.0425 0.0725 0.1550

0.1100 0.0625 0.0650 0.1025 0.1800

0.1225 0.0850 0.0725 0.1150 0.2050

0.1225 0.0975 0.0825 0.1275 0.2175

0.1375 0.1175 0.0825 0.1350 0.2225

0.1525 0.1075 0.0875 0.1500 0.2400

0.1550 0.1125 0.0900 0.1575 0.2500

compportionmin =

0.9500 0.9550 0.9275 0.9125 0.9450

0.9325 0.9425 0.9075 0.8950 0.9275

0.9200 0.9450 0.9075 0.8925 0.9275

0.9150 0.9400 0.8975 0.8900 0.9250

0.9175 0.9375 0.8925 0.8925 0.9250

0.9175 0.9400 0.9000 0.8950 0.9200

0.9200 0.9450 0.8850 0.8950 0.9100



**53rd experiment, same as 52(b=0.75, min 60 %, f=[1,15]) perf each iter, slsf comp is fixed at 60% doing the second test w/ 200, sampsizes =** 10, (100 for slsf with 30 sec lim);

returnedobjs =

225.9231 237.2213 259.5622 237.5751 234.7415

lcfobjs =

225.9231 237.2213 259.5622 235.4202 225.2150

225.8573 235.2970 262.3897 239.8291 222.2783

236.7466 241.1397 248.4090 237.5751 228.4866

223.0748 240.8092 258.2033 232.3842 222.0972

230.5183 236.1414 255.1480 229.9720 225.8429

221.5027 231.1500 247.3190 246.0922 229.9368

235.0780 240.1876 258.1352 232.3564 234.7415

slsfobjs =

222.4298 213.1303 256.9436 228.4144 197.2196

lcfrejs =

3.0531 2.5842 2.7470 2.1730 4.1875

2.7271 2.2497 2.6899 1.4324 4.4350

2.3907 2.6303 1.5412 1.8103 3.2917

2.2280 2.3137 2.3242 2.1220 4.0540

3.0695 2.2566 2.6074 1.6925 4.0225

2.2811 2.2410 2.0831 1.8522 3.1840

3.0334 2.2110 1.7582 2.2148 2.8935

slsfrejs =

5.3091 4.9912 4.0935 4.8338 7.3551

menusizes =

4.8000 4.0500 4.5000 4.7500 3.7000

4.7500 4.5500 4.6000 4.8000 4.0000

4.9500 4.3500 4.8000 4.8000 4.2000

4.9000 4.1500 4.5500 4.9500 3.9500

4.7000 4.2500 4.8500 4.8500 4.1500

4.7500 4.1000 4.4000 4.7000 4.3500

4.8000 4.1000 4.4000 4.7500 4.3000

avelcfobj =

228.3858 237.4209 255.5952 236.2327 226.9426

aveslsfobj =

223.6275

menudiffs =

59 52 40 57 54

64 68 46 66 70

63 62 37 57 55

56 48 52 52 58

53 51 37 47 60

55 48 38 53 71

cumcompdiffs =

96 81 90 95 74

123 109 111 122 104

141 132 124 144 133

156 143 130 157 141

165 153 145 167 152

169 159 147 176 163

176 163 150 186 168

bestobjest =

242.5865 251.4973 264.0078 251.0755 243.9507

guessbestiter =

1 1 1 3 7

estobjs =

212.6035 203.9182 254.4810 231.0029 198.9499

226.4141 235.3680 261.2914 243.0453 231.8623

230.1826 244.0450 263.2485 239.3555 230.8328

235.8157 241.8440 251.8150 250.7100 214.5755

223.7058 236.9605 262.1069 230.9418 235.3262

225.5277 234.4423 261.1664 224.6364 229.7774

213.4504 223.7356 248.9841 239.7629 221.9254

220.2058 246.6387 255.9989 238.6226 234.9157

testedtwice =

1 1 1 1 1

0 0 0 1 0

0 0 0 1 0

0 0 0 0 1

0 0 0 0 1

0 0 0 0 1

0 0 0 0 1

failedsecond =

0 0 0 1 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

compportion80 =

0.0950 0.0475 0.1125 0.1100 0.0275

0.1050 0.0600 0.1375 0.1275 0.0575

0.1200 0.0675 0.1600 0.1475 0.0825

0.1375 0.0725 0.1625 0.1600 0.0875

0.1400 0.0875 0.1775 0.1750 0.1100

0.1550 0.0950 0.1800 0.1825 0.1100

0.1550 0.1000 0.1900 0.1825 0.1075

compportionmin =

0.9225 0.9550 0.9225 0.9200 0.9500

0.9125 0.9375 0.9275 0.9025 0.9350

0.9125 0.9350 0.9225 0.8925 0.9275

0.8975 0.9225 0.9225 0.8775 0.9200

0.8950 0.9200 0.9100 0.8775 0.9125

0.8975 0.9200 0.9150 0.8825 0.9150

 0.8950 0.9150 0.9100 0.8750 0.9050

**54th experiment, Cumulative Perf (b=0.75, min 60 %, f=[1,15]) =** 10, (100 for slsf with 30 sec lim);

lcfiterbetter =

0.8000

lcfiterworse =

0.1667

lcfiterave =

221.2038

slsfave =

207.1278

avepercbetter =

0.0680

Percbetter=

0.0366 0 0.1019 0.1434 0.1086

-0.0185 -0.0238 0.1318 0.0812 0.1048

-0.0146 0.0513 -0.0078 0.0614 -0.0501

0.1311 0.0946 0.0219 0.0713 0.1304

0.0861 0.0554 0.1999 0.0883 0.0867

0.1081 0.0875 0.0671 0.0299 0.0785

returnedobjs =

191.0961 211.5027 213.8622 238.6182 211.3669

257.3542 215.4078 253.7515 243.4235 257.3508

196.0928 207.7931 181.6635 213.3051 203.4156

218.0314 251.2480 206.8548 224.2629 224.0955

203.5314 193.3808 252.5879 225.0061 253.0146

228.1419 238.7485 239.6244 177.5570 204.0251

slsfobjs =

184.3485 211.5027 194.0827 208.6939 190.6598

262.2143 220.6555 224.2025 225.1341 232.9324

199.0019 197.6566 183.0839 200.9698 214.1505

192.7529 229.5271 202.4266 209.3312 198.2459

187.3998 183.2243 210.5015 206.7530 232.8229

205.8775 219.5393 224.5603 172.4053 189.1773

menusizes =

4.6000 4.3500 4.1000 4.6000 4.2000

4.6500 4.7000 4.2500 4.8500 4.4000

4.7500 4.5500 4.1500 4.5000 4.4500

4.7500 4.1500 4.5000 4.5000 3.8000

4.5000 4.4500 4.5000 4.4500 4.7000

4.5000 4.7000 4.9000 4.3000 4.4500

avepij =

0.2119 0.2650 0.3688 0.4090 0.3054

0.3125 0.2681 0.3506 0.2744 0.3695

0.2493 0.2487 0.2470 0.4023 0.2017

0.3266 0.3564 0.2748 0.3628 0.3686

0.2729 0.3023 0.5060 0.3237 0.3520

0.2586 0.3545 0.3591 0.2701 0.2634

pijover5 =

58 82 130 136 101

88 63 117 82 144

72 82 66 137 60

113 143 77 122 130

73 106 205 108 114

78 104 125 97 76

pijequal1 =

22 24 62 46 51

38 20 43 34 52

27 22 14 74 19

45 58 32 56 73

26 37 83 46 49

30 46 51 33 33

runtimes =

149.8093 141.3259 198.9609 294.4297 130.3718

250.7932 270.2667 132.1921 217.1105 330.7133

200.9383 194.1855 302.3121 197.9876 247.0464

160.5844 194.7423 265.1617 178.5055 133.4076

322.9715 254.8341 128.1659 130.9381 249.0064

215.2976 193.6216 170.3727 207.4201 290.7491

bestobjest =

201.6887 213.7766 215.9798 244.7180 214.8325

265.7646 244.3909 263.2038 246.4345 267.7430

225.1279 209.2197 189.6882 222.4742 217.6537

222.9035 254.9654 209.4716 227.8230 224.3730

209.1705 199.1946 252.0728 231.2822 263.2283

233.6859 245.7926 244.3658 185.4795 206.9436

guessbestiter =

3 0 4 7 2

7 2 4 7 4

1 5 6 6 6

6 3 3 7 7

6 4 4 3 4

3 5 2 4 7

compportion80 =

0.2200 0.1725 0.2525 0.1175 0.1700

0.1950 0.1200 0.1575 0.1400 0.1125

0.1975 0.1475 0.1100 0.2650 0.1500

0.3125 0.2400 0.1500 0.1600 0.2400

0.1825 0.2075 0.2025 0.2100 0.1550

0.1225 0.1125 0.1475 0.1725 0.2875

compportionmin =

0.9250 0.8575 0.8975 0.8800 0.9150

0.8525 0.8550 0.8775 0.8875 0.9000

0.8750 0.9075 0.9250 0.9225 0.9225

0.9025 0.9450 0.8625 0.9225 0.8775

0.8675 0.9400 0.9050 0.9225 0.8650

0.9475 0.8600 0.8850 0.9250 0.9075

**55th experiment, Cumulative Perf (b=0.75, min 60 %, f=[1,15]) doing the second test w/ 200, sampsizes =** 10, (100 for slsf with 30 sec lim); same as 54

lcfiterbetter =

0.9333

lcfiterworse =

0.0667

lcfiterave =

217.7147

slsfave =

201.9786

avepercbetter =

0.0796

Percbetter=

0.0083 0.0325 0.0848 0.0649 0.2189

0.0865 0.0674 0.0240 0.0881 0.1119

-0.0116 0.0913 0.0943 0.1009 0.1520

0.0814 -0.0020 0.1796 0.0777 0.0156

0.1187 0.0975 0.0018 0.1387 0.0079

0.1834 0.0534 0.1041 0.0107 0.1062

returnedobjs =

211.9440 229.5304 224.1289 245.7901 212.9811

211.5741 249.0127 199.9537 211.7728 220.3341

211.5588 202.0444 230.6154 204.9523 226.7714

260.2045 212.2215 235.2209 199.6002 206.2315

220.5654 186.4624 203.9558 232.2192 204.5381

217.5140 216.1894 200.9506 188.2354 254.3691

slsfobjs =

210.1915 222.2983 206.6069 230.8143 174.7292

194.7335 233.2986 195.2593 194.6259 198.1685

214.0391 185.1451 210.7462 186.1716 196.8475

240.6124 212.6375 199.4040 185.2039 203.0631

197.1661 169.9006 203.5880 203.9395 202.9408

183.8074 205.2319 182.0039 186.2430 229.9389

menusizes =

4.3000 4.3500 4.7500 4.3500 4.3000

4.6500 4.7000 4.3500 4.5500 4.6500

4.6000 4.5500 4.7500 4.4000 4.6000

4.6000 4.2000 4.8000 4.2500 4.8500

4.3500 4.5000 4.4000 4.2500 4.1500

4.4500 4.6500 4.4500 4.4000 4.5000

avepij =

0.2326 0.3768 0.2656 0.2730 0.3078

0.2650 0.2767 0.2736 0.3558 0.3199

0.3229 0.2590 0.3035 0.2423 0.3226

0.3525 0.2835 0.4129 0.2629 0.2348

0.3376 0.3849 0.2669 0.3118 0.2753

0.3790 0.2579 0.2993 0.2899 0.3913

pijover5 =

68 135 78 89 98

85 88 82 118 105

83 79 96 67 105

108 91 142 77 76

116 149 87 95 90

130 60 99 92 126

pijequal1 =

29 61 22 37 40

30 32 37 54 35

30 31 31 22 39

60 33 69 35 23

43 77 33 30 38

54 21 41 45 46

runtimes =

368.1564 221.5981 302.7906 284.4792 172.8470

190.6321 196.3287 200.6742 276.1999 281.3019

348.7160 338.9444 232.3310 291.8415 299.9777

325.7496 252.2806 186.4884 134.5386 258.0134

198.4174 199.5228 293.2266 313.9799 306.9954

247.5042 279.2830 151.0579 256.9331 184.9895

bestobjest =

225.6214 236.0884 234.7996 249.0310 216.9722

222.2885 256.0284 211.2731 220.1420 227.9434

227.0254 209.3207 236.8584 218.8862 237.2206

270.5576 224.2968 238.4627 209.7958 214.2031

228.9780 187.1061 215.3074 230.1755 211.3227

225.4993 239.1498 202.7124 194.6454 271.7854

guessbestiter =

5 2 6 2 7

6 4 7 5 7

1 7 5 3 5

6 6 6 4 4

5 6 7 4 4

7 3 5 3 4

estslsfobjs =

209.9736 222.2791 201.9510 234.6020 166.4677

193.7788 234.5570 197.0851 194.7835 199.7192

198.0807 187.2818 211.5764 180.5205 197.5523

240.9970 211.0932 197.9713 185.9812 203.6160

200.0449 170.7109 205.1277 208.2228 201.9099

181.3363 203.4806 190.5462 189.5264 231.1711

compportion80 =

0.1475 0.3000 0.1250 0.2300 0.2150

0.1375 0.1550 0.1575 0.2300 0.1825

0.1300 0.1425 0.0750 0.1475 0.1775

0.2000 0.1600 0.2125 0.1275 0.1025

0.1625 0.2400 0.1300 0.1000 0.1375

0.1150 0.2100 0.1850 0.2275 0.1400

compportionmin =

0.9200 0.9325 0.8825 0.8975 0.9100

0.9175 0.9125 0.9075 0.9050 0.9075

0.8500 0.8975 0.8825 0.9075 0.8925

0.8725 0.9075 0.8900 0.9000 0.8950

0.8525 0.9100 0.8975 0.9100 0.8975

0.8775 0.8825 0.9275 0.9100 0.8925

**56th experiment, Cumulative Perf (b=0.75, min 60 %, f=[1,15]) perf each iter, doing the second test w/ 200, sampsizes =** 10, (100 for slsf with 30 sec lim); Instead of 2nd test needing to be better than slsf est, ave of 2nd and 1st test becomes est for that soln and it needs to be better than the best one.—clearly not great

lcfiterbetter =

0.6667

lcfiterworse =

0.3000

lcfiterave =

212.3146

slsfave =

207.0475

avepercbetter =

0.0254

amtpercbetter =

0.0256

percbetter =

0.0418 0.0141 -0.0266 0.0458 0

0.0048 0.0260 0.0308 0.1477 -0.0404

0.0954 -0.0082 0.0773 0.0643 0.0114

-0.0085 0.0194 0.0014 0.0690 -0.0119

0.0560 -0.0303 0.0557 -0.0097 -0.0057

-0.0023 0.0506 0.0392 0.0581 0.0033

returnedobjs =

197.5330 206.7210 190.2641 246.4769 207.6847

198.9303 244.5521 182.5922 192.0290 207.2144

202.3479 154.1603 257.6912 236.0622 172.3531

221.1631 221.5260 211.4859 242.0150 235.8990

254.5257 212.5582 233.0294 219.2661 174.2674

229.4246 201.4544 185.6344 251.5787 178.9992

slsfobjs =

189.6036 203.8454 195.4545 235.6783 207.6847

197.9711 238.3565 177.1403 167.3178 215.9475

184.7302 155.4404 239.1988 221.8094 170.4031

223.0582 217.3058 211.1900 226.3932 238.7425

241.0300 219.2063 220.7249 221.4103 175.2692

229.9563 191.7438 178.6340 237.7733 178.4047

menusizes =

4.3500 4.5500 4.7000 4.3000 4.5000

4.1500 4.7000 4.4500 4.6500 4.6000

4.2500 4.1000 4.9000 4.7000 4.2500

4.8000 4.7000 4.5500 4.4500 4.8500

4.9000 4.7500 4.7500 4.6000 4.5000

4.6000 4.3500 4.4500 4.8500 4.5000

avepij =

0.2404 0.2409 0.3643 0.3385 0.2886

0.2577 0.3559 0.2723 0.2852 0.3690

0.3884 0.2514 0.3358 0.3278 0.2329

0.2927 0.3155 0.3109 0.3020 0.3540

0.3446 0.2900 0.3689 0.2458 0.2433

0.2967 0.3092 0.3033 0.4415 0.2564

pijover5 =

79 80 115 111 82

77 118 82 84 132

147 68 105 111 75

84 101 96 96 121

124 82 131 81 52

84 97 106 157 70

pijequal1 =

31 29 60 53 30

40 43 26 42 54

61 23 35 53 40

35 39 36 40 54

55 41 69 26 30

39 45 49 69 24

runtimes =

217.5707 318.6075 255.7981 245.6130 321.3211

149.9917 158.5109 332.8776 585.7262 502.0452

566.8339 588.2373 404.4716 480.3444 447.6991

278.8134 246.3327 226.1840 218.4676 175.3580

140.7729 296.3492 236.9469 199.5835 310.5066

315.9559 232.5280 154.4263 255.9236 240.7536

bestobjest =

382.2041 428.6432 420.0675 490.2794 213.5243

398.7003 499.7858 365.7476 379.2947 431.5712

395.8458 327.7697 518.6658 462.3907 343.0290

453.3307 439.9807 441.9765 491.3248 476.8141

515.6685 441.4772 458.5372 433.3206 368.6355

471.3678 413.8656 380.6357 495.6708 351.5057

guessbestiter =

1 2 1 2 0

1 1 1 2 1

1 1 1 3 2

2 1 2 2 1

1 1 2 1 3

5 1 1 1 2

estslsfobjs =

190.0672 206.7866 196.5867 235.3384 213.5243

202.0767 241.5456 171.0391 168.0632 213.8272

186.3469 154.5676 241.6723 223.1322 172.6932

225.9703 218.8776 213.4543 227.0988 240.6426

240.5003 220.1844 223.2526 217.5933 176.2873

231.7017 192.2345 176.6081 233.8059 179.1893

compportion80 =

0.1450 0.1550 0.1800 0.1650 0.2150

0.1375 0.2225 0.2175 0.1875 0.2350

0.2275 0.1650 0.1100 0.1850 0.1650

0.1425 0.2200 0.1300 0.1250 0.1775

0.2125 0.1525 0.2500 0.1300 0.1825

0.1500 0.1075 0.2275 0.1850 0.1250

compportionmin =

0.9050 0.9425 0.8950 0.9125 0.8925

0.9375 0.8975 0.9200 0.8975 0.8975

0.9375 0.9125 0.8775 0.8950 0.9275

0.8750 0.8775 0.8500 0.8650 0.9000

0.9175 0.8800 0.9075 0.8925 0.9225

0.8950 0.8925 0.9000 0.8525 0.9200

**57th experiment, Cumulative Perf (b=0.75, min 60 %, f=[1,15]) perf each iter, doing the second test w/ 200, sampsizes =** 10, (100 for slsf with 30 sec lim); Instead of 2nd test needing to be better than slsf est, 2nd test needs to be better than best est (slsf or 2nd test from earlier iter)—seems pretty good

lcfiterbetter =

0.9333

lcfiterworse =

0

lcfiterave =

228.1349

slsfave =

211.0358

avepercbetter =

0.0810

percbetter =

0.1645 0.1587 0.0590 0.0631 0.1329

0.1133 0.0335 0.1765 0.0696 0.0626

0.0975 0.0313 0.0495 0.0220 0.1316

0.0665 0.0177 0.1284 0 0.0306

0.1345 0.0679 0.1157 0.1100 0.0182

0.0906 0 0.1670 0.0869 0.0298

returnedobjs =

285.3994 213.0992 241.1562 216.7078 260.9610

184.8838 237.6391 231.4453 251.8862 226.6234

286.6000 193.8730 234.1447 206.2150 210.9528

224.1548 212.9270 242.6813 207.7155 223.5310

214.7195 196.5671 256.6408 259.6542 211.3622

193.1412 207.3760 251.2766 252.0301 208.6820

slsfobjs =

245.0908 183.9139 227.7251 203.8444 230.3422

166.0705 229.9254 196.7220 235.4854 213.2821

261.1306 187.9918 223.0975 201.7719 186.4253

210.1822 209.2260 215.0577 207.7155 216.8929

189.2614 184.0774 230.0231 233.9138 207.5835

177.1014 207.3760 215.3149 231.8888 202.6407

menusizes =

4.8500 4.5000 4.6500 4.7000 4.6000

3.9000 4.9000 3.9000 4.6000 4.3500

4.4500 4.6500 4.2500 4.3000 3.6500

4.6500 4.6000 5.0000 4.5000 4.9000

4.4000 4.2000 4.6500 4.3500 4.4500

4.5500 4.4500 3.6000 4.4500 3.8000

avepij =

0.4605 0.3182 0.3019 0.2627 0.4311

0.2452 0.3412 0.3030 0.3091 0.3324

0.3219 0.3099 0.2969 0.2805 0.3526

0.2984 0.2645 0.3473 0.2415 0.3315

0.2992 0.2415 0.3919 0.3883 0.2819

0.3112 0.2519 0.3205 0.3069 0.2891

pijover5 =

163 109 95 76 153

78 102 95 109 110

98 91 86 87 138

101 72 116 49 110

100 73 132 134 84

95 65 99 101 94

pijequal1 =

82 55 34 25 61

32 46 33 39 48

46 33 26 41 68

47 40 53 24 40

37 24 54 60 36

37 20 47 48 32

runtimes =

194.4516 200.5439 309.8627 241.8855 330.4950

199.4995 267.5407 198.2737 161.4999 151.8401

290.7272 260.4611 342.5405 153.2522 191.3572

264.8601 311.0560 395.5978 382.1708 264.2303

343.7770 377.4929 269.3486 270.1352 393.2475

368.0965 377.9036 312.9204 367.3752 352.3630

bestobjest =

290.7597 219.3211 250.8227 225.8106 261.2978

187.6847 250.9534 234.2945 252.2643 236.4186

278.5143 203.0088 247.0065 216.5522 210.8986

226.6049 210.4851 255.0920 207.3935 232.5329

226.0004 204.5506 261.5488 265.2921 210.6565

202.9966 212.3521 249.8560 254.4302 213.1465

guessbestiter =

2 2 2 3 4

5 3 7 1 4

5 3 4 2 3

4 6 6 0 2

3 7 3 2 3

7 0 2 5 4

estslsfobjs =

245.0169 189.7687 225.9413 198.0628 230.3530

168.6759 228.2052 189.6413 236.0715 211.3986

261.1622 188.7826 225.2562 201.2357 185.4186

209.5273 204.3209 215.7073 207.3935 215.6759

189.4145 185.5755 227.4509 234.3040 209.4720

178.4507 212.3521 206.8225 232.5552 203.9864

compportion80 =

0.1675 0.1900 0.1525 0.1825 0.0900

0.1825 0.1325 0.1450 0.2075 0.2150

0.0750 0.1550 0.1375 0.2000 0.1800

0.2500 0.1325 0.2300 0.2025 0.2175

0.2100 0.1400 0.1300 0.1925 0.1125

0.2125 0.1950 0.1050 0.2325 0.1625

compportionmin =

0.8650 0.9400 0.8850 0.8900 0.8450

0.9425 0.8800 0.8750 0.9500 0.8875

0.8375 0.8700 0.8925 0.9250 0.9225

0.9000 0.9125 0.8600 0.8925 0.8950

0.8850 0.9100 0.8700 0.8850 0.9075

0.8825 0.8975 0.8950 0.9050 0.9100

**58th experiment, Cumulative Perf Same as 57(b=0.75, min 60 %, f=[1,15]) perf each iter, doing the second test w/ 200, sampsizes =** 10, (100 for slsf with 30 sec lim); Instead of 2nd test needing to be better than slsf est, 2nd test needs to be better than best est (slsf or 2nd test from earlier iter)—same experiment but this time it wasn’t as good as 57

lcfiterbetter =

0.8000

lcfiterworse =

0.0333

lcfiterave =

219.9707

slsfave =

208.5325

avepercbetter =

0.0567

percbetter =

0.0398 0.0695 0.0147 0.0620 0

0.0468 0.1607 0.1496 0.0153 0.0890

0.0076 0.0559 -0.0206 0.1014 0.0331

0 0.0141 0.1294 0.0683 0.0945

0 0.0767 0 0.1085 0.0620

0.1335 0 0.0679 0.0283 0.0939

returnedobjs =

209.3806 242.8605 245.8984 219.8295 204.5056

210.3006 245.1374 238.4573 233.6749 192.7192

221.3000 221.3104 234.5174 211.6141 229.0069

227.2991 205.2296 237.8935 234.5782 234.2856

220.1894 225.9806 222.1987 235.6585 193.6427

183.8834 201.0236 208.5567 201.1186 207.0684

slsfobjs =

201.3624 227.0698 242.3354 207.0048 204.5056

200.8979 211.1984 207.4311 230.1591 176.9645

219.6394 209.6007 239.4555 192.1235 221.6791

227.2991 202.3683 210.6373 219.5826 214.0586

220.1894 209.8759 222.1987 212.5856 182.3297

162.2287 201.0236 195.2898 195.5924 189.2877

menusizes =

4.3500 4.3000 4.2500 4.6000 4.6000

4.6500 4.3000 4.9500 4.2000 4.6500

4.7500 4.5500 4.4500 4.4000 4.0500

4.4000 4.7000 4.6000 4.5500 4.9000

4.4000 4.8500 4.8000 4.6000 4.4500

4.1500 4.5500 4.4000 4.4500 4.8500

avepij =

0.2593 0.3716 0.3303 0.3551 0.2810

0.2866 0.3841 0.3652 0.2218 0.2418

0.2529 0.2580 0.2660 0.3454 0.3284

0.2507 0.3059 0.3870 0.3717 0.3042

0.2439 0.2866 0.2476 0.3429 0.2849

0.2555 0.2759 0.2351 0.2768 0.3178

pijover5 =

76 138 104 115 88

81 131 127 47 65

79 80 81 121 122

78 89 125 141 111

70 75 59 107 88

84 92 66 83 96

pijequal1 =

33 67 48 62 42

31 61 55 19 24

35 28 33 52 60

30 31 70 66 54

23 27 22 49 29

28 49 26 37 31

runtimes =

193.4084 242.7608 362.3039 375.8213 404.6440

385.7422 308.6642 276.7666 307.6261 270.7525

185.9255 337.5387 342.1256 264.3980 337.9692

187.2398 347.4249 347.0014 156.3891 155.3591

284.8702 155.0584 321.6800 336.7886 260.8614

372.9012 258.3341 292.1596 331.0457 211.1498

bestobjest =

212.5983 246.3276 255.0585 228.4896 209.8029

202.2608 247.5008 243.9433 239.4208 193.9199

230.7056 227.1458 241.7413 211.9763 244.5142

229.9558 212.2899 239.9477 238.2140 236.8733

220.5333 236.6584 227.7800 238.6740 201.4510

188.4146 205.8312 208.4901 206.0592 207.4449

guessbestiter =

3 5 5 3 0

3 2 3 7 6

2 2 2 2 2

0 2 4 3 7

0 5 0 5 2

6 0 6 3 4

estslsfobjs =

198.5277 219.2434 247.0271 209.3680 209.8029

193.4203 211.4944 208.7668 231.7631 183.8629

219.1969 207.7194 240.4977 194.7467 219.8308

229.9558 202.2584 210.3247 222.2684 213.7095

220.5333 211.5507 227.7800 215.6866 183.1150

167.7045 205.8312 197.2320 197.4763 181.6991

compportion80 =

0.1325 0.2325 0.1975 0.2925 0.2525

0.1525 0.1250 0.1600 0.0875 0.1775

0.1600 0.1325 0.1925 0.2400 0.2600

0.1625 0.1100 0.1625 0.2325 0.2525

0.2525 0.1800 0.0925 0.1950 0.1475

0.1425 0.1750 0.2650 0.1250 0.1750

compportionmin =

0.9075 0.9300 0.8900 0.9175 0.8875

0.8650 0.9075 0.8850 0.8700 0.9375

0.9275 0.8750 0.9200 0.9000 0.9300

0.8875 0.8725 0.8975 0.9075 0.9375

0.9125 0.8550 0.8500 0.9225 0.9000

0.9300 0.9050 0.9325 0.8825 0.8700

**59th experiment, Fixed Scenarios** b=1**, min 60 %, f=[1,15]) –took like 40 mins, the lcf solver takes on the order of 10 seconds? 15 fixed scens, 20 reg**

lcfobjs =

158.6475 136.1409 169.6556 231.4405 194.8923

slsfobjs =

176.8379 197.0724 202.6977 211.7280 210.4980

lcfrejs =

6.4944 6.6483 6.1670 2.3003 4.8841

slsfrejs =

3.3266 4.9721 2.3402 0.7459 3.6881

menusizes =

4.6000 4.1000 4.2000 4.8000 4.2000

avelcfobj =

178.1554

aveslsfobj =

199.7668

pquants =

0.0055 0.1688 0.3241 0.8039 1.9607

0.0330 0.1699 0.3046 0.6237 1.9918

0.0156 0.2336 0.3260 0.6603 1.9905

0.0369 0.2612 0.4547 0.8829 1.8085

0.0001 0.1336 0.3841 0.7851 2.0964

compquants =

0.6000 0.6000 0.6000 0.6742 1.4736

0.6000 0.6000 0.6000 0.6586 1.3393

0.6000 0.6000 0.6000 0.6036 1.5898

0.6000 0.6000 0.6000 0.6102 1.4939

0.6000 0.6000 0.6000 0.8293 1.1955

**60th experiment, Fixed Scenarios b=1, min 60 %, f=[1,15]) 5 fixed scens, 20 reg**

lcfobjs =

125.1727 214.8986 155.8741 203.5419 178.3411

slsfobjs =

159.4548 244.9406 187.7226 230.8602 217.6790

lcfrejs =

7.6327 5.9431 4.8931 5.4003 7.7067

slsfrejs =

3.4221 0.9258 2.7318 2.0442 2.9327

menusizes =

4.5000 3.3000 3.2000 4.0500 2.5500

avelcfobj =

175.5657

aveslsfobj =

208.1315

pquants =

0.0073 0.1344 0.2885 0.4660 1.8153

0.0034 0.1473 0.3355 0.7113 1.9054

0.0195 0.2368 0.4103 0.9444 1.5625

0.0121 0.2200 0.4006 0.7698 2.0166

0.0056 0.1782 0.3612 0.8023 2.0834

compquants =

0.6000 0.6000 0.6000 0.6000 1.3474

0.6000 0.6000 0.6000 0.6000 1.1644

0.6000 0.6000 0.6000 0.6282 1.5374

0.6000 0.6000 0.6000 0.7180 1.5914

0.6000 0.6000 0.6048 0.6473 1.3976

**61st experiment, Fixed Scenarios b=1, min 60 %, f=[1,15]) –20 fixed scens, 20 reg**

lcfobjs =

167.4116 148.3260 219.6643 243.6799 189.1426

slsfobjs =

186.8044 183.7530 212.9992 254.6753 220.5782

lcfrejs =

4.5662 7.0801 3.7473 3.5278 3.0109

slsfrejs =

1.3810 4.7882 1.2033 0.7090 1.0706

menusizes =

4.1000 4.4500 4.7000 4.7500 4.2500

avelcfobj =

193.6449

aveslsfobj =

211.7620

pquants =

0.0059 0.2131 0.3659 0.6530 1.8685

0.0175 0.2252 0.3548 0.7039 2.0110

0.0018 0.1951 0.4058 0.7551 2.0252

0.0058 0.2034 0.3253 0.6860 1.8601

0.0550 0.1992 0.4023 0.9168 1.8767

compquants =

0.6000 0.6000 0.6000 0.6400 1.6632

0.6000 0.6000 0.6000 0.6859 2.1034

0.6000 0.6000 0.6000 0.7096 1.1241

0.6000 0.6000 0.6000 0.6792 1.2558

0.6000 0.6000 0.6000 0.7044 1.6790

**62nd experiment, Fixed Scenarios 1 iter b=1, min 60 %, f=[1,15]) –20 fixed scens, 20 reg, 200 scen test, double test,**

lcfobjs =

237.5509 261.3160 235.4152 203.1574 214.7935

slsfobjs =

218.4294 236.8333 213.3921 188.0820 208.6089

lcfrejs =

0.1605 1.3610 0.6091 1.6031 0.8980

slsfrejs =

0.1208 1.5435 0.5722 1.8026 0.9698

menusizes =

3.6500 4.6000 4.9000 4.4000 4.6500

avelcfobj =

230.4466

aveslsfobj =

213.0692

pquants =

0.0381 0.4762 0.6286 0.8762 1.9312

0.0381 0.2667 0.5905 0.8000 1.9439

0.0244 0.4394 0.5787 0.7728 1.9155

0.0762 0.3048 0.6095 0.7810 2.0461

0.0381 0.1905 0.5905 0.8344 2.0586

compquants =

0.6000 0.6064 0.7048 0.7964 1.0511

0.6000 0.6023 0.6999 0.8182 2.4876

0.6000 0.6000 0.7135 0.7951 1.9486

0.6000 0.6513 0.7156 0.8004 1.3913

0.6000 0.6166 0.7144 0.8318 2.1305

**63rd experiment, Fixed Scenarios 1 iter b=1, min 60 %, f=[1,15]) –20 fixed scens, 20 reg, now the premium const is multiplied by x to make it feasible 200 scen test, double test**

lcfobjs =

227.5392 236.9899 194.5429 185.4811 216.9234

slsfobjs =

230.3878 224.8672 193.3153 195.3034 209.2811

lcfrejs =

3.5730 3.1316 1.5376 6.0564 4.2426

slsfrejs =

1.5170 2.4224 0.0816 5.9274 4.2325

menusizes =

4.7500 4.4500 4.8000 3.8000 4.2500

avelcfobj =

212.2953

aveslsfobj =

210.6310

pquants =

0.0102 0.1429 0.4000 0.5811 2.0956

0.0286 0.3429 0.4286 0.6000 1.6824

0.0286 0.1997 0.4286 0.6321 1.9055

0.0286 0.1143 0.3000 0.4644 1.9430

0.0061 0.1143 0.3714 0.6000 1.6479

compquants =

0.6000 0.6026 0.6537 0.7267 1.3210

0.6000 0.6000 0.6497 0.7467 1.2178

0.6000 0.6000 0.6511 0.7323 1.4756

0.6000 0.6239 0.6802 0.7702 1.1824

0.6000 0.6251 0.7032 0.8186 1.5725

**64th experiment, Fixed Scens 1 iter b=0.75, min 60 %, f=[1,15]) –20 fixed scens, 20 reg 200 scen test, double test,**

lcfobjs =

284.8979 194.2220 229.7755 198.7878 214.2538

slsfobjs =

261.2002 182.6242 214.4674 186.1930 194.1964

lcfrejs =

1.3095 3.1619 1.2864 2.0011 2.2606

slsfrejs =

1.0020 2.8937 1.1537 1.7833 2.2224

menusizes =

4.9500 4.3000 4.5000 4.6000 4.5500

avelcfobj =

224.3874

aveslsfobj =

207.7362

pquants =

0.0316 0.3048 0.5714 0.8000 1.7395

0.0204 0.2095 0.4952 0.6857 1.9932

0.0110 0.2381 0.5714 0.8801 2.0036

0.0294 0.2095 0.5333 0.8832 2.0441

0.0381 0.1905 0.5333 0.8000 1.7784

compquants =

0.6000 0.6058 0.7075 0.8282 1.3982

0.6000 0.6541 0.7409 0.8101 1.4359

0.6000 0.6515 0.7434 0.8467 1.5978

0.6000 0.6443 0.7337 0.8529 1.1349

0.6000 0.6112 0.7127 0.8034 1.0020

**64th experiment, Fixed Scens 7 iter b=0.75, min 60 %, f=[1,15]) –20 fixed scens, 20 reg, now with up beta, 200 scen test, double test,**

returnedobjs =

163.4382 226.5647 235.9157 227.9053 252.6193

returnedobjs =

163.4382 226.5647 235.9157 227.9053 252.6193

lcfobjs =

163.4382 226.5647 235.9157 227.9053 252.6193

slsfobjs =

163.2730 216.7004 214.1318 215.3682 204.9643

lcfrejs =

2.5480 3.4097 1.7786 1.4017 0.1777

slsfrejs =

2.6556 1.9736 1.4823 1.2603 3.8950

menusizes =

4.9500 4.0000 4.4500 4.9000 4.7500

avelcfobj =

23.3483 32.3664 33.7022 32.5579 36.0885

aveslsfobj =

202.8875

menudiffs =

69 63 54 59 51

64 58 56 51 48

64 67 65 44 54

65 50 48 50 67

44 34 53 47 65

36 44 61 42 70

cumcompdiffs =

90 88 80 90 79

128 113 107 123 110

146 129 126 134 129

153 143 137 141 143

162 150 148 148 155

165 156 161 155 169

168 162 169 159 182

bestobjest =

169.0762 229.2828 237.9223 223.7603 255.3825

guessbestiter =

7 7 7 7 7

estobjs =

162.6962 214.2134 214.0565 216.5956 206.0137

169.0762 229.2828 237.9223 223.7603 255.3825

compportion80 =

0.1725 0.2475 0.1700 0.1950 0.1525

compportionmin =

0.9475 0.9425 0.9575 0.9525 0.9175

**65th experiment, Fixed Scens 7 iter b=0.75, min 60 %, f=[1,15]) –20 fixed scens, 20 reg, now with up beta 200 scen test, double test,**

returnedobjs =

286.2842 241.1235 196.6258 254.2196 223.7959

lcfobjs =

288.4357 229.6675 194.9173 254.2196 214.5646

286.9096 236.9590 189.5151 258.1260 223.6660

278.7867 234.6652 196.6258 252.2188 223.7959

277.1724 238.2759 193.8547 256.8430 224.0250

287.4249 236.3703 190.1625 248.3020 223.4193

290.0426 238.2191 195.9490 248.6093 222.1031

286.2842 241.1235 193.6461 247.1549 221.4925

slsfobjs =

268.9759 214.9321 185.1400 244.1156 205.6793

lcfrejs =

1.1079 0.3094 1.4080 1.1629 0.3758

1.2159 1.8022 1.7660 1.5570 1.4309

1.4137 1.4910 1.6394 2.2023 1.3489

1.3986 1.9837 1.7124 1.7587 1.2911

1.4588 2.1318 1.6311 2.0731 1.2207

1.5071 2.1945 1.4167 1.8670 1.4352

0.9615 1.8056 1.6017 1.5956 1.1139

slsfrejs =

1.1442 1.0223 1.5933 0.8498 0.3250

menusizes =

4.5500 4.8000 4.5500 4.7000 4.7000

4.8000 4.7000 4.3500 4.6500 4.9500

4.7000 4.7500 4.8500 4.8500 4.7500

4.8000 4.7500 4.7500 4.8000 4.4500

 4.7000 4.7000 4.6000 4.5000 4.6000

4.7000 4.7000 4.8500 4.8500 4.4500

4.4500 4.7500 4.7000 4.6500 4.4500

avelcfobj =

285.0080 236.4686 193.5243 252.2105 221.8666

aveslsfobj =

223.7686

menudiffs =

59 48 66 69 67

60 35 58 58 54

74 40 42 67 56

60 31 45 72 43

68 44 39 57 39

69 39 47 52 42

cumcompdiffs =

91 95 91 93 94

123 118 121 127 130

144 130 137 145 145

154 137 146 164 156

163 147 153 177 164

170 154 162 188 169

178 159 167 194 172

bestobjest =

290.2225 241.2414 200.2948 263.2872 224.1194

guessbestiter =

7 7 3 1 3

estobjs =

264.1075 214.7896 187.8394 241.5344 204.6472

286.9241 224.2289 195.4077 263.2872 218.6551

287.6357 230.3096 196.1385 255.1478 223.6651

283.2934 235.4885 200.2948 253.8590 224.1194

284.4131 237.7892 196.4760 251.5608 223.1090

287.8104 239.7258 185.4003 252.5582 223.7083

284.4313 237.3643 195.6870 246.1992 219.7526

290.2225 241.2414 190.6179 245.1372 221.2142

compportion80 =

0.1275 0.1375 0.1925 0.1625 0.1450

0.1425 0.1625 0.2025 0.1725 0.2025

0.1550 0.1750 0.2075 0.1775 0.2250

0.1500 0.1725 0.1975 0.1850 0.2275

0.1500 0.1800 0.1925 0.1975 0.2350

0.1450 0.1775 0.1825 0.1925 0.2350

0.1475 0.1725 0.1725 0.1975 0.2350

compportionmin =

0.9725 0.9775 0.9925 0.9975 0.9700

0.9675 0.9675 0.9825 0.9800 0.9575

0.9575 0.9575 0.9725 0.9750 0.9525

0.9475 0.9450 0.9625 0.9600 0.9350

0.9500 0.9500 0.9550 0.9550 0.9275

0.9300 0.9525 0.9475 0.9425 0.9275

0.9225 0.9475 0.9325 0.9450 0.9275

**66th experiment, Fixed Scens 7 iter b=0.75, min 60 %, f=[1,15]) –15 fixed scens, 15 reg, 200 scen test, double test,**lcfiterbetter =

1

lcfiterworse =

0

lcfiterave =

229.9407

slsfave =

210.3650

avepercbetter =

0.0947

Averuntime= 245.0783

percbetter =

0.0324 0.0881 0.0477 0.0607 0.1782

0.0788 0.1011 0.1182 0.0484 0.1063

0.0822 0.0608 0.0178 0.0664 0.1278

0.0463 0.0913 0.1158 0.0968 0.0803

0.1681 0.1413 0.1874 0.1388 0.0343

0.0797 0.1602 0.0337 0.0721 0.0892

0.1429 0.1118 0.1059 0.1029 0.0801

0.0728 0.1066 0.1325 0.1471 0.0645

0.0553 0.1501 0.0576 0.0950 0.0992

0.0928 0.0390 0.0473 0.1293 0.1540

returnedobjs =

213.3046 246.4493 255.1247 207.9484 246.0114

281.0248 166.9046 216.8144 236.7965 258.7867

236.5875 265.4076 237.4813 208.4500 258.3360

197.6885 257.7837 246.8119 259.5336 192.4862

259.9887 223.1241 185.1647 241.7625 260.8200

214.5905 227.5202 282.5044 203.5751 209.8735

254.2778 191.9153 265.7547 198.3746 195.5525

235.8750 248.2574 250.0813 198.0036 242.0498

210.9367 278.2152 261.9693 204.4826 218.9369

241.5291 198.2744 207.6404 195.0092 201.2454

slsfobjs =

206.6115 226.5011 243.5146 196.0523 208.7985

260.5006 151.5742 193.8901 225.8684 233.9278

218.6245 250.1968 233.3228 195.4791 229.0587

188.9441 236.2245 221.2040 236.6236 178.1844

222.5717 195.4958 155.9377 212.2867 252.1754

198.7561 196.0986 273.2991 189.8756 192.6867

222.4838 172.6120 240.2985 179.8649 181.0442

219.8585 224.3432 220.8276 172.6180 227.3857

199.8891 241.9121 247.6934 186.7479 199.1833

221.0218 190.8380 198.2619 172.6856 174.3949

menusizes =

4.4500 4.5500 4.9000 4.8000 4.7000

4.5000 4.5000 4.2000 4.7500 4.5500

4.8500 4.5000 4.4000 4.5500 4.5000

4.0000 4.3500 4.9000 4.8500 4.7000

4.5500 4.6000 4.4000 4.9500 4.6500

4.9000 4.7000 4.9000 4.3000 4.6500

4.4000 4.0500 4.8000 4.5500 4.5000

4.6500 4.3500 4.7000 4.8000 4.8500

4.6000 4.1500 4.8500 4.1000 4.7500

4.7500 4.4500 4.2500 4.4500 4.6500

avepij =

0.2948 0.3473 0.3528 0.4038 0.3878

0.3729 0.2663 0.3735 0.3529 0.3335

0.3740 0.2806 0.2945 0.3914 0.3366

0.2884 0.3471 0.3867 0.3148 0.3298

0.4541 0.2597 0.3360 0.3613 0.3351

0.3622 0.3641 0.2956 0.3144 0.3483

0.3293 0.2426 0.3885 0.2940 0.2930

0.3460 0.3914 0.3889 0.4175 0.3759

0.2580 0.3768 0.3643 0.2845 0.2961

0.3971 0.2160 0.3264 0.2822 0.3887

pijover5 =

114 129 138 163 155

152 91 145 132 132

141 109 118 156 130

100 135 153 112 120

184 99 143 137 127

150 151 115 118 139

128 90 140 112 106

133 159 161 158 135

93 146 142 108 116

158 77 129 101 154

pijequal1 =

41 31 40 59 50

40 34 57 54 41

53 33 26 53 44

22 48 48 38 31

70 25 52 35 39

50 55 34 48 55

34 33 46 35 33

48 35 34 56 67

28 49 44 31 39

51 22 59 48 70

runtimes =

201.1852 164.6737 308.2495 221.6711 202.1107

173.6502 354.9581 161.4391 182.5515 163.4196

145.1219 199.3320 280.1136 217.1219 232.4876

292.8800 155.7458 151.8684 154.2003 413.7784

222.6164 220.2326 203.7689 165.5127 184.2133

594.8675 487.3204 420.3898 493.8423 615.9702

379.0336 140.7348 332.2660 187.5021 277.2808

183.3486 245.3269 159.8615 182.3237 201.9727

234.8376 177.5063 181.5109 250.2457 189.5422

178.5576 218.5409 203.5100 198.6985 146.0237

bestobjest =

221.4041 250.4593 259.5212 210.5974 246.6380

282.5301 171.0780 216.4684 239.6664 260.6154

235.6685 268.1392 240.9027 209.5530 260.4471

198.7924 259.2782 248.2646 261.5536 195.7856

260.8976 230.5480 185.3599 241.4294 263.9339

212.3189 227.1083 289.0595 204.5684 214.4584

260.1319 192.4731 269.5018 198.6454 201.2622

239.0051 249.2823 252.1629 196.7047 240.5880

212.4693 280.5059 269.4644 209.1573 225.1190

243.4240 205.5223 208.4544 199.2736 201.2096

guessbestiter =

3 2 4 4 3

3 6 7 6 7

6 2 1 5 7

7 4 2 5 6

3 7 6 5 3

7 7 7 7 7

6 7 5 6 5

2 4 2 6 3

4 4 6 6 7

2 7 7 3 3

estslsfobjs =

207.4074 226.5437 243.5096 196.1602 208.6556

261.3824 155.9765 194.1230 224.0866 233.8514

217.5106 248.5296 233.0361 197.4199 231.8003

195.2329 236.4131 219.7622 236.4934 177.5930

225.5892 197.2163 159.0148 206.4112 254.1615

200.8033 190.4219 273.4148 190.8216 190.9315

223.4945 181.2895 240.3334 179.9152 175.5605

215.2733 225.1958 221.5653 175.3025 226.4941

206.7749 241.5485 247.5958 186.2510 200.2950

219.8947 191.8439 198.6729 173.4124 177.7792

compportion80 =

0.2025 0.2075 0.2275 0.3125 0.2325

0.2275 0.2375 0.2350 0.2450 0.1725

0.2200 0.1425 0.2200 0.2000 0.2275

0.3050 0.1700 0.2250 0.1650 0.1700

0.1975 0.3075 0.2050 0.2125 0.2025

0.3175 0.2175 0.3150 0.1850 0.2150

0.2000 0.2900 0.2400 0.1625 0.2400

0.2200 0.3225 0.2475 0.2575 0.2975

0.2425 0.1750 0.1650 0.1350 0.1575

0.2275 0.2050 0.2625 0.2850 0.1950

compportionmin =

0.9750 0.9575 0.9550 0.9525 0.9600

0.9675 0.9550 0.9750 0.9600 0.9300

0.9575 0.9525 0.9825 0.9550 0.9475

0.9700 0.9400 0.9525 0.9375 0.9800

0.9425 0.9550 0.9650 0.9450 0.9575

0.9575 0.9500 0.9625 0.9400 0.9800

0.9600 0.9600 0.9600 0.9675 0.9775

0.9600 0.9825 0.9600 0.9625 0.9550

0.9625 0.9450 0.9625 0.9675 0.9500

0.9600 0.9450 0.9675 0.9550 0.9475

**67th experiment, Fixed Scens 7 iter b=0.75, min 60 %, f=[1,15]) –10 fixed scens, 10 reg, 200 scen test, double test, --I think the best one so far**

lcfiterbetter =

1

lcfiterworse =

0

lcfiterave =

233.3967

slsfave =

212.6377

avepercbetter =

0.0997

Averuntime= 182.2178

percbetter =

0.0830 0.1381 0.1394 0.1148 0.0752

0.0702 0.0827 0.1068 0.0781 0.2338

0.1451 0.1408 0.1340 0.0194 0.0555

0.0583 0.0580 0.1367 0.0926 0.0702

0.1497 0.1354 0.0910 0.0905 0.0844

0.0985 0.0785 0.0274 0.1799 0.0635

0.0805 0.0993 0.0758 0.1128 0.0783

0.1322 0.0590 0.1433 0.0899 0.0868

0.1129 0.1999 0.0504 0.0611 0.1323

0.0883 0.0670 0.1241 0.0501 0.1077

returnedobjs =

234.2267 253.5601 267.9384 242.7190 232.3914

232.7565 245.8128 207.4702 259.3260 181.5437

236.9526 203.8627 241.0414 224.6201 285.1776

215.0247 225.6464 248.4916 225.3679 220.2046

236.1939 231.4492 238.2490 272.2320 239.7545

255.4080 206.2125 255.6153 202.4634 252.8226

228.3377 227.4431 262.9721 255.4486 197.5011

231.8361 245.1990 210.2131 196.7424 244.0589

249.9989 231.6570 198.4286 235.6794 285.6675

203.4418 196.4282 234.8475 236.5968 222.8015

slsfobjs =

216.2842 222.7951 235.1496 217.7275 216.1363

217.4843 227.0396 187.4570 240.5360 147.1364

206.9324 178.7046 212.5673 220.3548 270.1772

203.1743 213.2714 218.6130 206.2607 205.7665

205.4439 203.8458 218.3825 249.6469 221.0868

232.5094 191.2116 248.8060 171.5956 237.7263

211.3265 206.9073 244.4514 229.5453 183.1618

204.7638 231.5346 183.8663 180.5065 224.5669

224.6399 193.0678 188.9084 222.1116 252.2897

186.9341 184.0887 208.9289 225.3177 201.1472

menusizes =

4.6500 4.4500 4.6000 4.7500 4.4500

4.7000 4.6000 4.0000 4.6500 3.9000

4.4000 4.0000 4.3000 4.7500 4.8500

4.4500 4.7000 4.5000 4.4500 3.5000

4.8000 4.4500 4.7000 4.9000 4.4000

4.8000 4.8500 4.6500 4.5500 4.8500

4.7000 4.2000 4.8000 4.7000 4.4500

4.9000 5.0000 4.2000 4.5000 5.0000

4.8500 4.5000 4.3500 4.9500 4.8000

4.1500 4.6000 4.2000 4.6500 4.5500

avepij =

0.3574 0.4232 0.3734 0.4166 0.3248

0.2767 0.3680 0.2837 0.3042 0.3464

0.2849 0.3228 0.3351 0.2779 0.3352

0.2709 0.2434 0.3841 0.3205 0.3455

0.3825 0.3447 0.4177 0.3263 0.3475

0.3845 0.2905 0.4144 0.4020 0.3140

0.3161 0.2740 0.2805 0.3686 0.2275

0.3695 0.3525 0.2653 0.2069 0.4231

0.3615 0.2690 0.3220 0.3682 0.3833

0.3648 0.3273 0.3129 0.3324 0.3459

pijover5 =

136 174 161 168 123

103 142 95 122 138

118 116 134 105 126

94 86 153 128 136

151 138 167 124 136

151 108 169 163 112

122 98 108 149 75

150 147 103 72 166

133 100 121 142 150

149 131 117 123 147

pijequal1 =

53 71 38 55 41

34 55 34 30 31

26 33 44 45 48

31 43 56 39 58

64 51 51 36 57

40 24 73 42 35

31 45 38 48 18

51 55 30 27 46

45 23 37 51 47

62 38 32 37 53

runtimes =

200.6628 139.4321 210.2614 150.1203 137.7800

141.9832 144.4102 297.8639 145.4296 298.7817

242.1584 228.6511 185.9411 153.1143 181.9276

245.1477 168.1148 176.6222 141.6413 164.0414

176.4361 143.3715 269.3172 205.5186 184.9511

195.5690 149.4466 299.7749 178.5450 181.5195

187.6321 151.1700 156.0448 138.9355 163.1584

143.5706 166.5784 221.1322 145.0260 163.2588

144.1647 144.5279 344.5236 158.4926 172.2308

151.4859 139.3269 131.8462 219.5983 129.6525

bestobjest =

239.4410 253.5776 269.3739 245.7269 236.3065

238.2540 249.2197 217.2630 264.7670 187.9524

233.3592 206.0736 240.1592 225.7203 285.1711

222.7939 227.4854 252.2116 229.2138 219.9437

234.0135 230.9062 235.5016 272.4402 241.6555

256.7337 207.3788 254.3053 202.7174 257.6442

234.7179 228.5087 266.8048 259.5258 202.9125

232.4928 249.5748 210.8812 200.6636 251.5511

251.6794 233.2133 196.9942 236.2709 283.1981

203.8893 198.5417 235.2979 239.8384 222.5956

guessbestiter =

5 7 4 3 5

1 5 6 6 5

7 2 7 6 2

3 3 6 4 6

7 6 4 5 6

3 4 6 5 6

5 5 2 4 2

2 4 6 6 6

6 6 7 3 5

4 6 2 4 7

estslsfobjs =

224.1105 223.9224 239.9859 218.1252 217.2238

212.6831 227.3457 190.7131 242.2819 147.5989

212.1466 180.2182 213.7855 224.0504 268.0183

197.8308 214.2762 214.7220 205.4340 204.4103

204.7623 203.0341 217.6181 250.4789 219.3757

235.0368 189.2543 250.1129 172.0106 240.4036

202.5775 207.9496 245.9969 228.7535 189.8552

205.3987 234.4356 188.1245 178.5128 218.4020

219.3649 195.7770 190.3593 221.1690 249.3967

190.1323 181.4929 210.3736 232.4301 201.3014

compportion80 =

0.2700 0.2375 0.1975 0.1700 0.2800

0.2100 0.1550 0.1325 0.2075 0.1675

0.1900 0.2625 0.1875 0.2250 0.2250

0.1675 0.2600 0.1875 0.2100 0.2575

0.2500 0.1600 0.2500 0.1850 0.2125

0.3875 0.1675 0.3575 0.1825 0.1675

0.1975 0.2850 0.2425 0.0875 0.1775

0.2050 0.2450 0.1800 0.1825 0.2125

0.1950 0.1925 0.1900 0.2825 0.1175

0.1750 0.2050 0.2075 0.2150 0.2025

compportionmin =

0.9500 0.9350 0.9525 0.9600 0.9450

0.9300 0.9350 0.9575 0.9775 0.9775

0.9675 0.9600 0.9575 0.9625 0.9625

0.9550 0.9675 0.9475 0.9675 0.9675

0.9450 0.9500 0.9425 0.9400 0.9775

0.9775 0.9675 0.9575 0.9600 0.9400

0.9575 0.9375 0.9650 0.9550 0.9750

0.9500 0.9475 0.9475 0.9550 0.9600

0.9425 0.9550 0.9800 0.9425 0.9400

0.9650 0.9775 0.9500 0.9575 0.9600

**68th experiment, Fixed Scens 7 iter b=0.75, min 60 %, f=[1,15]) –5 fixed scens, 5 reg, 200 scen test, double test, --not as good as w/ 10 scens (runtime, ave% better)**

lcfiterbetter =

1

lcfiterworse =

0

lcfiterave =

227.6164

slsfave =

209.3314

avepercbetter =

0.0879

averuntime =

190.7275

avelcfrejs =

1.6398

aveslsfrejs =

1.9748

percbetter =

0.0091 0.0661 0.0679 0.1263 0.0862

0.0887 0.0878 0.1279 0.0712 0.0753

0.1371 0.1481 0.0775 0.0856 0.1418

0.1290 0.0639 0.0369 0.0508 0.0758

0.1091 0.0814 0.0764 0.1066 0.0928

0.1694 0.0932 0.1075 0.0683 0.0015

0.0798 0.0331 0.0675 0.0276 0.0863

0.0713 0.0825 0.0958 0.0972 0.1122

0.0866 0.0468 0.1189 0.1072 0.0898

0.0727 0.0680 0.1835 0.0936 0.1162

returnedobjs =

219.1705 247.5543 220.9019 252.1794 228.2299

260.6171 250.4180 253.3719 242.5246 241.3724

203.4338 246.5799 237.0803 242.2780 221.9520

191.5500 238.8770 230.3955 298.2847 237.4657

208.2632 237.5031 208.8466 279.9284 218.5311

221.9641 266.6773 212.1479 193.1200 191.3038

225.1940 199.2025 259.0211 196.5506 193.7214

175.8321 190.5534 214.4352 185.8177 270.0177

228.2837 245.9256 228.0492 175.7032 223.8203

221.6257 219.0715 260.5570 244.9711 219.9460

slsfobjs =

217.1915 232.2036 206.8539 223.9014 210.1205

239.3760 230.2153 224.6410 226.3970 224.4738

178.9033 214.7814 220.0191 223.1673 194.3811

169.6704 224.5313 222.2039 283.8573 220.7271

187.7783 219.6223 194.0214 252.9658 199.9700

189.8092 243.9414 191.5603 180.7797 191.0174

208.5587 192.8220 242.6456 191.2755 178.3332

164.1303 176.0338 195.6796 169.3552 242.7773

210.0913 234.9402 203.8228 158.6984 205.3804

206.6117 205.1248 220.1596 223.9970 197.0508

lcfrejs =

1.3734 1.4849 1.5809 0.5613 2.7366

2.2272 1.4446 1.6959 1.5561 0.1988

2.1903 0.8314 0.9244 1.2386 1.5841

2.2342 0.3133 1.6297 0.5533 1.2445

2.0857 2.8743 2.7033 1.0951 1.7849

1.0518 0.0734 1.5656 0.5775 4.4061

1.2158 2.5037 0.4571 2.2471 3.4905

2.4873 2.7886 0.9856 2.3106 1.1323

1.5821 1.8229 1.3698 3.6577 1.1302

2.0240 1.6688 0.6643 1.4042 1.2252

slsfrejs =

1.8047 1.9053 0.7797 0.1253 1.5745

2.0709 1.6326 2.8368 1.1862 0.9895

3.0794 1.2900 1.6072 1.2565 2.3912

3.0252 0.6610 1.7799 0.3864 1.5022

1.4940 3.5034 3.3035 1.4688 1.8314

3.5057 0.2543 2.5524 0.4575 3.7007

3.0879 2.7590 0.8923 2.8286 3.4513

4.5580 3.0663 0.6409 1.1560 1.4481

0.1726 1.9930 3.5898 3.5102 1.6651

2.4484 1.8117 0.7654 2.5615 2.3797

menusizes =

4.3500 4.7000 4.8500 4.9500 4.3500

4.5000 4.7000 4.7000 4.6500 4.3500

4.0000 4.3500 4.7500 4.3500 4.4000

3.8500 4.5500 4.5500 4.8500 4.4000

4.5500 4.5000 4.6000 3.9500 4.9000

4.2500 4.8000 4.6000 4.9000 4.7000

4.7500 4.6000 4.6500 4.8000 3.9000

4.4000 4.2000 4.6000 4.2000 4.7000

4.5500 4.5500 4.4500 4.3500 4.6000

4.1000 4.3000 4.7500 4.8500 4.8000

avepij =

0.2930 0.3929 0.3450 0.4002 0.3136

0.3362 0.2932 0.3059 0.2670 0.3525

0.3252 0.4876 0.2991 0.3508 0.3288

0.3242 0.3058 0.2960 0.3479 0.3038

0.3105 0.2577 0.2508 0.3391 0.3402

0.3051 0.3464 0.3015 0.3793 0.2968

0.3447 0.2820 0.3265 0.2739 0.2759

0.2097 0.3510 0.3549 0.3007 0.3205

0.4474 0.3008 0.3141 0.3157 0.3401

0.3671 0.2797 0.4192 0.3226 0.3033

pijover5 =

109 155 130 152 124

126 106 114 98 141

121 210 118 134 124

128 119 114 123 117

118 88 89 143 125

113 125 108 140 103

141 106 123 92 104

76 129 134 117 125

162 109 125 119 129

139 108 169 121 112

pijequal1 =

47 66 46 41 35

36 30 33 31 61

43 80 34 48 25

51 30 39 45 38

32 30 15 36 45

29 41 39 51 35

31 38 32 39 27

30 43 49 41 21

59 37 36 31 42

39 38 49 32 31

runtimes =

134.9244 240.7373 136.4344 150.6816 154.1325

167.1244 187.1626 138.2422 139.2499 131.9739

220.4932 139.1932 168.5149 156.9340 189.9582

200.9275 132.9883 163.5361 258.9131 184.2822

136.8701 159.6837 253.9364 149.8113 154.0704

181.7132 136.6041 180.1928 250.2006 337.0461

212.6712 182.9071 173.2605 297.7011 195.2351

140.4325 222.8291 175.5371 161.6266 179.5105

238.7536 190.9311 288.7153 306.4616 148.8776

295.2331 136.6877 172.9939 236.7309 242.7454

bestobjest =

223.0192 251.1108 221.9637 249.2865 229.1698

262.5336 249.2106 256.5674 245.1423 242.1210

208.0985 247.6070 245.8461 244.0692 224.2392

190.7740 246.2363 230.2292 302.7384 240.2312

212.2644 238.0188 217.7914 280.9383 223.3870

223.5360 267.2335 214.4425 194.3592 194.0194

232.8376 198.4788 258.8142 201.0326 195.1369

179.1050 194.5393 214.4253 188.7965 269.7871

230.7553 249.4975 233.0445 185.9465 223.8541

224.9793 219.3656 260.7687 253.3604 223.1363

guessbestiter =

3 4 2 3 7

4 2 6 4 6

5 4 5 5 7

3 1 3 4 3

5 2 7 7 7

3 4 3 5 3

3 5 7 1 6

2 2 5 6 7

3 3 3 5 4

3 5 6 5 4

estslsfobjs =

215.4753 231.1780 204.0237 223.8002 212.7608

241.6622 233.0398 233.2517 226.1612 224.9430

178.0443 215.2452 221.8700 223.3452 186.1906

170.4310 224.6650 221.9225 286.1537 218.3479

185.7253 224.0336 195.5638 257.8504 194.8972

186.7342 244.9703 192.5433 184.0267 184.3463

210.3708 193.6397 239.0749 188.4306 175.6172

163.5285 175.3699 196.0084 170.3672 246.6693

211.3483 234.2598 211.9084 161.7677 204.6181

210.8669 206.1236 224.0893 218.0203 197.7785

compportion80 =

0.1825 0.2225 0.2425 0.2125 0.3175

0.2600 0.1475 0.1775 0.1600 0.3200

0.1225 0.2325 0.2050 0.2200 0.1575

0.1800 0.1875 0.2525 0.1525 0.2025

0.2125 0.1725 0.2050 0.2300 0.2575

0.1675 0.1900 0.2100 0.2325 0.2700

0.3750 0.2900 0.2350 0.1750 0.1800

0.2325 0.2800 0.2500 0.2375 0.1925

0.2725 0.1925 0.1900 0.2575 0.2575

0.2525 0.1450 0.1750 0.2200 0.1875

compportionmin =

0.9550 0.9500 0.9650 0.9450 0.9800

0.9425 0.9575 0.9500 0.9750 0.9575

0.9500 0.9650 0.9675 0.9500 0.9500

0.9600 0.9450 0.9450 0.9325 0.9725

0.9450 0.9525 0.9625 0.9650 0.9425

0.9675 0.9575 0.9675 0.9675 0.9425

0.9725 0.9675 0.9475 0.9550 0.9800

0.9550 0.9575 0.9325 0.9625 0.9275

0.9550 0.9475 0.9650 0.9600 0.9425

0.9600 0.9650 0.9425 0.9550 0.9450

**69th experiment, Fixed Scens 7 iter b=0.75, min 60 %, f=[1,15]) –20 fixed scens, 200 scen test, double test, 10 reg,--not as good as 50-50 ratio**

lcfiterbetter =

0.8800

lcfiterworse =

0.0400

lcfiterave =

223.2526

slsfave =

211.8936

avepercbetter =

0.0535

averuntime =

221.3485

avelcfrejs =

1.5930

aveslsfrejs =

1.8106

percbetter =

0.0242 0.1227 0.0913 0.0309 0

0.0632 0.0848 0.0241 0.0740 0.0928

0.0487 -0.0193 0.0603 0.1200 0.0879

0.0702 0.0483 0.0553 0.0375 0.0550

0.0370 0 0.0452 0.0688 0.0285

0 0.1670 0.0884 0.0688 0.0545

-0.0082 0.0570 0.0396 0.0140 0.0659

0.0486 0.0668 0.0673 0.0505 0.0737

0.0462 0.0263 0.0242 0.0221 0.0219

0.0911 0.0613 0.0500 0 0.1272

returnedobjs =

245.5041 243.8673 221.9970 200.3422 197.5651

201.0938 223.8042 185.6459 181.7356 270.3910

241.4913 175.3487 226.7969 252.0203 243.4254

213.6913 227.4952 248.2042 209.1147 191.0186

237.5624 250.4254 209.9796 233.2281 229.4886

206.1490 238.6002 224.5171 187.1503 214.4242

205.5144 265.5845 204.0817 210.8571 264.6945

233.1498 227.7749 211.8747 218.6377 259.1711

260.4642 212.1797 242.2950 219.5537 190.9212

234.9116 233.7570 215.5140 211.1041 208.5122

slsfobjs =

239.7005 217.2211 203.4196 194.3464 197.5651

189.1316 206.3179 181.2713 169.2170 247.4299

230.2814 178.8050 213.8985 225.0195 223.7556

199.6742 217.0054 235.1915 201.5650 181.0644

229.0779 250.4254 200.9050 218.2089 223.1265

206.1490 204.4570 206.2893 175.1024 203.3477

207.2113 251.2733 196.3033 207.9550 248.3244

222.3415 213.5060 198.5057 208.1357 241.3718

248.9509 206.7325 236.5750 214.7978 186.8299

215.3018 220.2573 205.2493 211.1041 184.9834

lcfrejs =

2.4594 0.0035 1.0017 2.7756 0

3.6815 1.2688 3.7665 3.3053 1.4516

0.0876 2.1960 2.7698 0.9889 0.8052

1.0049 2.1985 1.4445 1.4708 1.5611

1.8488 0 0.0848 0.7356 0.4302

0 1.0079 1.0111 1.9230 2.2034

3.0712 1.7637 3.4131 2.7147 0.6193

2.4917 1.4960 1.9746 0.6911 1.6157

0.0018 2.0279 0.8387 1.9215 1.5592

4.1216 0.6854 3.6237 0 1.5308

slsfrejs =

1.7987 1.1447 1.2503 3.6740 2.9062

4.1093 1.7598 2.9572 5.6056 0.5705

0.6088 3.0120 1.3485 1.7489 2.1825

1.4383 1.6818 2.2982 1.4651 1.4921

1.1229 0.2628 2.3588 0.2512 0.3657

1.6860 2.9644 0.1957 0.8452 1.9148

2.2502 1.1221 3.6661 2.0296 1.7663

1.5089 1.0512 2.1672 1.0004 1.4910

0.0279 2.4701 0.4676 1.8387 1.4603

3.3001 2.6457 3.3703 1.6134 0.2626

menusizes =

4.7000 4.3500 4.4000 4.2000 4.6500

3.9000 4.7000 4.1000 4.5500 4.7000

4.6500 4.4000 4.5000 4.6500 4.5500

4.6000 4.7000 4.0000 4.8000 4.4500

4.3000 4.9000 4.2000 4.6500 4.6000

4.8500 4.4000 4.4500 4.2500 3.8500

4.1000 4.8000 3.8500 4.1500 4.1000

4.1000 4.5500 3.7000 4.5000 4.6000

4.8500 5.0000 4.0500 4.2000 4.4500

4.6000 4.8000 4.4000 4.2500 3.4500

avepij =

0.3391 0.4286 0.4135 0.2959 0.2692

0.2892 0.3392 0.3088 0.3083 0.3892

0.4110 0.2951 0.4217 0.4024 0.4394

0.4097 0.3163 0.3465 0.3115 0.3820

0.3462 0.4165 0.3193 0.4061 0.4004

0.3183 0.4952 0.4312 0.3792 0.3602

0.2913 0.3527 0.2927 0.3469 0.4547

0.3432 0.3908 0.3656 0.3433 0.3547

0.4107 0.3950 0.3170 0.3233 0.3513

0.3103 0.3368 0.3579 0.3848 0.4275

pijover5 =

123 162 153 106 88

102 125 116 98 136

154 107 161 159 167

151 112 127 113 139

134 156 121 152 148

107 206 161 139 135

110 135 113 124 177

129 151 136 124 133

149 142 111 119 120

107 125 137 137 158

pijequal1 =

47 70 66 52 29

46 48 46 34 57

66 46 65 49 69

60 40 50 51 77

49 63 49 61 69

35 96 65 61 55

45 56 47 40 87

51 74 47 48 44

79 67 45 44 59

31 52 63 71 57

runtimes =

184.0069 178.7260 193.5189 351.7225 326.7881

252.0417 164.8016 244.3120 266.3060 201.9390

189.0524 239.7282 178.8692 172.2846 221.7621

205.8034 231.5475 226.4084 165.1857 162.7547

170.4924 203.4807 245.3127 180.6180 172.7369

197.5751 243.8715 175.8055 166.4761 235.8729

291.7674 185.8821 209.1336 194.8250 294.4405

260.5637 175.4974 221.8889 202.0327 231.6939

182.7106 268.6031 186.4855 234.5585 270.6357

252.4152 281.8672 201.8262 375.6933 195.1014

bestobjest =

251.0491 243.4960 221.2794 203.9350 199.1763

204.8241 223.1506 189.9976 190.8998 269.9237

241.2125 178.3104 228.7041 249.8378 245.9769

212.2039 224.1151 252.6600 211.7158 190.8732

236.7775 252.3331 210.5949 234.3331 231.8762

209.5742 238.8939 224.0871 190.4951 216.8642

210.7598 266.4347 204.9950 212.9513 264.1895

234.0051 227.5922 216.3450 220.0124 260.9439

260.7264 212.8187 244.4309 221.1489 193.7916

240.3359 235.4537 218.4766 210.2649 212.0727

guessbestiter =

5 4 3 5 0

7 7 3 2 7

6 1 6 3 5

6 2 2 7 7

7 0 3 4 6

0 4 7 3 6

6 7 6 6 5

5 6 6 4 3

6 5 1 4 5

5 7 5 0 3

estslsfobjs =

233.5040 216.8964 199.8207 191.9884 199.1763

195.0226 206.9823 182.3023 165.3212 254.3474

230.5960 177.8403 216.0642 229.2741 223.6742

198.7922 218.7002 235.3738 200.6960 182.0436

231.4376 252.3331 201.8620 218.9804 221.7960

209.5742 203.7268 197.3748 179.0279 206.3775

205.6478 250.2174 198.6106 202.4603 241.3640

221.1341 216.2085 192.3890 194.0661 247.3378

249.1726 209.7923 233.0700 219.0099 189.4420

212.1209 219.9652 206.0267 210.2649 185.2880

compportion80 =

0.2925 0.3450 0.3875 0.2725 0.2600

0.2825 0.2800 0.2725 0.3075 0.2775

0.4050 0.2575 0.3425 0.3900 0.3225

0.3075 0.2250 0.2800 0.2500 0.3425

0.3275 0.3775 0.3250 0.3725 0.4025

0.3575 0.3575 0.2800 0.3675 0.2400

0.2325 0.2900 0.2475 0.3550 0.3675

0.2425 0.3575 0.2700 0.3000 0.1900

0.3250 0.3525 0.2650 0.2800 0.3075

0.2325 0.2325 0.2475 0.2775 0.3175

compportionmin =

0.9600 0.9700 0.9525 0.9750 0.9625

0.9700 0.9775 0.9775 0.9625 0.9550

0.9750 0.9675 0.9775 0.9725 0.9750

0.9850 0.9725 0.9700 0.9525 0.9700

0.9750 0.9775 0.9675 0.9800 0.9825

0.9700 0.9600 0.9750 0.9800 0.9675

0.9825 0.9525 0.9800 0.9750 0.9725

0.9500 0.9525 0.9725 0.9625 0.9575

0.9700 0.9575 0.9575 0.9825 0.9775

0.9600 0.9600 0.9800 0.9775 0.9775

**70th experiment, Fixed Scens 7 iter b=0.75, min 60 %, f=[1,15]) –10 fixed scens, 20 reg,200 scen test, double test,-- about as good as 50-50 ratio but takes longer**

lcfiterbetter =

0.9800

lcfiterworse =

0.0200

lcfiterave =

231.2218

slsfave =

211.8186

avepercbetter =

0.0955

averuntime =

311.5398

avelcfrejs =

2.2844

aveslsfrejs =

1.8863

percbetter =

0.0794 0.1102 0.1047 0.0578 0.0999

0.0693 0.0132 0.1067 0.1385 0.0684

0.1070 0.0606 0.0819 0.0063 0.1589

0.1189 0.1081 0.0705 0.0961 0.0990

0.0961 0.1433 0.1623 0.0979 0.1834

0.5859 0.0700 0.0846 0.1003 0.0540

0.0935 0.0170 0.0925 0.1159 0.0421

0.0373 0.0769 0.0833 0.1181 0.0999

-0.0059 0.0917 0.1000 0.0731 0.0473

0.0059 0.0990 0.0605 0.0776 0.1183

returnedobjs =

249.5507 224.2022 225.8297 234.3979 250.6876

246.8452 230.2637 282.3294 232.8659 229.7402

262.9130 215.1826 183.0845 203.3266 246.6474

205.0386 280.0510 191.2509 170.0731 206.7444

238.6630 258.6471 273.7501 256.7589 197.1434

216.3455 194.2054 250.3097 217.8574 235.6580

183.0362 231.4876 237.5916 253.9038 209.9638

247.5363 214.0482 212.2596 253.0813 276.1818

220.0583 210.1579 249.8255 200.3703 221.3006

226.7221 259.4964 259.9323 234.8305 248.9443

slsfobjs =

231.1972 201.9528 204.4347 221.5998 227.9203

230.8395 227.2604 255.1005 204.5291 215.0261

237.5039 202.8871 169.2258 202.0499 212.8324

183.2462 252.7260 178.6475 155.1681 188.1232

217.7314 226.2368 235.5165 233.8576 166.5933

136.4158 181.4968 230.7759 197.9895 223.5932

167.3848 227.6206 217.4670 227.5390 201.4903

238.6350 198.7587 195.9417 226.3419 251.0940

221.3699 192.5104 227.1175 186.7185 211.3009

225.4017 236.1309 245.1007 217.9198 222.6095

lcfrejs =

2.0562 2.5779 1.7725 1.9822 1.8300

2.3382 3.3264 2.3883 0.4940 2.3010

1.6018 1.0787 4.1206 3.0957 2.3856

5.1792 0.8843 2.2010 3.1229 4.6450

1.8149 1.7360 0.6215 0.7429 2.8664

2.1585 2.1141 2.7384 2.1095 2.5672

3.2090 3.2729 1.4704 1.7906 4.2681

1.4862 0.8865 1.5402 3.3501 0.9481

3.2006 3.3322 1.6215 1.4247 3.3865

2.1019 2.0685 1.4023 1.9565 2.6495

slsfrejs =

1.2993 2.3374 2.2021 1.1412 1.1432

1.6551 1.6723 1.7875 0.4967 1.5794

0.7429 0.4212 3.5960 2.9987 0.4519

5.5310 0.1227 1.9749 4.1478 5.0249

1.2404 0.9638 1.9585 0.2430 0.8509

8.9797 0.3505 2.3095 1.8084 2.7270

4.1643 1.5565 1.0651 1.2036 1.7509

1.4546 0.5908 0.3294 2.2881 0.4560

2.6467 3.3380 1.6482 1.8444 0.9803

0.3739 1.7139 1.3454 1.7643 2.0449

menusizes =

4.6500 4.3500 4.5500 4.5000 4.4000

4.7000 4.9000 4.8500 4.5500 4.4500

4.8000 4.7000 3.5500 4.7500 4.7000

4.1500 4.8000 4.5000 4.5000 4.3500

4.7000 4.7000 4.7000 5.0000 4.2000

4.9000 4.5500 4.3000 4.4000 4.6500

3.9000 4.4500 4.9000 4.5000 4.3500

4.8000 4.6000 4.6500 4.0500 4.7500

4.2500 4.4500 4.5000 4.6000 4.6000

5.0000 4.8000 4.7500 4.4000 3.9000

avepij =

0.3610 0.2764 0.3899 0.3244 0.3641

0.2779 0.2464 0.3374 0.3882 0.2932

0.3208 0.3272 0.2725 0.2161 0.3606

0.2520 0.3773 0.2607 0.2575 0.2253

0.3046 0.2991 0.2594 0.3232 0.3011

0.4143 0.2713 0.3161 0.2984 0.2496

0.2614 0.2757 0.3153 0.3043 0.3641

0.2111 0.2783 0.3590 0.2670 0.3202

0.2746 0.2757 0.2342 0.3572 0.3225

0.3202 0.3169 0.3407 0.3006 0.3126

pijover5 =

113 80 138 98 118

79 60 98 134 90

94 105 77 62 116

78 132 78 75 66

106 88 76 107 98

143 91 102 92 64

69 91 101 95 111

56 87 116 81 108

84 90 65 118 89

96 98 107 91 91

pijequal1 =

47 30 65 44 42

23 27 33 58 22

43 37 30 29 39

23 48 40 30 22

42 32 26 32 29

36 37 31 29 21

18 41 36 36 42

19 30 44 30 50

37 35 17 73 40

31 50 53 28 36

runtimes =

302.4658 255.8484 196.4280 346.8681 354.6933

370.2769 424.5900 215.4640 375.0030 257.1780

190.4042 330.5926 426.4534 315.9330 287.9100

346.7906 232.3076 277.4424 287.3875 364.2895

227.7435 230.9324 195.4440 194.4415 227.4762

505.8861 222.7990 375.5564 201.8705 460.0180

641.8586 239.1940 219.2908 255.4143 546.3155

266.9401 250.3437 247.6938 283.9451 222.9044

418.0391 352.1528 252.3028 357.5294 288.1080

372.9441 324.1685 367.6192 406.0739 263.6599

bestobjest =

252.5915 226.1577 230.0793 238.2573 257.9529

251.4911 239.8899 286.4160 232.0060 229.7874

266.3762 225.6137 187.2043 201.5349 250.9441

212.0788 282.2709 193.0335 173.8241 212.1517

239.0345 256.1337 269.2454 258.5332 197.0619

219.1320 195.9730 259.6563 217.6804 230.2241

194.4659 239.3888 248.9188 261.7298 215.8419

248.9194 214.7819 214.5979 254.1465 280.6377

223.9499 213.6874 243.0999 200.3651 222.7322

228.1521 259.3435 261.9499 238.6633 252.1165

guessbestiter =

2 2 6 5 6

1 5 7 1 7

7 6 2 1 4

5 3 6 2 1

4 7 3 6 6

5 2 5 6 1

3 5 2 6 5

1 3 7 3 7

3 2 2 1 6

2 4 7 1 6

estslsfobjs =

231.5731 202.4983 205.4462 221.6802 227.8252

225.7819 225.9297 253.7662 204.4883 215.0315

238.7636 202.3892 172.7865 197.9411 208.4565

184.6338 251.7064 180.2083 152.6204 182.7506

214.1572 230.1553 234.8334 234.6201 163.0211

136.9006 182.5481 228.7858 197.4669 221.2641

156.9649 223.6978 217.6683 226.9662 194.8218

238.9355 191.0037 193.7765 203.4911 252.9705

217.5035 197.3785 228.6275 187.0348 212.8465

224.9662 229.7423 244.1404 215.5579 220.7197

compportion80 =

0.1925 0.1700 0.1800 0.1000 0.1725

0.1425 0.1600 0.0750 0.1000 0.1200

0.0900 0.2000 0.1250 0.1725 0.1475

0.1750 0.1300 0.2625 0.1400 0.2525

0.1575 0.1575 0.0775 0.1825 0.1475

0.1100 0.2100 0.1450 0.1575 0.1650

0.1325 0.1700 0.1325 0.0875 0.1775

0.1375 0.1475 0.1100 0.1000 0.1575

0.2750 0.1550 0.1025 0.1850 0.1800

0.0950 0.1550 0.1175 0.1225 0.1850

compportionmin =

0.9100 0.9175 0.9275 0.9125 0.9100

0.8925 0.9175 0.8900 0.9075 0.9200

0.9100 0.9175 0.9450 0.9100 0.8975

0.9325 0.9300 0.9500 0.9300 0.9400

0.9250 0.9025 0.8900 0.9000 0.9100

0.8800 0.9325 0.9400 0.9175 0.9125

0.9300 0.8975 0.9150 0.8925 0.9475

0.9250 0.9075 0.9275 0.9225 0.9200

0.9450 0.9275 0.9050 0.9325 0.9050

0.9175 0.8850 0.9125 0.8950 0.9150

**71st experiment, Fixed Scens 7 iter b=0.75, min 60 %, f=[1,15]) –10 fixed scens, 10 reg,--200 scen test, no double test, about as good as 50-50 ratio but takes longer**

lcfiterbetter =

1

lcfiterworse =

0

lcfiterave =

231.4148

slsfave =

213.5334

avepercbetter =

0.0850

averuntime =

234.0062

avelcfrejs =

1.6741

aveslsfrejs =

1.8006

percbetter =

0.0913 0.1051 0.0751 0.0516 0.0627

0.0808 0.0422 0.0661 0.0832 0.1205

0.0553 0.1561 0.0711 0.1675 0.0666

0.0873 0.0200 0.0369 0.0586 0.1126

0.1023 0.0698 0.0674 0.1168 0.1782

0.0891 0.0340 0.1283 0.0568 0.0831

0.1069 0.0032 0.0446 0.1591 0.0442

0.1001 0.1178 0.1100 0.1118 0.0263

0.0628 0.1622 0.1946 0.0546 0.0773

0.0823 0.0483 0.0435 0.0998 0.0630

returnedobjs =

253.7750 270.0899 214.8015 238.4193 222.4936

172.3047 205.6385 242.6397 210.7613 224.9991

261.6437 242.2169 212.3468 200.8065 250.7670

245.7873 218.6155 250.6422 232.7211 233.5843

236.2972 243.7337 281.1472 235.0562 225.9935

242.3532 242.2142 287.2240 217.5351 231.9457

253.8896 208.4373 220.2978 210.3576 303.8636

273.0762 206.5338 255.6792 204.1888 195.6806

243.0740 238.2358 227.5720 190.4077 200.1400

228.1690 194.9669 205.2425 220.0421 242.3331

slsfobjs =

232.5512 244.4017 199.7981 226.7108 209.3595

159.4192 197.3034 227.5891 194.5778 200.8041

247.9406 209.5098 198.2585 172.0003 235.1136

226.0614 214.3290 241.7254 219.8426 209.9464

214.3593 227.8333 263.3933 210.4647 191.8196

222.5172 234.2403 254.5607 205.8527 214.1537

229.3726 207.7753 210.8971 181.4819 290.9886

248.2217 184.7760 230.3427 183.6603 190.6699

228.7091 204.9885 190.4987 180.5473 185.7770

210.8150 185.9828 196.6803 200.0707 227.9770

lcfrejs =

1.9184 1.2321 1.8133 1.5386 1.5404

3.2986 2.4624 1.8025 0.0694 2.2589

2.0146 2.1020 3.4534 2.5348 0.6961

0.2315 0.7582 0.1148 1.7236 1.0341

1.2503 1.9137 0.7725 0.8383 1.2230

2.7974 0.3097 0.6890 2.0560 2.8768

1.7048 2.8184 1.3765 2.1138 0.2999

1.9015 1.6742 0.0818 1.2979 1.8336

2.3700 1.9034 1.7941 2.6608 1.7139

1.9276 2.6153 1.1539 2.5538 2.5858

slsfrejs =

1.9581 1.5243 2.4232 2.6642 1.5587

3.9023 1.4959 1.1697 1.6234 1.5209

1.3377 3.4672 3.3564 5.7070 0.3856

1.0345 1.0137 0.3620 1.7534 0.8607

1.2150 1.7404 0.4819 0.2988 2.6607

2.2603 0.7651 0.6787 1.8160 3.4278

0.2084 2.1865 0.6826 3.6617 0.1903

1.1526 0.8571 0.0592 1.6611 3.0991

2.3766 3.0161 2.2443 4.0674 1.4043

1.0765 2.1924 1.8061 2.2269 1.3987

menusizes =

4.5500 4.4000 4.5500 4.8500 4.5000

3.9500 4.8500 4.4500 4.3500 4.5000

4.9500 4.2000 3.8500 4.3500 4.4000

4.9500 4.7000 4.8000 4.2000 4.8500

4.6000 4.4500 4.8000 4.8000 4.7000

4.2000 4.7500 4.8000 4.2500 4.4000

4.7000 4.6000 4.5500 4.1500 5.0000

4.7000 4.3500 4.4500 4.6000 4.3000

4.7000 4.2500 4.5500 4.5000 4.6000

4.5500 4.3500 4.4000 4.6500 4.4500

avepij =

0.3444 0.3338 0.2472 0.3198 0.3324

0.3245 0.2693 0.2954 0.3080 0.3210

0.3175 0.4264 0.3050 0.2347 0.2831

0.3857 0.3714 0.3044 0.2397 0.3661

0.3598 0.3714 0.3583 0.3955 0.3554

0.3135 0.3093 0.3890 0.3209 0.2815

0.3826 0.3011 0.3491 0.3873 0.3383

0.4163 0.3031 0.4931 0.2680 0.2726

0.3144 0.3463 0.3196 0.2912 0.3178

0.3407 0.2574 0.3062 0.3004 0.3235

pijover5 =

133 136 88 117 128

127 96 104 118 119

127 164 114 95 111

154 142 112 82 157

146 142 135 165 142

124 115 152 120 100

150 110 141 157 139

159 120 207 97 102

121 142 119 105 124

141 102 119 118 119

pijequal1 =

30 44 28 49 41

40 34 40 47 45

39 62 39 32 35

46 59 45 30 51

46 47 55 58 47

26 36 39 56 23

46 32 41 39 24

55 42 69 22 46

43 41 33 37 34

41 23 49 33 43

runtimes =

245.0343 230.5435 186.8749 339.4438 259.0313

268.3535 225.7966 260.4315 204.1528 179.0170

186.6391 366.6927 265.5760 276.9419 190.4552

239.2762 209.4763 179.4263 223.7324 229.5737

202.3396 272.3427 187.7355 197.1027 247.0503

215.7036 213.6839 194.8482 207.5360 316.4652

205.8999 233.8249 237.3670 274.3921 232.1336

245.6859 192.4483 198.2686 226.2423 247.7288

194.6891 237.3959 243.2256 189.2116 361.7951

201.7705 228.2782 191.2429 277.8657 259.5693

bestobjest =

256.1320 270.6731 219.0573 250.5690 231.1896

179.1533 215.0764 249.6826 208.9674 224.6517

266.8525 250.7967 212.6153 206.1135 253.0432

248.7037 225.9341 251.7891 233.9429 234.9760

240.1213 248.3486 286.4088 240.5790 228.8510

242.3842 246.2493 291.8245 221.0496 237.0198

256.5002 224.3496 223.9600 211.6796 310.2563

278.9559 206.1487 256.5365 199.7970 198.6128

242.7443 237.5869 230.2562 199.0967 204.4023

231.1240 205.1669 205.5969 218.5248 243.9770

guessbestiter =

5 7 6 6 4

3 4 4 4 2

2 7 4 2 3

7 5 3 7 6

5 4 5 2 4

6 1 7 5 6

7 7 2 5 2

7 6 7 6 7

7 7 3 4 6

5 6 3 7 7

estslsfobjs =

233.9244 244.7605 198.1547 232.3123 206.3495

159.7719 195.3040 228.0022 194.7705 200.7666

251.9571 207.3096 195.6284 174.8276 232.1902

227.1349 212.7292 239.8102 219.9178 210.2791

211.5226 229.5201 262.2032 209.7973 190.0582

215.7403 234.7853 256.7367 207.5949 211.5677

228.8144 200.3019 211.0749 184.0748 291.6352

250.5358 186.8488 231.1053 186.2980 189.5638

217.8938 204.7248 188.1079 182.1042 186.6092

212.7933 184.4014 194.8427 190.0734 229.6501

compportion80 =

0.2175 0.2550 0.1950 0.2850 0.2050

0.2500 0.1850 0.1775 0.2375 0.1475

0.2100 0.2050 0.2125 0.1450 0.2575

0.1500 0.3500 0.2325 0.2250 0.1750

0.1625 0.1450 0.2600 0.1675 0.2675

0.2325 0.1900 0.1600 0.2750 0.2025

0.2025 0.2775 0.2075 0.3725 0.2350

0.2275 0.3300 0.3075 0.2350 0.2400

0.1975 0.1675 0.2500 0.2275 0.2850

0.2000 0.1675 0.1450 0.2775 0.2450

compportionmin =

0.9625 0.9625 0.9525 0.9550 0.9550

0.9775 0.9450 0.9375 0.9600 0.9725

0.9375 0.9575 0.9800 0.9675 0.9450

0.9725 0.9675 0.9575 0.9600 0.9525

0.9625 0.9475 0.9425 0.9550 0.9775

0.9750 0.9650 0.9325 0.9800 0.9525

0.9475 0.9575 0.9650 0.9750 0.9775

0.9500 0.9625 0.9500 0.9625 0.9750

0.9725 0.9575 0.9650 0.9500 0.9775

0.9550 0.9600 0.9750 0.9650 0.9450

**72nd experiment, Fixed Scens 7 iter b=0.75, min 60 %, f=[1,15]) –10 fixed scens, 10 reg,--200 scen test, no double test, same as 71, has one 350% improve which skews results**

lcfiterbetter =

0.9600

lcfiterworse =

0.0400

lcfiterave =

237.0730

slsfave =

214.6373

avepercbetter =

0.1574

averuntime =

263.6833

avelcfrejs =

1.6660

aveslsfrejs =

1.9797

percbetter =

0.1512 0.0534 0.1695 0.0278 0.0804

3.4773 0.1392 0.0513 0.1556 -0.0035

0.0503 0.0421 0.0657 0.1576 0.1016

0.0688 0.1456 0.0806 0.1634 0.1171

-0.0137 0.0778 0.0741 0.0393 0.0882

0.0531 0.0949 0.0685 0.0556 0.1108

0.0759 0.1859 0.0913 0.1653 0.0897

0.0835 0.0886 0.0607 0.1350 0.0863

0.0968 0.0391 0.0478 0.1304 0.0747

0.1154 0.0833 0.1254 0.0850 0.0688

returnedobjs =

263.3349 253.9316 206.7439 236.2135 247.3652

210.2630 253.4793 198.7694 217.8102 230.1088

243.2521 202.7516 244.2067 298.6819 234.3859

207.7263 229.9381 251.2462 238.3062 216.2983

174.9624 237.8911 254.2367 271.0993 256.3930

234.1358 253.4074 200.3991 206.6730 250.8792

207.8878 260.1173 199.0530 286.0458 216.9459

262.7032 251.9432 223.4410 193.6784 230.3109

270.6848 220.1641 242.7544 262.6599 236.5605

264.1618 226.6939 283.5838 239.9678 249.4016

slsfobjs =

228.7449 241.0626 176.7767 229.8296 228.9620

46.9624 222.5045 189.0707 188.4865 230.9147

231.6051 194.5609 229.1500 258.0242 212.7594

194.3474 200.7185 232.5092 204.8277 193.6167

177.3881 220.7277 236.7044 260.8498 235.6206

222.3290 231.4461 187.5571 195.7878 225.8500

193.2280 219.3330 182.4028 245.4616 199.0937

242.4532 231.4376 210.6461 170.6409 212.0120

246.8029 211.8898 231.6848 232.3702 220.1235

236.8211 209.2706 251.9926 221.1666 233.3385

lcfrejs =

2.8568 0.9155 2.3176 1.7366 3.1686

1.6164 1.4815 3.1576 2.2766 1.0885

2.3029 2.7861 1.4468 1.0154 2.8157

0.8319 0.6069 2.1877 1.0234 1.0233

2.5956 0.9861 0.9154 0.4823 1.2428

0.9578 1.6804 2.5967 2.8043 1.9233

1.6787 0.2473 3.6455 0.0657 1.5108

1.1796 0.1575 3.4459 2.8130 1.5039

1.5299 1.7656 2.3558 0.7092 1.9328

0.8370 2.2640 0.9636 1.8111 0.0410

slsfrejs =

2.4010 1.0678 3.9750 1.7258 3.1931

15.6042 0.7386 2.2022 3.8970 0.5955

1.5469 3.0558 1.7150 0.6113 1.7633

0.8088 1.5761 2.4228 1.6029 1.6171

1.9118 1.6364 1.3255 0.2972 0.5199

1.1231 1.2716 3.2693 2.5013 1.8247

1.1620 1.5662 3.0041 0.1471 1.4944

0.0296 0.5677 3.6204 3.9751 1.1271

1.0656 2.2500 1.6982 0.6262 1.1762

0.9659 3.8633 0.1643 2.0797 0.5995

menusizes =

4.2000 4.6000 4.2000 4.2500 3.7000

4.3500 4.8500 4.8500 4.6500 4.9000

4.6500 4.8500 4.5500 3.6000 4.2000

4.8500 4.9000 4.6500 4.3000 4.5500

4.5000 4.8500 4.7500 4.7500 4.5000

4.7500 4.7000 3.8000 4.7000 4.3500

4.5000 4.6500 4.4000 4.7500 4.8500

4.6500 4.6000 4.4500 3.9000 4.8500

4.4500 4.9500 4.8000 4.2500 4.5000

4.6500 4.5000 4.7500 4.7000 4.9000

avepij =

0.3156 0.3541 0.2724 0.3463 0.3428

0.2940 0.4208 0.2837 0.3303 0.3233

0.3331 0.3322 0.2852 0.4774 0.4042

0.3608 0.4105 0.2792 0.3736 0.4314

0.2935 0.2879 0.2754 0.2834 0.3596

0.3291 0.3666 0.2784 0.3063 0.3999

0.3231 0.3946 0.2502 0.4069 0.3806

0.3789 0.3275 0.2882 0.3117 0.3085

0.4224 0.2743 0.2970 0.3631 0.3561

0.3112 0.2715 0.4460 0.3476 0.3890

pijover5 =

119 138 106 135 139

109 176 97 132 118

116 127 114 204 173

137 168 106 146 177

107 115 104 113 142

126 136 105 113 158

121 158 87 174 142

149 124 113 119 121

173 99 112 143 144

118 101 177 131 151

pijequal1 =

32 56 40 67 46

35 60 33 36 24

39 41 43 91 53

54 63 25 64 86

35 41 34 28 35

39 45 41 25 57

46 44 39 53 45

56 42 27 49 33

61 37 23 41 56

19 35 66 57 64

runtimes =

409.8166 442.3328 365.3805 383.7607 507.1191

323.6613 309.3211 248.8653 255.9203 287.2399

307.1684 381.7473 270.0248 246.5928 231.5168

211.6552 244.6153 213.2026 194.7362 199.4959

311.0958 274.5966 212.1936 203.1360 229.4688

259.7271 241.2788 266.6160 378.6776 208.2395

276.9855 243.6479 201.1153 203.9949 202.1805

215.8089 237.2908 198.9812 281.3067 245.6152

219.1140 252.1463 323.0789 207.1315 206.6298

219.9738 200.3673 213.1410 199.4475 217.0042

bestobjest =

259.2517 253.9453 207.6150 238.5968 247.5068

215.5454 258.8161 204.6565 221.7304 246.1085

247.4432 214.3591 247.4502 298.6095 239.7474

214.1182 230.4775 255.5312 238.6826 216.4921

187.4897 238.8842 256.6569 280.1323 259.6976

240.2860 255.4791 201.8423 214.5949 253.2104

209.4611 256.4117 203.1143 287.5884 220.1006

261.9435 250.2022 230.3725 196.2902 231.0526

269.6752 224.4664 245.5266 263.1338 237.8855

267.2528 228.5180 284.5580 241.4922 251.6242

guessbestiter =

5 7 7 6 1

6 4 4 7 2

3 6 2 2 5

4 4 5 5 2

1 7 5 4 6

2 3 2 2 7

7 7 3 7 2

6 5 1 3 3

4 5 7 5 7

2 4 4 6 5

estslsfobjs =

230.8524 238.5681 179.2920 229.2809 230.1246

48.2333 221.3069 193.6403 199.3831 231.5503

233.5684 194.6147 222.3827 257.6073 211.6902

194.4534 201.7109 233.8816 204.1028 193.8075

179.6980 218.5074 236.6872 261.4212 218.2269

219.2281 230.5412 176.9993 198.7554 227.5713

192.2262 221.9665 186.2191 246.2161 198.4321

241.3947 229.5379 210.8395 172.7123 215.3140

247.9667 214.0928 236.3481 234.5427 220.6094

238.5396 209.6712 252.3480 223.3844 232.2161

compportion80 =

0.2400 0.2525 0.1750 0.3450 0.2300

0.2000 0.1850 0.2050 0.2475 0.2550

0.2200 0.2075 0.1925 0.1425 0.2225

0.2025 0.1725 0.2150 0.2500 0.2400

0.2150 0.1725 0.2200 0.1725 0.2575

0.1400 0.1825 0.2300 0.2150 0.2175

0.1925 0.2700 0.1325 0.1700 0.2100

0.2900 0.1900 0.1300 0.2100 0.2150

0.2725 0.2725 0.2800 0.1975 0.2750

0.1700 0.2475 0.2775 0.1650 0.2225

compportionmin =

0.9500 0.9325 0.9700 0.9725 0.9750

0.9650 0.9550 0.9400 0.9500 0.9600

0.9500 0.9575 0.9500 0.9450 0.9875

0.9475 0.9550 0.9575 0.9750 0.9675

0.9425 0.9450 0.9625 0.9750 0.9650

0.9500 0.9675 0.9575 0.9600 0.9650

0.9425 0.9650 0.9375 0.9425 0.9575

0.9625 0.9575 0.9625 0.9650 0.9325

0.9600 0.9650 0.9575 0.9575 0.9625

0.9500 0.9600 0.9425 0.9700 0.9675

**73rd experiment, Strawman 2**

slsfobjs =

224.3996 189.1588 201.8035 234.5936 189.4635

lcfobjs =

227.0364 190.2470 187.0349 270.3600 191.9163

top1wtobjs =

198.3919 182.0498 172.6641 210.6302 167.4116

top1wtnontrivials =

9 8 6 4 9

closest5wtobjs =

192.2798 120.6081 177.0082 219.4180 155.2048

closest1wtobjs =

158.6523 136.7331 134.1953 181.3946 124.0181

closest1wtnontrivials =

14 9 12 9 11

Comparing mutate dscens and equally-weighted random scens (30s time lim for both)

slsfrandscenobjs =

210.6735 183.6490 239.2863 165.4242 187.8026

slsfobjs =

213.0931 189.3716 245.4046 261.6463 193.9575

slsfrandscenobjs =

177.2184 95.5442 39.4275 81.9838 64.4691

slsfobjs =

193.5607 205.0977 202.9674 262.9904 52.2953

Now with 100s each since randobjs seemed to need more time (but still is worse)

slsfrandscenobjs =

198.4150 175.2694 223.4728 193.5177 206.9320

slsfobjs =

199.8313 198.1024 225.3267 198.6470 208.3845

**74th experiment, Old iter method (no fixed scens) b=0.75, min 60 %, f=[1,15]) –10 fixed scens, 10 reg,--200 scen test, with double test, to confirm fixed scens is better**

lcfiterbetter =

0.9600

lcfiterworse =

0.0200

lcfiterave =

227.7879

slsfave =

212.1323

avepercbetter =

0.0731

averuntime =

175.4566

avelcfrejs =

2.3144

aveslsfrejs =

1.7533

percbetter =

0.0759 -0.0078 0.0717 0.1187 0.0392

0.1274 0.0297 0.1064 0.0200 0.1505

0 0.1199 0.0512 0.1451 0.1232

0.0666 0.0065 0.0460 0.0557 0.0588

0.1281 0.0311 0.1406 0.0364 0.1111

0.0121 0.0555 0.0438 0.0653 0.0980

0.0664 0.1205 0.0715 0.1375 0.1187

0.0119 0.1349 0.1214 0.0629 0.0367

0.1084 0.1632 0.0741 0.0249 0.0927

0.0278 0.0432 0.0325 0.0377 0.0423

returnedobjs =

278.9251 261.1954 199.9144 242.8467 211.3851

220.9982 225.9926 213.0752 170.7078 262.5067

171.2735 242.4246 212.8521 219.2484 204.2351

236.7879 227.4390 204.3944 256.6787 251.7265

232.5548 228.8520 234.1034 253.2094 275.7614

208.8632 209.5740 183.5522 179.7767 239.5644

270.4026 196.3085 258.7449 237.6458 211.3675

204.3595 301.7492 267.9138 244.8897 193.5254

212.5770 299.8817 239.6556 207.9393 239.0527

198.8762 230.3054 206.6992 194.2867 212.7929

slsfobjs =

259.2500 263.2364 186.5354 217.0802 203.4026

196.0321 219.4785 192.5838 167.3648 228.1771

171.2735 216.4738 202.4867 191.4732 181.8372

222.0019 225.9761 195.4111 243.1377 237.7436

206.1445 221.9428 205.2511 244.3213 248.1913

206.3581 198.5506 175.8523 168.7583 218.1856

253.5565 175.1967 241.4804 208.9142 188.9340

201.9599 265.8722 238.9129 230.3983 186.6670

191.7807 257.8108 223.1133 202.8827 218.7782

193.4912 220.7769 200.1982 187.2292 204.1522

lcfrejs =

1.8427 1.7076 2.0527 1.3256 2.9808

1.6252 2.7692 1.6577 3.7936 1.5455

0 1.0822 3.0176 3.0377 2.6542

2.2979 3.2959 4.0256 2.3428 2.0866

1.5009 2.8815 1.3704 1.6638 1.8360

1.8990 2.5805 5.4293 2.9012 2.4173

1.2383 3.0623 1.8543 1.6696 3.4694

3.5631 0.0699 1.2594 1.0804 4.6033

1.1407 1.7592 0.6735 2.8647 1.1938

4.2139 2.4010 4.0441 4.3798 1.5583

slsfrejs =

0.6190 0.5447 0.8922 0.6099 0.8931

0.8122 2.3981 1.0667 2.3291 0.7424

3.2944 2.1010 2.0363 2.5722 2.1098

2.3745 2.5726 3.1546 1.0806 1.7721

1.3899 2.0778 0.6296 0.4166 0.5289

1.2487 1.5717 3.8880 2.6387 2.5938

1.4053 2.0489 1.7324 1.8161 3.3087

1.6078 0.1240 1.5798 1.0913 3.2917

1.1794 0.5268 0.0586 2.3520 1.7564

4.0827 1.0312 2.5853 3.8108 1.3152

menusizes =

4.7000 4.8000 4.3000 4.6500 4.4500

4.5000 4.1500 4.5500 4.4000 4.2000

4.2000 4.5500 4.3000 4.2000 4.5000

4.4000 4.4000 4.7000 4.6500 4.5500

4.6500 4.2000 4.6500 4.5000 4.7000

4.8000 4.3000 4.6500 4.2000 4.7500

4.5500 4.3000 4.5000 4.4000 4.6000

4.3000 5.0000 4.8000 4.6500 4.6000

4.3500 4.6000 4.6000 4.2500 4.2500

4.1500 4.8000 4.6500 4.4000 4.4500

avepij =

0.3622 0.2737 0.3013 0.3683 0.3036

0.3480 0.2863 0.2696 0.2641 0.3990

0.3047 0.3290 0.2600 0.3243 0.3531

0.3187 0.2431 0.2423 0.3084 0.2998

0.2839 0.2555 0.3678 0.3511 0.3472

0.2889 0.2768 0.2487 0.3209 0.3036

0.3765 0.3483 0.3003 0.3062 0.3182

0.3148 0.4041 0.3476 0.3015 0.2500

0.3532 0.3761 0.3428 0.2519 0.3527

0.2922 0.3327 0.3020 0.2374 0.2810

pijover5 =

124 84 105 122 94

122 93 83 71 143

88 101 79 109 117

107 68 66 100 93

94 75 131 114 109

91 87 78 113 98

144 124 97 102 113

102 144 108 93 67

126 120 106 78 129

92 99 84 76 87

pijequal1 =

57 26 40 46 34

54 48 36 33 58

37 38 30 39 48

48 21 28 31 23

28 31 71 49 55

33 33 23 63 36

62 48 38 54 54

44 66 41 36 22

60 54 45 39 53

45 43 40 27 38

runtimes =

91.8259 235.8927 204.3775 140.8078 167.6387

126.3475 115.1960 122.6640 143.4544 107.5767

300.9975 173.1495 114.9020 215.6116 164.6128

279.3371 214.3724 231.2301 142.0017 127.4352

222.5886 267.4227 108.7685 191.1295 122.1241

239.6621 115.5081 297.7560 127.2690 155.5871

198.3957 121.6401 146.2092 114.1970 105.6217

186.5257 108.4056 143.5989 246.0118 161.4831

135.8034 119.7874 142.4122 286.2514 127.0957

215.7918 280.8356 138.3402 312.1025 215.0759

bestobjest =

279.6414 271.4553 203.0726 244.9527 217.7651

225.8700 229.2832 222.6849 175.9296 266.1047

171.3595 250.4966 226.2263 222.1307 203.8087

240.5474 235.0466 210.6174 257.3829 259.4077

238.9250 237.9523 235.8090 254.1797 282.6354

208.9385 223.7091 189.3766 181.3004 245.2947

276.5603 198.1538 264.7486 238.2313 212.2239

218.6404 304.0882 273.4690 250.5913 206.8223

214.5125 303.2873 245.6104 212.2629 238.5413

200.8266 235.0499 210.8071 202.5267 215.2977

guessbestiter =

7 5 3 7 3

3 1 3 3 2

0 2 7 6 4

3 2 4 6 5

3 6 6 7 4

6 5 5 7 4

4 6 6 5 4

1 3 6 2 6

3 5 2 4 7

6 5 5 3 7

estslsfobjs =

257.3369 265.2554 187.1796 215.6100 202.7908

196.4230 220.5939 196.2740 170.6945 228.8583

171.3595 218.0297 203.0699 193.2287 183.5911

219.6540 222.0149 196.4563 242.3097 241.2631

204.2357 222.9161 205.5149 244.9553 250.9339

207.6006 198.1336 179.3236 171.4873 220.9005

252.3240 178.1905 242.7182 208.5068 184.6124

201.6960 267.1653 236.5985 228.6525 190.5961

192.6694 257.1664 223.4533 193.5436 221.5122

194.2604 219.7819 200.2993 192.3008 196.1085

compportion80 =

0.1525 0.1400 0.1750 0.1550 0.1550

0.2600 0.1725 0.1850 0.2200 0.1575

0.2350 0.1275 0.1600 0.2125 0.1325

0.1200 0.1100 0.1600 0.1300 0.1550

0.1300 0.1825 0.1375 0.2175 0.2375

0.1300 0.1875 0.2200 0.2600 0.1425

0.2875 0.2075 0.2800 0.1200 0.3100

0.1750 0.1975 0.1550 0.1075 0.1100

0.1950 0.2000 0.1700 0.2300 0.2100

0.2725 0.1150 0.1425 0.1650 0.1550

compportionmin =

0.9050 0.8425 0.9250 0.8775 0.8825

0.8550 0.9275 0.8675 0.9075 0.9200

0.9150 0.8575 0.8975 0.8825 0.8925

0.9025 0.8975 0.9225 0.8900 0.8700

0.8900 0.8975 0.9025 0.9275 0.8900

0.8625 0.9175 0.9150 0.9550 0.8850

0.9300 0.9250 0.8775 0.8750 0.9250

0.9000 0.9100 0.8475 0.8475 0.8975

0.9150 0.8550 0.9050 0.9250 0.9025

0.9300 0.8800 0.8750 0.9225 0.8950

**75th experiment, Fixed Scens Iterb=0.75, min 60 %, f=[1,15]) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have relative weight—crashed halfway through in perf analysis**

lcfiterbetter =

0.8400

lcfiterworse =

0.0400

avepercbetter =

0.0980

averuntime =

232.6406

avelcfrejs =

2.2725

aveslsfrejs =

2.2361

percbetter =

0.0759 0 0.1323 0 0.0969

0.1134 -0.0023 0.1527 0.0585 0.0554

0 0.1153 0.1058 0.0042 0.0773

0.0935 0.1043 0.1777 0.6907 0.1177

0.0453 0.0930 0.0426 0.0153 0.0853

returnedobjs =

278.9251 263.2364 250.0768 220.5946 174.5357

234.3856 221.5028 244.1990 252.1945 240.6614

257.6279 220.0082 238.3812 206.8216 203.6778

195.2107 191.8437 208.3063 212.4475 259.7119

218.9643 225.5570 217.9121 232.5044 231.5097

slsfobjs =

259.2500 263.2364 220.8557 220.5946 159.1185

210.5188 222.0066 211.8462 238.2627 228.0281

257.6279 197.2632 215.5806 205.9617 189.0660

178.5196 173.7307 176.8732 125.6544 232.3700

209.4839 206.3643 209.0036 229.0098 213.3206

171.2695

slsfrejs =

0.6190 0.5447 1.0746 2.4794 3.8009

0.5312 0.5791 0.6495 0.6556 1.1985

2.2786 1.9408 2.0722 1.3935 1.4265

4.2972 5.7680 1.6726 10.2704 1.2130

1.5536 2.1766 4.3367 1.6034 1.7663

4.7071

lcfrejs =

1.8427 0 1.4817 0 3.3671

1.3710 3.3468 1.4702 2.0591 3.1507

0 2.4496 2.0208 2.6169 2.2338

2.7145 6.1226 1.7853 2.3012 1.9066

3.1728 2.8194 3.5574 3.1513 1.8702

bestobjest =

279.6414 265.2554 260.7551 220.7448 188.6794

234.5810 238.5381 244.3909 255.9867 245.2865

253.0814 223.6488 245.1084 212.1972 205.2470

211.9477 203.2763 208.4424 218.4540 262.8900

221.1434 226.7650 221.6230 237.8903 236.9738

guessbestiter =

7 0 2 0 4

7 3 4 5 2

0 3 3 5 4

3 7 7 6 3

2 3 2 5 5

menusizes =

4.7000 4.8500 4.5500 4.3000 4.6000

4.8000 4.7500 4.7000 4.7000 4.9500

4.4500 4.5000 4.6500 4.5000 4.8000

4.1500 4.5500 4.4500 4.6000 4.7000

4.3500 4.4500 4.6000 4.4000 4.3500

**76th experiment, Fixed Scens Iterb=0.75, min 60 %, f=[1,15]) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have relative weight—(same as 75)—does seem at least slightly worse than equally weighted**

lcfiterbetter =

0.9800

lcfiterworse =

0

lcfiterave =

229.0166

slsfave =

211.8516

avepercbetter =

0.0812

averuntime =

186.7401

avelcfrejs =

2.2977

aveslsfrejs =

1.8175

percbetter =

0.1168 0.0440 0.0882 0.1308 0.0493

0.0427 0.1568 0.1058 0.0713 0.0861

0.0295 0.0420 0.0469 0.1142 0.0565

0.0590 0.0252 0.1072 0.0830 0.0916

0.1025 0.0841 0.0581 0.1474 0.0996

0.1232 0 0.1473 0.0379 0.0422

0.1386 0.1496 0.1499 0.0122 0.1427

0.0015 0.0847 0.0340 0.0573 0.0542

0.0447 0.0708 0.0973 0.0880 0.0697

0.1030 0.0308 0.1117 0.1071 0.1219

returnedobjs =

203.2778 230.5497 192.8082 278.3101 249.5756

229.4531 214.4871 243.4714 231.9997 209.0221

222.6802 206.8151 187.8079 260.1434 221.4470

197.3232 192.5165 253.7398 288.7999 236.7897

286.4333 281.6538 228.0723 217.5947 219.2600

266.9652 232.0837 223.9687 217.1113 261.2303

213.7070 249.9604 251.1857 214.1479 217.9759

203.2035 205.8489 197.5202 217.3563 250.7145

220.2959 207.3530 240.8514 206.7386 227.5486

265.2248 198.3156 228.9672 202.1954 246.3289

slsfobjs =

182.0132 220.8336 177.1779 246.1196 237.8443

220.0506 185.4204 220.1864 216.5679 192.4587

216.2894 198.4868 179.3986 233.4845 209.6044

186.3253 187.7919 229.1698 266.6623 216.9102

259.8048 259.8130 215.5424 189.6398 199.4044

237.6854 232.0837 195.2190 209.1908 250.6474

187.6999 217.4355 218.4401 211.5662 190.7508

202.9089 189.7798 191.0313 205.5675 237.8328

210.8750 193.6380 219.4923 190.0212 212.7264

240.4580 192.3925 205.9546 182.6277 219.5551

lcfrejs =

2.7470 2.8434 2.8021 1.2491 1.4255

2.8948 3.4447 2.4646 2.5772 3.6806

3.1157 3.7736 3.3180 1.8000 1.7351

2.4959 2.0648 1.1405 1.3798 1.9879

1.1717 1.3013 1.9648 2.1980 3.3402

1.2971 0 1.5890 3.1529 0.7568

1.6562 1.6209 1.7336 3.7196 2.1248

2.1927 1.4643 4.6809 3.5109 2.5606

1.2682 3.9939 2.7173 3.3113 2.4718

2.4414 2.3246 1.4555 2.1002 1.8243

slsfrejs =

1.8347 1.2668 2.8747 1.1054 0.2645

2.5910 3.3759 1.4007 2.4378 2.2357

1.4802 3.1670 3.0327 0.4331 3.0177

1.2449 0.3084 0.9081 0.7447 0.9927

1.0761 0.9877 1.0747 2.4365 2.6948

1.2046 2.3819 0.3333 2.0964 0.4004

1.2370 1.1103 1.1513 3.2334 2.9658

0.6962 0.6935 4.2155 1.9455 1.0116

0.8789 5.5950 2.2000 5.5845 2.3685

0.6789 1.8003 0.6494 2.0786 1.3749

menusizes =

4.6000 4.3000 4.2500 4.6000 4.4500

4.8000 4.3000 4.3500 4.7000 4.2000

4.6500 4.4000 4.5000 4.8500 4.0500

4.2500 4.5000 4.6000 4.8000 4.7000

4.9500 4.7000 4.5000 4.5000 4.5500

4.7000 4.7000 4.9000 4.3000 4.4000

4.1500 4.7500 5.0000 4.2500 4.1500

4.5500 4.6000 3.8500 3.9000 4.4000

4.7000 4.5000 4.2500 4.1000 4.4000

4.8000 4.8500 4.4500 4.5500 4.7500

avepij =

0.2929 0.2560 0.2768 0.3449 0.3158

0.2423 0.3349 0.3994 0.2716 0.3117

0.3771 0.2670 0.3072 0.3694 0.3013

0.3160 0.3133 0.3319 0.3839 0.3409

0.3396 0.3654 0.3762 0.3187 0.2697

0.4000 0.2038 0.3755 0.2854 0.4036

0.3330 0.4054 0.3418 0.2110 0.3134

0.3150 0.3440 0.2279 0.2871 0.3246

0.3213 0.2345 0.3498 0.2131 0.2870

0.2981 0.2871 0.3955 0.3398 0.3224

pijover5 =

100 76 94 123 109

65 111 147 84 107

126 85 108 121 105

108 99 106 121 115

106 122 139 112 87

129 51 135 85 150

117 157 92 58 116

116 116 62 88 107

110 65 110 71 92

102 95 146 117 104

pijequal1 =

50 35 39 55 59

25 38 69 31 45

64 26 40 56 48

52 49 51 64 48

46 43 61 40 33

53 18 45 35 65

50 71 36 22 49

60 59 24 40 35

43 24 40 28 47

35 41 71 56 41

runtimes =

111.1742 271.8474 173.2951 173.8904 105.7818

188.5534 213.9021 111.5062 136.2502 220.8863

334.7945 253.6738 298.2291 218.7030 173.2394

233.1658 265.5784 126.5502 137.3183 131.6211

207.5367 128.6526 128.4592 182.6589 209.8802

189.5698 277.4565 181.9043 203.5464 142.5365

131.5408 157.2578 229.3789 174.7297 167.2819

125.8738 249.6470 311.7595 121.2079 124.5840

198.5847 126.4402 311.0135 243.6431 177.5560

138.2803 192.3734 109.3293 156.8972 157.4619

bestobjest =

208.9145 234.3967 198.1722 281.4645 251.0501

227.9621 217.7218 248.4600 242.7799 211.4888

239.7557 206.4685 191.8786 266.3544 226.6103

203.2403 199.8392 261.8536 289.3342 238.6000

288.5648 288.8509 234.7017 221.2051 224.3331

269.3338 233.8095 224.0474 217.0964 272.1818

214.4643 252.0267 258.8811 221.0941 220.0494

211.6165 217.6978 202.6497 230.9520 262.7186

224.2607 219.4601 248.6087 214.5727 231.9709

273.3340 206.2221 230.3386 205.7588 248.0653

guessbestiter =

5 5 7 5 7

5 7 7 7 6

4 7 5 7 3

6 3 4 7 5

6 4 1 5 4

3 0 6 4 1

6 7 7 5 7

2 4 6 1 3

2 4 5 5 2

4 2 7 3 5

estslsfobjs =

178.3540 212.3780 175.4706 249.6919 238.5230

223.6076 185.4098 223.6732 214.7011 191.2065

216.5280 197.5422 180.6774 235.8806 212.6657

187.7087 187.3349 230.0701 267.4551 213.1572

258.6541 262.0299 213.1318 189.1174 199.2861

240.5247 233.8095 195.4118 208.2812 250.7193

187.2551 218.2367 218.5752 214.9849 193.0625

203.3650 190.3875 194.2811 205.3152 235.5421

211.7708 207.4408 219.2992 189.8726 215.0567

242.0312 185.5601 207.1914 185.6517 215.1240

compportion80 =

0.1825 0.1550 0.1700 0.1425 0.2075

0.1500 0.1150 0.1850 0.1775 0.1350

0.2825 0.1550 0.2400 0.1350 0.2275

0.2400 0.2425 0.1475 0.1925 0.1675

0.1375 0.1775 0.1950 0.2100 0.2525

0.1325 0.1275 0.1825 0.1725 0.2550

0.1925 0.1950 0.2200 0.2025 0.2000

0.2575 0.1800 0.2100 0.1075 0.2050

0.2050 0.1725 0.1850 0.2550 0.1850

0.1275 0.1525 0.2500 0.2950 0.1025

compportionmin =

0.9100 0.9000 0.9125 0.8775 0.8875

0.8975 0.8900 0.9175 0.9025 0.9275

0.8650 0.9150 0.9000 0.8725 0.9425

0.9275 0.8725 0.8675 0.8650 0.9050

0.8725 0.8950 0.9150 0.8975 0.9250

0.8775 0.8975 0.8700 0.8950 0.8925

0.9475 0.9175 0.8500 0.9200 0.9050

0.8975 0.8975 0.9375 0.9300 0.9125

0.9125 0.9225 0.9100 0.9275 0.9200

0.8825 0.9100 0.9325 0.9200 0.8900

**77th experiment, Fixed Scens Iterb=0.75, min 60 %, f=[1,15]) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have relative weight—(same as 75&76)—testing again since saw dimensions bug in lcf code, but crashed halfway through again in mini perf analysis even tho all the inputs seem normal**

lcfiterbetter =

0.9600

lcfiterworse =

0.0400

lcfiterave =

234.4630

slsfave =

217.1558

avepercbetter =

0.0797

averuntime =

183.1028

avelcfrejs =

1.4681

aveslsfrejs =

1.4999

percbetter =

0.0098 0.1169 0.1134 0 0.0959

0.0676 0.0295 0.0427 0.1380 0.0299

0.0951 0.0409 0.0937 0.0587 0.0757

0.0952 0.0937 0.0760 0.1825 0.0519

0.0389 0.0390 0.1062 0.1648 0.1354

returnedobjs =

239.2104 236.3824 238.6963 227.0461 241.8960

236.5241 237.4233 213.2160 297.3273 220.0019

265.5419 226.0889 251.6415 220.0442 215.1220

249.9482 236.4920 238.5210 233.3013 227.1194

217.6912 179.3400 234.1763 262.8484 215.9755

lcfrejs =

0.6275 2.4735 0.6657 0 1.1087

0.1351 3.0954 0.8240 0.9206 3.5112

0.8326 2.5287 2.1262 2.0908 3.6423

0.1675 1.8495 1.5582 0.1529 2.9028

1.3932 2.2816 1.0852 0.0587 0.6699

slsfobjs =

236.8909 211.6502 214.3770 227.0461 220.7349

221.5540 230.6253 204.4811 261.2801 213.6219

242.4895 217.2013 230.0832 207.8466 199.9832

228.2175 216.2250 221.6716 197.2902 215.9083

209.5380 172.6011 211.6885 225.6643 190.2248

slsfrejs =

0.4812 1.5375 0.2201 2.1638 0.9444

0.5264 3.7920 1.7339 0.2106 3.3243

0.7662 3.5119 2.4557 1.1720 3.1323

0.7626 1.6719 1.6535 0.0192 2.3714

0.7064 2.6758 1.1342 0.1712 0.3596

bestobjest =

248.0027 236.9406 239.7200 229.5403 240.8136

238.5938 240.1435 213.2643 295.8671 223.6817

266.0483 227.6607 245.4913 223.7433 223.1132

244.5910 236.3057 241.6019 233.5847 233.7351

222.1758 183.7346 234.4246 264.1740 216.4011

menusizes =

4.8000 4.6000 4.7000 4.7000 4.7000

5.0000 4.4500 4.4500 4.4500 4.6000

4.7500 4.5500 4.7500 4.5000 3.8000

4.8500 4.6500 4.6000 4.6000 4.5000

4.9500 4.7500 4.1500 4.8000 4.7000

guessbestiter =

4 7 6 0 6

3 1 5 6 1

6 3 2 3 7

7 4 2 5 4

4 1 1 2 4

**78th experiment, Fixed Scens Iterb=0.75, min 60 %, f=[1,15]) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have relative weight—(same as 75&76&77)—seems similar to equal weight method**

lcfiterbetter =

0.9600

lcfiterworse =

0

lcfiterave =

230.4857

slsfave =

210.8233

avepercbetter =

0.0946

averuntime =

260.8657

avelcfrejs =

1.3725

aveslsfrejs =

1.7341

percbetter =

0.1551 0.1379 0.0622 0.0587 0.1297

0.0629 0.1478 0.0980 0.0390 0.0771

0.0593 0.0724 0.0459 0.1431 0

0.1034 0.0697 0.0583 0.0542 0.0972

0.2133 0.0806 0.0636 0.1254 0.1232

0.1074 0.0414 0.0364 0 0.0186

0.1480 0.1170 0.1588 0.1023 0.1049

0.0851 0.1116 0.0551 0.2355 0.1162

0.0831 0.0973 0.0872 0.0610 0.1860

0.0755 0.0987 0.0842 0.1237 0.1143

returnedobjs =

224.4328 215.1511 216.9772 211.3091 231.3365

266.3606 215.6971 193.8621 217.9703 231.3454

244.1948 219.6064 261.3028 243.9614 203.1340

241.2539 220.1451 193.0534 218.3531 247.1737

207.6270 233.8493 215.8786 247.5036 275.4472

257.8234 215.6110 219.4087 210.7401 210.4738

202.5124 248.4043 249.5241 250.7141 278.2294

218.6155 231.8067 237.9297 244.9055 226.3405

228.6493 231.3309 259.6804 226.3837 206.7614

219.8309 271.8515 217.0677 226.9966 235.7675

slsfobjs =

194.2922 189.0753 204.2686 199.5875 204.7772

250.5998 187.9171 176.5563 209.7965 214.7814

230.5232 204.7817 249.8329 213.4209 203.1340

218.6432 205.8085 182.4249 207.1250 225.2771

171.1231 216.3973 202.9617 219.9162 245.2348

232.8213 207.0403 211.7104 210.7401 206.6359

176.4050 222.3841 215.3274 227.4393 251.8126

201.4764 208.5304 225.4977 198.2223 202.7801

211.1153 210.8122 238.8607 213.3668 174.3316

204.3900 247.4233 200.2050 202.0040 211.5765

lcfrejs =

0.9670 2.6859 1.9091 1.6268 1.3699

1.2496 0.1143 2.0307 0.3263 2.2508

2.0461 1.7872 1.3097 1.3345 0

0.9617 1.5758 1.9609 2.3260 0.6065

0.5865 3.1407 1.1705 1.2429 1.7491

0.0546 1.5644 2.0782 0 2.1802

2.7292 0.1678 0.5392 1.0324 1.7005

2.0314 1.2480 1.3801 1.3765 1.7766

2.7103 1.8705 0.9404 0.3974 1.9418

0.9222 0.2017 1.4780 1.3342 0.6408

slsfrejs =

2.7455 1.9062 2.1688 1.3203 2.9316

0.4950 1.5104 1.3623 0.7184 1.4284

1.5515 1.4151 1.5255 2.1962 2.4942

0.1314 2.0127 2.0397 3.2542 1.2975

3.2522 2.2223 0.4507 1.9841 0.6349

0.0004 1.2368 2.0981 2.3954 2.2060

2.5078 0.0703 2.0491 0.9376 0.5318

2.7460 1.7759 1.9452 4.2707 3.0187

3.0513 2.4706 0.3460 1.5889 4.1900

0.5106 0.0900 2.3572 0.8445 0.4164

menusizes =

4.8000 4.3500 4.3500 4.3000 4.3000

4.4500 4.4000 4.8000 4.8000 4.6500

4.5000 4.8500 4.1500 4.6500 4.3000

4.5500 4.5500 4.5500 4.2000 4.1500

4.9000 4.5000 4.3000 4.6500 4.5000

4.5000 4.7000 4.5500 4.7000 4.3500

4.5000 4.7500 4.5000 4.7000 4.7500

4.3000 4.3000 4.5500 4.7000 4.7000

4.3000 4.6000 4.7500 4.8000 4.5000

4.8000 4.6000 3.6500 4.8000 4.7500

avepij =

0.4016 0.3394 0.2994 0.3178 0.3354

0.3213 0.3716 0.3673 0.3736 0.3458

0.3566 0.3307 0.2978 0.4119 0.2336

0.3778 0.2770 0.2604 0.2529 0.3968

0.3703 0.3112 0.3526 0.4187 0.3801

0.4075 0.3112 0.2691 0.3126 0.2275

0.3373 0.4680 0.4180 0.2833 0.3684

0.2618 0.3001 0.3071 0.3687 0.2761

0.2520 0.3102 0.4142 0.3304 0.3293

0.3897 0.3817 0.3495 0.4094 0.3703

pijover5 =

161 126 109 119 132

126 157 138 150 132

143 121 125 163 73

144 104 91 102 161

141 128 130 180 150

162 115 102 111 89

135 190 174 105 144

92 114 109 148 104

85 111 167 124 121

149 158 144 150 135

pijequal1 =

65 50 39 52 32

25 55 60 66 43

53 49 39 59 22

36 36 37 29 55

35 22 44 71 59

61 38 45 38 32

48 74 67 25 44

36 39 53 32 34

29 35 59 44 49

58 51 46 62 50

runtimes =

258.0871 159.1142 230.0522 169.0698 253.6363

187.8650 163.6347 175.5090 153.7482 164.0058

239.2415 274.4765 405.9873 350.8310 403.0618

242.0969 309.5212 245.9389 243.9502 276.3702

309.3681 415.7637 416.2695 322.2403 206.8230

208.1978 264.7772 401.4444 474.1659 334.2827

199.4597 190.9681 233.3828 229.7045 206.5832

175.7431 302.6094 401.3779 239.5740 286.1200

270.1975 236.2969 179.1828 220.9618 287.2904

190.2104 236.0553 304.3546 197.9418 195.7413

bestobjest =

226.3992 217.3115 220.5072 211.5875 232.9528

271.4274 216.5305 196.0724 219.7052 235.0416

245.5703 223.0055 270.9895 245.8829 206.3423

241.2034 223.2171 196.7058 220.6851 253.6179

210.4593 231.4812 226.0679 249.4757 278.8651

258.5605 219.5197 232.1880 214.8647 214.5018

204.4440 250.1478 249.2094 252.3388 281.8281

220.7793 233.1085 236.5671 246.8998 221.4896

230.9471 236.2509 272.6980 225.2026 214.1231

225.2451 271.2436 217.5043 224.6670 235.1545

guessbestiter =

5 2 6 4 3

5 2 6 7 2

5 3 1 6 0

4 2 5 2 5

6 6 3 7 3

1 2 1 0 3

7 7 5 5 2

3 5 7 5 5

4 4 3 6 3

2 5 6 2 1

estslsfobjs =

195.4215 189.0746 208.2743 199.2910 205.8185

251.4467 189.7369 177.9971 207.6854 208.6257

232.0093 203.7145 253.9146 213.7798 206.3423

219.4636 209.9591 182.1931 206.4532 225.6944

172.4017 215.8509 203.0235 212.3847 244.8035

232.8097 206.7896 214.4363 214.8647 207.4096

181.6832 222.3873 216.4854 233.3220 252.6899

209.8941 207.9744 227.5559 193.1274 201.9030

215.2505 211.7599 238.6016 213.0626 173.8851

203.1179 247.4149 199.0289 196.7508 212.5532

compportion80 =

0.2125 0.1600 0.3075 0.3150 0.2100

0.2600 0.2600 0.1825 0.3175 0.2750

0.2400 0.1925 0.1900 0.2650 0.2200

0.2275 0.2200 0.1625 0.2275 0.2600

0.1750 0.2200 0.2975 0.3450 0.1300

0.1800 0.2650 0.1950 0.2125 0.2050

0.2575 0.2575 0.2775 0.1625 0.2250

0.2550 0.1850 0.2375 0.2600 0.2675

0.2000 0.1950 0.3150 0.1950 0.2450

0.2200 0.2625 0.2325 0.2200 0.1900

compportionmin =

0.9525 0.9500 0.9550 0.9725 0.9550

0.9675 0.9725 0.9625 0.9500 0.9625

0.9725 0.9475 0.9825 0.9450 0.9675

0.9475 0.9800 0.9475 0.9750 0.9600

0.9725 0.9800 0.9625 0.9625 0.9350

0.9500 0.9650 0.9600 0.9725 0.9750

0.9475 0.9250 0.9650 0.9700 0.9500

0.9425 0.9600 0.9600 0.9450 0.9450

0.9350 0.9700 0.9575 0.9675 0.9675

0.9525 0.9600 0.9725 0.9575 0.9600

**79th experiment, Fixed Scens Welfare b=0.75, min 80 %, f=[1,15]) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt**

returnedobjs =

211.6805 220.0375 251.4929 187.4204 203.0624

lcfobjs =

208.2763 220.0375 247.1294 187.4204 195.0780

slsfobjs =

211.6805 95.6490 251.4929 186.8091 203.0624

lcfrejs =

1.0665 1.5199 0.0565 1.1917 3.0223

slsfrejs =

0.8927 13.9123 0.3908 2.4894 3.3189

menusizes =

4.4500 4.4500 4.9000 4.5000 4.0000

avelcfobj =

29.7538 31.4339 35.3042 26.7743 27.8683

aveslsfobj =

189.7388

averuntimes =

51.9346 50.1206 26.9124 42.6809 52.4149

menudiffs =

78 113 77 70 89

74 108 81 60 111

51 26 66 61 85

48 28 60 61 98

58 22 63 55 110

51 93 65 55 61

cumcompdiffs =

95 41 96 88 80

130 125 135 124 99

152 136 159 143 146

166 146 173 157 172

175 159 183 166 182

179 164 193 176 204

182 192 200 188 210

bestobjest =

212.7907 221.5146 252.4333 188.0500 203.8894

guessbestiter =

0 7 0 7 0

estobjs =

212.7907 97.1698 252.4333 186.1999 203.8894

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

207.9298 221.3441 247.5587 186.9658 196.6761

testedtwice =

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 1 0 1 0

failedsecond =

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

runtimes =

363.5425 350.8440 188.3869 298.7663 366.9046

compportion80 =

0.3975 0.4450 0.3925 0.3475 0.4650

compportionmin =

0.3975 0.4450 0.3925 0.3475 0.4650

**80th experiment, Fixed Scens Welfare b=0.75, min 80 %, f=[1,15]) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt, perf every iter**

returnedobjs =

210.3305 242.6293 224.5167 203.6031 159.1131

lcfobjs =

203.6735 238.3631 218.7418 203.1311 155.1106

204.0842 236.5291 222.6866 203.6031 158.2686

195.3874 238.4258 221.7784 199.8285 157.2804

203.0144 235.6337 224.5167 201.6632 156.1325

203.4451 236.5593 219.1759 198.8747 156.5172

204.7398 236.8414 218.9729 196.8441 155.6403

203.9585 236.6992 223.3236 202.8645 156.8774

slsfobjs =

210.3305 242.6293 220.8132 208.2619 159.1131

lcfrejs =

0.9340 0.0059 0.6842 1.1988 1.1700

0.9837 0.0187 0.0470 1.5271 1.0676

0.1146 0.0311 0.0352 1.2123 1.3348

0.8772 0.0028 0.0138 1.3667 1.0188

0.7864 0.0473 0.9140 0.7725 1.0622

1.0000 0.0184 0.8110 0.8745 1.0188

1.0007 0.0145 0.0498 1.2358 1.1171

slsfrejs =

1.0430 0.0936 1.3894 1.4270 2.0275

menusizes =

4.3500 4.5500 4.3000 4.4500 3.9500

4.7000 4.7000 4.7500 4.7500 4.7000

4.7500 5.0000 5.0000 4.6500 4.1000

4.8000 5.0000 5.0000 4.4000 4.5500

4.7000 4.4500 4.7500 3.9000 4.7500

4.6500 5.0000 4.6000 4.6000 4.6500

4.5500 4.9500 4.9500 4.1000 4.3000

avelcfobj =

202.6147 237.0074 221.3137 200.9728 156.5467

aveslsfobj =

208.2296

averuntimes =

22.8943 19.8169 42.7679 32.3950 27.9366

menudiffs =

71 73 65 78 65

55 66 65 70 52

65 54 62 75 67

42 63 61 68 62

43 55 71 80 60

48 47 69 78 49

****cumcompdiffs =

87 91 86 89 79

126 129 123 131 119

148 155 149 152 133

163 163 164 167 149

169 174 178 175 163

174 181 184 187 171

178 187 191 201 176

bestobjest =

209.9179 243.3048 224.0849 206.6896 159.2069

guessbestiter =

0 0 4 2 0

estobjs =

209.9179 243.3048 222.2794 201.4855 159.2069

203.1025 237.4944 215.5717 204.4322 154.6090

204.6027 236.8802 221.9588 206.8767 157.6052

194.9958 238.2225 222.7000 202.7709 157.8272

203.2463 234.8147 224.3782 203.8517 156.0344

202.9138 236.5392 216.7315 200.3582 157.2560

204.7932 237.0841 218.7730 201.0054 156.1753

203.8828 236.7792 215.8604 201.1069 157.5977

runtimes =

160.2603 138.7181 299.3756 226.7653 195.5561

compportion80 =

0.2650 0.2375 0.2450 0.2700 0.2375

0.2950 0.2925 0.2975 0.3375 0.3000

0.3375 0.3325 0.3325 0.3775 0.3350

0.3600 0.3475 0.3475 0.4025 0.3550

0.3775 0.3700 0.3600 0.4300 0.3800

0.3825 0.3725 0.3700 0.4475 0.3950

0.3875 0.3850 0.3875 0.4625 0.3975

compportionmin =

0.2650 0.2375 0.2450 0.2700 0.2375

0.2950 0.2925 0.2975 0.3375 0.3000

0.3375 0.3325 0.3325 0.3775 0.3350

0.3600 0.3475 0.3475 0.4025 0.3550

0.3775 0.3700 0.3600 0.4300 0.3800

0.3825 0.3725 0.3700 0.4475 0.3950

0.3875 0.3850 0.3875 0.4625 0.3975

**81st experiment, Fixed Scens Iter b=0.75, min 60 %, f=[1,15]) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt, with comp info**

lcfiterbetter =

1

lcfiterworse =

0

lcfiterave =

230.5055

slsfave =

208.9732

avepercbetter =

0.1037

averuntime =

194.8708

avelcfrejs =

1.8089

aveslsfrejs =

2.0322

percbetter =

0.1395 0.0891 0.1797 0.0945 0.1791

0.0813 0.1429 0.1331 0.1077 0.1338

0.1229 0.1399 0.1318 0.1523 0.0796

0.0415 0.0999 0.0652 0.0628 0.0181

0.0430 0.1024 0.0639 0.1036 0.0857

avelcfavecomp =

9.7331

aveslsfavecomp =

10.8095

avelcfaveperccomp =

0.7738

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

102.5829

aveslsfavetotprofit =

82.5530

avelcfpercposprofit =

1

aveslsfpercposprofit =

1

avelcfaveextratime =

0.4450

aveslsfaveextratime =

0.4450

returnedobjs =

252.2424 218.0447 253.4180 239.5340 245.4026

257.8362 219.5297 221.6939 251.1985 216.6732

213.3151 198.6018 260.8740 187.6262 243.4962

189.1059 253.3034 174.4534 231.8532 215.4174

220.2153 284.7802 257.8986 235.7259 220.3977

slsfavecomp =

10.2704 9.6448 13.3910 9.3175 10.2931

10.0487 10.4311 11.2593 9.1929 10.8079

11.0381 12.2411 13.0212 13.4327 9.4092

9.7903 11.6227 9.0922 11.1012 9.1601

9.4547 12.5625 12.1184 9.5001 12.0363

lcfavecomp =

8.7856 9.2313 11.4837 8.3815 8.4881

9.5515 9.3307 9.9137 7.7009 9.6657

9.6128 11.5202 11.5162 11.6887 8.6061

9.1437 10.5288 8.3764 10.2145 8.9260

8.9051 11.1554 11.3561 8.2238 11.0207

lcfaveperccomp =

0.7076 0.7859 0.7841 0.7889 0.7162

0.8206 0.7839 0.7510 0.6844 0.7537

0.7320 0.7829 0.7314 0.8010 0.7807

0.7624 0.8195 0.7776 0.8002 0.8427

0.8324 0.7719 0.7989 0.7390 0.7966

lcfavetotprofit =

114.9436 77.8586 118.7069 92.3988 116.8361

89.8105 99.4026 117.2582 112.2029 109.0329

105.7463 88.4410 125.8946 99.0392 93.0500

90.1477 114.8487 87.6548 101.0976 80.2253

91.8240 124.8765 104.2940 103.3405 105.6415

slsfavetotprofit =

86.5259 66.2942 88.6021 76.1600 82.7656

78.2478 80.4537 91.2261 82.3738 86.0697

82.1463 74.6852 98.9132 76.5632 75.6070

78.5194 93.8782 76.4264 81.9752 76.8321

81.4664 96.8152 91.1929 79.2919 80.7936

lcfaveextratime =

0.3962 0.4498 0.5473 0.3422 0.3097

0.4343 0.4107 0.4640 0.3287 0.4537

0.4179 0.6145 0.5371 0.5409 0.3346

0.4395 0.4348 0.3935 0.4936 0.3941

0.4018 0.5050 0.5562 0.3593 0.5654

slsfaveextratime =

0.4434 0.4309 0.6361 0.3743 0.3566

0.4645 0.4523 0.4859 0.3669 0.4930

0.4570 0.6789 0.5923 0.6361 0.3788

0.4588 0.4464 0.4190 0.5270 0.3921

0.4137 0.5323 0.5829 0.3879 0.5748

slsfobjs =

221.3637 200.2001 214.8145 218.8444 208.1186

238.4534 192.0780 195.6573 226.7650 191.0981

189.9665 174.2295 230.4886 162.8285 225.5415

181.5693 230.3032 163.7690 218.1540 211.5928

211.1306 258.3305 242.4189 213.6046 203.0096

lcfrejs =

1.6057 4.1017 2.0941 1.7357 1.2670

1.0875 2.4626 0.9651 0.9213 1.2001

2.2848 4.6326 0.2727 4.1662 2.0105

2.6563 0.0399 1.8888 1.8409 1.4489

0.9316 0.2364 1.9170 0.2956 3.1594

slsfrejs =

0.7460 4.5754 3.7222 2.0002 1.2896

2.0407 1.9573 0.5249 0.0615 1.2330

2.0548 6.3260 0.5553 5.6393 1.8051

2.0826 0.2433 1.9817 2.4088 1.6632

0.9013 0.5757 1.8907 1.1470 3.3796

menusizes =

4.8000 4.1000 4.7500 4.3000 3.7500

4.5500 4.0500 4.8000 4.6000 4.5500

3.7500 4.3500 4.7000 4.1500 4.3500

4.7000 4.5500 4.2500 4.8000 4.6000

4.4500 4.8500 4.7000 4.7000 4.7500

avepij =

0.3285 0.2694 0.4104 0.3377 0.4719

0.2820 0.3372 0.3864 0.3503 0.3366

0.3155 0.2166 0.3604 0.3204 0.3128

0.2743 0.4319 0.2879 0.3353 0.2968

0.2564 0.3931 0.3129 0.2862 0.2972

pijover5 =

127 101 171 128 184

114 126 156 136 120

113 69 138 125 124

96 174 111 123 116

92 148 116 105 102

pijequal1 =

39 22 52 59 79

26 59 44 57 42

35 16 27 31 42

33 72 31 46 46

28 54 26 46 27

runtimes =

141.8835 277.8536 256.2168 228.2447 144.6849

177.6255 169.2879 149.1466 140.3275 176.2719

160.0685 165.5191 171.1625 321.3940 145.2838

149.4438 155.8774 145.6614 323.9589 280.7054

166.3271 158.1798 163.6444 182.7292 320.2712

bestobjest =

253.6087 223.1256 258.3556 237.5191 248.1055

256.5300 224.1766 220.1971 252.3699 225.1151

213.0137 203.6071 257.8905 191.8575 243.8919

191.0487 254.1151 180.8262 235.9809 216.8760

220.1112 286.0677 259.1037 232.7531 228.4766

guessbestiter =

4 4 5 6 3

7 5 6 3 7

5 2 2 7 6

7 1 1 7 1

1 7 2 6 5

estslsfobjs =

218.3043 184.9321 215.0824 217.7613 207.8239

236.5569 194.6643 195.9647 226.9101 191.0376

189.9782 129.6171 221.9478 161.4701 227.0851

174.5819 231.5839 163.1866 217.4385 214.3504

210.5187 259.9841 239.0738 212.2230 206.4910

compportion80 =

0.1600 0.1800 0.2850 0.2300 0.1975

0.1900 0.2425 0.2125 0.1150 0.2250

0.1800 0.1750 0.1700 0.1975 0.1875

0.2575 0.2350 0.2000 0.2725 0.2475

0.2000 0.1850 0.2150 0.1400 0.1875

compportionmin =

0.9450 0.9675 0.9650 0.9700 0.9200

0.9700 0.9850 0.9550 0.9425 0.9600

0.9575 0.9650 0.9500 0.9575 0.9650

0.9625 0.9450 0.9725 0.9600 0.9700

0.9600 0.9500 0.9500 0.9400 0.9675

**82nd experiment, Fixed Scens Iter b=0.75, min 70 %, f=[1,15]) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt, with comp info**

lcfiterbetter =

1

lcfiterworse =

0

lcfiterave =

220.0629

slsfave =

207.4328

avepercbetter =

0.0610

averuntime =

224.7875

avelcfrejs =

1.4657

aveslsfrejs =

1.9277

percbetter =

0.0760 0.0621 0.0685 0.0822 0.0836

0.0887 0.1038 0.0548 0.0303 0.0191

0.0566 0.0417 0.0850 0.1342 0.0598

0.0571 0.0418 0.0421 0.0417 0.0545

0.0480 0.0347 0.0949 0.0470 0.0585

0.0852 0.0218 0.0669 0.0940 0.0669

0.0455 0.0572 0.0502 0.0422 0.0366

avelcfavecomp =

9.9861

aveslsfavecomp =

10.4484

avelcfaveperccomp =

0.8159

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

91.0338

aveslsfavetotprofit =

81.5898

avelcfpercposprofit =

1

aveslsfpercposprofit =

1

avelcfaveextratime =

0.4460

aveslsfaveextratime =

0.4460

returnedobjs =

183.9902 196.9595 226.3844 212.5897 215.8008

182.7169 230.8886 233.7800 208.1538 197.7706

235.2350 202.2530 207.2571 237.0268 195.3403

228.6478 231.1964 232.5502 213.6431 222.5440

206.7785 235.6566 232.4207 206.8377 231.6552

234.1956 203.0832 238.2057 249.9460 273.1295

213.2934 245839 184.4683 257.3580 194.8617

slsfavecomp =

9.7117 10.3978 11.2998 10.5727 10.5138

9.9609 9.3968 9.9941 9.5971 8.6461

10.5509 9.5404 10.7599 12.5478 13.1821

10.4618 9.7475 11.0486 11.0389 10.4995

10.6732 10.2950 9.9208 8.7816 10.5943

11.5492 9.2258 10.5569 12.4312 10.4193

11.8422 11.1950 8.8541 11.1646 8.7216

lcfavecomp =

8.9992 10.2686 10.6701 10.0313 9.8163

9.4659 8.8683 9.4522 9.9217 8.5301

10.2028 8.9753 10.2130 12.5750 12.5261

9.8529 9.3071 10.4546 10.7220 10.1290

10.3635 9.8636 9.1739 8.4748 10.1433

10.8473 8.9538 9.8118 11.5458 9.5831

11.2377 10.5890 8.3958 10.5834 8.9638

lcfaveperccomp =

0.7479 0.7950 0.8099 0.7941 0.7934

0.7918 0.8681 0.7832 0.8341 0.8859

0.8074 0.7916 0.8426 0.8774 0.7639

0.7975 0.8522 0.8170 0.8159 0.8654

0.8634 0.8275 0.7950 0.8087 0.8149

0.7710 0.8752 0.8620 0.7736 0.7413

0.7797 0.7805 0.8020 0.8199 0.9077

lcfavetotprofit =

92.2987 77.6038 105.3703 94.8141 89.6462

92.3054 85.5870 92.4541 65.5578 78.8692

92.6553 91.5407 85.8904 92.3089 112.1276

100.3988 85.6200 95.5303 93.2660 88.2710

77.7262 93.5737 87.3012 72.2568 91.2072

104.1510 86.1926 92.0908 109.6975 104.8233

105.3170 98.4585 84.2435 97.6455 69.3814

slsfavetotprofit =

79.1705 74.2915 91.1138 84.0467 77.5532

79.7178 77.8339 81.0662 67.6594 75.8266

85.2444 76.9248 78.9775 90.9947 96.4354

86.4778 78.1147 86.0896 87.2600 78.3828

72.6821 85.5138 73.4427 67.1463 82.6198

90.2427 79.1727 79.9377 92.9579 87.5167

93.1888 86.4173 74.0195 86.5742 71.0284

lcfaveextratime =

0.3922 0.5015 0.4582 0.4595 0.4502

0.3959 0.3683 0.3607 0.4652 0.3353

0.4657 0.3744 0.4530 0.5910 0.6256

0.4284 0.4296 0.4680 0.4678 0.5022

0.5206 0.4210 0.3877 0.3700 0.4301

0.4956 0.3941 0.4079 0.4829 0.4214

0.5198 0.4604 0.3861 0.4949 0.4242

slsfaveextratime =

0.4362 0.5236 0.4877 0.4796 0.4855

0.3910 0.3466 0.3801 0.4618 0.3420

0.4893 0.3644 0.4735 0.6294 0.6301

0.4399 0.4467 0.4716 0.4854 0.4755

0.5303 0.4580 0.3870 0.3832 0.4284

0.5123 0.4117 0.4246 0.4851 0.4479

0.5391 0.4645 0.4095 0.5220 0.4291

slsfobjs =

170.9986 185.4356 211.8700 196.4479 199.1502

167.8284 209.1745 221.6272 202.0250 194.0649

222.6349 194.1542 191.0198 208.9818 184.3182

216.3032 221.9231 223.1588 205.0908 211.0400

197.3055 227.7479 212.2826 197.5499 218.8506

215.8103 198.7499 223.2786 228.4673 255.9910

204.0138 232.2975 175.6485 246.9315 187.9745

lcfrejs =

1.8119 3.6052 0.7951 1.0269 2.0097

0.9052 0.9891 1.0161 3.6090 0.8426

0.0804 0.9630 1.9548 3.1322 2.3916

0.9094 1.9423 1.0197 0.3618 1.5783

2.6249 1.3859 1.2238 3.1086 1.5546

0.7198 0.7584 0.9003 0.9098 0.0964

0.9148 1.0497 1.3911 1.8275 1.8912

slsfrejs =

1.4422 4.4217 0.5723 1.3184 3.0651

1.7283 1.3186 1.3495 4.6062 1.0432

1.0923 2.0076 3.1140 2.4494 1.8911

0.5945 2.3533 1.2534 1.0193 2.8108

4.3964 0.8202 3.2621 3.7122 2.0256

1.2340 0.9984 2.1213 1.1686 0.2212

0.4359 1.2946 2.1472 1.7035 2.4776

menusizes =

3.8000 4.4000 4.6000 4.4500 4.5000

4.5000 4.5000 4.3500 3.9000 4.6000

4.7000 4.5000 4.5000 1.9500 4.7500

4.6000 4.6000 4.6000 4.6500 4.8500

4.1000 4.6500 4.1500 3.9000 4.6000

4.9500 4.8000 4.4000 4.4000 4.9000

4.8500 4.5500 4.3500 4.9000 4.4500

avepij =

0.2873 0.2746 0.4354 0.3510 0.2768

0.3603 0.3820 0.4260 0.2309 0.3825

0.3684 0.4333 0.3356 0.3884 0.3838

0.3756 0.3311 0.3519 0.3291 0.3000

0.2760 0.4386 0.3462 0.2681 0.4001

0.4218 0.4403 0.2898 0.4080 0.3461

0.3448 0.3512 0.3006 0.3803 0.2584

pijover5 =

104 89 183 136 95

129 157 167 82 145

145 164 131 147 136

143 131 128 123 99

99 176 134 93 159

156 164 104 157 121

134 132 112 144 94

pijequal1 =

25 32 67 51 32

60 60 69 16 73

46 64 56 51 48

48 58 51 40 38

28 78 42 42 63

74 80 36 65 34

37 39 41 52 34

runtimes =

160.6690 275.5837 156.9191 188.4640 249.7961

223.9734 229.6385 214.0562 389.4221 207.8703

275.6017 358.7895 265.4306 386.4020 226.6180

155.8975 152.5705 196.0549 208.6053 264.1054

334.4893 161.3741 234.5726 151.6980 193.2826

240.6726 201.2056 225.7885 164.4071 159.5555

167.4682 227.6184 150.6079 158.6488 309.7043

bestobjest =

184.6330 199.5802 226.2539 211.6600 217.2633

183.5463 229.0765 234.6790 208.7461 197.6301

238.8140 207.7149 208.9963 248.1608 199.6530

227.7433 232.2288 233.5396 217.5754 224.2227

214.2890 235.4498 233.6713 209.4559 237.5261

233.8855 202.3591 238.6798 253.3715 273.6327

214.5648 245.1354 186.2232 260.1196 196.2756

guessbestiter =

2 2 3 2 2

6 6 6 1 3

3 5 4 5 3

4 2 2 1 4

2 5 5 4 1

5 5 4 4 4

3 5 4 6 4

estslsfobjs =

170.0794 185.8981 214.3161 199.7169 194.1128

167.7174 213.1916 221.8455 201.1361 189.1356

227.7143 194.6630 191.2571 220.2087 184.2548

215.6027 221.9045 215.2931 199.9410 213.3980

194.9781 226.1353 214.2461 198.4596 221.9653

220.0749 198.4147 223.1939 228.5034 259.0596

205.6970 235.6779 175.7614 247.4773 194.0909

compportion80 =

0.1625 0.2050 0.3200 0.3300 0.1650

0.2125 0.1950 0.2100 0.1925 0.1925

0.2600 0.1975 0.2525 0.3775 0.2425

0.2125 0.1875 0.2775 0.1925 0.2600

0.2450 0.2750 0.2075 0.2175 0.1875

0.2500 0.3675 0.1725 0.1950 0.1225

0.1525 0.2775 0.2650 0.2675 0.2875

compportionmin =

0.9075 0.9375 0.9425 0.9375 0.9250

0.9250 0.9125 0.9250 0.9575 0.9425

0.9450 0.9300 0.9350 0.9050 0.9275

0.9275 0.9350 0.9225 0.9225 0.9200

0.9250 0.9275 0.9175 0.9325 0.9075

0.9300 0.9350 0.9200 0.9050 0.9025

0.8975 0.9300 0.9475 0.8925 0.9275

**83rd experiment, Fixed Scens Iter b=0.75, min 70 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt, with comp info**

lcfiterbetter =

0.9714

lcfiterworse =

0.0286

lcfiterave =

363.9193

slsfave =

346.3939

avepercbetter =

0.0522

averuntime =

217.1320

avelcfrejs =

0.6660

aveslsfrejs =

1.5300

percbetter =

0.0438 0.0030 0.0366 0.0375 0.0228

0.0269 0.0499 0.1241 0.0909 0.0552

0.0828 0.0792 0.0286 0.0326 0.0264

0.1035 0.0371 0.0638 -0.0087 0.0980

0.0927 0.0734 0.0362 0.0393 0.0550

0.0323 0.0346 0.0429 0.1468 0.0248

0.0227 0.0166 0.1100 0.0328 0.0332

avelcfavecomp =

10.1967

aveslsfavecomp =

10.5826

avelcfaveperccomp =

0.8280

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

90.6405

aveslsfavetotprofit =

83.9064

avelcfpercposprofit =

1

aveslsfpercposprofit =

1

avelcfaveextratime =

0.4629

aveslsfaveextratime =

0.4629

returnedobjs =

390.0961 334.4407 387.6512 387.6270 352.0249

370.2478 370.7023 375.3274 367.2003 368.1383

363.6310 392.0208 361.1062 398.6063 368.8125

374.1064 336.8194 341.7151 364.7042 287.1987

356.9531 334.6633 358.8649 361.4695 370.8426

380.8113 362.2934 382.1821 342.6010 370.5703

373.5717 375.0748 343.2069 362.1955 369.6972

slsfavecomp =

11.5353 9.8722 13.1599 11.1907 8.5930

11.8565 11.2981 11.2700 9.9306 10.3964

9.7788 11.1980 9.9975 12.3549 11.0173

11.4432 9.4849 8.7059 11.4516 10.2269

9.5601 10.9374 11.1829 9.6119 11.0735

11.5767 10.1058 9.8504 9.8115 11.1323

10.0854 9.8784 9.6404 10.7441 10.4403

lcfavecomp =

11.0062 9.8756 12.1568 10.4728 8.4335

11.4416 10.8900 10.6255 9.5076 10.0852

9.3303 10.3766 9.6493 11.5297 10.8942

10.6958 9.3840 8.7784 11.1207 10.4681

9.0515 10.7233 10.9635 9.0586 10.5734

11.3057 9.4081 9.2737 9.9599 10.6455

9.4221 9.5800 9.8484 10.3796 9.9678

lcfaveperccomp =

0.8053 0.8261 0.7596 0.7866 0.8155

0.7903 0.7938 0.8197 0.8641 0.8063

0.9262 0.8024 0.8046 0.7704 0.8857

0.8184 0.8519 0.8408 0.8032 0.9567

0.8453 0.8184 0.8315 0.8045 0.8104

0.8657 0.7762 0.8080 0.8877 0.7975

0.7951 0.8858 0.8733 0.8591 0.7929

lcfavetotprofit =

100.9703 81.6919 120.5430 104.0107 78.2497

99.3347 96.2938 92.9638 85.4924 90.4758

83.4008 100.0269 87.3399 113.6249 89.3694

96.7377 80.4813 73.1350 97.3167 55.5916

83.3057 82.4663 90.2014 91.7777 95.3948

97.1325 94.2954 96.7102 71.3412 98.9469

98.3854 89.3439 70.0171 92.0398 94.0084

slsfavetotprofit =

92.0208 79.9497 100.3045 90.8566 75.1297

92.1883 89.3460 81.7278 79.1833 84.2822

79.1058 87.7229 82.1274 97.3292 87.4185

85.3005 77.6454 72.3420 91.4256 65.3528

75.2529 79.0213 87.5893 81.1673 87.6447

92.2780 82.0917 84.7307 73.8484 89.3913

86.0449 84.6978 71.4195 85.1464 85.6390

lcfaveextratime =

0.5057 0.4939 0.5287 0.4867 0.3828

0.5139 0.5076 0.4615 0.4331 0.4601

0.4138 0.4118 0.4315 0.5193 0.4797

0.4905 0.4554 0.4090 0.5170 0.5272

0.4209 0.5223 0.5349 0.3749 0.4938

0.4911 0.3843 0.3965 0.4741 0.4720

0.4190 0.4250 0.4736 0.4620 0.4293

slsfaveextratime =

0.5117 0.4975 0.5581 0.5199 0.3823

0.5067 0.5152 0.4746 0.4407 0.4692

0.4172 0.4248 0.4410 0.5165 0.4870

0.4741 0.4668 0.3978 0.5313 0.4846

0.4213 0.5352 0.5397 0.3813 0.5082

0.5045 0.3808 0.4102 0.5072 0.4807

0.4372 0.4158 0.4600 0.4851 0.4293

slsfobjs =

373.7197 333.4360 373.9541 373.6074 344.1795

360.5611 353.0726 333.8837 336.6066 348.8939

335.8242 363.2377 351.0668 386.0348 359.3118

339.0153 324.7577 321.2077 367.9225 261.5753

326.6642 311.7652 346.3359 347.8115 351.5119

368.8798 350.1735 366.4509 298.7533 361.6034

365.2977 368.9682 309.1966 350.6902 357.8140

lcfrejs =

0.0166 1.5932 1.2278 0.1277 0.8736

0.4796 0.6011 0.1342 0.2107 0.3651

0.3254 0.0155 0.7784 0.1274 0.0328

0.0858 1.8096 0.5860 0.7954 2.8949

0.7381 2.0882 0.7927 1.2173 0.4163

0.1996 1.1440 0.0191 0.6201 0.6490

0.6356 0.0251 0.2566 1.0665 0.3616

slsfrejs =

0.4736 1.9208 0.8673 0.3587 1.2479

1.0802 1.0737 2.3544 2.0016 1.1234

1.9358 1.0858 1.1934 0.1052 1.0854

1.9921 1.9863 2.4037 0.6826 5.6451

2.4419 3.3236 1.3633 1.4807 1.5062

0.6404 1.2857 0.2328 3.5017 0.8725

0.3872 0.2432 3.3739 1.3236 0.9567

menusizes =

4.9000 4.8000 4.8000 5.0000 4.9000

5.0000 5.0000 4.7000 4.7500 4.5500

4.9500 4.8000 5.0000 5.0000 4.9500

4.9000 4.8000 4.7000 4.8500 4.2500

4.9500 4.5000 5.0000 4.9000 4.8000

4.9500 4.8000 4.9500 5.0000 4.9500

4.7000 4.9500 4.7000 4.5000 4.7000

avepij =

0.3411 0.2908 0.4159 0.3764 0.3476

0.3756 0.3540 0.4266 0.3201 0.3065

0.3683 0.3711 0.3084 0.4576 0.3955

0.3764 0.3252 0.2548 0.3628 0.2517

0.3960 0.2799 0.3134 0.4149 0.3378

0.3734 0.3425 0.4169 0.3493 0.3475

0.3965 0.3913 0.3429 0.3949 0.3890

pijover5 =

126 108 143 146 126

139 129 166 118 116

138 143 115 191 156

143 118 93 127 87

147 99 110 161 132

141 125 162 117 124

150 157 136 153 138

pijequal1 =

35 21 54 50 57

36 37 61 41 35

52 46 43 65 54

47 52 33 42 32

54 32 27 69 36

45 60 65 39 44

63 56 42 58 61

runtimes =

203.9492 166.9740 155.5638 166.7405 190.9126

196.6608 228.8831 224.4849 237.2833 289.0867

208.5923 205.8839 160.7118 185.2508 175.7730

325.2667 166.7459 297.7233 212.5652 349.4666

230.4802 237.2464 180.6426 159.6646 173.6996

161.1633 300.2682 163.8850 331.7345 153.8760

158.1747 172.0782 319.1449 259.2578 249.7871

bestobjest =

393.4445 347.2880 393.4340 387.1597 360.5234

375.9282 372.8743 379.7496 367.2205 372.8924

364.7784 392.9048 366.1353 403.0283 372.2530

372.4145 338.8832 341.7853 378.1355 294.2274

358.0893 338.6311 365.1151 363.1879 374.7291

383.3430 365.2451 382.4608 351.5784 386.3759

380.3621 374.3675 346.3473 362.5411 373.2625

guessbestiter =

4 3 4 4 1

2 3 3 7 7

3 4 3 4 5

7 7 2 5 4

6 2 3 5 6

4 1 2 4 1

4 7 5 2 6

estslsfobjs =

370.7951 326.3079 379.6494 377.6405 338.2634

357.7992 362.3893 314.7570 339.9045 361.3744

339.5353 363.6250 356.4911 376.7052 358.1545

319.4759 333.4346 307.3593 365.8358 265.4831

328.4233 311.3445 343.0779 352.8161 351.0672

375.1385 351.0258 364.1206 304.1196 362.9980

369.0157 373.4633 298.7215 352.9459 351.3330

compportion80 =

0.2500 0.2600 0.1725 0.2275 0.1975

0.1550 0.2125 0.3475 0.1850 0.1875

0.2850 0.2350 0.2225 0.2450 0.3050

0.2775 0.3350 0.2375 0.2475 0.2025

0.2200 0.2050 0.2050 0.2300 0.2275

0.2400 0.1325 0.2325 0.2375 0.2450

0.1725 0.2600 0.2200 0.3625 0.2100

compportionmin =

0.8975 0.9350 0.8825 0.9300 0.9150

0.9075 0.9050 0.9475 0.9000 0.9175

0.9275 0.9575 0.8975 0.9300 0.9200

0.9350 0.9175 0.9225 0.9100 0.9275

0.9350 0.9275 0.9275 0.9475 0.9300

0.9100 0.9075 0.9225 0.9150 0.9075

0.9075 0.9350 0.9250 0.9350 0.9225

**84th experiment, Fixed Scens Welfare Profit b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt, with comp info**

lcfiterbetter =

0.7429

lcfiterworse =

0.0286

lcfiterave =

356.1237

slsfave =

344.9321

avepercbetter =

0.0341

averuntime =

348.2707

avelcfrejs =

0.5406

aveslsfrejs =

1.7456

percbetter =

0.1116 0 0.0527 0.0370 0.0035

0.0165 0.0250 0 0.0308 0.0696

0.0204 0.0492 0.0386 0.0561 0

0.0229 0 0.1132 0.0365 0

0 0 0.0283 0.0039 -0.0056

0.0863 0.0483 0.0312 0.0639 0.0089

0.0557 0.0358 0 0.0538 0.0981

avelcfavecomp =

8.5940

aveslsfavecomp =

11.0065

avelcfaveperccomp =

0.6700

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

59.7745

aveslsfavetotprofit =

84.8675

avelcfpercposprofit =

0.7714

aveslsfpercposprofit =

1

avelcfaveextratime =

0.3736

aveslsfaveextratime =

0.3736

avelcfaverejfare =

5.7249

aveslsfaverejfare =

7.1822

returnedobjs =

364.2098 384.3560 373.5375 359.2792 373.6558

341.8315 365.2780 376.8212 363.2075 333.3211

324.4693 328.0118 378.1875 351.9039 367.2787

324.7414 365.2973 329.9208 368.1923 370.7992

366.0768 376.8208 340.5997 355.9869 382.1912

324.8653 348.6379 352.3807 358.9194 341.1280

336.0982 355.1846 356.9675 353.5303 370.6418

slsfavecomp =

10.5553 12.1251 15.4127 10.2919 12.0742

10.8884 9.9754 13.1100 10.3533 9.2081

8.4288 11.3704 12.5454 11.2641 11.5532

10.1176 10.9637 10.6837 10.9933 8.9369

9.4476 11.3803 11.5617 11.7494 12.8802

9.9296 10.2910 10.3285 11.5404 11.9920

10.3424 9.1064 11.5654 10.7298 11.5323

lcfavecomp =

10.3945 0 15.3465 10.4403 12.1778

11.2630 10.0869 0 10.5718 9.4244

9.1906 11.4212 12.3670 11.6648 0

10.0925 0 11.2892 11.0805 0

0 0 11.8313 11.8978 13.0625

10.3795 10.3629 10.2522 11.8731 12.0426

10.5496 9.4185 0 10.9174 11.3915

lcfaveperccomp =

0.8835 0 0.8439 0.8592 0.8761

0.8945 0.8352 0 0.8746 0.8633

0.9578 0.8559 0.8157 0.8671 0

0.8859 0 0.9329 0.8547 0

0 0 0.8423 0.8242 0.8194

0.9471 0.8580 0.8415 0.8659 0.8092

0.8871 0.9030 0 0.8932 0.8581

lcfavetotprofit =

75.3762 0 98.2873 77.1925 88.4075

76.7646 79.9743 0 76.6459 68.4124

58.2462 76.4122 94.7243 75.4781 0

70.9249 0 59.6257 81.7584 0

0 0 79.1301 86.5776 96.0075

56.8716 73.3937 78.6995 78.6715 89.0490

68.0656 70.5673 0 75.0493 81.7956

slsfavetotprofit =

78.5723 95.1788 102.9105 82.9546 93.5996

85.5212 83.3445 99.7106 84.2056 71.5641

69.5834 79.6231 94.1085 84.2767 92.9162

74.4462 88.3836 75.8051 85.5068 81.2376

82.7125 92.5710 84.7533 89.4709 99.8396

69.9949 76.6745 80.2346 87.8117 90.7244

76.3262 77.0915 91.4132 82.4306 84.8659

lcfaveextratime =

0.4424 0 0.7145 0.4662 0.4943

0.4737 0.3998 0 0.4317 0.4698

0.3803 0.5451 0.5203 0.5346 0

0.3974 0 0.4979 0.4082 0

0 0 0.5439 0.5127 0.5826

0.4797 0.4388 0.4198 0.5286 0.5329

0.4938 0.3861 0 0.4763 0.5034

slsfaveextratime =

0.4657 0.4876 0.7577 0.4608 0.4962

0.4687 0.4199 0.5984 0.4365 0.4430

0.3786 0.5708 0.5104 0.5058 0.4789

0.4023 0.4723 0.4975 0.4083 0.3316

0.4067 0.4745 0.5454 0.5188 0.5864

0.4895 0.4363 0.4279 0.5478 0.5304

0.4620 0.3857 0.5329 0.4666 0.5111

lcfaverejfare =

7.4915 0 9.9095 5.8246 5.8063

5.4915 6.7154 0 8.2700 7.3785

9.0392 5.2245 9.0911 8.6137 0

5.8839 0 6.0001 7.9392 0

0 0 8.9437 4.1408 11.4643

5.5912 6.0740 7.8454 11.1516 8.0725

5.9426 8.0937 0 8.1082 6.2642

slsfaverejfare =

6.1033 9.2987 9.5935 5.5534 5.1570

5.6090 6.5425 11.4267 5.3606 7.7211

9.1209 6.5285 7.9652 8.8178 6.3376

5.5752 6.5380 6.4268 7.6539 5.3691

6.3826 10.5238 8.8315 4.7661 10.5165

6.0832 6.7445 6.7438 8.2749 7.9924

5.9550 7.1039 5.4668 6.7764 6.5180

slsfobjs =

327.6510 384.3560 354.8340 346.4436 372.3545

336.2845 356.3560 376.8212 352.3532 311.6196

317.9755 312.6314 364.1448 333.2124 367.2787

317.4657 365.2973 296.3587 355.2343 370.7992

366.0768 376.8208 331.2178 354.6032 384.3526

299.0532 332.5738 341.7256 337.3634 338.1086

318.3785 342.9156 356.9675 335.4710 337.5230

lcfrejs =

0.0104 0 0.4055 0.1524 0.0843

1.2715 0.1325 0 0.0179 0.7883

1.3662 2.2545 0.0214 0.1095 0

1.9414 0 1.0228 0.0112 0

0 0 1.6477 1.0943 0.0213

1.0949 1.0268 0.6144 0.3535 2.0292

1.1093 0.0423 0 0.2107 0.0879

slsfrejs =

2.8458 0.1344 2.1363 1.5472 0.5634

1.9326 1.0747 0.5511 1.0617 2.9897

2.6943 3.5718 1.1064 2.4693 0.5324

3.1360 0.7283 3.8988 1.3487 0.0395

0.2728 0.1632 2.5231 1.3015 0.2088

3.8044 2.4686 1.8426 1.8369 2.3886

2.9493 1.3287 1.0731 2.2686 2.3021

menusizes =

4.8000 4.8000 0.4500 4.8500 5.0000

4.6500 4.9000 4.9000 4.7500 4.7000

4.6000 4.4500 4.8500 4.9000 4.7000

4.5000 4.9500 4.8000 4.5500 4.7000

4.7500 4.7500 4.3500 4.7500 5.0000

4.6500 4.3500 4.3000 4.7500 4.9000

4.5000 4.9000 4.6000 4.9000 4.9500

avepij =

0.3826 0.4824 0.4385 0.2899 0.4905

0.3700 0.4549 0.5190 0.4286 0.3450

0.2743 0.3644 0.4617 0.3970 0.4197

0.3928 0.4095 0.3346 0.4391 0.4129

0.3238 0.4425 0.3530 0.3705 0.3968

0.3101 0.3399 0.3362 0.3460 0.4218

0.2719 0.3970 0.3605 0.3854 0.3738

pijover5 =

140 188 155 94 196

136 169 203 172 116

97 137 171 153 167

145 142 125 175 155

123 168 124 128 144

115 141 122 121 154

102 148 124 146 139

pijequal1 =

46 71 48 32 66

59 77 74 68 47

51 56 66 59 61

65 63 47 70 62

52 73 39 57 47

42 44 54 47 50

29 63 49 53 55

runtimes =

503.2814 476.8379 621.6969 438.4018 408.4878

366.3188 214.5652 291.9517 278.4787 382.0827

316.4712 366.7721 371.6119 261.1234 209.8230

401.2656 265.9167 275.7201 218.7822 178.7083

181.0988 289.3313 373.1622 364.0877 233.5586

386.0628 348.0106 370.6487 327.5079 289.2695

477.8245 448.7098 328.9514 476.8215 446.1334

guessbestiter =

7 0 2 6 1

3 2 0 3 6

7 3 7 3 0

4 0 6 6 0

0 0 1 1 4

7 6 4 6 1

6 6 0 7 4

estslsfobjs =

330.2833 384.0094 360.0195 341.5821 368.0838

337.4919 358.0072 382.9535 356.8025 303.6790

316.5155 320.2534 360.8076 340.9021 370.4137

320.1211 370.4451 288.4452 352.6570 371.3448

371.4226 376.7803 329.3277 351.8596 379.5391

300.0598 326.8451 341.6248 328.0314 335.4275

325.4169 341.2825 368.7272 339.7752 339.0043

compportion80 =

0.3525 0.4000 0.4200 0.2925 0.3400

0.4275 0.4000 0.4775 0.4050 0.3175

0.3850 0.4175 0.3675 0.3775 0.3850

0.4675 0.3200 0.4100 0.3975 0.3000

0.4100 0.3475 0.4150 0.3600 0.3450

0.3400 0.3150 0.3200 0.3325 0.2400

0.3750 0.4175 0.4875 0.4150 0.3825

compportionmin =

0.3525 0.4000 0.4200 0.2925 0.3400

0.4275 0.4000 0.4775 0.4050 0.3175

0.3850 0.4175 0.3675 0.3775 0.3850

0.4675 0.3200 0.4100 0.3975 0.3000

0.4100 0.3475 0.4150 0.3600 0.3450

0.3400 0.3150 0.3200 0.3325 0.2400

0.3750 0.4175 0.4875 0.4150 0.3825

**85th experiment, Fixed Scens Welfare Profit b=0.75, min 80 %, f=[1,15]) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt, with comp info—same problem as 84**

lcfiterbetter =

0.3143

lcfiterworse =

0.0571

lcfiterave =

213.8893

slsfave =

212.9870

avepercbetter =

0.0043

averuntime =

201.0977

avelcfrejs =

0.4426

aveslsfrejs =

2.0892

percbetter =

0 0 0.0164 0 0.0162

0.0018 0.0270 0 0 0.0183

0 0.0111 0 0.0139 0

-0.0117 0 0 0.0124 -0.0044

0 0 0 0 0

0 0 0 0.0142 0

0 0.0310 0 0.0060 0

avelcfavecomp =

4.1367

aveslsfavecomp =

10.7405

avelcfaveperccomp =

0.3210

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

28.7987

aveslsfavetotprofit =

82.3621

avelcfpercposprofit =

0.3714

aveslsfpercposprofit =

1

avelcfaveextratime =

0.1740

aveslsfaveextratime =

0.1740

avelcfaverejfare =

3.3751

aveslsfaverejfare =

9.2681

returnedobjs

259.2500 219.9676 196.2513 206.3547 216.3037

227.5848 222.0465 214.9517 212.1296 208.5142

222.1916 229.3857 223.9995 244.8197 217.0429

211.5846 203.5071 197.0871 221.7962 228.6516

188.4009 227.8451 170.8986 237.5634 243.2396

221.2713 195.5252 234.7954 164.6027 198.6381

185.5763 218.4777 212.4344 174.8174 228.6192

slsfavecomp =

9.5159 11.3075 10.3621 12.1575 9.7009

11.0988 10.7821 8.7113 10.7731 12.2234

9.6862 11.7676 11.8626 12.1202 10.0900

10.4448 10.4415 9.9654 11.1933 10.3440

9.2074 11.4616 12.0161 10.5473 11.8567

11.4632 10.9513 10.4163 9.4864 9.0690

9.3605 12.8385 12.5737 9.2895 10.8313

lcfavecomp =

0 0 10.6602 0 9.9033

11.2374 11.2116 0 0 12.7518

0 11.7458 0 12.2582 0

10.7093 0 0 11.4472 10.7435

0 0 0 0 0

0 0 0 9.5796 0

0 12.8598 0 9.6755 0

lcfaveperccomp =

0 0 0.8882 0 0.9158

0.8439 0.8383 0 0 0.8984

0 0.8251 0 0.8461 0

0.8616 0 0 0.8274 0.8665

0 0 0 0 0

0 0 0 0.8608 0

0 0.8745 0 0.8871 0

lcfavetotprofit =

0 0 70.1648 0 66.6482

76.4475 78.1675 0 0 81.1875

0 85.3520 0 87.9689 0

80.4715 0 0 82.6506 77.6437

0 0 0 0 0

0 0 0 66.8086 0

0 88.4761 0 65.9665 0

slsfavetotprofit =

82.0083 89.4407 76.9739 92.7200 71.9770

80.7711 79.9942 76.8339 73.8353 88.4948

80.0897 86.3089 89.3032 92.5755 81.2129

86.0904 80.2028 80.7091 87.3969 84.6753

77.6237 90.0029 79.4932 87.8636 90.1235

85.8296 82.4929 82.7460 69.1810 75.9180

72.2698 91.1926 81.1552 72.4709 82.6961

lcfaveextratime =

0 0 0.4832 0 0.3867

0.5221 0.5128 0 0 0.5495

0 0.4696 0 0.4780 0

0.3285 0 0 0.5297 0.4692

0 0 0 0 0

0 0 0 0.3790 0

0 0.5648 0 0.4153 0

slsfaveextratime =

0.4032 0.5432 0.4869 0.5591 0.4096

0.5004 0.4962 0.3250 0.4750 0.5512

0.4446 0.5141 0.5593 0.5122 0.4679

0.3658 0.4555 0.4697 0.5359 0.4726

0.4000 0.5152 0.6325 0.4110 0.4807

0.5370 0.4721 0.5181 0.3972 0.4064

0.4381 0.5735 0.5403 0.4166 0.5052

lcfaverejfare =

0 0 4.7031 0 9.4107

8.1402 12.4458 0 0 10.6037

0 7.5626 0 10.6665 0

13.9243 0 0 9.3489 9.9710

0 0 0 0 0

0 0 0 4.6491 0

0 10.2455 0 6.4560 0

slsfaverejfare =

9.7155 8.5467 5.3030 8.1188 7.9996

7.8054 13.3420 10.0243 7.9347 11.8574

9.4803 7.9549 11.2439 8.5533 9.6901

8.4194 9.2341 7.4871 9.4850 10.0770

9.2422 11.6557 8.6604 14.7082 7.5547

6.4947 8.4719 12.9999 5.6371 10.6701

10.5259 9.5832 9.6094 6.9601 9.3365

slsfobjs =

259.2500 219.9676 193.0865 206.3547 212.8598

227.1695 216.2186 214.9517 212.1296 204.7592

222.1916 226.8745 223.9995 241.4716 217.0429

214.0856 203.5071 197.0871 219.0868 229.6584

188.4009 227.8451 170.8986 237.5634 243.2396

221.2713 195.5252 234.7954 162.2976 198.6381

185.5763 211.9127 212.4344 173.7750 228.6192

lcfrejs =

0 0 2.4539 0 1.1163

2.2045 1.5379 0 0 1.1321

0 1.0144 0 0.2122 0

0.0046 0 0 0.3429 0.4285

0 0 0 0 0

0 0 0 2.0493 0

0 0.9713 0 2.0242 0

slsfrejs =

0.6190 1.1347 3.4047 1.3085 3.2472

2.8062 2.7675 1.3103 4.0974 2.1463

1.3354 2.0066 1.6973 1.0569 1.4276

0.7685 2.0734 1.5367 1.3549 0.9145

2.0221 1.1809 4.4596 0.2577 1.7693

2.2485 1.9397 1.6813 3.8046 1.9611

2.9299 2.4567 4.5409 3.2005 1.6557

menusizes =

4.6000 4.5500 4.3000 4.5000 4.0500

4.6000 4.3000 4.4000 4.2000 4.6000

4.7500 4.5000 4.6500 4.8500 4.6500

4.0000 4.5000 4.6500 4.7000 4.7500

5.0000 4.8000 4.2000 4.7500 4.7000

4.6500 4.2000 4.8500 3.4000 4.7000

4.3500 4.5500 4.1000 4.1500 4.1500

avepij =

0.4160 0.3769 0.3393 0.4432 0.3256

0.3122 0.3922 0.4123 0.3284 0.3963

0.4042 0.3745 0.3563 0.5157 0.3307

0.5226 0.3655 0.3270 0.3283 0.3422

0.4094 0.3849 0.2940 0.4022 0.4962

0.3495 0.4144 0.3349 0.4148 0.3477

0.2822 0.4223 0.4044 0.3496 0.3438

pijover5 =

160 132 125 171 115

100 139 159 120 135

167 133 120 197 111

212 135 116 102 130

149 134 108 144 195

129 168 116 172 131

100 161 164 125 127

pijequal1 =

62 52 49 63 42

38 48 72 58 58

49 50 39 92 43

120 52 46 36 55

61 45 29 74 92

55 63 40 89 50

30 55 59 57 39

runtimes =

157.0916 230.3064 196.4262 301.8713 185.4850

304.2504 312.4813 110.2557 307.2162 222.3986

143.5192 179.6426 220.2737 135.0033 210.2059

122.5231 158.2875 149.9414 185.1297 155.6122

115.5243 181.9410 317.3226 111.1141 170.7059

228.8140 203.3232 141.1457 225.5102 131.8425

226.4346 282.8077 278.4855 121.6728 313.8542

guessbestiter =

0 0 3 0 7

2 5 0 0 3

0 3 0 5 0

5 0 0 1 1

0 0 0 0 0

0 0 0 4 0

0 7 0 6 0

estslsfobjs =

257.3369 221.7723 193.2212 209.6885 211.2824

228.2900 218.0424 214.7674 217.0094 206.9757

222.9864 227.4031 225.3548 241.8102 222.1651

211.2546 204.5197 197.5742 218.0395 225.8887

189.9060 225.1639 180.8975 235.5019 239.3204

225.6798 199.7874 232.7456 162.3873 201.3424

186.9445 208.5751 216.5533 171.8936 231.2578

compportion80 =

0.3375 0.4100 0.3825 0.3775 0.3100

0.2925 0.4000 0.3000 0.3700 0.4075

0.4075 0.3650 0.3475 0.4800 0.3800

0.4650 0.3925 0.3300 0.4500 0.3600

0.3250 0.3525 0.3725 0.3675 0.4150

0.4075 0.4225 0.3825 0.3450 0.3975

0.3425 0.4175 0.4300 0.3675 0.3425

compportionmin =

0.3375 0.4100 0.3825 0.3775 0.3100

0.2925 0.4000 0.3000 0.3700 0.4075

0.4075 0.3650 0.3475 0.4800 0.3800

0.4650 0.3925 0.3300 0.4500 0.3600

0.3250 0.3525 0.3725 0.3675 0.4150

0.4075 0.4225 0.3825 0.3450 0.3975

0.3425 0.4175 0.4300 0.3675 0.3425

**86th experiment, Fixed Scens Welfare Profit b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt, zeros problem fixed, minitest=rej(best known)**

lcfiterbetter =

0.9143

lcfiterworse =

0.0857

avepercbetter =

0.0273

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.7473

lcfiterave =

354.5949

slsfave =

345.7599

averuntime =

205.5418

avelcfrejs =

0.4847

aveslsfrejs =

1.5915

percbetter =

0.0468 0.0381 -0.0051 0.0029 0.1144

0.0398 0.0178 0.0361 0.0091 -0.0073

0.0507 0.0041 0.0041 0.0118 0.0528

0.1378 0.0050 0.0221 0.0285 0.0199

0.0438 0.0143 0.0185 0.0622 -0.0199

0.0111 0.0478 0.0029 0.0236 0.0624

0.0066 0.0014 0.0059 0.0374 0.0064

avelcfavecomp =

11.2594

aveslsfavecomp =

10.9276

avelcfaveperccomp =

0.8721

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

76.9732

aveslsfavetotprofit =

85.0137

avelcfpercposprofit =

1

aveslsfpercposprofit =

1

avelcfaveextratime =

0.4871

aveslsfaveextratime =

0.4871

avelcfaverejfare =

7.7909

aveslsfaverejfare =

7.3328

returnedobjs =

340.2713 342.0841 363.9516 350.5912 345.4732

379.2587 340.8186 341.0501 353.0086 375.9537

348.3111 362.3775 351.4907 358.2655 339.4149

304.6238 362.5507 357.9523 351.1664 378.2716

365.8750 361.0596 369.8800 340.5954 361.2830

363.9763 347.0240 350.2986 327.9317 356.3361

366.8337 367.4133 351.0332 364.4301 369.9666

slsfavecomp =

11.1372 9.1859 12.3402 10.1635 11.2368

13.1059 10.8860 11.4240 9.9103 11.5403

9.8038 10.6469 9.6377 8.7783 10.4760

10.0516 13.1218 10.3163 10.0525 13.0132

11.1627 14.3524 11.0760 11.9008 8.8074

9.6433 10.8497 9.6243 10.5764 12.3191

10.7277 11.2843 9.8522 11.0251 12.4378

lcfavecomp =

11.6595 9.7981 12.7624 10.7188 10.9503

12.9071 11.2689 11.8013 9.9578 11.8663

10.2083 10.9840 10.2237 9.1107 10.6542

10.9148 13.9646 10.6503 10.6196 13.0239

11.6188 14.6269 11.1281 12.4855 9.1591

9.9182 11.1696 9.8997 10.8334 12.7983

11.0110 11.6430 9.9934 11.3912 12.3569

lcfaveperccomp =

0.9037 0.8890 0.8682 0.9031 0.8864

0.8271 0.8889 0.8746 0.8081 0.8649

0.8621 0.8918 0.9486 0.8677 0.8617

0.9379 0.8730 0.8484 0.9481 0.8523

0.8593 0.9182 0.8578 0.8934 0.8738

0.8947 0.8517 0.8665 0.8598 0.8720

0.8446 0.8567 0.8225 0.8403 0.8058

lcfavetotprofit =

67.9447 65.9205 84.8089 73.4222 73.1631

92.7027 73.1769 75.5243 79.7146 85.7760

70.0844 77.8354 67.6961 70.3076 73.7004

56.2314 77.1929 76.5424 65.2796 92.0154

78.5202 84.7659 83.7552 77.2296 72.8659

75.7418 77.1134 74.7445 71.7529 78.1622

81.2224 82.0756 80.3488 81.3137 95.4106

slsfavetotprofit =

83.0828 76.8981 95.7737 83.7997 77.0695

94.7660 82.3318 85.7727 80.3725 92.8092

78.8330 86.1100 80.6454 77.9996 78.7133

68.0515 97.1564 83.3471 79.6382 96.6138

86.9345 99.0051 87.6695 84.7587 80.0014

82.6907 82.1949 81.2858 79.1916 87.6867

88.1942 90.3435 82.6766 89.0845 93.9767

lcfaveextratime =

0.5398 0.4316 0.5190 0.4505 0.4730

0.5463 0.5232 0.5515 0.3484 0.4792

0.4482 0.4323 0.4215 0.3399 0.4865

0.5043 0.6010 0.4782 0.4521 0.5341

0.5048 0.6707 0.4081 0.6022 0.3674

0.4080 0.5166 0.4316 0.5531 0.5843

0.4998 0.5233 0.4261 0.4567 0.5345

slsfaveextratime =

0.5257 0.4235 0.5271 0.4359 0.4790

0.5174 0.4949 0.5764 0.3480 0.4748

0.4248 0.4428 0.4045 0.3300 0.4804

0.4761 0.6056 0.4593 0.4494 0.5198

0.5125 0.6856 0.4161 0.5646 0.3508

0.3993 0.5164 0.4224 0.5278 0.5632

0.5091 0.5264 0.4273 0.4720 0.5180

lcfaverejfare =

6.8911 4.7242 8.4901 8.7491 7.1197

6.6376 5.5693 6.3469 5.2440 6.4487

8.1902 5.7612 6.2488 4.5622 7.3089

7.6814 9.6663 9.7684 8.1394 10.0013

9.8178 8.7357 6.9477 10.0987 9.0452

9.2449 7.5616 5.0471 8.3220 10.7648

8.9043 8.8685 7.8668 9.1004 8.8066

slsfaverejfare =

6.6383 6.9850 5.3978 9.0798 6.1598

6.4637 5.8818 5.9598 6.1430 8.1328

7.5391 6.3101 6.2357 5.2005 7.2699

8.6695 8.1029 8.5972 6.3918 6.9237

9.8779 6.6176 6.1223 11.6082 6.6306

5.3862 8.6544 5.1582 7.3898 10.4784

6.4316 7.5571 8.3947 8.4134 9.8457

slsfobjs =

325.0521 329.5431 365.8254 349.5757 310.0134

364.7554 334.8601 329.1734 349.8178 378.7082

331.5126 360.8911 350.0397 354.0931 322.4064

267.7314 360.7540 350.1994 341.4319 370.8931

350.5130 355.9560 363.1508 320.6596 368.6107

359.9931 331.1831 349.2714 320.3569 335.3991

364.4380 366.9086 348.9573 351.2927 367.6284

lcfrejs =

0.1870 0.4572 0.3653 0.1959 0.8381

0.1290 1.0585 1.2290 1.0132 0.0006

0.1160 0.1273 0.1005 0.0369 1.1469

2.4076 0.0167 0.1913 0.1483 0.0074

0.0362 0.3347 0.0392 1.1484 0.0005

0.0047 1.0451 0.7960 1.8008 0.1057

0.0095 0.0757 1.0672 0.0626 0.6643

slsfrejs =

2.8117 2.0411 1.0786 1.2445 3.7625

1.4072 1.9244 2.2651 1.3278 0.3436

1.7609 0.6461 1.1607 0.8088 2.5443

5.0866 1.3683 1.0724 1.8354 1.0148

1.3674 1.9548 1.0005 2.5503 0.0594

0.6722 1.9877 1.2076 2.5760 2.3354

0.4358 0.5610 1.3397 1.1222 1.0269

menusizes =

4.9500 4.8500 4.8000 4.8500 4.7500

4.7500 4.7000 4.7500 4.6000 4.8000

4.8500 4.7000 4.7500 4.8000 4.5500

3.7000 4.9500 4.8000 4.8000 4.5500

4.7000 4.7500 4.8500 4.8500 4.6500

4.7500 4.5000 4.9500 4.9500 4.8500

5.0000 4.9500 4.5000 4.5500 5.0000

avepij =

0.1662 0.1517 0.1722 0.1670 0.1591

0.1609 0.1508 0.1579 0.1704 0.1689

0.1585 0.1663 0.1644 0.1749 0.1359

0.1193 0.1797 0.1534 0.1680 0.1600

0.1512 0.1592 0.1767 0.1473 0.1685

0.1800 0.1466 0.1657 0.1367 0.1587

0.1695 0.1641 0.1516 0.1673 0.1660

pijover5 =

63 58 73 68 66

65 60 61 68 66

66 68 62 72 55

48 73 62 71 65

59 67 71 60 65

76 56 68 44 66

69 67 63 72 63

pijequal1

32 27 37 30 28

25 25 24 33 27

24 33 33 36 23

17 36 21 25 28

23 24 36 17 33

33 20 31 19 18

24 17 29 38 28

runtimes =

115.3997 150.9296 141.9462 279.9620 181.2651

208.7621 278.4224 293.2067 156.7277 124.2201

234.2896 221.5159 220.1172 118.6927 138.6079

315.8456 192.5314 171.3455 306.7056 270.9613

211.2613 265.9668 247.3713 321.0429 118.9753

142.7478 247.2598 117.5326 312.7463 298.6537

196.3204 151.6020 131.3878 161.6933 147.9472

bestest =

-0.5369 -0.1808 -0.0862 -0.0495 -0.8720

-0.0260 -1.0669 -1.1376 -1.0007 -0.0001

-0.0261 -0.0395 -0.0798 -0.0056 -1.0447

-2.1730 -0.0024 -0.0196 -0.0187 -0.0196

-0.0045 -0.1940 -0.1037 -0.5020 -0.0000

-0.0000 -1.0114 -0.5601 -0.9882 -0.0218

-0.0145 -0.0013 -0.3459 -0.0575 -0.2878

guessbestiter =

7 3 3 4 2

4 6 6 6 6

6 6 7 7 3

6 4 2 6 6

6 2 6 6 7

2 6 6 5 7

2 2 1 7 4

estslsfobjs =

329.1589 320.8223 365.2500 355.0622 312.4848

366.7582 335.4190 339.1336 349.7122 372.2106

318.9954 357.2791 346.6418 349.0243 323.0842

278.7697 370.4458 350.0564 336.4238 371.1211

354.9815 364.3271 363.2574 322.1621 369.6694

357.2728 332.7213 337.5272 323.7981 346.0402

373.5833 360.1375 355.2416 366.5557 368.1853

compportion80 =

0.7576 0.7526 0.7396 0.7526 0.7579

0.7158 0.7766 0.6947 0.6522 0.6979

0.7629 0.6596 0.8000 0.6146 0.6264

0.6622 0.7374 0.7396 0.6875 0.6593

0.7128 0.7158 0.7216 0.7938 0.7849

0.7053 0.6778 0.6768 0.6970 0.7010

0.7700 0.7172 0.7111 0.6593 0.7200

compportionmin =

0.7576 0.7526 0.7396 0.7526 0.7579

0.7158 0.7766 0.6947 0.6522 0.6979

0.7629 0.6596 0.8000 0.6146 0.6264

0.6622 0.7374 0.7396 0.6875 0.6593

0.7128 0.7158 0.7216 0.7938 0.7849

0.7053 0.6778 0.6768 0.6970 0.7010

0.7700 0.7172 0.7111 0.6593 0.7200

**86th experiment, Fixed Scens Welfare Profit b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt, zeros problem fixed, minitest=obj**

lcfiterbetter =

0.6857

lcfiterworse =

0.1143

avepercbetter =

0.0352

lcfrejbetter =

0.8000

lcfrejworse =

0

avepercrejbetter =

0.5757

lcfiterave =

352.1527

slsfave =

341.3431

averuntime =

236.4532

avelcfrejs =

0.6619

aveslsfrejs =

1.7806

percbetter =

0.0193 0 0.0703 0.0215 0.0192

0.0029 -0.0019 0.0252 0 0.0418

0.0361 0.0606 0 0.0277 0.0122

0.0750 0.0185 -0.0050 0.0333 0.3398

0 0.1472 0.0496 0 0.0154

0.0391 0.0207 -0.0039 0.0130 -0.0029

0 0.0762 0.0669 0 0.0150

avelcfavecomp =

10.8469

aveslsfavecomp =

10.6314

avelcfaveperccomp =

0.8618

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

77.3015

aveslsfavetotprofit =

82.7643

avelcfpercposprofit =

1

aveslsfpercposprofit =

1

avelcfaveextratime =

0.4791

aveslsfaveextratime =

0.4791

avelcfaverejfare =

7.3092

aveslsfaverejfare =

7.4958

returnedobjs =

371.6318 342.5675 320.5084 317.9046 347.3529

355.7652 366.8535 342.0044 380.2514 340.1671

353.5353 355.3059 361.8578 359.5331 352.1463

338.6234 379.0510 345.9358 363.1171 344.6594

370.9769 348.2546 330.9481 359.2992 315.9481

361.3173 333.4800 357.9739 348.6345 367.1919

358.9747 357.3893 353.7959 370.2256 352.1612

slsfavecomp =

9.8834 8.5339 9.5248 8.6783 11.0084

8.6741 11.3209 10.1308 14.0440 9.8171

10.1241 9.6956 10.2134 9.5559 11.3339

9.6762 12.8256 9.4874 9.6660 15.5032

9.5782 15.3960 10.5494 12.0341 10.3387

9.7943 10.9971 9.1201 10.1001 12.1641

10.1412 10.3053 10.1306 12.7967 8.9554

lcfavecomp =

10.0362 8.5339 9.8722 9.5548 11.5082

9.0402 11.6142 10.6579 14.0440 10.0955

10.3084 9.9859 10.2134 9.7088 11.7021

9.9998 12.8654 10.1250 9.7798 14.4777

9.5782 15.8207 10.7069 12.0341 10.5949

9.8684 11.3980 9.4904 10.3104 12.5779

10.1412 10.3696 10.4300 12.7967 9.4004

lcfaveperccomp =

0.8377 0.8000 0.8563 0.9699 0.8972

0.8910 0.8433 0.8986 0.8000 0.9033

0.8540 0.8835 0.8000 0.8620 0.8667

0.9288 0.8294 0.9469 0.8508 0.8473

0.8000 0.9043 0.8668 0.8000 0.8442

0.8558 0.9001 0.8678 0.8394 0.8957

0.8000 0.8848 0.8664 0.8000 0.8715

lcfavetotprofit =

80.7547 74.2239 66.9361 52.7926 75.8865

70.8154 84.3213 70.9206 102.9913 71.3163

77.6226 71.9921 85.2037 75.6740 76.1206

65.9784 93.7269 66.1565 75.3712 90.1799

83.5402 74.6183 72.5039 92.8055 70.3606

77.0812 69.5832 74.2642 78.1307 84.2143

82.7375 74.7034 75.3616 97.5874 69.0765

slsfavetotprofit =

84.5028 74.2239 70.9159 71.0823 85.8634

77.6939 90.6877 80.2008 102.9913 77.7560

80.9716 79.1661 85.2037 80.2321 86.4880

75.4531 97.7160 78.7831 79.8543 79.9941

83.5402 92.2943 76.4778 92.8055 75.3479

80.5279 79.6816 80.0458 83.1194 93.9555

82.7375 80.2972 81.7312 97.5874 76.8222

lcfaveextratime =

0.4032 0.3319 0.4683 0.4436 0.5178

0.3349 0.5575 0.4951 0.6558 0.4300

0.4849 0.4125 0.4482 0.4077 0.5329

0.4743 0.5002 0.4162 0.4092 0.7204

0.3547 0.7443 0.4945 0.5347 0.4702

0.4288 0.5374 0.4297 0.4515 0.5357

0.3836 0.4824 0.5009 0.5489 0.4281

slsfaveextratime =

0.4035 0.3319 0.4547 0.3940 0.4954

0.3431 0.5570 0.4634 0.6558 0.4411

0.4754 0.4070 0.4482 0.4019 0.5208

0.4597 0.5108 0.4085 0.4192 0.7880

0.3547 0.7139 0.4719 0.5347 0.4652

0.4188 0.5216 0.4066 0.4371 0.5354

0.3836 0.5112 0.5144 0.5489 0.4078

lcfaverejfare =

5.5123 7.1928 7.6130 7.2871 4.4049

7.7376 7.9669 8.2736 11.2418 7.2151

9.1286 7.5452 5.7094 4.2845 6.4986

6.1060 6.5676 6.3588 6.2069 8.6620

9.7549 9.0701 9.2433 6.6486 7.0595

8.1125 9.2003 6.8183 5.6240 3.8089

4.8993 6.2852 7.9457 11.5929 8.2467

slsfaverejfare =

5.8476 7.1928 8.3317 6.3710 4.8448

7.6463 7.8170 8.8526 11.2418 7.1750

8.5798 6.8357 5.7094 5.4296 6.4448

6.1764 5.2260 7.3492 5.8839 11.3252

9.7549 10.4364 8.5813 6.6486 7.3129

6.4021 8.1832 9.6831 5.6212 7.0027

4.8993 5.8310 7.8428 11.5929 8.2814

slsfobjs =

364.6096 342.5675 299.4694 311.2103 340.8001

354.7426 367.5652 333.5935 380.2514 326.5267

341.2041 335.0072 361.8578 349.8413 347.8937

315.0017 372.1758 347.6677 351.4132 257.2444

370.9769 303.5684 315.3008 359.2992 311.1520

347.7336 326.7016 359.3877 344.1587 368.2529

358.9747 332.0729 331.6162 370.2256 346.9455

lcfrejs =

0.0257 1.3922 2.0570 0.5542 1.0181

0.1784 0.1503 0.4767 0.6704 0.8734

0.1901 0.1304 0.7265 0.3821 0.7239

0.5334 0.1817 0.1999 0.0429 1.3700

0.2183 0.8390 1.2421 1.2032 2.4959

0.0413 1.5954 0.0969 0.9242 0.1374

1.0335 0.3138 0.1769 0.6756 0.2956

slsfrejs =

0.6187 1.3922 3.8034 2.7986 1.4349

0.7557 0.5544 2.0808 0.6704 2.5218

1.4120 1.7570 0.7265 1.2044 1.5108

2.6712 0.8983 1.1847 1.2222 7.0711

0.2183 4.6915 3.1809 1.2032 3.3069

1.2937 2.5944 0.4214 1.5225 0.9458

1.0335 2.3111 1.5286 0.6756 1.1045

menusizes =

4.9000 4.2000 4.3500 4.8000 4.6000

4.5500 4.9500 4.8500 4.3500 4.7000

4.8500 4.9000 5.0000 4.8500 4.8500

4.8000 4.9000 4.5500 4.8000 4.9000

4.4500 4.9000 4.5500 4.8500 4.3500

5.0000 4.6500 4.9500 4.7500 4.7500

4.4000 5.0000 5.0000 4.7000 4.8000

avepij =

0.1761 0.1360 0.1323 0.1445 0.1535

0.1578 0.1587 0.1602 0.1415 0.1409

0.1531 0.1571 0.1612 0.1613 0.1664

0.1538 0.1914 0.1535 0.1609 0.1474

0.1549 0.1607 0.1440 0.1488 0.1334

0.1700 0.1432 0.1657 0.1696 0.1758

0.1606 0.1635 0.1601 0.1470 0.1506

pijover5 =

71 50 51 55 63

63 62 62 60 50

57 61 66 60 69

62 77 62 63 61

65 64 57 62 50

65 57 64 67 71

66 63 64 63 59

pijequal1 =

25 30 22 27 23

34 23 24 17 24

20 30 26 26 26

28 47 30 27 12

36 25 15 21 19

29 21 27 37 35

35 24 19 28 20

runtimes =

138.3021 345.3804 328.5814 334.4111 255.4433

258.0992 210.0424 191.8045 203.9201 316.2190

318.3894 274.6172 122.5038 274.7969 195.9716

277.9782 128.9419 238.8250 258.0461 344.3478

154.7348 321.1697 307.5833 178.4985 219.1492

318.3064 234.9528 192.2588 157.8659 159.8595

143.7428 194.6385 228.5573 142.8321 305.0900

bestest =

372.1171 343.4565 317.7806 319.7590 347.6888

358.7255 365.8210 348.7371 385.4334 342.3091

347.6254 358.8362 364.0006 364.2464 353.2000

340.9468 379.1947 346.0250 362.0657 353.4256

369.7791 357.4820 339.8299 368.4743 324.5128

362.5764 338.2158 359.9202 349.9082 369.5221

359.3618 359.2245 347.8533 377.8219 354.7509

guessbestiter =

2 0 2 6 2

1 4 3 0 3

7 4 0 6 5

7 3 6 7 3

0 4 6 0 1

4 7 5 1 6

0 5 7 0

estslsfobjs =

369.1603 343.4565 300.3850 307.9165 342.3710

353.3128 362.5235 331.2217 385.4334 334.2758

340.2835 337.9119 364.0006 355.4307 333.4470

316.8140 372.7266 336.8723 350.6798 254.6582

369.7791 297.6781 312.4756 368.4743 314.6229

347.3086 324.9892 356.1546 342.9062 360.7099

359.3618 341.8562 327.7346 377.8219 349.5553

compportion80 =

0.6327 0 0.7931 0.7500 0.7391

0.6374 0.6566 0.6701 0 0.6809

0.7113 0.7449 0 0.6392 0.6907

0.7188 0.7143 0.8022 0.6979 0.6735

0 0.7755 0.6813 0 0.7241

0.6200 0.7312 0.6465 0.6947 0.7263

0 0.7500 0.7100 0 0.7292

compportionmin =

0.6327 1.0000 0.7931 0.7500 0.7391

0.6374 0.6566 0.6701 1.0000 0.6809

0.7113 0.7449 1.0000 0.6392 0.6907

0.7188 0.7143 0.8022 0.6979 0.6735

1.0000 0.7755 0.6813 1.0000 0.7241

0.6200 0.7312 0.6465 0.6947 0.7263

1.0000 0.7500 0.7100 1.0000 0.7292

**87th experiment, Fixed Scens Welfare Profit b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, no double test, mutated scens have equal wt, zeros problem fixed, minitest=rej**

lcfiterbetter =

0.7800

lcfiterworse =

0.2200

avepercbetter =

0.0353

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.7440

lcfiterave =

351.4870

slsfave =

340.4147

averuntime =

302.1377

avelcfrejs =

0.5562

aveslsfrejs =

1.8531

percbetter =

0.0341 0.1735 0.0057 0.0686 0.0469

-0.0196 0.0401 -0.0053 0.0321 0.0632

0.0520 0.0339 0.0416 0.0518 0.0843

0.0607 0.0273 0.0114 0.0176 -0.0003

0.0400 0.0986 0.0334 -0.0332 -0.0024

0.0546 0.2164 0.0053 -0.0073 0.0128

0.0450 0.0338 0.0248 -0.0088 0.0504

0.0065 -0.0015 0.0937 -0.0136 0.0414

0.0009 -0.0110 0.0258 0.0443 -0.0139

0.0384 0.0608 0.0373 0.0195 0.0513

avelcfavecomp =

11.2215

aveslsfavecomp =

10.8929

avelcfaveperccomp =

0.8813

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

75.9326

aveslsfavetotprofit =

84.1326

avelcfpercposprofit =

1

aveslsfpercposprofit =

1

avelcfaveextratime =

0.4905

aveslsfaveextratime =

0.4905

avelcfaverejfare =

7.0010

aveslsfaverejfare =

6.9266

returnedobjs =

331.4741 295.3316 366.9382 337.1815 367.5049

351.1414 343.5013 374.4811 337.7924 346.7476

330.0868 363.2702 352.7979 350.8996 340.9975

350.9158 352.6092 347.4271 340.4339 349.5613

314.0464 329.4961 368.3359 332.7346 367.5610

340.4527 340.0358 367.6518 364.9877 364.4549

356.1344 309.6437 346.4561 369.4849 369.4200

365.7632 373.4412 355.6933 376.5703 368.4586

366.5723 369.3738 353.3591 350.5812 351.5478

336.6670 342.7395 358.6351 364.5833 368.3769

slsfavecomp =

9.6769 11.1989 11.5182 10.5457 11.0118

11.3604 10.0797 11.0124 12.0463 10.0941

11.7800 13.4360 9.4116 10.1532 8.3056

10.7098 10.7560 9.2935 11.6302 9.3490

9.9371 9.9783 13.9141 9.9592 11.1263

10.9098 10.9195 10.5784 12.2700 11.7114

10.8426 10.5309 10.8710 10.5616 12.1404

10.8042 12.8727 10.9164 12.2900 11.7110

11.2132 10.0447 8.1322 9.4909 9.2452

9.6163 11.4424 13.2516 10.5583 13.4346

lcfavecomp =

10.1300 11.7971 11.7526 10.7813 11.1235

11.7590 10.5220 11.1954 12.4284 10.4490

11.7869 13.9070 9.6928 10.3477 8.7580

11.1549 11.2622 9.6717 11.8438 9.6206

10.4225 10.2737 13.8196 10.2185 11.2988

11.4032 11.7420 10.7918 12.8223 11.7397

11.4585 11.6813 11.2502 10.8950 12.2562

11.1200 13.4912 10.7187 12.5618 12.0409

11.4203 10.2847 8.3676 10.0885 10.0014

10.0760 11.5585 13.5129 10.5573 13.2167

lcfaveperccomp =

0.8621 0.9336 0.8274 0.9025 0.8702

0.8803 0.9004 0.8331 0.8419 0.9086

0.8235 0.9567 0.9309 0.8568 0.9611

0.8790 0.8724 0.9041 0.8534 0.8651

0.9088 0.9350 0.8439 0.8862 0.8325

0.8812 0.9754 0.8244 0.8598 0.8235

0.8933 0.9544 0.8889 0.8588 0.8561

0.8915 0.8898 0.8387 0.8504 0.8546

0.8569 0.8403 0.8740 0.9529 0.9155

0.8857 0.8669 0.9210 0.8833 0.8574

lcfavetotprofit =

67.9110 60.5022 86.6751 68.3002 78.4234

80.2269 72.3518 86.8131 79.4124 68.5595

83.4257 78.3651 68.3884 74.8778 56.3921

74.5583 74.8191 70.6633 80.1727 73.6181

63.5363 62.9757 93.0595 71.6288 86.1426

68.8942 57.8730 83.2531 82.1343 87.9642

72.5917 54.9819 77.2173 81.8653 85.1733

81.0934 85.0036 79.7710 90.8404 82.5245

85.0507 81.9977 70.0912 66.2972 66.2490

66.4988 77.4886 81.8965 79.0469 89.0326

slsfavetotprofit =

74.7423 67.4767 91.8053 76.5960 86.3081

87.8664 80.4765 90.4471 86.2160 78.9562

85.6532 95.4287 76.3341 80.6824 67.7431

83.7009 85.5826 79.3803 86.7388 79.4237

73.7546 70.4672 97.9168 79.1069 90.1082

80.6125 77.9579 87.2907 94.9324 90.5125

86.1782 75.3886 85.1044 88.9119 91.8165

88.4033 98.6784 79.3300 97.1788 90.8088

89.9873 86.7673 73.1234 79.1018 80.6694

76.8915 81.3501 94.8198 84.1057 93.7953

lcfaveextratime =

0.4985 0.5877 0.5272 0.4546 0.4392

0.4901 0.4999 0.4558 0.6020 0.4844

0.5653 0.5890 0.4188 0.4563 0.3889

0.4821 0.4873 0.3517 0.5286 0.3822

0.4970 0.4721 0.6295 0.4482 0.4955

0.5541 0.5161 0.4431 0.5734 0.4567

0.4912 0.5242 0.5097 0.4588 0.5713

0.4270 0.5551 0.4924 0.5059 0.5373

0.5005 0.3659 0.3074 0.4124 0.4130

0.4681 0.5224 0.6356 0.4362 0.6142

slsfaveextratime =

0.4682 0.5720 0.5134 0.4605 0.4434

0.5019 0.4988 0.4722 0.5810 0.4648

0.5647 0.6223 0.4207 0.4660 0.3802

0.4912 0.4891 0.3525 0.5419 0.3739

0.4944 0.4485 0.5847 0.4351 0.4937

0.5228 0.5289 0.4507 0.5770 0.4730

0.4932 0.5214 0.5108 0.4219 0.5681

0.4485 0.5382 0.4886 0.5253 0.5433

0.4892 0.3636 0.3323 0.4063 0.4049

0.4308 0.5220 0.6327 0.4289 0.6056

lcfaverejfare =

6.6964 5.1559 11.0207 3.7214 7.0193

5.1526 6.9774 7.8911 5.2548 4.9907

6.2331 7.8511 6.7681 7.4708 5.9857

9.6252 5.8667 3.1003 5.5002 3.5855

7.9146 8.5753 6.4537 6.2871 5.3458

5.8736 8.4017 10.4393 9.9680 6.2820

7.9404 6.3100 3.8990 7.6829 7.0503

4.1177 11.9117 7.1769 4.2403 9.6839

8.3334 5.4032 10.7538 4.1975 8.5663

9.7984 10.0215 6.0353 6.8418 8.6792

slsfaverejfare =

7.8201 8.3050 9.2152 5.1256 4.5469

5.4615 7.7599 8.9057 7.0268 6.1171

6.2640 6.8755 6.1512 6.9226 5.5607

8.7348 7.1331 4.3253 6.3545 4.7422

7.5695 7.7545 6.8436 5.6010 7.0141

6.7458 7.6525 9.4531 7.6386 6.4313

7.5120 7.4491 4.9478 6.4221 6.0783

6.2695 8.5751 7.3450 5.6432 8.0817

7.6280 7.7358 7.8668 6.6818 8.5496

7.4332 9.0825 5.6250 4.5408 6.8092

slsfobjs = 320.5473 251.6711 364.8674 315.5307 351.0287

358.1691 330.2459 376.4661 327.2912 326.1286

313.7577 351.3678 338.7236 333.6067 314.4985

330.8206 343.2290 343.5140 334.5480 349.6836

301.9759 299.9136 356.4420 344.1717 368.4350

322.8225 279.5491 365.6953 367.6791 359.8487

340.8135 299.5070 338.0572 372.7689 351.6933

363.4168 374.0158 325.2189 381.7701 353.8060

366.2389 373.4964 344.4594 335.6961 356.4919

324.2165 323.0953 345.7460 357.5938 350.4050

lcfrejs =

1.3417 2.6870 0.0809 1.1548 0.0134

1.0621 1.1011 0.0108 1.5196 0.1413

2.2215 0.0135 0.1098 0.4011 0.0687

0.0988 0.4226 0.6427 1.5553 0.7794

1.7703 1.2378 0.2342 1.0154 0.2691

1.0094 0.0910 0.1255 0.1469 0.6694

0.0829 1.8051 0.9318 0.0087 0.1024

0.0897 0.0011 0.6198 0.0239 0.0371

0.3113 0.0023 0.0678 0.0349 0.0004

0.3573 0.6717 0.4483 0.0693 0.1480

slsfrejs =

2.6171 6.4924 0.5667 3.1122 1.1748

1.1468 2.1588 0.1902 2.8692 2.4048

3.1256 1.8519 1.7333 2.2225 2.8744

2.0555 1.7462 1.4348 2.2401 1.2359

3.3221 4.0241 1.8345 1.7994 0.6543

2.5693 3.3322 0.5477 0.6816 1.2034

1.3802 3.6482 1.9312 0.2545 1.4485

0.7634 0.8153 2.7462 0.3449 1.0745

0.7737 0.0438 1.0971 1.9328 0.5313

2.4561 2.9867 1.9777 1.1439 2.0828

menusizes =

4.6500 4.5500 4.8500 4.4000 4.7000

4.6500 4.7500 5.0000 4.7500 4.9500

5.0000 4.9500 4.6500 4.9000 4.7000

4.8500 4.9000 4.8000 4.8500 4.8000

4.5500 4.4500 5.0000 4.7500 4.9500

4.6000 4.7500 4.7500 4.9500 4.9000

4.5500 4.4000 4.7000 4.7000 4.9000

4.9000 4.9000 4.9500 4.7500 4.6000

5.0000 4.6500 4.9000 4.9500 4.9500

4.9000 4.7000 4.8500 4.8500 4.9500

avepij =

0.1311 0.1280 0.1653 0.1550 0.1815

0.1538 0.1427 0.1768 0.1427 0.1511

0.1494 0.1778 0.1548 0.1683 0.1582

0.1677 0.1831 0.1826 0.1597 0.1760

0.1389 0.1430 0.1582 0.1584 0.1751

0.1519 0.1747 0.1554 0.1816 0.1840

0.1617 0.1423 0.1552 0.1639 0.1624

0.1722 0.1721 0.1506 0.1757 0.1468

0.1624 0.1772 0.1693 0.1813 0.1780

0.1615 0.1451 0.1521 0.1657 0.1721

pijover5 =

49 50 66 60 81

58 51 67 54 58

50 73 61 71 61

69 76 73 62 73

51 51 63 62 69

58 73 61 77 73

70 60 59 65 61

68 71 58 69 55

61 70 64 72 71

65 55 59 66 70

pijequal1 =

18 9 26 30 36

24 25 35 14 26

26 35 25 29 27

31 41 45 27 41

22 27 25 25 33

23 34 23 36 42

21 29 24 30 24

33 30 19 38 22

25 42 32 41 39

29 20 22 27 29

runtimes =

259.2581 324.6620 405.2116 475.2893 184.7138

297.9654 207.9369 192.0189 201.6723 285.0429

165.8110 288.8673 216.9806 135.8365 225.3509

331.1489 228.8483 150.4183 199.3629 122.0017

319.6393 324.1542 407.1086 491.4651 366.2159

412.8807 521.9392 496.7672 374.0876 347.0675

409.9609 520.9121 434.8966 476.1271 384.4646

361.5786 228.7235 312.0132 181.6927 355.8901

194.7514 183.9923 266.7368 161.3997 214.7356

241.1752 358.5896 349.2986 228.3501 281.8742

guessbestiter =

7 7 6 6 7

7 5 5 5 6

5 7 4 3 7

7 5 6 7 3

7 6 5 2 6

5 7 6 3 4

5 6 4 2 4

4 5 7 5 7

4 1 6 6 6

3 3 5 7 3

compportion80 =

0.6989 0.6923 0.7216 0.5568 0.8511

0.7204 0.6842 0.6600 0.6632 0.7172

0.5600 0.8384 0.7634 0.7857 0.8404

0.7835 0.6837 0.6458 0.6804 0.7396

0.7582 0.6854 0.6800 0.6421 0.6364

0.6848 0.8000 0.6105 0.6970 0.5816

0.8132 0.7614 0.6489 0.7340 0.7041

0.7041 0.7041 0.6465 0.6105 0.7065

0.5900 0.6559 0.6735 0.7677 0.7374

0.6939 0.7340 0.6804 0.7216 0.7475

compportionmin =

0.6989 0.6923 0.7216 0.5568 0.8511

0.7204 0.6842 0.6600 0.6632 0.7172

0.5600 0.8384 0.7634 0.7857 0.8404

0.7835 0.6837 0.6458 0.6804 0.7396

0.7582 0.6854 0.6800 0.6421 0.6364

0.6848 0.8000 0.6105 0.6970 0.5816

0.8132 0.7614 0.6489 0.7340 0.7041

0.7041 0.7041 0.6465 0.6105 0.7065

0.5900 0.6559 0.6735 0.7677 0.7374

0.6939 0.7340 0.6804 0.7216 0.7475

**87th experiment, Fixed Scens Welfare Profit b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt, zeros problem fixed, minitest=rej,gap=0.01**

lcfiterbetter =

0.6400

lcfiterworse =

0.3600

avepercbetter =

0.0189

lcfrejbetter =

0.9800

lcfrejworse =

0.0200

avepercrejbetter =

0.5601

lcfiterave =

351.3263

slsfave =

345.2627

averuntime =

325.6590

avelcfrejs =

0.7420

aveslsfrejs =

1.5866

percbetter =

-0.0020 0.0275 -0.0036 0.0471 0.0263

0.0137 0.0429 -0.0180 0.0475 -0.0059

-0.0106 0.0022 0.0010 0.0940 0.0223

0.0234 0.0017 0.1032 -0.0074 0.0130

-0.0160 0.1550 0.0513 -0.0030 0.0132

-0.0070 0.0192 0.0216 -0.0123 0.1230

0.0110 0.0479 -0.0190 -0.0059 0.0297

0.0474 0.0295 0.0132 0.0302 0.0031

-0.0236 -0.0008 0.0076 0.0243 -0.0211

-0.0083 0.0061 0.0307 -0.0072 -0.0131

avelcfavecomp =

10.7422

aveslsfavecomp =

10.5036

avelcfaveperccomp =

0.8681

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

76.9498

aveslsfavetotprofit =

82.9359

avelcfpercposprofit =

1

aveslsfpercposprofit =

1

avelcfaveextratime =

0.4557

aveslsfaveextratime =

0.4557

avelcfaverejfare =

6.7027

aveslsfaverejfare =

6.7289

returnedobjs =

332.7696 350.8854 370.7306 352.7912 358.5559

355.4899 355.9204 312.5318 360.1520 334.1326

351.4846 376.9557 353.4089 336.4220 346.3155

342.6961 378.0994 366.7280 357.5111 348.2775

340.4083 341.0078 364.6324 356.6340 355.4761

367.8830 352.2884 369.3442 374.0494 352.2370

319.3913 358.7465 334.6371 365.8436 331.1685

341.5626 298.2083 355.2497 362.2749 365.2326

350.4291 349.6596 336.1226 346.5087 372.0651

339.0800 340.9297 339.7777 369.1920 374.4156

slsfavecomp =

8.6435 10.2233 12.2227 11.7263 9.3185

10.2790 10.2514 9.3529 12.9871 9.5412

11.6223 12.7465 10.4412 11.0823 10.9212

9.5421 11.5214 11.7146 8.9480 10.8728

7.8374 8.7431 10.1306 9.2174 10.4486

11.7076 10.7109 11.2286 11.1108 10.2395

12.6461 11.4968 9.3695 9.7868 10.3344

10.5373 9.9579 8.7358 11.2314 9.2591

9.0044 13.1110 10.3503 10.3220 11.7388

9.3308 9.4823 9.7717 12.0860 11.2939

lcfavecomp =

9.0898 10.4700 12.6878 11.6382 9.5237

10.4705 10.3953 9.6291 12.8409 9.7178

12.1166 12.8029 10.5897 11.2511 11.2449

9.5220 11.6337 11.2700 9.4604 11.2995

8.3077 9.4202 10.2173 9.3219 10.6645

12.0300 10.9356 11.4408 11.4180 10.6084

12.7979 11.4334 9.8405 10.0413 11.0238

10.5836 10.2660 9.0975 11.5050 9.5283

9.5354 13.2354 10.4824 10.2801 12.1962

9.5337 9.7049 9.9476 12.4554 11.6017

lcfaveperccomp =

0.9127 0.8894 0.8993 0.8238 0.8476

0.8933 0.8498 0.8551 0.9042 0.8272

0.8890 0.8040 0.8375 0.8486 0.9255

0.8632 0.8268 0.8481 0.9320 0.8944

0.9130 0.9332 0.8687 0.8202 0.8379

0.8708 0.8616 0.8504 0.8727 0.9074

0.8337 0.9115 0.8642 0.8430 0.9044

0.8370 0.8759 0.8938 0.8362 0.8589

0.9328 0.8538 0.8547 0.8528 0.8812

0.8250 0.8395 0.8323 0.8803 0.8842

lcfavetotprofit =

63.9289 72.5418 84.6682 83.5088 73.7625

77.0631 76.3386 69.1297 85.0395 77.0989

77.9669 97.1795 80.2221 73.2259 72.7799

73.8077 90.4401 86.3970 69.3338 72.4669

64.1943 57.3705 76.5137 78.7110 80.2868

86.5899 76.8572 85.8927 83.8938 72.7262

80.1878 78.8666 67.8460 79.3192 65.6984

75.8777 62.3280 68.1633 82.9430 75.6997

70.2561 86.9420 75.6912 77.3954 84.0189

74.7188 74.5089 73.9847 86.6155 86.4949

slsfavetotprofit =

73.8874 80.5746 95.0247 83.7204 79.4127

82.4753 81.3393 74.3100 90.5963 78.9174

88.0031 98.2262 84.2282 79.1079 80.8167

76.0411 93.0755 83.3731 79.9596 84.9851

73.0509 68.8543 81.4246 80.7142 84.9888

93.0664 82.9360 90.1458 90.1697 78.8670

84.4119 85.4694 77.4910 84.7258 77.9506

79.1161 70.5493 76.1054 86.0714 81.7518

79.9548 92.9878 80.6157 79.8960 94.1353

78.5912 79.5197 77.2906 95.2340 92.6340

lcfaveextratime =

0.3795 0.4650 0.5612 0.5159 0.3974

0.4562 0.4565 0.4406 0.5225 0.4564

0.5546 0.4696 0.4823 0.5462 0.4168

0.3945 0.4450 0.4312 0.3454 0.5036

0.3497 0.3992 0.4139 0.3437 0.4583

0.5261 0.4642 0.4889 0.4604 0.4837

0.5849 0.4787 0.4363 0.3660 0.5300

0.4734 0.5053 0.3527 0.5072 0.3576

0.3568 0.5708 0.4610 0.4163 0.4980

0.4297 0.4368 0.4493 0.5143 0.4329

slsfaveextratime =

0.3775 0.4682 0.5768 0.5134 0.4196

0.4874 0.4504 0.4203 0.5207 0.4542

0.5420 0.5017 0.4828 0.5653 0.4646

0.3860 0.4651 0.4794 0.3489 0.4592

0.3465 0.4278 0.4234 0.3463 0.4460

0.5381 0.4652 0.4958 0.4568 0.5110

0.6040 0.4902 0.4321 0.3710 0.5201

0.4734 0.4877 0.3623 0.4706 0.3651

0.3607 0.5701 0.4514 0.3972 0.5315

0.4252 0.4465 0.4630 0.5096 0.4433

lcfaverejfare =

4.3763 7.1406 7.1474 6.1433 7.3107

6.2323 10.4291 5.1293 6.2562 7.8358

7.0309 6.6570 5.8998 8.4804 4.5372

5.5188 6.2807 10.2011 4.6805 5.5915

5.3739 7.4627 6.6655 6.2268 9.2980

4.2379 7.3086 4.2929 6.4231 10.1637

6.2588 8.2416 5.7536 5.5153 8.5451

5.5968 5.4426 6.5116 11.3807 5.7859

3.0655 4.8367 6.4708 5.1436 9.5963

7.2341 7.3265 9.2485 4.1997 8.6473

slsfaverejfare =

4.5094 6.1950 7.2623 7.2770 5.7896

6.2643 7.4073 5.5618 6.0878 8.9234

7.1151 7.5784 6.1301 7.9323 5.8509

5.7767 6.7369 7.6290 6.0670 4.8263

6.0770 7.5729 5.9882 6.5682 8.4086

7.2697 7.2245 7.0218 8.5806 9.2400

6.4705 5.3722 6.3388 5.2627 8.8855

5.6224 5.6464 6.2060 11.2420 5.1861

5.7869 4.8557 5.8611 5.1105 6.7741

7.2610 6.7326 8.7988 5.2150 8.9451

slsfobjs =

333.4313 341.4936 372.0544 336.9206 349.3744

350.6987 341.2835 318.2527 343.8155 336.1299

355.2632 376.1467 353.0621 307.5080 338.7664

334.8740 377.4704 332.4296 360.1730 343.8110

345.9261 295.2512 346.8282 357.7199 350.8348

370.4812 345.6453 361.5254 378.7147 313.6575

315.9027 342.3469 341.1059 368.0027 321.6027

326.1177 289.6551 350.6279 351.6411 364.1027

358.9011 349.9432 333.5901 338.2727 380.0865

341.9230 338.8666 329.6473 371.8509 379.4028

lcfrejs =

1.4204 0.4117 0.1898 1.0899 0.2696

0.5404 0.2589 2.3251 0.5871 1.6585

1.0593 0.5940 0.7968 1.1531 1.0514

0.8613 0.0343 0.2142 0.0048 0.4562

0.4711 0.3631 0.0047 0.7301 0.5968

0.2575 0.6165 0.1218 0.0190 0.2316

2.9389 0.1159 0.7261 0.1462 0.9868

1.3920 3.0078 0.0197 0.1955 0.0317

0.6375 1.2701 1.8260 1.3292 0.0115

1.6676 1.0312 1.2438 0.0952 0.0385

slsfrejs =

2.0246 1.6677 0.6063 2.3427 1.3759

1.2548 1.5757 2.5937 2.4445 1.7556

1.2900 0.6589 1.1249 3.3192 2.1955

2.0776 0.1417 2.5997 0.3476 1.7802

0.6849 3.7817 1.4051 0.7742 1.0691

0.5249 1.7085 0.7353 0.2043 2.2983

3.5485 2.0726 1.3924 0.3833 2.6100

2.5275 4.2428 1.0792 1.5097 0.4874

0.6699 1.8189 2.2137 2.1549 0.1671

1.6191 1.6669 2.0310 0.6830 0.0885

menusizes =

4.4500 4.9500 5.0000 4.4500 4.6500

4.9000 4.8500 4.4500 4.6000 4.9000

4.6500 4.7000 4.9000 4.6500 3.7000

4.8000 4.8000 4.7500 4.7500 4.7500

4.5500 4.5500 4.6500 4.6500 4.7000

4.9500 4.6000 4.5000 4.5500 4.9000

4.4500 4.8000 4.2500 4.8500 4.6500

4.4000 4.4500 4.2000 4.9500 4.7000

4.7500 4.3000 4.8000 4.6500 4.9500

4.5500 4.6000 4.6500 4.8500 4.1500

avepij =

0.1493 0.1663 0.1601 0.1383 0.1644

0.1585 0.1562 0.1378 0.1641 0.1396

0.1633 0.1734 0.1632 0.1466 0.1465

0.1532 0.1688 0.1581 0.1731 0.1639

0.1499 0.1493 0.1677 0.1755 0.1601

0.1781 0.1500 0.1645 0.1590 0.1571

0.1329 0.1696 0.1386 0.1805 0.1433

0.1493 0.1469 0.1512 0.1696 0.1777

0.1732 0.1396 0.1641 0.1700 0.1815

0.1505 0.1449 0.1496 0.1758 0.1571

pijover5 =

57 67 67 53 67

62 64 50 68 48

66 72 65 61 61

56 69 62 70 64

57 60 66 71 62

71 61 66 63 68

51 70 56 74 57

60 56 63 70 75

72 58 64 70 77

57 55 59 72 68

pijequal1 =

30 28 22 17 33

27 27 27 24 16

21 38 26 16 34

30 30 31 36 33

30 19 37 44 32

37 26 30 24 24

19 25 21 41 18

24 31 28 26 38

38 21 30 37 30

27 24 27 36 33

runtimes =

152.9767 447.4584 400.4523 580.7816 230.0536

316.3692 609.1292 455.1235 505.9764 212.1557

689.3010 137.9207 227.1684 847.0373 253.3003

386.3051 201.4804 550.9508 268.6019 256.4069

289.5142 719.9552 175.8757 126.0963 305.7852

142.3275 315.9430 200.8560 158.6644 503.5997

173.4445 343.0704 282.8439 129.8319 847.2858

368.8089 734.9076 232.2928 430.2255 141.4676

144.6522 332.6461 207.5467 152.5488 151.2199

197.1348 143.9689 325.0894 141.1443 135.2518

guessbestiter =

3 3 3 4 6

3 7 1 6 2

4 5 2 6 4

6 7 6 7 6

4 7 3 1 7

7 5 2 4 4

2 4 4 3 5

2 6 5 3 5

1 3 5 6 3

5 4 2 6 1

compportion80 =

0.7753 0.7273 0.7100 0.7079 0.7419

0.6735 0.7835 0.7416 0.8261 0.6429

0.7634 0.6383 0.6939 0.7419 0.5946

0.7500 0.6146 0.6421 0.6737 0.7053

0.7912 0.8242 0.6344 0.5376 0.6596

0.7374 0.6196 0.6333 0.7253 0.8265

0.6966 0.6875 0.7412 0.7010 0.8172

0.6591 0.7528 0.8333 0.7172 0.7340

0.7158 0.6395 0.6146 0.6559 0.8081

0.7363 0.6957 0.7527 0.7010 0.7590

compportionmin =

0.7753 0.7273 0.7100 0.7079 0.7419

0.6735 0.7835 0.7416 0.8261 0.6429

0.7634 0.6383 0.6939 0.7419 0.5946

0.7500 0.6146 0.6421 0.6737 0.7053

0.7912 0.8242 0.6344 0.5376 0.6596

0.7374 0.6196 0.6333 0.7253 0.8265

0.6966 0.6875 0.7412 0.7010 0.8172

0.6591 0.7528 0.8333 0.7172 0.7340

0.7158 0.6395 0.6146 0.6559 0.8081

0.7363 0.6957 0.7527 0.7010 0.7590

**88th experiment, Fixed Scens Welfare Profit b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt, minitest=rej, gap=0.1, beta=fare+1.85**

**lcfiterbetter =**

**0.7714**

**lcfiterworse =**

**0.2000**

**avepercbetter =**

**0.0219**

**lcfrejbetter =**

**0.9714**

**lcfrejworse =**

**0**

**avepercrejbetter =**

**0.5616**

**lcfiterave =**

**349.7827**

**slsfave =**

**342.7227**

**averuntime =**

**255.1389**

**avelcfrejs =**

**0.8520**

**aveslsfrejs =**

**1.7727**

**percbetter =**

**-0.0109 0.0518 0.0183 0.0437 0.0161**

**0.0733 0 0.0073 -0.0012 0.0323**

**-0.0006 -0.0057 0.0199 0.0220 -0.0412**

**0.0112 -0.0098 -0.0195 0.0286 0.0001**

**0.0923 0.0002 0.0997 0.0174 0.0177**

**0.0076 0.0246 0.0102 0.0018 0.0268**

**0.0262 0.0332 0.0145 0.0786 0.0807**

**avelcfavecomp =**

**11.0645**

**aveslsfavecomp =**

**10.8553**

**avelcfaveperccomp =**

**0.8566**

**aveslsfaveperccomp =**

**0.8000**

**avelcfavetotprofit =**

**78.3054**

**aveslsfavetotprofit =**

**84.0959**

**avelcfpercposprofit =**

**1**

**aveslsfpercposprofit =**

**1**

**avelcfaveextratime =**

**0.4844**

**aveslsfaveextratime =**

**0.4844**

**avelcfaverejfare =**

**6.9752**

**aveslsfaverejfare =**

**6.9373**

**returnedobjs =**

**373.6770 368.3112 361.6353 342.0371 347.6753**

**349.2751 364.0166 346.5792 345.7913 381.6677**

**357.4632 359.4347 354.2041 374.4615 337.7666**

**361.0326 340.3700 328.6400 362.0660 364.1250**

**339.2143 363.3256 304.8731 348.2272 344.2737**

**364.5780 338.4525 334.7217 372.8099 310.2751**

**295.2505 349.6777 364.2651 320.8209 371.3981**

**slsfavecomp =**

**11.6432 11.7661 11.5998 9.9534 10.1158**

**9.8939 11.0934 8.7156 10.3764 13.4669**

**12.2020 9.4820 8.5793 11.6702 13.0826**

**10.5420 10.9049 7.7736 9.5179 12.2291**

**11.9447 10.3379 9.2640 8.9964 11.1672**

**10.1440 10.3567 9.3222 12.8083 10.7924**

**10.8314 14.3135 12.6250 10.7547 11.6692**

**lcfavecomp =**

**11.8426 12.0428 11.9011 9.9500 10.4467**

**9.9239 11.0934 8.9728 10.7959 13.3810**

**12.6277 9.8666 8.7606 11.6233 13.4353**

**10.7247 11.1587 8.3508 9.7161 12.7239**

**11.6639 10.4845 9.4715 9.3709 11.3829**

**10.4140 10.6026 9.7856 13.3610 10.9621**

**10.9103 14.2382 12.7828 10.8171 11.6734**

**lcfaveperccomp =**

**0.8459 0.8638 0.8580 0.8205 0.8700**

**0.8837 0.8000 0.8515 0.8805 0.8318**

**0.8843 0.8724 0.8294 0.8380 0.8297**

**0.8250 0.8584 0.9458 0.8534 0.8529**

**0.8430 0.8314 0.8543 0.8658 0.8504**

**0.8842 0.8675 0.8717 0.8614 0.8541**

**0.8639 0.8756 0.8234 0.8878 0.8520**

**lcfavetotprofit =**

**89.8286 82.7317 81.3367 76.0770 73.6585**

**71.4575 90.0083 71.0474 76.0978 96.0662**

**84.9788 73.7170 73.5926 89.0740 87.7912**

**82.5338 77.2696 59.2811 74.6062 83.1824**

**79.1439 81.5020 63.4444 69.8079 79.3117**

**77.6938 74.6746 69.3044 85.5250 71.2454**

**64.2566 89.7819 90.2222 68.3490 82.0905**

**slsfavetotprofit =**

**93.9915 89.5816 90.5585 75.5888 80.3627**

**76.2990 90.0083 76.5579 83.8955 98.1381**

**93.4506 81.2149 77.2633 91.3608 94.7975**

**85.5465 84.4165 71.5316 80.2128 94.4915**

**80.0733 85.4434 66.2161 77.6780 85.0565**

**84.1499 81.9401 77.6737 97.9992 76.0896**

**69.8443 96.4287 94.8784 73.8522 86.7639**

**lcfaveextratime =**

**0.4764 0.5392 0.5227 0.4051 0.4241**

**0.4365 0.4623 0.4096 0.5178 0.5319**

**0.6031 0.3874 0.3595 0.4777 0.6561**

**0.4902 0.5050 0.3686 0.3951 0.5599**

**0.5326 0.4077 0.4262 0.4372 0.5025**

**0.4070 0.4893 0.4013 0.5521 0.5743**

**0.4792 0.6732 0.5668 0.4945 0.4809**

**slsfaveextratime =**

**0.4710 0.5437 0.5351 0.4290 0.4464**

**0.4256 0.4623 0.4016 0.5154 0.5252**

**0.5973 0.3819 0.3694 0.4929 0.6452**

**0.4918 0.4851 0.3428 0.4018 0.5607**

**0.5266 0.4017 0.4121 0.4261 0.4962**

**0.4140 0.4943 0.3854 0.5460 0.5611**

**0.4549 0.7188 0.5743 0.4759 0.4954**

**lcfaverejfare =**

**4.3919 8.3119 8.4785 6.2981 5.6281**

**5.9320 6.8033 5.9900 5.9557 8.1392**

**6.7749 6.1064 5.1155 5.3495 8.9025**

**10.3470 7.1053 3.8860 5.2599 9.0149**

**5.8401 4.2430 5.8915 6.1393 5.4736**

**5.4466 5.1496 9.7346 10.0145 8.2549**

**6.9015 13.8681 9.8995 5.6514 7.8339**

**slsfaverejfare =**

**5.9094 8.4520 5.7350 7.3504 6.2058**

**5.5141 6.8033 5.9057 7.3130 8.1184**

**7.8660 7.5396 6.0068 5.6418 9.2349**

**10.0688 6.3735 3.9431 5.5322 7.9453**

**6.5233 4.4249 6.5603 6.2251 5.8672**

**6.7702 5.4047 9.2232 8.3560 7.9726**

**6.4982 9.5114 8.8291 6.0563 7.1237**

**slsfobjs =**

**377.8089 350.1675 355.1419 327.7148 342.1709**

**325.4284 364.0166 344.0676 346.2024 369.7266**

**357.6711 361.4801 347.3037 366.4034 352.2735**

**357.0455 343.7388 335.1744 352.0120 364.0944**

**310.5499 363.2446 277.2246 342.2559 338.2843**

**361.8142 330.3408 331.3524 372.1244 302.1728**

**287.7068 338.4282 359.0537 297.4333 343.6650**

**lcfrejs =**

**0.1848 0.1662 0.2040 1.2779 1.0176**

**0.5463 0.8529 0.5821 1.0976 0.0607**

**0.7333 0.1004 0.3459 0.0025 1.3630**

**0.4376 1.2252 0.9274 0.1514 0.2119**

**1.3427 0.5276 2.9368 0.4108 1.3289**

**0.0166 0.9297 0.9528 0.0105 2.6405**

**3.4951 1.2527 0.5249 1.9530 0.0090**

**slsfrejs =**

**0.2503 1.4272 1.0781 2.5305 1.6609**

**2.5595 0.8529 1.2857 1.5093 1.2146**

**1.1285 0.5429 0.8047 0.8150 1.5028**

**1.0174 1.6383 1.5060 1.2000 0.6376**

**3.7628 0.8349 4.8923 1.3277 2.0799**

**0.7253 2.1603 1.9728 0.5989 3.6235**

**4.5919 2.6689 1.3015 4.3095 2.0333**

**menusizes =**

**4.8500 5.0000 4.7000 4.2000 4.4000**

**4.7000 4.6500 4.8000 4.9000 4.7000**

**4.9500 4.7000 4.7500 4.9500 4.6000**

**4.9000 4.7000 4.9000 4.2000 4.8500**

**4.6500 4.8500 4.1000 4.7500 4.5500**

**4.6500 4.8500 4.5500 5.0000 4.7000**

**3.8500 4.9500 4.7000 4.4000 4.4500**

**avepij**

**0.1834 0.1551 0.1570 0.1350 0.1513**

**0.1489 0.1556 0.1513 0.1438 0.1727**

**0.1579 0.1705 0.1578 0.1764 0.1345**

**0.1557 0.1451 0.1691 0.1501 0.1692**

**0.1457 0.1791 0.1255 0.1535 0.1526**

**0.1575 0.1571 0.1496 0.1809 0.1280**

**0.1296 0.1645 0.1533 0.1489 0.1505**

**pijover5 =**

**74 59 61 54 61**

**58 65 56 53 71**

**62 76 55 74 49**

**66 55 67 60 71**

**58 72 47 64 60**

**61 58 65 76 47**

**53 68 59 62 63**

**pijequal1 =**

**36 21 26 24 23**

**19 27 26 21 41**

**22 36 33 25 15**

**18 26 35 31 28**

**22 38 19 22 29**

**32 28 27 29 17**

**19 21 22 24 19**

**runtimes =**

**140.0173 220.3863 229.2800 369.0555 318.3131**

**325.3378 176.9727 229.7775 243.6832 324.7337**

**138.1069 121.5117 241.3519 157.0733 296.1076**

**172.2935 254.3745 142.3305 155.4494 307.0624**

**323.2175 120.6806 293.4025 137.6190 262.9288**

**139.6194 379.9167 319.9145 127.6438 267.6300**

**445.2606 532.1773 339.5500 386.3193 290.7619**

**bestest =**

**-0.0702 -0.0334 -0.0499 -1.1393 -1.0031**

**-0.1869 -0.5941 -0.5995 -0.3894 -0.0755**

**-0.4240 -0.0476 -0.2552 -0.0002 -0.9016**

**-0.3862 -0.9090 -0.3846 -0.0251 -0.0659**

**-1.2195 -0.3869 -2.7213 -0.2785 -0.6395**

**-0.0006 -0.2957 -0.9650 -0.0047 -2.1020**

**-3.3993 -0.9290 -0.6340 -1.7903 -0.0369**

**guessbestiter =**

**5 7 7 6 6**

**6 0 6 1 3**

**1 3 5 5 5**

**2 6 4 7 1**

**5 5 2 6 5**

**4 2 1 4 3**

**3 3 7 6 5**

**estslsfobjs =**

**376.2092 352.4023 349.3262 323.3593 335.7875**

**326.9800 368.7266 341.6978 357.6047 366.9235**

**362.8628 358.1277 349.3841 365.4194 346.3284**

**359.1123 344.4360 336.9867 341.8168 371.0463**

**308.3865 362.1544 287.5607 339.5475 348.6112**

**362.3457 342.3987 336.0929 379.5619 297.4085**

**285.6927 341.0892 355.7676 298.8081 339.8627**

**compportion80 =**

**0.7423 0.7200 0.7021 0.7262 0.7159**

**0.7340 0 0.6563 0.6939 0.7234**

**0.7071 0.7340 0.6316 0.6667 0.7065**

**0.7041 0.6915 0.8265 0.7024 0.6804**

**0.7419 0.6598 0.7439 0.7263 0.6813**

**0.6774 0.7423 0.7143 0.7500 0.7128**

**0.6623 0.7778 0.6170 0.7159 0.7303**

**compportionmin =**

**0.7423 0.7200 0.7021 0.7262 0.7159**

**0.7340 1.0000 0.6563 0.6939 0.7234**

**0.7071 0.7340 0.6316 0.6667 0.7065**

**0.7041 0.6915 0.8265 0.7024 0.6804**

**0.7419 0.6598 0.7439 0.7263 0.6813**

**0.6774 0.7423 0.7143 0.7500 0.7128**

**0.6623 0.7778 0.6170 0.7159 0.7303**

**89th experiment, Fixed Scens Welfare Profit b=1, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt, minitest=rej, gap=0.1,**

**lcfiterbetter =**

**0.6857**

**lcfiterworse =**

**0.2857**

**avepercbetter =**

**0.0262**

**lcfrejbetter =**

**0.9714**

**lcfrejworse =**

**0**

**avepercrejbetter =**

**0.4388**

**lcfiterave =**

**344.6439**

**slsfave =**

**336.5270**

**averuntime =**

**256.3341**

**avelcfrejs =**

**1.1098**

**aveslsfrejs =**

**2.0329**

**percbetter =**

**0.0199 -0.0171 0.0268 0.0018 0.0495**

**0 -0.0006 0.1046 0.0306 0.0894**

**-0.0007 0.0046 -0.0110 0.0040 0.0508**

**0.0477 -0.0112 0.0827 0.0741 0.0053**

**-0.0038 -0.0057 0.0317 0.0149 -0.0116**

**0.0314 0.1090 -0.0230 0.0948 0.0186 0.0210 0.0177 0.0523 -0.0067 0.0266**

**avelcfavecomp =**

**10.8744**

**aveslsfavecomp =**

**10.7260**

**avelcfaveperccomp =**

**0.8523**

**aveslsfaveperccomp =**

**0.8000**

**avelcfavetotprofit =**

**78.1614**

**aveslsfavetotprofit =**

**82.3435**

**avelcfpercposprofit =**

**1**

**aveslsfpercposprofit =**

**1**

**avelcfaveextratime =**

**0.4864**

**aveslsfaveextratime =**

**0.4864**

**avelcfaverejfare =**

**7.0760**

**aveslsfaverejfare =**

**7.3634**

**returnedobjs =**

**363.4411 348.4439 352.4880 364.9380 286.8447**

**362.2047 357.8552 324.4835 348.5704 343.2755**

**349.0587 358.0983 331.4171 356.5737 341.8598**

**315.0355 327.2608 347.0436 342.8093 367.2816**

**356.2431 351.9450 334.1539 341.0636 354.0498**

**364.0572 339.2799 333.3937 291.2798 345.5368**

**363.0317 369.9013 324.8614 364.8303 339.9263**

**slsfavecomp =**

**9.7983 9.2929 12.4632 10.2363 10.3477**

**9.9580 10.1289 12.1856 11.0088 12.9680**

**10.6268 11.6172 8.7934 10.7012 10.3983**

**9.9890 10.2724 9.2663 11.4747 10.9611**

**9.4570 10.5654 10.5818 10.5526 11.0514**

**11.5203 10.0606 9.6778 11.6835 12.4644**

**11.3807 10.7344 11.6613 12.1677 9.3641**

**lcfavecomp =**

**10.0039 9.5688 12.4737 10.5004 10.4704**

**9.9580 10.2834 12.4552 10.9504 12.3747**

**10.9259 11.6348 8.9843 10.7712 10.3404**

**10.7516 10.5365 9.3859 11.6015 10.9887**

**9.8246 10.9913 10.6151 10.8410 11.2481**

**11.6064 10.1158 10.2136 11.7021 12.7565**

**11.4271 10.9352 11.5354 12.3468 9.4834**

**lcfaveperccomp =**

**0.8510 0.8522 0.8368 0.8337 0.8778**

**0.8000 0.8453 0.8838 0.8529 0.8453**

**0.8798 0.8231 0.8321 0.8223 0.8227**

**0.9094 0.8738 0.9259 0.8864 0.8041**

**0.9201 0.8821 0.8521 0.8311 0.8330**

**0.8115 0.8650 0.9030 0.8712 0.8266**

**0.8377 0.8541 0.8321 0.8364 0.8155**

**lcfavetotprofit =**

**79.5301 74.1243 89.3514 82.6475 62.3039**

**83.8757 81.7503 73.3746 78.7810 88.3238**

**75.2383 86.9750 72.3377 84.8655 79.0842**

**54.4909 73.0039 68.2396 73.2166 89.6556**

**73.5020 74.9717 78.0102 77.8721 82.3200**

**88.2538 71.0267 67.3427 65.0019 85.8667**

**86.9495 84.0012 80.8723 91.4252 77.0616**

**slsfavetotprofit =**

**83.1005 79.0108 91.9697 86.7628 67.5461**

**83.8757 84.6858 80.3099 81.3345 84.9304**

**83.3659 88.6089 74.8484 86.7193 79.5886**

**71.6338 80.0331 74.2135 80.1748 90.2014**

**81.3664 85.4684 80.1594 81.1851 86.5019**

**90.6114 72.3279 78.9130 69.3513 91.9584**

**88.4478 88.4724 80.7886 94.6804 78.8778**

**lcfaveextratime =**

**0.4492 0.3774 0.6290 0.4727 0.4414**

**0.4211 0.4085 0.5858 0.4573 0.5719**

**0.4960 0.5006 0.4127 0.4931 0.4946**

**0.4932 0.4997 0.4208 0.5098 0.4752**

**0.3691 0.4139 0.5229 0.4862 0.5129**

**0.4970 0.4556 0.4701 0.5899 0.5856**

**0.5118 0.4597 0.5486 0.5499 0.4401**

**slsfaveextratime =**

**0.4596 0.3706 0.6390 0.4578 0.4167**

**0.4211 0.4060 0.5990 0.4459 0.5888**

**0.4739 0.4834 0.4029 0.4982 0.4823**

**0.4899 0.4777 0.4210 0.5258 0.4752**

**0.3797 0.3878 0.5251 0.4493 0.4984**

**0.4801 0.4141 0.4428 0.5747 0.5981**

**0.4918 0.4654 0.5593 0.5510 0.4362**

**lcfaverejfare =**

**6.2996 8.3124 6.3850 7.7302 6.5060**

**8.0128 8.9139 8.4536 5.4813 8.1601**

**8.8551 8.3637 8.4570 6.7124 7.4852**

**10.0173 5.0679 6.1968 7.3538 7.5274**

**3.3986 3.7651 6.0870 5.7676 5.6681**

**6.7226 7.0899 5.3945 7.5885 8.7524**

**9.9886 3.5312 6.9884 7.5380 9.0883**

**slsfaverejfare =**

**8.0253 8.4650 6.1480 11.4112 6.2804**

**8.0128 8.9152 8.6312 5.3821 7.7693**

**7.2603 8.1020 8.9512 7.0546 7.1786**

**8.0211 4.9853 5.4468 6.9336 7.5641**

**5.5916 4.7342 6.7414 7.9612 5.9332**

**6.9544 7.7631 5.8387 7.5519 9.4719**

**9.1810 4.9388 7.0825 8.3327 9.1028**

**slsfobjs =**

**356.3641 354.5189 343.2938 364.2815 273.3196**

**362.2047 358.0811 293.7660 338.2246 315.1178**

**349.2946 356.4714 335.0950 355.1643 325.3336**

**300.6962 330.9679 320.5217 319.1682 365.3466**

**357.6002 353.9567 323.8982 336.0425 358.2032**

**352.9605 305.9291 341.2292 266.0471 339.2149**

**355.5475 363.4656 308.7296 367.2777 331.1100**

**lcfrejs =**

**0.1294 0.7838 1.2349 0.0697 3.9400**

**0.6204 0.6921 2.1072 1.2082 1.1980**

**0.6702 0.8758 1.4977 0.7178 1.2426**

**1.4595 1.5992 0.6132 1.1807 0.5409**

**0.2280 0.4395 1.3663 1.7451 0.9826**

**0.6160 0.7344 0.6889 4.0246 0.6563**

**0.4110 0.2387 2.6785 0.7080 0.9450**

**slsfrejs =**

**0.5865 1.0112 1.7570 0.2749 5.3746**

**0.6204 0.8645 4.1732 2.2390 3.7876**

**1.4773 1.3285 1.6254 0.9534 2.5872**

**3.8195 2.1620 2.6235 3.2465 0.6312**

**0.7726 1.2822 2.2311 2.3940 1.1391**

**1.5362 3.6013 1.5970 6.1204 1.5393**

**1.1845 0.6785 3.6733 0.7604 1.4997**

**menusizes =**

**4.7000 4.5000 5.0000 4.8000 4.0000**

**4.4500 4.6000 4.0500 4.4500 4.8500**

**4.8000 4.6000 4.6000 4.8000 4.5000**

**4.3500 4.5500 4.8000 4.0500 5.0000**

**4.9000 4.8000 4.7000 4.8000 4.5000**

**4.7500 4.3000 4.8000 4.1000 4.8500**

**4.9000 4.8000 4.6500 4.7500 4.7500**

**avepij =**

**0.1524 0.1609 0.1469 0.1649 0.1184**

**0.1425 0.1540 0.1221 0.1474 0.1522**

**0.1527 0.1504 0.1424 0.1391 0.1425**

**0.1352 0.1433 0.1594 0.1312 0.1601**

**0.1771 0.1661 0.1339 0.1593 0.1552**

**0.1640 0.1315 0.1636 0.1206 0.1603**

**0.1626 0.1620 0.1274 0.1511 0.1372**

**pijover5 =**

**60 60 59 69 41**

**59 64 48 60 62**

**62 65 54 53 58**

**50 60 63 50 63**

**75 64 52 66 63**

**68 53 69 48 65**

**67 62 51 62 51**

**pijequal1 =**

**19 34 18 29 24**

**20 26 15 27 26**

**30 22 22 17 15**

**23 23 24 21 28**

**37 39 15 27 27**

**30 18 28 14 26**

**24 30 14 24 15**

**runtimes =**

**182.9508 233.7078 134.9455 183.0566 325.6313**

**147.3512 312.7897 331.0513 315.2233 324.5513**

**329.1958 316.9070 327.6846 283.0747 287.2738**

**326.7371 203.7972 258.3183 326.5887 251.5681**

**156.8061 141.6788 331.7031 133.6536 293.9329**

**134.3229 329.8431 158.6934 329.0809 231.7944**

**295.0414 144.1286 238.5449 316.4659 333.6005**

**bestest =**

**-0.0104 -0.9045 -0.9934 -0.0563 -3.4511**

**-0.2985 -0.4374 -1.9875 -1.2291 -1.3395**

**-0.3050 -0.7220 -1.6735 -0.3911 -1.2352**

**-1.3393 -1.3700 -0.2929 -0.9854 -0.2846**

**-0.0867 -0.7958 -1.1011 -1.5077 -0.5785**

**-0.7226 -1.0748 -0.4115 -3.8029 -0.8739**

**-0.4364 -0.1282 -2.4459 -0.2702 -0.1299**

**guessbestiter =**

**7 2 5 7 2**

**0 1 2 7 3**

**4 4 3 6 2**

**3 7 5 1 1**

**4 5 2 2 2**

**5 2 2 2 5**

**5 7 4 1 1**

**estslsfobjs =**

**354.7711 354.2650 354.0551 368.1164 278.7166**

**368.7694 358.5704 301.3014 337.4581 315.1236**

**348.6720 356.2099 332.1657 355.9457 331.3008**

**302.3322 338.1149 311.8764 321.2914 368.8327**

**359.8768 350.5969 319.4352 329.7328 356.7785**

**366.7127 314.0648 343.5581 267.1959 333.0268**

**359.0588 371.9460 307.6154 353.6362 332.9908**

**compportion80 =**

**0.6596 0.5333 0.5600 0.5417 0.6250**

**0 0.6848 0.5926 0.6404 0.6598**

**0.6458 0.6196 0.6304 0.5833 0.5222**

**0.7126 0.6923 0.5938 0.5926 0.5800**

**0.5714 0.6042 0.6170 0.5625 0.6778**

**0.6316 0.5814 0.6042 0.6463 0.6495**

**0.6122 0.6354 0.5484 0.5789 0.5789**

**compportionmin =**

**0.6596 0.5333 0.5600 0.5417 0.6250**

**1.0000 0.6848 0.5926 0.6404 0.6598**

**0.6458 0.6196 0.6304 0.5833 0.5222**

**0.7126 0.6923 0.5938 0.5926 0.5800**

**0.5714 0.6042 0.6170 0.5625 0.6778**

**0.6316 0.5814 0.6042 0.6463 0.6495**

**0.6122 0.6354 0.5484 0.5789 0.5789**

**89th experiment, Fixed Scens Welfare Profit b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt, minitest=rej, gap=0.01,lcf solved with f=f+10**

**lcfiterbetter =**

**0.6600**

**lcfiterworse =**

**0.3200**

**avepercbetter =**

**0.0208**

**lcfrejbetter =**

**0.9400**

**lcfrejworse =**

**0.0400**

**avepercrejbetter =**

**0.5773**

**lcfiterave =**

**355.1970**

**slsfave =**

**348.5509**

**averuntime =**

**246.2967**

**avelcfrejs =**

**0.6184**

**aveslsfrejs =**

**1.5643**

**percbetter =**

**-0.0333 0.0375 0.0315 0.0048 0.0200**

**-0.0163 0.0441 -0.0012 0.0426 -0.0109**

**0.0420 0.0673 -0.0112 -0.0049 0.0163**

**-0.0138 -0.0104 0.0449 0.1122 0.0115**

**0.0005 0.0064 0.1301 0.1001 0.0110**

**0.0121 -0.0051 -0.0226 0.0707 0.0254**

**-0.0056 0.0481 -0.0252 0.0137 0**

**0.0073 0.0807 0.0122 0.0254 0.0279**

**0.0242 0.0818 0.0220 -0.0025 0.0329**

**0.0050 -0.0006 0.0144 -0.0158 -0.0091**

**avelcfavecomp =**

**11.3587**

**aveslsfavecomp =**

**11.1301**

**avelcfaveperccomp =**

**0.8620**

**aveslsfaveperccomp =**

**0.8000**

**avelcfavetotprofit =**

**80.0602**

**aveslsfavetotprofit =**

**86.1533**

**avelcfpercposprofit =**

**1**

**avelcfaveextratime =**

**0.4881**

**avelcfaverejfare =**

**7.1536**

**aveslsfaverejfare =**

**7.2498**

**returnedobjs =**

**343.5167 332.5373 334.7283 373.3168 354.2123**

**371.2980 362.8795 355.3408 357.3188 360.4401**

**343.9741 322.4966 362.6139 376.0583 358.5517**

**371.2599 338.1949 348.6834 357.8560 365.1479**

**363.5875 379.4586 305.3434 361.7164 338.8526**

**369.8146 347.5815 329.0271 369.1112 365.1503**

**373.4785 308.4248 330.9794 346.6222 374.6955**

**345.7812 349.1482 365.7967 368.6592 373.4768**

**360.7202 341.6816 365.4001 365.6867 361.8111**

**373.0290 344.0251 349.2573 372.4282 368.6797**

**slsfavecomp =**

**10.2045 8.2218 9.1894 13.3402 9.6001**

**10.7427 11.2018 10.8811 12.1074 12.4654**

**12.5624 12.1305 12.2812 11.0175 9.9512**

**13.1521 10.2877 10.4443 9.4457 10.4986**

**9.2192 13.2146 9.6714 11.4851 9.8568**

**11.5727 9.9902 9.7674 14.4716 12.6012**

**12.2980 10.5189 11.4292 9.7945 11.1232**

**10.0413 10.5790 10.4351 12.3781 11.9972**

**11.6433 12.0396 11.7052 11.9889 13.2285**

**12.1161 11.4494 9.4632 11.5829 9.1177**

**lcfavecomp =**

**10.5487 8.7819 9.4809 13.5397 9.7984**

**11.0793 11.3204 10.9450 12.2115 13.0194**

**12.4758 12.3840 12.5605 11.2164 10.1886**

**13.5982 10.6161 10.4133 9.3943 10.6948**

**9.4753 13.3148 10.2572 11.2039 10.1112**

**11.7866 10.2448 10.3602 14.3386 12.8322**

**12.6148 10.7959 11.5266 10.0045 11.1232**

**10.5200 10.6546 10.6190 12.7048 12.2285**

**12.0187 12.2399 12.0335 12.1679 13.5374**

**12.3005 11.7056 9.6568 12.0114 9.2816**

**lcfaveperccomp =**

**0.8800 0.9061 0.8595 0.8220 0.8761**

**0.8716 0.8794 0.8147 0.8415 0.8464**

**0.8784 0.8880 0.8517 0.8259 0.8700**

**0.8693 0.8487 0.8297 0.8435 0.9112**

**0.8473 0.8173 0.9460 0.9445 0.8359**

**0.8282 0.8408 0.9174 0.8839 0.8944**

**0.8519 0.8867 0.8256 0.8686 0.8000**

**0.8992 0.9031 0.8606 0.8517 0.8486**

**0.9161 0.8755 0.8547 0.8224 0.8403**

**0.8407 0.8309 0.8404 0.8830 0.8312**

**lcfavetotprofit =**

**77.6345 60.1668 70.1015 95.5697 74.2806**

**83.4821 80.4241 85.0097 85.4601 82.4949**

**81.8366 69.7894 88.9354 87.1049 77.5742**

**90.3736 75.3301 79.8834 76.5452 78.2888**

**76.3827 95.9895 54.2888 76.1678 75.8618**

**87.8308 78.0196 66.2264 91.9520 83.6247**

**89.6789 62.8971 79.0254 75.9112 91.3544**

**70.9278 73.2336 79.0789 89.1861 86.7697**

**74.6245 72.3051 81.6570 90.0484 88.5138**

**90.6090 82.9600 76.2442 82.3587 78.9963**

**slsfavetotprofit =**

**84.1795 69.7334 74.5595 100.2189 80.5168**

**90.1930 85.3207 86.9515 90.6723 94.2614**

**85.7774 78.6053 95.2669 91.1103 82.7722**

**100.0618 81.7304 80.8562 74.8016 85.0065**

**81.4010 99.3241 66.5741 81.3882 80.2587**

**91.4930 82.8384 78.6008 98.9101 92.8836**

**96.8027 70.2628 82.0842 80.8038 91.3544**

**82.0785 78.5601 84.9324 94.4139 92.2599**

**87.2594 82.2714 90.5378 93.9385 96.2731**

**94.9096 88.2020 80.0598 92.1304 82.2641**

**lcfaveextratime =**

**0.4704 0.4095 0.4046 0.6007 0.4032**

**0.4661 0.4730 0.4426 0.5321 0.5630**

**0.5080 0.6102 0.5202 0.4177 0.4039**

**0.6256 0.4686 0.4342 0.3784 0.4228**

**0.3759 0.5865 0.4723 0.4249 0.4578**

**0.4555 0.4178 0.4360 0.6292 0.5349**

**0.5435 0.5466 0.5337 0.4676 0.4530**

**0.4472 0.4917 0.4569 0.5594 0.4873**

**0.4600 0.5630 0.5568 0.5197 0.6265**

**0.5395 0.5338 0.4380 0.4940 0.3406**

**slsfaveextratime =**

**0.4705 0.3922 0.3818 0.5922 0.4087**

**0.4659 0.4914 0.4299 0.5534 0.5707**

**0.5149 0.6127 0.5378 0.4290 0.3901**

**0.6299 0.4578 0.4476 0.4180 0.4207**

**0.3878 0.6084 0.4913 0.4606 0.4608**

**0.4817 0.4325 0.4250 0.6609 0.5770**

**0.5414 0.4997 0.5068 0.4691 0.4530**

**0.4258 0.4933 0.4588 0.5646 0.5347**

**0.4231 0.5358 0.5720 0.5258 0.6148**

**0.5316 0.5263 0.4445 0.5065 0.3427**

**slsfobjs =**

**355.3622 320.5097 324.5219 371.5483 347.2586**

**377.4657 347.5384 355.7806 342.7161 364.4256**

**330.0992 302.1632 366.7129 377.8952 352.8029**

**376.4601 341.7375 333.6950 321.7588 360.9803**

**363.4001 377.0277 270.1923 328.7971 335.1774**

**365.3973 349.3534 336.6444 344.7537 356.1071**

**375.5970 294.2574 339.5246 341.9229 374.6955**

**343.2800 323.0704 361.4047 359.5235 363.3315**

**352.1899 315.8340 357.5313 366.5967 350.2829**

**371.1831 344.2329 344.3032 378.4175 372.0809**

**lcfrejs =**

**1.4201 0.5043 0.9147 0.5146 0.2713**

**0.0316 0.1784 0.9308 0.6037 0.5599**

**0.8807 1.2985 0.8190 0.0527 0.5478**

**0.3601 1.5579 0.9312 0.2094 0.0390**

**0.0632 0.2133 1.6845 0.0327 1.4688**

**0.2610 1.1716 1.2824 0.1337 0.3404**

**0.1452 2.1856 2.0396 0.7548 0.2353**

**0.7748 0.6666 0.1832 0.2708 0.1297**

**0.0275 0.5083 0.1993 0.5714 0.5814**

**0.0998 1.4969 0.6766 0.0944 0.0017**

**slsfrejs =**

**0.9271 2.1757 2.3927 0.9398 1.1028**

**0.0915 1.6800 1.1333 1.8676 1.2416**

**3.0809 3.9761 1.0358 0.1318 1.1261**

**0.5718 1.8208 2.1681 2.6771 0.9890**

**0.3575 0.5178 4.8988 2.9270 1.9776**

**0.8284 1.1442 1.9759 2.0316 1.5492**

**0.5794 4.3506 2.2789 1.2823 0.2353**

**1.5292 2.7222 0.8600 0.9896 1.0043**

**1.7323 3.4455 1.1902 0.7843 1.8835**

**0.5832 1.7672 1.2359 0.4079 0.0177**

**menusizes =**

**4.9500 4.6500 4.5500 4.7500 4.7000**

**4.9000 4.7500 4.6000 4.9500 4.4500**

**4.3000 4.7500 4.6500 4.5500 4.9000**

**4.9500 4.6500 4.6000 4.7500 4.8500**

**4.4500 4.7000 4.3000 4.8500 4.7500**

**4.7000 4.7500 4.3000 4.9500 4.8500**

**4.8500 4.5500 4.5500 4.9500 4.9000**

**4.4000 5.0000 4.7000 4.9500 4.8500**

**4.8500 4.8500 5.0000 4.9000 4.9500**

**5.0000 4.8500 5.0000 4.5000 4.7500**

**avepij =**

**0.1585 0.1571 0.1460 0.1653 0.1657**

**0.1751 0.1593 0.1458 0.1586 0.1375**

**0.1502 0.1499 0.1718 0.1574 0.1647**

**0.1579 0.1645 0.1530 0.1514 0.1582**

**0.1507 0.1594 0.1324 0.1659 0.1512**

**0.1617 0.1674 0.1468 0.1665 0.1609**

**0.1682 0.1260 0.1403 0.1559 0.1674**

**0.1547 0.1610 0.1636 0.1605 0.1561**

**0.1888 0.1580 0.1621 0.1633 0.1540**

**0.1666 0.1513 0.1647 0.1593 0.1819**

**pijover5 =**

**58 68 56 67 65**

**73 63 53 59 53**

**59 61 72 62 62**

**59 69 59 61 59**

**58 64 53 62 61**

**63 66 59 61 65**

**65 49 55 62 70**

**58 61 62 64 58**

**79 61 65 67 59**

**62 58 59 65 78**

**pijequal1 =**

**24 22 30 26 35**

**26 24 29 25 16**

**27 16 32 25 32**

**26 31 28 24 31**

**31 24 19 38 25**

**35 32 19 32 26**

**31 11 18 20 28**

**33 22 30 23 26**

**39 26 25 27 20**

**28 24 28 28 36**

**runtimes =**

**272.5763 435.3597 319.8784 163.5119 118.1825**

**123.3475 291.2856 284.9450 195.8214 231.3013**

**349.7785 601.4424 122.1006 123.3709 178.5771**

**179.7016 271.5745 199.8824 262.2711 190.5041**

**163.2280 255.7757 453.5422 241.4948 127.0097**

**236.2124 193.7785 311.6167 206.9235 233.7622**

**167.5418 651.9172 324.8752 162.3035 125.2420**

**155.0318 321.3647 175.8358 366.0065 197.6045**

**152.8127 488.5583 178.4925 255.3709 465.5886**

**135.5216 143.1291 221.4522 151.9583 135.4699**

**guessbestiter =**

**5 2 4 7 5**

**1 4 6 3 5**

**5 3 2 7 2**

**5 1 3 3 6**

**4 3 7 2 7**

**5 3 7 6 6**

**7 7 2 2 0**

**5 7 3 4 7**

**4 7 1 1 7**

**6 2 4 1 1**

**estslsfobjs =**

**351.5754 315.2316 286.1204 373.0437 334.2659**

**378.1012 347.5314 360.4660 341.2970 369.8917**

**332.6785 310.4621 366.5343 376.5002 359.1586**

**381.5453 339.4292 344.4136 322.8625 356.0974**

**362.0604 374.8192 276.7964 327.9104 342.1988**

**366.8208 350.6159 337.1743 342.0036 350.0077**

**376.6036 291.2447 334.5516 339.4140 376.4542**

**341.6379 318.1668 363.1795 343.6622 366.8341**

**348.0738 321.7998 352.3451 365.5485 358.7483**

**372.1838 349.9647 344.3588 376.0990 371.9309**

**compportion80 =**

**0.6566 0.8925 0.7363 0.6526 0.6170**

**0.7653 0.6842 0.7500 0.7677 0.7416**

**0.7326 0.8105 0.6667 0.7363 0.6122**

**0.7980 0.6774 0.6304 0.7368 0.7320**

**0.6629 0.7660 0.8256 0.7010 0.6632**

**0.6170 0.7263 0.6860 0.6465 0.6598**

**0.5876 0.7033 0.7033 0.6566 0**

**0.6705 0.7200 0.7128 0.7273 0.6598**

**0.7320 0.7629 0.7200 0.7245 0.7172**

**0.6900 0.7010 0.6600 0.6444 0.6947**

**compportionmin =**

**0.6566 0.8925 0.7363 0.6526 0.6170**

**0.7653 0.6842 0.7500 0.7677 0.7416**

**0.7326 0.8105 0.6667 0.7363 0.6122**

**0.7980 0.6774 0.6304 0.7368 0.7320**

**0.6629 0.7660 0.8256 0.7010 0.6632**

**0.6170 0.7263 0.6860 0.6465 0.6598**

**0.5876 0.7033 0.7033 0.6566 1.0000**

**0.6705 0.7200 0.7128 0.7273 0.6598**

**0.7320 0.7629 0.7200 0.7245 0.7172**

**0.6900 0.7010 0.6600 0.6444 0.6947**

**90th experiment, Fixed Scens Welfare Profit b=0.75, min 80 %, f=25) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt, minitest=rej, gap=0.01**

**lcfiterbetter =**

**0.9000**

**lcfiterworse =**

**0.0600**

**avepercbetter =**

**0.0414**

**lcfrejbetter =**

**0.9600**

**lcfrejworse =**

**0**

**avepercrejbetter =**

**0.5695**

**lcfiterave =**

**544.1607**

**slsfave =**

**524.3619**

**averuntime =**

**256.4341**

**avelcfrejs =**

**0.7393**

**aveslsfrejs =**

**1.8362**

**percbetter =**

**0.0497 0 0.0090 0.0193 0.0186**

**0.0518 0.0676 0.2722 0.0199 0.0358**

**0.0114 0.1277 0.0221 0.0351 0.0123**

**0.0565 0.1521 0.0264 0.0096 0.0135**

**0.0680 0.1364 0.0330 -0.0053 0.0026**

**0.1021 0.0264 0.0702 0.0081 0.0031**

**0.1339 0.0347 0.0466 0.0435 0.0262**

**0.0157 0.0245 0.0119 0.0145 0.0239**

**0.0565 0.0319 0.0223 0.1141 0.0015**

**-0.0107 0.0220 0 0.0131 -0.0110**

**avelcfavecomp =**

**11.1267**

**aveslsfavecomp =**

**10.8930**

**avelcfaveperccomp =**

**0.8668**

**aveslsfaveperccomp =**

**0.8000**

**avelcfavetotprofit =**

**77.8127**

**aveslsfavetotprofit =**

**84.0852**

**avelcfpercposprofit =**

**1**

**returnedobjs =**

**562.4809 560.3720 552.9658 532.8023 535.1034**

**530.5005 516.4840 429.0804 567.3777 561.6935**

**550.6263 537.7916 469.7862 545.2392 560.9069**

**548.2802 513.4530 547.6464 576.9525 542.5897**

**548.0771 542.7406 515.2360 577.4711 552.9856**

**571.1435 529.8889 489.8490 542.3294 564.0139**

**545.2400 554.4473 566.6478 555.9056 547.8339**

**553.3460 519.0829 546.6626 563.8816 561.9610**

**520.6012 575.5924 547.2414 509.1721 580.7305**

**578.1488 554.2450 555.9239 549.4167 546.0877**

**slsfavecomp =**

**9.6009 10.4734 9.4477 9.7573 9.7011**

**10.7400 8.8189 8.5039 12.3195 11.5992**

**9.2531 10.7177 10.9028 9.9986 10.8214**

**10.8398 14.3954 11.4924 13.0959 10.4070**

**10.1654 11.0348 10.8818 11.5061 12.4268**

**12.3273 9.2271 10.3801 9.8814 11.5240**

**10.6854 9.9746 11.0459 10.6548 9.5673**

**11.9125 10.8062 11.2488 10.3661 10.1266**

**10.0252 12.7045 11.6179 13.9655 12.2448**

**13.1074 11.1815 9.5678 10.1848 11.4232**

**lcfavecomp =**

**9.8482 10.4734 9.5825 10.0291 10.0712**

**10.8853 8.8779 9.7579 12.5973 11.5851**

**9.5236 10.6455 11.5320 10.4856 11.3213**

**11.0195 14.3585 11.9605 13.3496 10.7406**

**10.3589 11.0119 11.0182 11.7589 12.6026**

**12.0520 9.5558 10.7580 10.0419 11.6115**

**10.9095 10.2537 11.2161 10.8330 9.8345**

**12.1376 11.5747 11.4821 10.5098 10.3850**

**10.3036 12.6958 11.9154 13.6410 12.3506**

**13.4259 11.8573 9.5678 10.5044 11.5220**

**lcfaveperccomp =**

**0.8588 0.8000 0.8391 0.9109 0.8909**

**0.8728 0.8549 1.0334 0.8366 0.8669**

**0.8805 0.9009 0.8621 0.8906 0.8462**

**0.8355 0.9082 0.8469 0.8678 0.8642**

**0.9223 0.9212 0.8457 0.8315 0.8234**

**0.8586 0.9326 0.9379 0.8504 0.8125**

**0.8896 0.8614 0.8617 0.8501 0.8439**

**0.8401 0.8653 0.8841 0.8527 0.8765**

**0.8726 0.8427 0.8486 0.8647 0.8155**

**0.8674 0.8725 0.8000 0.8775 0.8495**

**lcfavetotprofit =**

**77.5721 87.2177 78.3040 72.6442 70.4322**

**75.9467 70.3051 36.1445 87.7339 83.7306**

**74.4904 67.2754 63.1096 69.7339 77.1677**

**79.7577 72.7976 78.3345 93.5371 75.9411**

**74.5062 69.4493 75.7703 89.1221 90.0427**

**87.0089 68.3252 63.8905 78.0188 91.4219**

**68.2630 75.2862 81.4899 80.6300 75.5387**

**86.5543 68.0071 80.7997 81.3349 79.5702**

**70.9361 91.3051 81.9357 80.9199 94.4242**

**95.7713 73.0611 82.2852 77.4304 85.3588**

**slsfavetotprofit =**

**81.1506 87.2177 80.6844 80.1264 78.6923**

**80.1842 71.5539 54.2267 94.4732 88.2284**

**80.4088 75.3779 75.4577 80.4461 87.4427**

**83.4865 84.7482 86.1249 100.3070 84.0260**

**80.2570 77.9793 80.8594 93.6069 94.5155**

**88.1739 76.8721 74.7181 80.5891 92.3584**

**76.7736 81.9483 85.9949 84.5571 80.4655**

**92.2905 82.0928 86.4856 85.5510 85.3718**

**78.3727 94.7326 89.8425 83.7486 96.9048**

**101.7626 87.2102 82.2852 84.5792 88.9961**

**slsfobjs =**

**535.8462 560.3720 548.0089 522.7006 525.3421**

**504.3687 483.7697 337.2712 556.3005 542.2679**

**544.4154 476.9049 459.6385 526.7586 554.0718**

**518.9488 445.6505 533.5652 571.4417 535.3789**

**513.2043 477.5806 498.7712 580.5198 551.5610**

**518.2125 516.2481 457.7276 537.9627 562.2989**

**480.8520 535.8555 541.4134 532.7370 533.8719**

**544.7830 506.6474 540.2597 555.8408 548.8227**

**492.7771 557.7828 535.2894 457.0168 579.8843**

**584.4280 542.3331 555.9239 542.2930 552.1729**

**lcfrejs =**

**0.0785 0.6226 0.5992 0.9350 0.8830**

**1.1811 1.3996 3.4488 0.3094 0.4059**

**0.4290 0.4536 2.6554 0.2587 0.1259**

**0.4584 1.2115 0.6162 0.0259 0.7469**

**0.5736 0.4217 1.8847 0.0183 0.8893**

**0.0594 1.0775 2.3079 0.9227 0.4693**

**0.3006 0.2958 0.1273 0.2675 0.6624**

**0.7054 1.1463 0.7099 0.1696 0.2603**

**1.4022 0.0861 0.5174 2.3367 0.0928**

**0.2480 0.1881 0.6430 0.5400 0.796**

**slsfrejs =**

**1.1948 0.6226 0.8647 1.5676 1.5952**

**2.4643 2.8434 7.7915 1.1011 1.3363**

**0.8793 3.5143 3.9739 1.5580 0.7275**

**1.9809 4.9136 1.5453 0.6683 1.4022**

**2.2288 3.4233 2.8000 0.0472 0.9842**

**2.2835 1.9150 4.0408 1.3063 0.6057**

**3.2946 1.2931 1.3544 1.4264 1.3748**

**1.0624 2.5390 1.3567 0.5978 0.9740**

**2.6977 1.0892 1.6655 4.6295 0.2550**

**0.2501 1.1660 0.6430 0.9131 1.0473**

**menusizes =**

**4.9000 4.8000 4.9000 4.9500 4.4000**

**4.0500 4.8500 3.9500 4.9500 5.0000**

**4.9000 4.5500 4.1500 4.5500 4.8000**

**4.7500 4.7000 4.7500 4.9500 5.0000**

**4.9500 4.9500 4.6000 4.8000 5.0000**

**4.9500 4.8000 4.7500 4.6000 4.9500**

**4.6500 4.8500 4.9000 4.9000 4.5000**

**4.9500 4.5500 4.8000 4.6000 5.0000**

**4.8000 4.8500 4.9500 4.2000 4.9000**

**4.8500 4.5000 4.9000 4.4000 4.9000**

**avepij =**

**0.1616 0.1668 0.1668 0.1541 0.1440**

**0.1412 0.1521 0.1180 0.1719 0.1725**

**0.1556 0.1513 0.1382 0.1475 0.1660**

**0.1481 0.1356 0.1642 0.1826 0.1660**

**0.1619 0.1696 0.1607 0.1790 0.1515**

**0.1544 0.1656 0.1410 0.1532 0.1737**

**0.1494 0.1588 0.1645 0.1609 0.1532**

**0.1640 0.1625 0.1538 0.1563 0.1715**

**0.1441 0.1707 0.1619 0.1346 0.1768**

**0.1713 0.1556 0.1606 0.1499 0.1604**

**pijover5 =**

**68 69 63 57 55**

**54 56 46 68 67**

**60 62 51 57 65**

**58 52 70 75 65**

**61 69 62 77 61**

**57 67 51 60 71**

**62 62 66 64 59**

**68 70 56 65 65**

**52 71 60 52 72**

**67 63 66 61 62**

**pijequal1 =**

**16 35 35 32 21**

**28 29 16 27 23**

**26 24 27 22 33**

**26 14 22 37 23**

**31 31 39 34 12**

**16 34 27 24 28**

**20 24 28 27 28**

**26 30 24 27 36**

**25 32 32 19 34**

**33 24 29 24 31**

**runtimes =**

**345.8670 120.9518 158.6318 285.2987 278.5767**

**269.8114 282.4714 906.9018 201.1557 178.2046**

**132.7056 284.4331 182.3738 312.8443 208.1046**

**331.1214 856.0208 502.3328 157.8890 136.2283**

**192.1137 433.3284 234.2662 141.7043 168.0058**

**252.6868 128.3149 151.9782 331.4292 145.7884**

**437.6638 144.0114 253.0844 260.7380 128.3418**

**185.4231 327.4143 335.6760 130.5853 128.8538**

**185.8593 263.0224 148.6494 371.2466 130.1238**

**131.8623 398.2686 128.1413 177.2509 243.9496**

**bestest =**

**-0.0608 -0.3741 -0.2758 -0.5971 -0.4371**

**-1.1194 -1.2445 -3.2052 -0.0963 -0.2398**

**-0.1214 -0.2444 -2.4924 -0.1862 -0.1097**

**-0.6159 -1.5682 -0.0783 -0.2638 -0.5519**

**-0.3418 -0.0658 -1.6189 -0.0033 -0.2114**

**-0.0176 -0.7088 -2.3066 -0.9446 -0.3510**

**-0.1934 -0.3304 -0.0517 -0.0854 -0.5386**

**-0.1019 -1.1412 -0.6093 -0.0502 -0.0595**

**-1.2419 -0.0263 -0.7006 -2.1994 -0.0094**

**-0.0196 -0.0634 -0.3321 -0.3920 -0.2490**

**guessbestiter =**

**3 0 4 3 3**

**5 3 7 5 5**

**3 2 1 6 4**

**6 4 7 6 7**

**6 7 1 1 2**

**4 2 7 6 7**

**6 2 7 6 7**

**6 1 2 1 3**

**4 4 6 4 6**

**5 1 0 3 4**

**estslsfobjs =**

**548.7734 566.8020 559.9846 511.3601 523.3291**

**508.2264 477.1700 357.5821 558.4237 546.9173**

**544.5409 480.3887 461.2219 531.2460 553.8819**

**509.6293 433.6650 535.4575 570.3760 540.5916**

**517.1204 483.7627 504.3725 581.2647 555.8676**

**521.1530 517.7820 454.1127 540.7853 560.2531**

**480.1863 536.0208 536.0924 526.8969 541.7683**

**551.6760 522.0903 534.4728 564.2057 548.9405**

**503.4476 558.2169 527.8776 452.2310 575.8289**

**588.9031 538.2173 563.9362 538.3888 552.2360**

**compportion80 =**

**0.6939 0 0.6633 0.7172 0.7159**

**0.8148 0.6186 0.8861 0.7576 0.6300**

**0.6224 0.7692 0.6627 0.7143 0.7917**

**0.6316 0.7447 0.7579 0.6263 0.7800**

**0.6061 0.8081 0.6522 0.7917 0.7600**

**0.6667 0.7604 0.7474 0.6739 0.6263**

**0.8495 0.8041 0.6020 0.6837 0.6000**

**0.7071 0.7802 0.7917 0.7174 0.6100**

**0.6771 0.5670 0.6667 0.6786 0.6327**

**0.6186 0.7778 0 0.6591 0.6020**

**compportionmin =**

**0.6939 1.0000 0.6633 0.7172 0.7159**

**0.8148 0.6186 0.8861 0.7576 0.6300**

**0.6224 0.7692 0.6627 0.7143 0.7917**

**0.6316 0.7447 0.7579 0.6263 0.7800**

**0.6061 0.8081 0.6522 0.7917 0.7600**

**0.6667 0.7604 0.7474 0.6739 0.6263**

**0.8495 0.8041 0.6020 0.6837 0.6000**

**0.7071 0.7802 0.7917 0.7174 0.6100**

**0.6771 0.5670 0.6667 0.6786 0.6327**

**0.6186 0.7778 1.0000 0.6591 0.6020**

**91st experiment, Fixed Scens Welfare Profit b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt, minitest=rej, gap=0.1, (best known)**

**lcfiterbetter =**

**0.7000**

**lcfiterworse =**

**0.3000**

**avepercbetter =**

**0.0276**

**lcfrejbetter =**

**1**

**lcfrejworse =**

**0**

**avepercrejbetter =**

**0.7504**

**lcfiterave =**

**351.9571**

**slsfave =**

**343.2373**

**averuntime =**

**192.6745**

**avelcfrejs =**

**0.4674**

**aveslsfrejs =**

**1.6942**

**percbetter =**

**0.0054 0.1485 -0.0137 0.0672 0.0465**

**0.0467 0.0309 0.1101 0.0275 -0.0085**

**-0.0153 0.0138 0.0427 0.0453 0.0362**

**0.0835 0.0278 0.0010 0.0079 0.0342**

**0.0217 0.0226 0.0208 0.0523 0.0319**

**-0.0236 -0.0023 0.0447 0.1341 -0.0192**

**-0.0100 0.0138 -0.0152 -0.0061 0.0280**

**-0.0062 0.0247 0.0752 -0.0021 0.0258**

**-0.0070 -0.0030 -0.0136 0.0406 -0.0072**

**0.0130 0.0119 0.0544 0.0092 0.1309**

**avelcfavecomp =**

**11.1341**

**aveslsfavecomp = 10.7784**

**avelcfaveperccomp =**

**0.8808**

**aveslsfaveperccomp =**

**0.8000**

**avelcfavetotprofit =**

**75.3578**

**aveslsfavetotprofit =**

**83.9830**

**avelcfpercposprofit =**

**1**

**returnedobjs =**

**357.2963 310.9670 367.0619 353.2852 317.8051**

**369.9892 365.7279 366.5265 363.1331 349.3068**

**357.2329 356.2093 352.1666 346.1606 361.0510**

**343.8043 357.3839 369.5402 332.7562 349.1390**

**368.5892 348.4404 367.8479 322.1575 373.3173**

**357.6486 351.9969 358.1847 321.5931 358.4129**

**359.1663 353.9306 338.4853 368.3506 353.6068**

**372.3859 368.0798 289.5288 346.3868 370.4555**

**340.9228 374.7189 349.9127 333.0055 318.8415**

**367.0845 332.0675 367.2141 367.7260 351.2533**

**slsfobjs =**

**355.3622 270.7535 372.1765 331.0434 303.6924**

**353.4788 354.7618 330.1741 353.4158 352.2884**

**362.7827 351.3446 337.7452 331.1717 348.4239**

**317.3171 347.7305 369.1852 330.1330 337.5800**

**360.7759 340.7425 360.3672 306.1516 361.7739**

**366.2766 352.7960 342.8508 283.5792 365.4444**

**362.8021 349.1259 343.6994 370.6280 343.9744**

**374.7089 359.2103 269.2909 347.1269 361.1324**

**343.3344 375.8478 354.7244 319.9999 321.1398**

**362.3602 328.1672 348.2838 364.3808 310.6099**

**slsfavecomp =**

**10.2045 11.5717 10.6408 9.3809 10.1036**

**12.4766 10.3869 13.7187 10.2982 10.6893**

**11.4873 10.8376 11.0023 12.1487 10.1108**

**9.2765 10.2937 10.8378 9.1929 11.7557**

**12.6217 11.8911 14.2877 9.0229 11.6140**

**8.0033 10.1030 11.1213 8.5793 13.0001**

**9.8826 8.7533 10.6044 11.7217 11.0150**

**11.1974 11.2145 10.9400 9.7517 13.6879**

**10.6262 11.9190 8.6403 9.2673 11.0979**

**11.5466 8.9381 12.1551 10.0067 9.2979**

**lcfavecomp =**

**10.5657 12.0888 11.0763 9.5517 10.6004**

**12.6463 10.7222 13.5469 10.4527 11.3423**

**11.8488 11.0866 11.5968 12.2459 10.4405**

**9.7377 10.7334 11.1859 9.5121 12.4262**

**12.6361 12.5866 14.2665 9.4644 11.4795**

**8.3063 10.4986 11.6276 9.4127 13.8474**

**10.2495 9.2088 11.0964 12.0491 11.1616**

**11.3662 11.5145 11.4928 10.4842 13.8787**

**11.1220 12.0793 9.2904 9.8574 11.7170**

**11.7892 9.2457 12.2830 10.2025 9.0826**

**lcfaveperccomp**

**0.8925 0.9612 0.9043 0.8796 0.8562**

**0.8420 0.8593 0.8851 0.8588 0.9039**

**0.8432 0.8491 0.9175 0.8677 0.8668**

**0.8920 0.8701 0.8393 0.8848 0.9033**

**0.8294 0.8717 0.8712 0.8976 0.8168**

**0.8516 0.8908 0.8821 0.9608 0.9105**

**0.8903 0.9073 0.8501 0.8615 0.8418**

**0.8344 0.8756 1.0239 0.9073 0.8444**

**0.9133 0.8457 0.9422 0.9216 0.8770**

**0.8695 0.8753 0.8581 0.8544 0.8894**

**lcfavetotprofit =**

**76.3846 61.6390 79.3053 69.6884 67.6510**

**87.2890 75.7145 80.9148 77.8023 71.7820**

**81.5575 79.4860 70.4978 80.2918 74.4788**

**64.9383 75.9917 83.0104 69.7646 69.9249**

**89.2890 76.0480 94.1256 60.4895 89.2993**

**70.5811 75.4581 75.9512 50.4847 79.9158**

**76.9484 66.8791 75.4386 86.5688 81.7366**

**86.5702 82.5839 54.9291 65.1453 88.1845**

**70.9608 89.2875 65.5771 63.1011 66.1306**

**83.4638 68.1466 86.0259 80.1533 70.3035**

**slsfavetotprofit =**

**84.1795 74.7258 89.0054 75.1559 74.7088**

**93.3126 83.3271 88.5727 82.3345 85.8579**

**88.7430 86.2400 85.4355 86.5208 82.6727**

**75.5136 84.2423 89.2485 75.7468 86.5042**

**94.1062 88.2316 100.8141 70.8115 89.5084**

**76.6262 83.8989 86.1687 67.4256 98.3276**

**84.8133 77.1119 83.1704 93.7577 84.4006**

**90.1870 89.6574 70.7732 79.2496 97.6760**

**82.3186 93.8177 77.6501 75.7097 79.1912**

**89.0422 75.2198 91.9509 85.2509 70.2362**

**returnedobjs =**

**357.2963 310.9670 367.0619 353.2852 317.8051**

**369.9892 365.7279 366.5265 363.1331 349.3068**

**357.2329 356.2093 352.1666 346.1606 361.0510**

**343.8043 357.3839 369.5402 332.7562 349.1390**

**368.5892 348.4404 367.8479 322.1575 373.3173**

**357.6486 351.9969 358.1847 321.5931 358.4129**

**359.1663 353.9306 338.4853 368.3506 353.6068**

**372.3859 368.0798 289.5288 346.3868 370.4555**

**340.9228 374.7189 349.9127 333.0055 318.8415**

**367.0845 332.0675 367.2141 367.7260 351.2533**

**slsfobjs =**

**355.3622 270.7535 372.1765 331.0434 303.6924**

**353.4788 354.7618 330.1741 353.4158 352.2884**

**362.7827 351.3446 337.7452 331.1717 348.4239**

**317.3171 347.7305 369.1852 330.1330 337.5800**

**360.7759 340.7425 360.3672 306.1516 361.7739**

**366.2766 352.7960 342.8508 283.5792 365.4444**

**362.8021 349.1259 343.6994 370.6280 343.9744**

**374.7089 359.2103 269.2909 347.1269 361.1324**

**343.3344 375.8478 354.7244 319.9999 321.1398**

**362.3602 328.1672 348.2838 364.3808 310.6099**

**lcfrejs =**

**0.1660 1.5489 0.0082 0.0031 1.9369**

**0.0880 0.0232 0.0504 0.0513 0.5883**

**1.0027 0.5209 0.2261 1.0995 0.0111**

**0.2554 0.1624 0.0464 1.3621 0.1946**

**0.0599 0.6118 0.4664 1.6695 0.0378**

**0.0085 0.5277 0.1906 0.6114 0.2602**

**0.1128 0.0655 1.0109 0.0684 0.8365**

**0.2411 0.0272 1.6265 0.4491 0.0923**

**0.6644 0.0743 0.0659 0.5358 2.0763**

**0.0784 1.1836 0.0699 0.0987 0.2039**

**slsfrejs =**

**0.9271 5.0768 0.3932 2.1470 3.0041**

**1.3312 1.1440 3.3039 1.2081 1.4758**

**1.0508 1.2375 1.7606 2.4620 1.3507**

**2.6383 1.2873 0.4056 1.8450 1.9752**

**1.2157 1.7418 1.5405 3.5252 1.1061**

**0.0861 1.0736 1.6018 4.0307 0.8513**

**0.4311 1.1205 1.7435 0.5345 1.7978**

**0.4637 1.0972 5.3481 1.5484 1.5054**

**1.6740 0.4401 0.5529 2.1660 2.8515**

**1.0695 2.0285 1.6276 0.6212 3.2915**

**menusizes =**

**4.8500 4.7500 4.7500 4.7500 4.1000**

**4.9000 4.8000 4.9000 4.7000 5.0000**

**4.4000 4.5000 4.9500 4.5000 4.9500**

**4.7000 4.9000 4.9000 4.8000 4.8500**

**4.9500 4.7000 5.0000 4.6000 4.9500**

**4.7500 4.9500 4.6000 4.8000 4.8500**

**5.0000 4.8000 4.3000 4.7500 4.8000**

**4.8000 4.9500 4.7500 4.3500 4.9000**

**4.4500 5.0000 4.8000 4.8000 4.3500**

**4.8000 4.9000 4.9000 4.6000 4.6000**

**avepij =**

**0.1585 0.1301 0.1888 0.1699 0.1242**

**0.1578 0.1642 0.1547 0.1514 0.1822**

**0.1620 0.1482 0.1670 0.1383 0.1623**

**0.1576 0.1568 0.1542 0.1537 0.1639**

**0.1564 0.1447 0.1689 0.1517 0.1660**

**0.1823 0.1600 0.1452 0.1474 0.1823**

**0.1637 0.1574 0.1506 0.1690 0.1493**

**0.1750 0.1798 0.1335 0.1696 0.1681**

**0.1493 0.1770 0.1567 0.1511 0.1480**

**0.1664 0.1603 0.1701 0.1612 0.1461**

**pijover5 =**

**60 46 76 69 51**

**63 68 63 57 75**

**70 63 72 51 63**

**63 58 60 59 70**

**57 56 66 61 68**

**69 59 56 59 76**

**65 64 60 71 55**

**68 70 51 73 73**

**56 70 59 59 56**

**66 63 65 63 57**

**pijequal1 =**

**24 14 46 31 12**

**21 26 15 27 40**

**32 29 30 18 33**

**28 26 22 27 26**

**24 18 26 32 23**

**46 27 23 32 36**

**26 25 30 23 23**

**36 38 20 37 20**

**32 33 28 22 27**

**27 26 33 31 23**

**runtimes =**

**237.8280 306.8298 106.3472 190.2856 299.8161**

**284.9294 211.9103 202.2901 267.0329 97.4468**

**109.2470 237.1750 140.9564 299.3406 175.6845**

**99.1015 208.9222 103.9171 201.3627 265.3198**

**177.1073 239.9401 258.1185 93.4784 277.7704**

**98.9708 163.5223 190.2177 249.8661 208.2276**

**167.3987 98.1984 111.4830 123.6718 300.9814**

**137.4612 155.4797 299.2219 260.5515 126.2857**

**278.5706 133.7653 226.3274 170.9095 116.0819**

**160.1838 193.6115 158.1166 117.3153 295.1480**

**bestest =**

**-0.2142 -1.4944 -0.0006 -0.0184 -1.6692**

**-0.0552 -0.0120 -0.0037 -0.0145 -0.2531**

**-1.0006 -0.1596 -0.0533 -0.9458 -0.0155**

**-0.1688 -0.0264 -0.0053 -1.3557 -0.1855**

**-0.0078 -0.3999 -0.3664 -1.8688 -0.0101**

**-0.0049 -0.4190 -0.0685 -0.8197 -0.0691**

**-0.0319 -0.0387 -1.0041 -0.0388 -0.3283**

**-0.0279 -0.0044 -1.3657 -0.2538 -0.0386**

**-0.7152 -0.0204 -0.0519 -0.9001 -1.9743**

**-0.0119 -0.7651 -0.0528 -0.0277 -0.0845**

**guessbestiter =**

**4 7 6 7 1**

**6 7 5 5 5**

**3 4 7 7 6**

**5 5 1 2 7**

**3 4 5 4 7**

**5 6 3 7 7**

**6 5 1 4 5**

**7 4 3 7 5**

**6 5 7 7 3**

**7 6 2 4 6**

**estslsfobjs =**

**351.5754 269.3415 374.1188 335.8008 299.9116**

**340.1072 357.0042 325.7643 353.8244 357.3828**

**363.0750 354.9577 346.8487 328.0645 350.4337**

**314.2903 354.3779 373.7456 334.3414 337.1168**

**363.6975 342.5766 354.4157 311.5302 360.7016**

**365.6062 352.8969 350.3423 270.1098 371.4218**

**365.9717 353.5058 345.8980 370.1265 351.6366**

**374.9857 360.9239 272.9116 347.5648 371.8102**

**344.0287 364.7944 344.3040 308.7773 320.9301**

**361.6237 333.5344 331.5939 368.0259 305.4894**

**compportion80 =**

**0.6701 0.7053 0.7053 0.6947 0.7805**

**0.6531 0.7396 0.7143 0.6809 0.7000**

**0.7500 0.6667 0.7172 0.7333 0.7475**

**0.7553 0.6837 0.5918 0.7188 0.8247**

**0.6869 0.6915 0.6600 0.6196 0.6566**

**0.7789 0.6566 0.6957 0.7708 0.7629**

**0.7300 0.8021 0.6860 0.6000 0.6875**

**0.6875 0.6566 0.7684 0.8046 0.7245**

**0.6854 0.6400 0.7292 0.6354 0.7011**

**0.7396 0.7245 0.6735 0.5978 0.6630**

**compportionmin**

**0.6701 0.7053 0.7053 0.6947 0.7805**

**0.6531 0.7396 0.7143 0.6809 0.7000**

**0.7500 0.6667 0.7172 0.7333 0.7475**

**0.7553 0.6837 0.5918 0.7188 0.8247**

**0.6869 0.6915 0.6600 0.6196 0.6566**

**0.7789 0.6566 0.6957 0.7708 0.7629**

**0.7300 0.8021 0.6860 0.6000 0.6875**

**0.6875 0.6566 0.7684 0.8046 0.7245**

**0.6854 0.6400 0.7292 0.6354 0.7011**

**0.7396 0.7245 0.6735 0.5978 0.6630**

**92nd experiment, Fixed Scens Welfare Profit b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt, minitest=rej, gap=0.1, iter=15**

**lcfiterbetter =**

**0.8000**

**lcfiterworse =**

**0.2000**

**avepercbetter =**

**0.0374**

**lcfrejbetter =**

**1**

**lcfrejworse**

**0**

**avepercrejbetter =**

**0.8574**

**lcfiterave =**

**352.7496**

**slsfave =**

**340.7764**

**averuntime =**

**296.7749**

**avelcfrejs =**

**0.3586**

**aveslsfrejs =**

**1.8607**

**percbetter =**

**0.0606 0.1077 -0.0080 -0.0184 0.0321**

**0.0034 0.0387 0.0338 0.0154 0.0383**

**-0.0025 0.1163 0.0088 0.0406 0.0191**

**0.0501 0.0089 0.0064 0.0811 0.0378**

**0.1033 0.0960 0.0619 0.0257 0.0726**

**0.0701 0.0638 0.0360 -0.0095 -0.0114**

**0.1083 -0.0110 0.0416 0.1514 0.0255**

**0.0089 0.0561 -0.0040 0.0538 0.0439**

**0.0131 -0.0153 0.0008 0.0124 0.0825**

**0.0742 -0.0013 0.0237 0.0431 -0.0147**

**avelcfavecomp =**

**11.3411**

**aveslsfavecomp =**

**10.9632**

**avelcfaveperccomp =**

**0.8912**

**aveslsfaveperccomp =**

**0.8000**

**avelcfavetotprofit =**

**73.8520**

**aveslsfavetotprofit =**

**84.0134**

**avelcfpercposprofit =**

**1**

**returnedobjs =**

**359.2272 352.3934 352.3078 374.0089 372.6619**

**350.6525 321.2296 316.7787 369.4011 341.8917**

**343.8773 363.2698 357.6791 330.7634 348.5809**

**356.4766 363.7313 360.7052 343.7543 357.6213**

**351.1620 339.9186 349.9479 348.2831 346.2712**

**319.6404 332.0541 368.4194 362.5945 354.2691**

**329.7677 364.7231 352.9653 349.9223 357.4866**

**371.8743 353.2680 378.0657 296.7517 350.6162**

**360.8018 383.7937 367.9892 367.4930 338.1905**

**352.7994 379.1272 352.8513 356.5324 362.8902**

**slsfobjs =**

**338.7127 318.1173 355.1356 381.0043 361.0754**

**349.4622 309.2615 306.4158 363.7904 329.2816**

**344.7349 325.4129 354.5714 317.8540 342.0511**

**339.4752 360.5098 358.4148 317.9769 344.5933**

**318.2722 310.1365 329.5563 339.5658 322.8433**

**298.7154 312.1270 355.6162 366.0617 358.3642**

**297.5495 368.7921 338.8621 303.9226 348.5972**

**368.6078 334.4898 379.5659 281.5896 335.8690**

**356.1490 389.7375 367.7118 363.0016 312.4188**

**328.4307 379.6270 344.6970 341.7849 368.3079**

**slsfavecomp =**

**11.8053 12.9684 11.2342 11.2092 12.3994**

**8.4796 10.7854 11.7313 12.9773 10.6475**

**9.0124 9.8681 9.3196 11.1733 11.3104**

**11.3694 9.4792 10.2173 11.7824 10.4619**

**10.0902 12.6647 9.4003 11.6572 11.4673**

**10.9107 11.4100 12.0652 10.7425 10.6767**

**11.4187 10.0841 9.7927 12.9299 9.4252**

**11.8915 10.7154 12.2184 9.8807 9.9425**

**10.0311 13.1002 11.4822 12.6087 11.5050**

**9.5317 12.7158 9.3012 9.4264 10.8402**

**lcfavecomp =**

**12.0451 12.9904 11.8846 11.5240 12.6599**

**8.9745 11.2241 12.0591 13.4051 11.3071**

**9.1955 10.0900 9.6704 11.3877 11.6420**

**11.6627 9.6963 10.7780 12.4651 10.8833**

**10.1258 12.4992 9.6798 12.0242 11.9384**

**11.3248 12.3183 12.3139 11.2753 11.2524**

**11.7364 10.4302 10.2509 12.8109 9.6661**

**12.3285 11.2709 12.5768 10.3279 10.3038**

**10.5173 13.4172 11.9633 13.5676 11.8585**

**10.0176 13.0130 9.5851 9.7230 11.3952**

**lcfaveperccomp =**

**0.9304 0.9538 0.8578 0.8439 0.8754**

**0.9091 0.9287 0.8947 0.8506 0.8949**

**0.8350 0.8643 0.8639 0.8645 0.8673**

**0.8884 0.8443 0.8938 0.9463 0.8907**

**0.9501 1.0214 0.9272 0.8628 0.9429**

**0.9040 0.9920 0.8299 0.8768 0.8626**

**0.8909 0.8773 0.8835 0.8871 0.8812**

**0.8479 0.9255 0.8373 0.8879 0.8959**

**0.9087 0.8198 0.8704 0.8836 0.9714**

**0.8948 0.8685 0.8730 0.8956 0.8935**

**lcfavetotprofit =**

**74.0676 72.1518 76.1579 85.6419 87.2828**

**65.3018 61.7188 62.9608 87.1202 67.8313**

**71.4133 72.6020 72.8347 75.2224 77.9039**

**78.4294 77.5796 73.2526 64.6867 74.1153**

**65.8318 66.9268 65.5090 80.5997 64.3505**

**60.0626 56.1732 87.6485 79.7859 73.8472**

**68.9886 78.5204 70.0350 77.4608 71.8465**

**83.5914 72.2048 88.3500 57.5652 70.7117**

**72.0359 94.9007 82.8012 80.3875 64.8725**

**66.0655 90.6525 74.8333 70.2944 77.4723**

**slsfavetotprofit =**

**85.2034 83.7486 89.2058 92.2459 94.1728**

**76.5276 74.9375 79.3154 98.1760 81.4493**

**75.9936 75.6765 79.9537 80.5708 84.7235**

**87.8886 81.3678 85.0333 86.2210 84.1261**

**74.7253 80.0130 74.6640 88.2043 79.8832**

**75.5857 81.5280 92.4411 88.4067 86.6107**

**80.9985 85.2814 81.3850 83.2406 78.8166**

**93.0749 83.6767 96.2341 68.6009 79.9437**

**83.9570 101.4493 92.1981 96.2127 78.3308**

**74.2837 97.4610 79.9304 78.0686 88.9246**

**returnedobjs =**

**359.2272 352.3934 352.3078 374.0089 372.6619**

**350.6525 321.2296 316.7787 369.4011 341.8917**

**343.8773 363.2698 357.6791 330.7634 348.5809**

**356.4766 363.7313 360.7052 343.7543 357.6213**

**351.1620 339.9186 349.9479 348.2831 346.2712**

**319.6404 332.0541 368.4194 362.5945 354.2691**

**329.7677 364.7231 352.9653 349.9223 357.4866**

**371.8743 353.2680 378.0657 296.7517 350.6162**

**360.8018 383.7937 367.9892 367.4930 338.1905**

**352.7994 379.1272 352.8513 356.5324 362.8902**

**slsfobjs =**

**338.7127 318.1173 355.1356 381.0043 361.0754**

**349.4622 309.2615 306.4158 363.7904 329.2816**

**344.7349 325.4129 354.5714 317.8540 342.0511**

**339.4752 360.5098 358.4148 317.9769 344.5933**

**318.2722 310.1365 329.5563 339.5658 322.8433**

**298.7154 312.1270 355.6162 366.0617 358.3642**

**297.5495 368.7921 338.8621 303.9226 348.5972**

**368.6078 334.4898 379.5659 281.5896 335.8690**

**356.1490 389.7375 367.7118 363.0016 312.4188**

**328.4307 379.6270 344.6970 341.7849 368.3079**

**lcfrejs =**

**0.0097 0.0597 0.2558 0.0000 0.0414**

**0.0056 1.2206 1.6724 0.0213 0.7432**

**0.6339 0.0012 0.0001 1.9004 1.0888**

**0.3649 0.0197 0.0028 0.0562 0.0466**

**0.0816 1.0194 0.0230 0.7989 0.2227**

**1.3521 0.1331 0.1689 0.0035 0.0911**

**1.0718 0.0581 0.0233 0.4067 0.0454**

**0.0322 0.0462 0.0068 2.6913 0.5861**

**0.0164 0.0028 0.0691 0.0021 0.3391**

**0.0635 0.0394 0.3044 0.0132 0.0741**

**slsfrejs =**

**2.4145 3.5378 1.0732 0.0363 0.8244**

**0.9292 3.6322 3.8576 0.8830 2.5238**

**1.3866 2.8243 0.6169 3.3048 1.8502**

**1.9907 0.5805 0.6536 2.3012 1.5354**

**3.0529 4.1254 2.2831 1.8766 3.1166**

**3.9695 2.8541 1.1251 0.3638 1.1096**

**3.6014 0.3030 1.5005 4.3335 1.2653**

**0.5721 1.7960 0.3200 4.8594 1.9739**

**1.0078 0.1035 0.5247 0.6489 3.5325**

**2.4864 0.5013 1.0963 1.5279 0.4478**

**menusizes =**

**4.8500 4.9500 5.0000 4.6500 4.8500**

**4.9500 4.6500 4.4000 4.8000 4.8000**

**4.6000 4.8000 4.7000 4.6500 4.8500**

**4.9000 4.8500 5.0000 4.8500 5.0000**

**4.7500 4.3500 4.7500 4.9500 4.8000**

**4.6500 5.0000 4.9500 4.9000 4.9500**

**4.8500 4.9000 4.9500 4.8500 4.8000**

**4.7000 4.8500 4.9000 4.4500 5.0000**

**4.8500 4.7500 4.8000 4.8000 5.0000**

**4.6000 5.0000 5.0000 4.8500 4.8500**

**avepij =**

**0.1743 0.1618 0.1683 0.1777 0.1704**

**0.1767 0.1515 0.1406 0.1730 0.1472**

**0.1440 0.1679 0.1788 0.1347 0.1560**

**0.1648 0.1700 0.1708 0.1636 0.1731**

**0.1584 0.1474 0.1490 0.1567 0.1705**

**0.1588 0.1808 0.1676 0.1760 0.1753**

**0.1482 0.1658 0.1821 0.1479 0.1621**

**0.1709 0.1643 0.1768 0.1315 0.1608**

**0.1613 0.1776 0.1719 0.1784 0.1515**

**0.1490 0.1663 0.1704 0.1756 0.1739**

**pijover5 =**

**77 71 66 71 68**

**70 59 55 73 59**

**52 68 70 47 59**

**68 70 73 68 69**

**60 56 55 63 70**

**67 78 69 73 66**

**51 67 75 62 61**

**72 62 71 46 63**

**62 70 72 77 62**

**62 61 67 72 75**

**pijequal1 =**

**34 17 29 43 28**

**38 31 20 36 21**

**26 33 38 23 21**

**21 32 30 27 36**

**27 28 27 24 33**

**29 38 20 36 37**

**22 27 41 19 31**

**33 24 40 19 21**

**27 39 34 32 18**

**22 26 33 30 34**

**runtimes =**

**356.0811 496.9847 389.8288 136.9221 292.7492**

**141.4038 525.4063 189.0869 271.3823 405.5872**

**331.0923 382.7995 339.9634 557.9560 370.8714**

**194.3901 398.4535 244.1314 171.2255 368.5594**

**207.0410 380.1133 543.2653 284.9702 451.4214**

**366.2539 501.7252 220.1332 191.1096 147.1353**

**288.0812 158.4077 266.5218 541.0704 186.3313**

**264.6231 350.8591 176.6261 153.9533 166.9710**

**146.2377 202.0259 196.0296 229.3918 539.6140**

**252.0482 245.7225 230.5496 204.0162 181.6212**

**bestest =**

**-0.0009 -0.0403 -0.0473 0 -0.0091**

**-0.0005 -1.3012 -1.3192 -0.0049 -0.1175**

**-0.9959 -0.0024 0 -1.2056 -0.4912**

**-0.0497 -0.0003 -0.0000 -0.0416 -0.0036**

**-0.0595 -1.0028 -0.0005 -0.4245 -0.0217**

**-1.2808 -0.0052 -0.0182 -0.0002 -0.1638**

**-0.7728 -0.0079 -0.0024 -0.0673 -0.0032**

**-0.0133 -0.0083 -0.0076 -2.8077 -0.3706**

**-0.0003 -0.0001 -0.0079 -0.0009 -0.1100**

**-0.0015 -0.0011 -0.1945 -0.0013 -0.0125**

**guessbestiter =**

**10 13 11 4 8**

**14 13 12 10 9**

**4 13 9 8 4**

**7 6 11 15 14**

**13 7 11 7 13**

**13 13 5 2 4**

**13 7 12 4 6**

**10 11 3 12 13**

**6 8 9 2 12**

**4 3 4 5 12**

**estslsfobjs =**

**340.0144 312.8051 357.5590 380.9875 344.0640**

**340.0047 290.4900 297.7238 380.5865 329.7300**

**329.8814 327.0327 356.2942 311.3919 325.7134**

**351.8230 355.4368 356.6658 301.3553 338.5346**

**317.0301 309.0951 330.1525 337.8006 324.9623**

**300.5881 327.2545 363.1724 371.4392 350.7277**

**293.8375 371.2292 329.4238 307.2453 327.3411**

**360.0293 322.2603 375.2097 290.1002 346.1059**

**358.5629 391.2611 372.4518 377.8361 314.1608**

**326.4728 379.9219 339.5813 341.2319 372.9102**

**compportion80 =**

**0.7835 0.7576 0.7400 0.7097 0.6598**

**0.7475 0.7742 0.8068 0.6979 0.7500**

**0.5652 0.7083 0.7766 0.6774 0.6186**

**0.7653 0.7010 0.7600 0.7938 0.6500**

**0.6632 0.7471 0.6842 0.6465 0.7604**

**0.7312 0.8300 0.7071 0.7449 0.7778**

**0.6804 0.7347 0.7374 0.6598 0.6667**

**0.7447 0.6598 0.7551 0.6742 0.8100**

**0.7320 0.6632 0.8021 0.8021 0.8000**

**0.7717 0.6500 0.6300 0.6804 0.8144**

**compportionmin =**

**0.7835 0.7576 0.7400 0.7097 0.6598**

**0.7475 0.7742 0.8068 0.6979 0.7500**

**0.5652 0.7083 0.7766 0.6774 0.6186**

**0.7653 0.7010 0.7600 0.7938 0.6500**

**0.6632 0.7471 0.6842 0.6465 0.7604**

**0.7312 0.8300 0.7071 0.7449 0.7778**

**0.6804 0.7347 0.7374 0.6598 0.6667**

**0.7447 0.6598 0.7551 0.6742 0.8100**

**0.7320 0.6632 0.8021 0.8021 0.8000**

**0.7717 0.6500 0.6300 0.6804 0.8144**

**93rd experiment, Fixed Scens Welfare Profit b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens have equal wt, minitest=rej, gap=0.1, no z slsf iter>1**

lcfiterbetter =

0.6800

lcfiterworse =

0.3200

avepercbetter =

0.0198

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.7819

lcfiterave =

348.1510

slsfave =

341.7316

averuntime =

165.9335

avelcfrejs =

0.4563

aveslsfrejs =

1.7725

percbetter =

0.0155 0.0266 0.0058 0.0512 -0.0028

-0.0571 0.0597 0.0749 0.0270 -0.0052

0.0131 0.0355 0.0569 -0.0027 0.0019

-0.0005 -0.0095 0.0938 0.0326 0.0732

0.0069 0.0737 -0.0028 0.0300 -0.0217

0.0054 0.0123 0.0355 0.0171 0.0384

0.0153 0.0117 0.0442 -0.0217 0.0223

0.0278 0.0891 -0.0077 -0.0135 0.1583

0.0078 0.0159 -0.0171 0.0249 -0.0030

0.0079 0.0051 -0.0135 -0.0351 -0.0126

avelcfavecomp =

11.0562

aveslsfavecomp =

10.7533

avelcfaveperccomp =

0.8836

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

75.5073

aveslsfavetotprofit =

83.6379

avelcfpercposprofit =

1

returnedobjs =

347.9250 344.7550 351.5064 349.9846 371.0883

295.4870 346.8097 341.8211 374.3955 361.8165

337.6186 370.1781 348.8419 364.2005 362.2154

364.5488 364.4783 340.5853 354.5269 345.2065

357.8371 349.0983 386.8285 357.6481 331.1373

356.2870 339.6324 330.8197 336.3175 357.0589

350.7144 302.0387 372.2740 338.4458 358.8007

302.7281 338.4110 265.5131 364.4929 353.1895

341.5425 371.1317 342.1077 341.9295 349.0658

351.7675 371.5952 375.3497 332.1168 343.6807

slsfobjs =

342.6076 335.8343 349.4904 332.9519 372.1158

313.3918 327.2579 317.9881 364.5534 363.7068

333.2521 357.4829 330.0725 365.1789 361.5205

364.7153 367.9848 311.3684 343.3188 321.6581

355.3755 325.1278 387.9283 347.2343 338.4729

354.3563 335.4982 319.4692 330.6775 343.8554

345.4251 298.5339 356.5196 345.9537 350.9750

294.5454 310.7332 267.5647 369.4624 304.9184

338.9007 365.3087 348.0693 333.6133 350.1324

349.0066 369.7259 380.4762 344.1913 348.0776

slsfavecomp =

10.4869 10.9311 8.5445 10.2461 10.5938

13.2212 10.2485 9.2706 13.1976 9.2551

10.5999 13.9731 11.9191 11.0098 9.3893

11.9017 9.4253 10.6261 11.1767 10.1127

9.2138 11.2727 12.2672 10.1034 9.9503

9.0528 10.3662 9.5368 10.1773 10.0087

9.8034 12.0966 11.8548 11.3179 12.7275

10.7798 13.9477 11.0595 9.5461 10.3880

8.1094 11.9571 10.2029 10.5791 9.5668

10.2098 11.5896 11.6639 11.3172 10.8679

lcfavecomp =

10.6425 11.7471 8.9420 10.5359 10.8303

13.0950 10.5160 9.5728 13.2420 9.5862

10.6349 14.2651 12.1295 11.4031 9.6689

12.1327 9.7372 11.1048 11.3533 10.7728

9.4823 11.5508 12.3244 10.5750 10.2239

9.5230 10.7641 9.7855 10.4807 10.3073

10.1646 12.6210 11.7623 11.6636 13.2876

11.0080 13.8878 11.6369 9.9188 10.5191

8.7437 12.0465 10.5721 10.9949 10.3624

10.4167 11.7363 11.9367 11.4098 11.1947

lcfaveperccomp =

0.8964 0.9286 0.8978 0.8881 0.8538

0.8488 0.9229 0.9301 0.8834 0.8778

0.8737 0.8964 0.8433 0.8498 0.8645

0.8536 0.8774 0.8988 0.8644 0.9047

0.8973 0.9012 0.8068 0.8844 0.8989

0.8858 0.9034 0.8513 0.8775 0.8622

0.9087 0.9071 0.8397 0.8577 0.8807

0.8973 0.8777 0.9517 0.8735 0.9449

0.9389 0.8891 0.8740 0.8733 0.9441

0.8601 0.8111 0.8334 0.9213 0.8704

lcfavetotprofit =

75.1840 65.6717 68.0951 70.1121 83.6180

81.7696 68.7025 67.2196 90.4168 74.7539

75.2430 90.1746 81.8903 81.3886 75.5048

87.8497 74.9871 69.1978 81.9896 63.6248

71.7422 70.9755 96.6139 73.5212 73.1830

69.8834 73.1791 69.3875 72.7780 74.6087

73.9633 64.7390 87.1454 79.1976 81.1556

67.7151 80.1281 52.9654 75.5502 70.9336

59.1551 85.9726 72.1952 72.9513 63.1686

78.9205 89.7776 88.6026 76.7480 81.1119

slsfavetotprofit =

82.2090 86.3964 76.5958 80.1025 88.8012

82.8785 77.8151 72.1863 96.6841 81.8615

80.6755 99.6252 86.3333 89.1796 81.3793

93.3640 81.6869 77.3258 85.6163 78.7993

79.6217 83.3725 97.9878 83.3925 80.0003

79.5166 81.5107 74.9082 80.6718 81.9473

82.2737 79.1778 90.0940 86.3289 93.6220

77.3916 88.5066 67.9329 83.6246 79.4695

73.1013 91.3909 81.5516 82.2409 81.0979

84.3704 92.6797 94.5464 83.7060 86.3423

returnedobjs =

347.9250 344.7550 351.5064 349.9846 371.0883

295.4870 346.8097 341.8211 374.3955 361.8165

337.6186 370.1781 348.8419 364.2005 362.2154

364.5488 364.4783 340.5853 354.5269 345.2065

357.8371 349.0983 386.8285 357.6481 331.1373

356.2870 339.6324 330.8197 336.3175 357.0589

350.7144 302.0387 372.2740 338.4458 358.8007

302.7281 338.4110 265.5131 364.4929 353.1895

341.5425 371.1317 342.1077 341.9295 349.0658

351.7675 371.5952 375.3497 332.1168 343.6807

slsfobjs =

342.6076 335.8343 349.4904 332.9519 372.1158

313.3918 327.2579 317.9881 364.5534 363.7068

333.2521 357.4829 330.0725 365.1789 361.5205

364.7153 367.9848 311.3684 343.3188 321.6581

355.3755 325.1278 387.9283 347.2343 338.4729

354.3563 335.4982 319.4692 330.6775 343.8554

345.4251 298.5339 356.5196 345.9537 350.9750

294.5454 310.7332 267.5647 369.4624 304.9184

338.9007 365.3087 348.0693 333.6133 350.1324

349.0066 369.7259 380.4762 344.1913 348.0776

lcfrejs =

0.5318 0.0039 0.0905 0.3865 0.0125

2.0354 0.1615 0.3942 0.0381 0.0182

0.5993 0.0858 0.8762 0.1712 0.0744

0.4397 0.0054 0.1747 0.8877 0.1611

0.0077 0.2459 0.0024 0.0483 0.8598

0.0691 0.4683 1.3031 1.1631 0.0282

0.5355 1.3943 0.0311 0.7339 0.1861

1.7219 0.5306 2.0801 0.0269 0.1254

0.0620 0.0336 0.3455 0.4343 0.0084

0.7837 0.3160 0.0022 1.0002 1.1202

slsfrejs =

1.8088 1.9183 0.9840 2.1353 0.2957

4.0376 2.4073 2.9345 1.3617 0.5260

2.2229 1.2308 2.1204 0.7411 0.6278

0.7919 0.3473 3.2171 2.0966 2.5554

0.9740 2.4176 0.0316 1.1266 1.9655

0.9605 1.7252 2.6506 2.2913 1.2942

1.4251 4.3789 1.3118 1.5003 1.4794

3.6750 3.7818 5.8413 0.2867 2.9708

1.0162 1.0456 1.2956 1.9783 1.0739

1.2818 0.7286 0.1567 2.0138 1.5867

menusizes =

4.9500 4.9500 4.8500 4.9500 4.9500

4.9500 4.9000 4.8500 4.9500 4.9500

4.9000 4.8000 5.0000 4.9500 4.8000

4.7500 4.9500 4.9000 4.7000 4.8000

4.9000 4.8000 4.8500 4.9000 4.9500

4.8500 4.9500 4.8000 4.8000 4.9500

4.9500 4.9500 4.8000 5.0000 4.9500

5.0000 5.0000 4.8500 4.8500 4.9000

4.8500 5.0000 4.9500 4.9000 4.9500

4.9500 4.8500 4.6000 4.6500 5.0000

avepij =

0.1584 0.1894 0.1755 0.1645 0.1713

0.1596 0.1508 0.1583 0.1782 0.1855

0.1522 0.1727 0.1483 0.1683 0.1630

0.1642 0.1663 0.1567 0.1463 0.1630

0.1740 0.1640 0.1889 0.1744 0.1600

0.1633 0.1542 0.1534 0.1560 0.1653

0.1634 0.1486 0.1572 0.1444 0.1717

0.1454 0.1452 0.1631 0.2061 0.1636

0.1587 0.1776 0.1516 0.1523 0.1894

0.1670 0.1616 0.1656 0.1638 0.1511

pijover5 =

57 79 68 64 68

61 60 59 72 76

59 66 57 62 63

63 67 58 54 67

69 66 78 73 59

65 58 54 57 68

62 60 62 55 71

53 59 71 86 65

59 70 61 62 81

64 59 65 67 55

pijequal1 =

23 45 38 23 36

18 23 26 36 32

23 38 15 31 33

32 29 30 26 31

38 33 45 34 30

32 24 27 30 29

30 21 26 17 31

23 16 25 56 28

37 34 20 23 41

33 30 34 35 23

runtimes =

266.4924 261.7525 257.4416 273.0786 258.6960

279.9198 301.9972 283.2135 299.1440 259.0099

284.3098 311.7638 163.0970 104.7731 105.2248

117.4472 96.6701 257.4582 145.7000 122.8987

141.9058 117.2288 111.0400 135.5709 112.6929

105.4539 143.7150 99.5485 114.2102 150.9170

104.8166 159.4103 143.1300 113.6001 150.2255

133.6203 197.4789 132.5508 102.7774 132.2658

122.5470 108.3211 132.8111 136.7500 118.0855

123.5228 129.8542 109.2829 128.9119 134.3427

bestest =

-0.0731 -0.0009 -0.0055 -0.0351 -0.0003

-2.0056 -0.1315 -0.1520 -0.0050 -0.0013

-0.4688 -0.0993 -0.6050 -0.1209 -0.0280

-0.1337 -0.0003 -0.1581 -0.3758 -0.0806

-0.0001 -0.2762 -0.0000 -0.0193 -0.2949

-0.0210 -0.0155 -1.0719 -0.9121 -0.0104

-0.1218 -1.0807 -0.0006 -0.3869 -0.2186

-1.2780 -0.4825 -2.0109 -0.0135 -0.0048

-0.0068 -0.0094 -0.3024 -0.0880 -0.0002

-0.2672 -0.3142 -0.0009 -1.0002 -0.4447

guessbestiter =

2 4 7 5 3

6 5 4 7 3

4 7 6 7 6

7 5 4 7 4

2 6 1 7 2

3 3 3 6 2

3 7 3 6 7

6 7 5 1 7

6 3 7 2 3

6 6 6 4 5

estslsfobjs =

343.4253 340.9953 347.6277 337.7242 362.5661

314.1931 316.1153 313.6017 368.7408 362.4856

329.8283 354.5561 334.1405 363.4104 362.1539

361.9113 367.5210 309.4420 346.9642 316.4557

353.2258 314.0686 383.5261 346.6151 336.0003

354.5586 339.8061 321.3145 335.2288 336.3485

347.0539 296.4048 361.0187 325.3535 348.4528

286.2602 310.1847 273.6517 367.8933 329.4937

344.0197 365.9275 345.4431 334.1763 350.7361

356.5059 369.9137 381.5488 344.0906 350.9094

compportion80 =

0.6263 0.7677 0.6907 0.7071 0.6465

0.6364 0.7857 0.7113 0.7273 0.7172

0.7041 0.7083 0.7400 0.6061 0.6146

0.6421 0.6061 0.6939 0.6489 0.7813

0.6224 0.7396 0.6804 0.7959 0.7273

0.7732 0.7677 0.6667 0.7292 0.6768

0.7374 0.7980 0.6979 0.7500 0.7273

0.7700 0.7400 0.7938 0.7629 0.7347

0.7423 0.7300 0.6566 0.7245 0.7879

0.6162 0.6392 0.6522 0.7097 0.6000

compportionmin =

0.6263 0.7677 0.6907 0.7071 0.6465

0.6364 0.7857 0.7113 0.7273 0.7172

0.7041 0.7083 0.7400 0.6061 0.6146

0.6421 0.6061 0.6939 0.6489 0.7813

0.6224 0.7396 0.6804 0.7959 0.7273

0.7732 0.7677 0.6667 0.7292 0.6768

0.7374 0.7980 0.6979 0.7500 0.7273

0.7700 0.7400 0.7938 0.7629 0.7347

0.7423 0.7300 0.6566 0.7245 0.7879

0.6162 0.6392 0.6522 0.7097 0.6000

**94th experiment, Fixed Scens Welfare Profit b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gap=0.1, no v**

lcfiterbetter =

0.7800

lcfiterworse =

0.2200

avepercbetter =

0.0220

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.7267

lcfiterave =

350.4500

slsfave

343.4529

averuntime =

186.2926

avelcfrejs =

0.6068

aveslsfrejs =

1.6329

percbetter =

0.0132 0.0038 0.0240 -0.0150 0.0100

0.0200 0.0189 0.0013 0.0240 -0.0158

0.0314 0.0634 -0.0107 0.0279 -0.0158

0.0548 0.0446 0.0503 0.0066 0.0527

-0.0068 0.0048 -0.0065 0.0065 -0.0167

-0.0079 -0.0062 0.0021 0.1757 0.0061

0.0126 -0.0201 0.0007 0.0326 0.0306

0.0084 0.0142 0.0445 0.0130 0.0839

0.0169 0.0394 0.0616 0.0086 0.0461

0.0166 0.0148 0.0621 -0.0053 0.0764

avelcfavecomp =

10.7128

aveslsfavecomp =

10.3865

avelcfaveperccomp =

0.8784

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

74.6306

aveslsfavetotprofit =

82.2532

avelcfpercposprofit =

1

returnedobjs =

345.7593 361.4679 347.4502 369.8101 363.1988

340.6571 334.6334 337.6949 352.5438 364.1562

336.6682 352.4222 370.3827 366.6513 356.1815

325.1162 370.6723 340.3206 367.7114 357.0652

354.9396 366.4895 380.9582 361.0925 348.7169

364.0027 370.5598 369.2752 366.9763 361.4925

378.0142 361.9520 353.5675 343.8010 328.0563

374.3898 281.5282 320.4016 357.9542 326.9345

333.9757 345.1734 338.0120 357.3607 334.5970

337.2176 354.5420 305.8711 344.6534 339.4327

slsfobjs =

341.2389 360.1031 339.3034 375.4533 359.6039

333.9846 328.4405 337.2688 344.2665 369.9989

326.4194 331.4165 374.4050 356.7031 361.8927

308.2147 354.8346 324.0321 365.2869 339.1911

357.3844 364.7534 383.4389 358.7640 354.6484

366.8878 372.8723 368.5122 312.1328 359.2898

373.3099 369.3747 353.3248 332.9489 318.3251

371.2873 277.5993 306.7480 353.3631 301.6269

328.4110 332.0991 318.3998 354.3122 319.8519

331.7221 349.3766 287.9741 346.4960 315.3508

slsfavecomp =

10.9425 12.4226 12.4560 10.9650 8.9361

9.4171 10.4185 11.9813 9.1202 9.3629

9.7198 9.5761 9.5293 10.3208 8.6951

10.8695 12.0344 8.7197 12.7079 9.5486

12.1349 11.4690 12.4558 10.4827 9.1657

9.6109 9.4167 10.3584 11.0578 9.2755

11.7747 10.1285 9.1693 8.4985 11.4164

11.4403 9.5788 9.5380 10.3911 10.8289

9.3593 9.8758 8.9609 9.0091 10.0088

10.2845 12.7868 11.9062 9.7472 11.4529

lcfavecomp =

11.2141 12.7283 12.9554 11.4299 9.1728

9.6470 10.5086 12.4186 9.5402 9.7281

10.1660 9.8680 9.7654 10.6035 9.1463

11.0866 12.2333 9.1832 12.8609 9.9354

12.6779 11.7275 12.7287 10.8246 9.5684

9.9203 9.5679 10.4828 10.5181 9.6212

11.8378 10.5715 9.5866 9.1801 11.6682

11.5449 10.0608 10.2739 10.9131 11.0945

10.1831 10.2405 8.9861 9.4058 10.2084

10.5462 12.7495 12.4934 10.2217 12.0468

lcfaveperccomp =

0.9429 0.8692 0.8630 0.8851 0.8470

0.8578 0.8677 0.8564 0.8764 0.8664

0.9133 0.9174 0.8400 0.8480 0.9108

0.8590 0.8678 0.9022 0.8366 0.9048

0.8606 0.8360 0.8433 0.8452 0.8851

0.8753 0.8215 0.8509 0.8376 0.9210

0.8274 0.8850 0.8763 0.8927 0.8481

0.8341 0.8888 0.9967 0.8957 0.8872

0.9054 0.9369 0.8805 0.9238 0.9209

0.8697 0.8210 0.8552 0.9260 0.9423

lcfavetotprofit =

71.1395 86.1808 78.0308 80.4918 75.1982

72.6336 74.6041 79.1562 70.9919 75.9417

66.6550 70.0999 79.7157 78.6903 69.8058

71.3908 83.9597 64.9065 93.0169 69.6186

81.2368 84.7012 91.0114 78.8707 70.8688

75.5531 80.4164 82.0641 80.9574 71.0503

90.2273 76.8528 72.2137 61.0776 77.2960

88.2358 54.9930 55.4545 72.5412 70.5880

62.8013 68.5502 67.3579 69.2940 68.0685

72.0136 89.7357 66.1904 72.8865 66.1952

slsfavetotprofit =

83.3556 94.3149 89.9656 90.0821 79.7277

77.9750 79.0527 88.4591 77.9043 82.8262

76.4853 78.3556 84.2239 84.2595 79.1720

76.4339 91.0782 73.9058 97.5466 78.4812

92.7779 91.2875 97.0563 86.5999 79.3554

83.0754 83.4949 86.2880 76.2002 79.8324

93.0220 86.2726 79.9508 73.7367 82.3953

91.4923 63.6975 72.3246 85.4337 78.4892

74.7917 77.6584 69.9976 78.9933 75.9069

78.2601 90.6900 75.7199 82.4945 81.7585

returnedobjs =

345.7593 361.4679 347.4502 369.8101 363.1988

340.6571 334.6334 337.6949 352.5438 364.1562

336.6682 352.4222 370.3827 366.6513 356.1815

325.1162 370.6723 340.3206 367.7114 357.0652

354.9396 366.4895 380.9582 361.0925 348.7169

364.0027 370.5598 369.2752 366.9763 361.4925

378.0142 361.9520 353.5675 343.8010 328.0563

374.3898 281.5282 320.4016 357.9542 326.9345

333.9757 345.1734 338.0120 357.3607 334.5970

337.2176 354.5420 305.8711 344.6534 339.4327

slsfobjs =

341.2389 360.1031 339.3034 375.4533 359.6039

333.9846 328.4405 337.2688 344.2665 369.9989

326.4194 331.4165 374.4050 356.7031 361.8927

308.2147 354.8346 324.0321 365.2869 339.1911

357.3844 364.7534 383.4389 358.7640 354.6484

366.8878 372.8723 368.5122 312.1328 359.2898

373.3099 369.3747 353.3248 332.9489 318.3251

371.2873 277.5993 306.7480 353.3631 301.6269

328.4110 332.0991 318.3998 354.3122 319.8519

331.7221 349.3766 287.9741 346.4960 315.3508

lcfrejs =

0.1917 0.3433 0.9603 0.0364 0.0040

0.9730 1.7024 1.4666 0.2326 0.0290

1.0695 0.0521 0.0124 0.0208 0.0429

1.8249 0.0972 0.4070 0.0187 0.0569

0.2784 0.1060 0.0321 0.0992 0.6609

0.0031 0.0060 0.0618 0.0516 0.0023

0.0069 0.0028 0.0719 0.2311 2.3741

0.0568 3.3788 1.3801 0.0326 1.3073

0.8574 0.6431 0.9957 0.0097 0.8703

1.3366 1.4563 3.0995 1.1518 0.2336

slsfrejs =

1.8310 1.1329 2.1742 0.2679 0.3572

1.8617 2.5976 2.0182 1.4862 0.1182

2.2790 1.8297 0.0480 1.0129 0.2612

3.6212 1.3173 2.1155 0.6904 1.7883

1.0792 0.8134 0.3392 0.7184 0.9305

0.4081 0.0884 0.4563 3.6829 0.7655

0.4850 0.1169 0.5162 1.8484 2.8978

0.6094 5.1007 3.5315 0.8990 3.4654

2.2621 2.2064 2.8933 0.8563 2.9395

2.3077 1.9339 4.6353 1.2155 2.8360

menusizes =

4.8000 4.7000 4.8500 4.6000 4.5500

4.9000 4.6500 4.8000 4.9500 4.8500

4.6000 5.0000 4.8000 4.9000 4.9000

4.4500 4.8000 4.8500 5.0000 4.5000

4.9000 4.9500 4.8000 4.8500 4.8000

4.7500 4.9000 4.6500 4.6500 4.9500

4.7000 4.8500 4.7000 4.9000 4.5500

4.9000 3.8500 4.6500 4.7500 4.8500

4.3500 4.7000 4.6000 4.8500 4.9500

4.7000 4.7000 4.2500 5.0000 4.8500

avepij =

0.1665 0.1612 0.1520 0.1676 0.1639

0.1542 0.1555 0.1485 0.1659 0.1789

0.1536 0.1681 0.1832 0.1651 0.1816

0.1323 0.1652 0.1404 0.1740 0.1624

0.1550 0.1777 0.1750 0.1725 0.1701

0.1795 0.1779 0.1731 0.1525 0.1825

0.1672 0.1793 0.1563 0.1714 0.1393

0.1598 0.1431 0.1569 0.1816 0.1462

0.1285 0.1652 0.1520 0.1795 0.1538

0.1579 0.1524 0.1296 0.1818 0.1628

pijover5 =

69 67 57 67 64

58 61 55 65 73

59 67 75 64 72

49 71 46 70 63

66 74 73 66 72

73 73 71 62 68

65 72 62 71 51

59 60 62 80 57

50 62 56 73 56

57 61 55 70 70

pijequal1 =

26 30 18 32 34

27 31 19 35 34

26 29 35 27 42

16 20 21 32 35

22 25 34 30 29

40 37 38 29 38

34 38 25 30 18

24 27 29 34 21

17 36 30 40 30

26 18 11 37 24

runtimes =

182.3344 137.3657 174.5104 125.9259 169.0768

196.5715 116.3900 192.0654 137.9441 112.5863

243.5343 141.4668 109.7529 169.1971 144.8369

309.5531 119.6596 306.7478 184.7780 148.8822

266.8732 198.2115 127.7327 124.1460 113.5675

112.1357 107.9350 111.5475 282.1064 114.4308

116.3093 120.1470 164.1066 164.3416 141.9592

145.3560 307.2770 267.6527 136.8638 309.7484

309.8623 309.4868 309.4621 110.8467 234.6644

287.0174 297.4068 278.9805 112.5559 208.7189

bestest =

-0.0067 -0.1910 -0.9388 -0.0020 -0.0012

-0.6132 -1.6844 -1.0502 -0.1053 -0.0082

-1.0002 -0.0226 -0.0011 -0.0016 -0.0011

-1.5994 -0.0445 -0.5389 -0.0004 -0.1170

-0.0244 -0.0741 -0.0308 -0.0171 -0.3658

-0.0005 -0.0002 -0.0225 -0.0138 -0.0011

-0.0011 -0.0004 -0.0015 -0.0803 -1.8252

-0.0684 -3.6694 -1.0905 -0.0021 -0.7345

-0.4827 -0.6069 -0.6363 -0.0007 -0.8064

-1.2803 -1.0543 -2.9015 -1.0741 -0.1151

guessbestiter =

5 3 7 1 6

4 4 3 5 2

5 7 1 5 2

3 2 7 4 6

1 3 5 6 1

4 3 1 7 6

7 4 1 4 2

7 5 4 2 7

2 7 3 3 7

5 6 5 6 2

estslsfobjs =

340.5904 361.9387 348.2401 379.0370 356.6527

335.3975 326.0917 338.6513 340.8312 370.2996

329.3067 338.4470 373.6963 357.6384 360.7281

311.3408 356.5663 318.2383 372.6492 342.3729

348.1506 375.7922 378.1199 361.8020 355.0333

360.8806 372.9682 367.9897 318.1768 364.4659

377.0377 372.0705 346.5361 331.4348 314.9648

372.3164 278.4757 305.6041 352.3101 312.3087

329.6921 328.9344 312.6426 353.8958 310.4867

333.4560 353.3672 282.4867 337.6862 300.7919

compportion80 =

0.7604 0.7447 0.7010 0.6522 0.6154

0.7143 0.6344 0.6458 0.6465 0.8351

0.7283 0.7300 0.6042 0.7143 0.7143

0.7416 0.7604 0.7113 0.6900 0.6556

0.6735 0.7374 0.6875 0.7113 0.6354

0.6526 0.7041 0.6559 0.7204 0.6768

0.6277 0.7320 0.7340 0.8265 0.6703

0.5306 0.7013 0.7957 0.7789 0.7113

0.7126 0.6489 0.7609 0.6392 0.7071

0.7128 0.7340 0.7176 0.6500 0.7423

compportionmin =

0.7604 0.7447 0.7010 0.6522 0.6154

0.7143 0.6344 0.6458 0.6465 0.8351

0.7283 0.7300 0.6042 0.7143 0.7143

0.7416 0.7604 0.7113 0.6900 0.6556

0.6735 0.7374 0.6875 0.7113 0.6354

0.6526 0.7041 0.6559 0.7204 0.6768

0.6277 0.7320 0.7340 0.8265 0.6703

0.5306 0.7013 0.7957 0.7789 0.7113

0.7126 0.6489 0.7609 0.6392 0.7071

0.7128 0.7340 0.7176 0.6500 0.7423

**95th experiment, Fixed Scens Welfare Profit b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gap=0.1, no v, same as 94**

lcfiterbetter =

0.7800

lcfiterworse =

0.2200

avepercbetter =

0.0316

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.7627

lcfiterave =

348.8060

slsfave =

338.5384

averuntime = 247.3413

avelcfrejs

0.5455

aveslsfrejs =

1.9755

percbetter =

0.0657 0.0075 -0.0013 0.0394 -0.0071

0.0481 0.0116 -0.0089 -0.0001 -0.0198

0.0482 0.0639 0.0551 0.0592 -0.0015

0.0287 0.0667 0.0138 -0.0096 0.0454

0.0089 0.0887 0.0182 0.0572 0.0874

0.0379 0.0417 0.1046 0.0018 0.0343

0.0289 0.0432 -0.0005 0.0123 0.0572

0.0246 0.0723 -0.0109 0.0227 -0.0293

0.0218 0.0083 0.0043 0.0220 0.1113

0.0728 0.0388 -0.0026 0.0543 0.0413

avelcfavecomp =

11.1677

aveslsfavecomp =

10.8005

avelcfaveperccomp =

0.8890

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

73.6896

aveslsfavetotprofit =

83.0480

avelcfpercposprofit =

1

returnedobjs =

346.1759 346.2215 380.4898 374.0449 365.3601

340.7344 301.8091 361.7283 355.8178 362.9736

364.0989 325.8296 359.3755 348.0174 343.5285

310.6356 357.5345 349.7304 382.8267 355.7608

329.0410 330.0535 371.2572 341.1581 336.5948

372.4909 350.9848 324.9219 374.5088 366.4695

318.2830 356.3696 347.3120 357.8191 340.0936

313.6563 353.6365 346.6163 339.4710 329.2500

367.5620 363.2665 342.5950 332.0793 359.8169

370.6089 335.5051 344.6530 341.3033 350.2275

slsfobjs =

324.8475 343.6340 380.9830 359.8565 367.9645

325.1023 298.3504 364.9936 355.8631 370.2958

347.3463 306.2642 340.5955 328.5700 344.0462

301.9687 335.1739 344.9572 386.5459 340.2959

326.1542 303.1670 364.6229 322.6883 309.5548

358.8793 336.9207 294.1579 373.8217 354.3226

309.3495 341.5983 347.4905 353.4735 321.7065

306.1118 329.8039 350.4455 331.9323 339.1723

359.7329 360.2760 341.1205 324.9361 323.7917

345.4466 322.9694 345.5662 323.7164 336.3353

slsfavecomp =

9.2536 11.4579 12.2360 14.1348 10.7794

9.3526 11.4909 9.9888 11.8857 13.2600

11.3306 11.0754 11.8776 9.0820 8.7115

8.0562 10.3430 8.9143 12.8088 10.9231

10.9960 10.3013 12.8978 8.0863 12.5038

11.9836 10.5299 10.5637 13.5312 11.0809

9.7722 12.7447 9.4960 10.4178 10.2514

9.4876 8.8790 9.6663 9.6147 10.9729

11.6373 9.7934 11.8040 9.1964 12.9461

12.5280 10.7156 9.9356 10.1508 10.5807

lcfavecomp =

9.9553 11.8312 12.4002 14.6564 11.4395

9.5714 11.8956 10.3585 12.2593 13.6752

11.4997 11.2611 12.0732 9.3222 9.3009

8.4715 10.4898 9.4512 13.0670 11.1787

11.6457 10.7950 13.2157 8.6426 12.6799

12.0608 10.8159 11.2385 13.9362 11.0801

10.4227 13.2996 10.1208 10.5964 10.6226

9.9512 8.8247 10.2188 9.9042 11.3336

12.1715 10.0001 12.1626 9.9429 12.8092

12.3891 11.4843 10.5281 10.4087 10.9235

lcfaveperccomp =

0.9162 0.8767 0.8370 0.8579 0.9436

0.8658 0.8857 0.8630 0.8631 0.8376

0.8760 0.8755 0.8821 0.8837 0.8959

0.8851 0.8548 0.8726 0.8275 0.8492

0.8720 0.9565 0.8781 0.9481 0.9082

0.8920 0.8636 1.0236 0.8377 0.8615

0.9211 0.9124 0.9259 0.8422 0.8804

0.8440 0.8908 0.9689 0.8885 0.8409

0.8933 0.8852 0.8881 0.9754 0.9284

0.8928 0.9236 0.9122 0.9117 0.8357

lcfavetotprofit =

65.3940 76.7197 92.5677 88.1751 74.4425

68.9153 68.4388 78.2591 83.9741 89.3955

80.6022 70.8128 77.9240 70.2419 62.8333

58.0423 77.0369 66.7592 94.8634 80.0381

70.0274 58.8357 86.6654 57.0086 69.3284

85.5448 75.6618 52.4360 91.5744 81.8979

62.3912 75.7166 69.4363 79.0412 68.8629

66.3216 69.8763 67.2707 66.1697 76.2501

78.7776 76.8474 79.1313 57.4258 75.2734

82.0177 63.7644 70.4858 69.2929 75.7093

slsfavetotprofit =

75.3143 87.1735 96.7023 100.6020 88.7274

75.4748 76.0527 85.5670 92.4740 99.0174

88.2370 79.6233 87.3363 76.2367 75.3689

65.6741 80.9762 76.7888 100.3842 85.6641

82.0469 72.1736 95.6563 68.7381 82.6096

91.3152 82.8146 72.5264 101.2674 86.2392

71.3683 92.1225 79.3401 82.9783 77.2874

72.8901 72.4993 80.8560 76.1502 81.3563

90.7985 83.0664 88.7109 75.0802 86.3680

89.0630 81.0048 81.2486 77.3694 84.0581

returnedobjs =

346.1759 346.2215 380.4898 374.0449 365.3601

340.7344 301.8091 361.7283 355.8178 362.9736

364.0989 325.8296 359.3755 348.0174 343.5285

310.6356 357.5345 349.7304 382.8267 355.7608

329.0410 330.0535 371.2572 341.1581 336.5948

372.4909 350.9848 324.9219 374.5088 366.4695

318.2830 356.3696 347.3120 357.8191 340.0936

313.6563 353.6365 346.6163 339.4710 329.2500

367.5620 363.2665 342.5950 332.0793 359.8169

370.6089 335.5051 344.6530 341.3033 350.2275

slsfobjs =

324.8475 343.6340 380.9830 359.8565 367.9645

325.1023 298.3504 364.9936 355.8631 370.2958

347.3463 306.2642 340.5955 328.5700 344.0462

301.9687 335.1739 344.9572 386.5459 340.2959

326.1542 303.1670 364.6229 322.6883 309.5548

358.8793 336.9207 294.1579 373.8217 354.3226

309.3495 341.5983 347.4905 353.4735 321.7065

306.1118 329.8039 350.4455 331.9323 339.1723

359.7329 360.2760 341.1205 324.9361 323.7917

345.4466 322.9694 345.5662 323.7164 336.3353

lcfrejs =

0.0470 0.5683 0.0105 0.0630 0.0025

0.8801 3.0741 0.0175 0.6774 0.5248

0.0861 1.9093 0.1747 0.3404 0.7247

1.5748 0.1852 0.2598 0.0023 0.5589

1.1437 0.4969 0.0511 0.0599 1.1124

0.0133 0.4360 0.3349 0.0520 0.0572

2.1251 0.0652 0.2949 0.2117 0.3499

2.0557 0.0070 0.2883 0.4794 1.8861

0.0200 0.0789 0.8255 0.2431 0.0411

0.0275 0.6102 0.7984 0.9046 0.5245

slsfrejs =

2.1864 1.8008 0.2035 1.3454 0.5447

2.5176 4.1652 0.2445 1.1428 0.9482

1.4955 3.6970 2.1991 2.0395 1.5494

3.2407 2.0675 1.4309 0.0735 2.0538

2.5921 3.9013 1.1970 2.4192 3.8900

1.1173 1.9246 3.9268 0.6826 1.4024

3.3787 1.9791 1.3589 1.2231 2.7102

3.2713 2.1163 1.2193 2.2375 2.2250

1.0319 0.5957 1.8598 2.4684 3.3233

2.1909 2.2859 1.3411 2.4468 1.5150

menusizes =

4.8500 4.9500 4.9000 4.9500 4.3500

4.9500 4.0000 4.8000 4.9000 4.6500

5.0000 4.7500 4.8500 4.9500 4.7000

4.4000 4.8000 4.7500 4.1000 5.0000

4.6500 4.3500 4.8500 5.0000 4.6000

4.9000 4.9000 4.6500 4.9500 4.8000

4.5000 4.9500 4.6500 4.8500 4.9000

4.4000 4.9500 4.9000 4.8500 4.1500

4.8500 5.0000 4.8500 4.7500 4.9500

4.9500 4.7500 4.4500 4.8000 4.8000

avepij =

0.1510 0.1562 0.1678 0.1751 0.1664

0.1652 0.1408 0.1742 0.1691 0.1677

0.1694 0.1534 0.1634 0.1595 0.1556

0.1381 0.1544 0.1792 0.1647 0.1650

0.1529 0.1527 0.1689 0.1665 0.1349

0.1638 0.1574 0.1336 0.1804 0.1566

0.1250 0.1734 0.1506 0.1606 0.1499

0.1299 0.1777 0.1647 0.1646 0.1320

0.1721 0.1787 0.1642 0.1545 0.1675

0.1635 0.1584 0.1526 0.1475 0.1643

pijover5 =

57 61 67 77 73

62 58 69 71 71

66 56 66 58 59

57 63 76 68 65

61 68 70 67 56

60 63 51 74 61

48 73 55 64 56

47 72 64 63 48

68 71 63 58 69

67 67 64 58 65

pijequal1 =

25 21 32 30 37

33 27 37 27 30

22 29 27 26 27

22 19 39 36 26

21 30 27 33 16

29 19 15 36 26

16 28 32 26 23

13 35 34 33 19

37 32 28 34 22

26 26 33 22 28

runtimes =

284.9567 127.8807 117.6181 200.7135 267.8315

169.6785 350.8776 164.4100 209.9296 346.1368

255.3799 115.9993 173.8553 167.8807 114.7789

249.8820 270.2050 117.8987 130.2002 202.2028

312.4506 348.0892 295.8639 211.7475 278.5081

302.2966 345.2371 307.9450 301.6438 294.0773

351.7809 340.0562 295.3317 331.5388 454.5879

491.8156 393.7277 174.6537 149.1508 287.8523

214.8360 126.0376 290.9977 122.9966 283.5321

267.7605 250.9057 156.4757 194.5416 152.3107

bestest =

-0.0314 -0.5725 -0.0064 -0.0509 -0.0014

-0.6251 -3.0304 -0.0038 -0.3289 -0.4992

-0.0657 -1.8576 -0.1295 -0.0741 -0.5985

-1.2897 -0.0096 -0.2005 -0.0000 -0.1979

-1.0589 -0.4708 -0.0101 -0.0398 -0.5626

-0.0125 -0.6769 -0.1885 -0.0115 -0.0145

-2.2758 -0.1312 -0.1285 -0.0893 -0.2380

-1.4966 -0.0000 -0.2174 -0.2966 -1.1411

-0.0213 -0.0022 -0.9040 -0.4602 -0.0122

-0.0110 -0.2393 -0.7775 -0.4243 -0.2124

guessbestiter =

5 4 2 3 5

5 1 6 3 1

7 5 4 6 7

4 5 1 4 3

2 7 6 7 3

4 7 6 5 4

3 7 5 3 7

1 5 4 4 4

2 2 5 7 7

6 3 1 6 6

estslsfobjs =

317.6243 342.9772 385.8106 355.8752 368.4455

327.5357 304.0048 370.4055 354.3599 364.4427

347.2895 320.9843 334.4123 331.1162 349.3372

300.0495 337.2648 346.7187 386.2565 346.5369

324.2836 309.4830 368.6981 330.0970 309.4073

357.6685 334.8622 299.8042 376.1074 356.5253

319.5039 329.6443 348.4949 350.7920 316.4434

298.5510 331.4514 349.2671 332.2567 340.7604

340.6026 360.3273 345.3680 311.6294 334.0371

343.5350 292.2002 342.3187 332.5790 350.4698

compportion80 =

0.7732 0.7273 0.7143 0.8182 0.7241

0.6667 0.6750 0.6875 0.7755 0.7312

0.7700 0.6737 0.7216 0.7172 0.7128

0.6818 0.6979 0.6737 0.7439 0.7500

0.6989 0.7701 0.6907 0.8200 0.7500

0.6633 0.7755 0.7527 0.7273 0.6563

0.7333 0.7172 0.6667 0.6701 0.7245

0.7273 0.7172 0.7449 0.7113 0.6867

0.7835 0.7300 0.6701 0.7053 0.7576

0.6970 0.8000 0.6292 0.7500 0.6563

compportionmin =

0.7732 0.7273 0.7143 0.8182 0.7241

0.6667 0.6750 0.6875 0.7755 0.7312

0.7700 0.6737 0.7216 0.7172 0.7128

0.6818 0.6979 0.6737 0.7439 0.7500

0.6989 0.7701 0.6907 0.8200 0.7500

0.6633 0.7755 0.7527 0.7273 0.6563

0.7333 0.7172 0.6667 0.6701 0.7245

0.7273 0.7172 0.7449 0.7113 0.6867

0.7835 0.7300 0.6701 0.7053 0.7576

0.6970 0.8000 0.6292 0.7500 0.6563

**96th experiment, Fixed Scens Welfare Profit b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gp=0.1, no v, slsf 50 scens iter>1**

lcfiterbetter =

0.7000

lcfiterworse =

0.3000

avepercbetter =

0.0246

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.7749

lcfiterave =

351.0777

slsfave =

343.2771

averuntime =

152.3746

avelcfrejs =

0.4534

aveslsfrejs =

1.6029

percbetter =

-0.0210 0.0073 0.0604 0.0160 0.0960

-0.0147 0.0203 0.0614 0.0500 0.0262

0.0317 0.0691 0.0268 0.0315 0.0146

0.0178 0.1384 0.0262 0.0074 0.0808

0.0215 -0.0014 -0.0129 0.0339 -0.0038

0.0132 0.0735 0.2096 0.0176 0.0133

-0.0053 0.0562 0.0265 -0.0025 0.0010

-0.0118 0.0096 0.0220 0.0202 0.0048

-0.0069 -0.0112 -0.0125 -0.0255 0.0446

0.0611 -0.0301 0.0241 -0.0005 -0.0428

avelcfavecomp =

11.0163

aveslsfavecomp =

10.5820

avelcfaveperccomp =

0.8881

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

73.7352

aveslsfavetotprofit =

83.2783

avelcfpercposprofit =

1

returnedobjs =

347.8938 371.9024 340.8163 367.5366 343.0566

343.6222 363.4612 356.5276 335.3129 354.2507

330.6575 334.5671 310.0447 356.4727 350.6108

366.2197 321.9732 333.6307 337.8397 350.8835

321.0081 371.1588 358.0143 373.7805 345.0308

356.0635 352.7053 377.0706 336.4853 344.8632

342.6869 346.5707 357.1866 386.0197 366.6415

350.6916 376.0177 368.7417 346.2790 358.4267

340.2321 366.4982 362.2875 372.4466 364.1250

342.3220 361.8145 343.6447 288.2017 359.5898

slsfobjs =

355.3622 369.2013 321.4149 361.7359 313.0221

348.7458 356.2347 335.8985 319.3583 345.1961

320.4896 312.9286 301.9487 345.5916 345.5485

359.8167 282.8318 325.1043 335.3667 324.6382

314.2524 371.6912 362.6819 361.5228 346.3388

351.4143 328.5674 311.7385 330.6524 340.3205

344.5116 328.1428 347.9823 387.0020 366.2616

354.8766 372.4448 360.7875 339.4141 356.7160

342.6060 370.6371 366.8814 382.2035 348.5665

322.6149 373.0304 335.5480 288.3366 375.6767

slsfavecomp =

10.2045 11.0936 8.3286 10.5626 10.4620

9.5315 12.8217 10.0230 9.2790 10.1375

9.0748 9.1751 12.8530 9.8963 9.7180

11.0995 9.4844 10.2917 7.3953 10.4294

10.7535 11.8359 9.7226 12.6015 8.1293

12.0175 11.0814 13.5835 10.5099 10.8210

9.7887 9.3975 9.9878 13.0124 9.6208

7.1353 13.4341 13.2862 11.0697 8.7613

11.0827 11.3919 9.7767 11.4431 12.4810

10.4041 11.2849 10.5532 9.9152 12.3563

lcfavecomp =

10.6874 11.6337 8.8412 10.8551 11.1296

9.9999 13.1389 10.2734 9.9958 10.3491

9.6398 9.3905 13.5588 9.9707 10.1021

11.3983 9.9890 10.5038 8.0611 10.9481

11.3816 12.2148 10.2910 12.7752 8.6124

12.5080 11.5716 13.7713 10.9806 11.1791

10.6097 9.7900 10.3083 13.1464 9.8798

7.5876 13.8416 13.7483 11.3976 9.0409

11.3430 11.7397 10.1756 11.8563 12.9649

10.8223 12.1633 11.2600 10.1735 13.2132

lcfaveperccomp =

0.9105 0.8493 0.9076 0.8596 0.9071

0.9309 0.8389 0.9005 0.9192 0.8818

0.8705 0.8765 0.8852 0.8668 0.8888

0.8412 0.9157 0.9323 0.9763 0.8912

0.9047 0.8330 0.9251 0.8274 0.9417

0.9052 0.8673 0.8311 0.8677 0.8863

1.0121 0.9508 0.8720 0.8183 0.8599

0.9065 0.8310 0.8830 0.8883 0.8355

0.9050 0.8490 0.9029 0.8850 0.8820

0.8809 0.9207 0.9034 0.8784 0.9011

lcfavetotprofit =

73.6517 79.0599 61.1242 79.1181 66.7450

69.5399 88.4240 69.9397 63.6738 75.4369

66.2072 65.3206 64.8346 77.2763 72.2722

81.8954 55.7057 69.1419 54.8394 66.1510

67.3333 85.2573 71.6310 91.2489 63.8500

74.6862 75.5006 93.1057 73.9446 73.7979

59.3394 65.0756 74.7629 97.3478 79.7057

62.0801 93.7929 80.5242 74.8968 72.8093

74.7453 84.6964 74.6558 85.3917 79.5609

70.3584 74.2742 68.8170 63.9134 79.3000

slsfavetotprofit =

84.1795 89.8947 71.5406 86.8528 75.5625

79.3687 95.1251 79.0987 76.1371 81.0310

74.4958 71.7587 84.0390 80.5793 80.9426

87.7903 67.4091 78.0698 69.0329 76.8332

80.5326 93.7414 83.7002 95.4672 74.2663

88.5301 85.5235 92.6433 82.8861 84.0589

79.5244 76.1924 81.5768 100.5768 83.4810

71.1832 101.0785 95.3156 82.2023 78.7498

82.9096 92.5024 83.3742 93.4194 92.2855

78.8118 91.5110 82.7120 68.9249 96.4939

returnedobjs =

347.8938 371.9024 340.8163 367.5366 343.0566

343.6222 363.4612 356.5276 335.3129 354.2507

330.6575 334.5671 310.0447 356.4727 350.6108

366.2197 321.9732 333.6307 337.8397 350.8835

321.0081 371.1588 358.0143 373.7805 345.0308

356.0635 352.7053 377.0706 336.4853 344.8632

342.6869 346.5707 357.1866 386.0197 366.6415

350.6916 376.0177 368.7417 346.2790 358.4267

340.2321 366.4982 362.2875 372.4466 364.1250

342.3220 361.8145 343.6447 288.2017 359.5898

slsfobjs =

355.3622 369.2013 321.4149 361.7359 313.0221

348.7458 356.2347 335.8985 319.3583 345.1961

320.4896 312.9286 301.9487 345.5916 345.5485

359.8167 282.8318 325.1043 335.3667 324.6382

314.2524 371.6912 362.6819 361.5228 346.3388

351.4143 328.5674 311.7385 330.6524 340.3205

344.5116 328.1428 347.9823 387.0020 366.2616

354.8766 372.4448 360.7875 339.4141 356.7160

342.6060 370.6371 366.8814 382.2035 348.5665

322.6149 373.0304 335.5480 288.3366 375.6767

lcfrejs =

0.3832 0.0114 0.3025 0.0182 0.3604

0.7355 0.3008 0.0551 0.5382 0.4323

1.0892 0.9123 2.0312 0.3396 0.2343

0.0833 1.1731 0.9275 0.2346 0.1028

1.6567 0.0561 0.0820 0.0387 0.1908

0.5628 0.1615 0.0412 1.2364 0.6034

0.0424 0.1949 0.1070 0.0086 0.1266

0.0023 0.0116 0.0581 1.0169 0.0966

1.2864 0.1069 0.0090 0.0211 0.0545

0.4386 0.0145 0.1930 3.8911 0.0959

slsfrejs =

0.9271 0.5033 2.3133 0.9497 3.2283

1.2442 1.2057 1.9564 1.8082 1.6356

2.3940 2.8336 3.9667 1.4209 1.1837

0.9696 4.8063 2.6467 1.4695 2.7905

3.2565 0.5754 0.7640 0.9715 0.9397

1.8170 1.5550 2.4496 1.8010 1.7623

1.3514 2.0592 0.9764 0.1028 0.4511

0.3526 0.4560 1.6230 2.1352 0.6431

2.0422 0.3805 0.3767 0.0592 1.7121

2.6585 0.4782 1.3774 4.4119 0.3527

menusizes =

4.9000 4.4000 4.8500 4.8500 4.7500

4.5000 4.9000 4.8000 4.7500 4.8500

4.6000 4.5500 4.2000 4.4500 4.6000

4.7500 4.6500 4.8500 4.5000 4.7000

4.9000 4.6000 4.7000 4.8500 4.7500

4.8500 4.6000 4.7500 4.8000 4.8000

4.9500 4.7000 4.9000 4.6500 4.5500

4.3500 4.9500 4.8000 4.4500 4.6500

4.3500 4.6000 4.8000 4.8500 4.4000

4.7500 4.4000 4.2500 4.0500 4.8000

avepij =

0.1639 0.1690 0.1488 0.1812 0.1456

0.1496 0.1658 0.1674 0.1623 0.1581

0.1459 0.1525 0.1348 0.1528 0.1593

0.1534 0.1502 0.1442 0.1576 0.1567

0.1505 0.1689 0.1677 0.1677 0.1618

0.1844 0.1515 0.1626 0.1503 0.1554

0.1568 0.1540 0.1652 0.1651 0.1607

0.1708 0.1716 0.1793 0.1559 0.1879

0.1490 0.1707 0.1646 0.1750 0.1449

0.1501 0.1567 0.1367 0.1253 0.1582

pijover5 =

60 71 58 79 58

57 61 72 67 59

54 65 58 58 60

60 59 52 65 66

60 67 64 66 64

77 63 69 62 59

64 62 65 69 63

68 69 80 63 79

60 70 61 72 57

53 65 57 47 65

pijequal1 =

24 38 22 42 20

34 32 24 24 30

24 32 17 32 35

25 21 26 28 23

20 36 35 32 34

37 20 18 21 30

24 24 22 23 35

40 29 35 27 42

26 34 32 31 24

23 32 17 24 22

runtimes =

127.6386 119.9941 137.0990 110.1244 180.4380

145.7946 165.7939 138.8240 168.5528 160.3728

112.4618 162.1098 152.5992 207.8154 97.3493

104.6765 110.1983 210.7993 118.6913 155.8925

101.7633 100.8856 100.8242 126.6300 182.8307

156.9414 208.8514 229.3242 255.1149 131.3785

119.7077 108.9697 139.5771 115.9206 117.5849

107.0926 184.0664 158.5868 172.6523 104.4533

276.8947 116.1196 112.9470 114.4425 286.3209

283.7478 124.0743 214.3789 149.2050 130.2180

bestest =

-0.2973 -0.0017 -0.1733 -0.0077 -0.2609

-0.8964 -0.4973 -0.0798 -0.0953 -0.1171

-1.1736 -0.6210 -1.8395 -0.1055 -0.0959

-0.0240 -0.8752 -0.8894 -0.1384 -0.0374

-1.9092 -0.0238 -0.0206 -0.0152 -0.1027

-0.5265 -0.0424 -0.0222 -0.5908 -0.4544

-0.0257 -0.0739 -0.0234 -0.0007 -0.0172

-0.0071 -0.0016 -0.0165 -1.0060 -0.0318

-0.4913 -0.1867 -0.0003 -0.0033 -0.0499

-0.1810 -0.0077 -0.3398 -3.2003 -0.0037

guessbestiter =

5 4 3 6 7

4 6 7 4 4

5 2 4 6 3

5 6 7 3 5

4 3 4 6 2

2 5 3 1 7

4 6 6 1 4

7 6 4 7 2

2 5 5 2 5

7 6 7 1 6

estslsfobjs =

351.5754 360.9730 324.1174 357.0195 317.5805

348.6903 354.8167 328.0958 306.1063 341.1542

319.6415 311.2643 295.6434 346.3635 347.4942

361.2941 286.5401 327.5024 338.9351 321.7468

316.0609 370.0373 366.5199 361.8135 348.7984

357.6696 341.0089 310.0849 307.7157 347.4432

338.5370 325.6820 341.9289 388.6660 364.2160

358.8794 370.2280 363.0281 342.3141 361.7646

343.5165 374.3999 360.8160 382.1431 354.7706

318.4434 376.2439 332.9823 288.5793 374.0481

compportion80 =

0.7551 0.6932 0.7629 0.6495 0.7895

0.7778 0.6020 0.6875 0.6842 0.7835

0.7609 0.7253 0.7143 0.6517 0.7065

0.6632 0.7634 0.7629 0.7333 0.7660

0.7143 0.7283 0.6915 0.6804 0.7684

0.7320 0.7391 0.7368 0.7813 0.7188

0.8081 0.7660 0.7551 0.6989 0.7363

0.7701 0.7677 0.8021 0.6966 0.6452

0.6552 0.5543 0.5938 0.7010 0.7841

0.6526 0.7045 0.7647 0.6173 0.7083

compportionmin =

0.7551 0.6932 0.7629 0.6495 0.7895

0.7778 0.6020 0.6875 0.6842 0.7835

0.7609 0.7253 0.7143 0.6517 0.7065

0.6632 0.7634 0.7629 0.7333 0.7660

0.7143 0.7283 0.6915 0.6804 0.7684

0.7320 0.7391 0.7368 0.7813 0.7188

0.8081 0.7660 0.7551 0.6989 0.7363

0.7701 0.7677 0.8021 0.6966 0.6452

0.6552 0.5543 0.5938 0.7010 0.7841

0.6526 0.7045 0.7647 0.6173 0.7083

**97th experiment, Fixed Scens Welfare Profit b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gp=0.1, no v, slsf 50 scens iter>1, noz i>1**

lcfiterbetter =

0.6800

lcfiterworse =

0.3200

avepercbetter =

0.0196

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.8034

lcfiterave =

352.8183

slsfave =

346.3003

averuntime =

124.3211

avelcfrejs =

0.3943

aveslsfrejs =

1.5992

percbetter =

0.0302 0.0147 0.0025 -0.0052 -0.0067

0.0330 0.0257 -0.0089 0.0230 0.0246

0.0243 0.0723 -0.0398 -0.0042 0.0245

-0.0162 -0.0029 0.0105 0.0223 -0.0253

-0.0151 0.0827 0.0529 0.0691 0.0287

-0.0092 0.0448 0.0084 0.0199 -0.0010

0.0196 -0.0005 0.0178 0.0022 0.0060

0.0781 0.0058 0.0815 -0.0021 -0.0010

0.0913 0.0306 0.0180 0.0214 0.0234

0.0091 -0.0019 0.0549 0.0624 -0.0142

avelcfavecomp =

11.1508

aveslsfavecomp =

10.7898

avelcfaveperccomp =

0.8832

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

75.2941

aveslsfavetotprofit =

84.4519

avelcfpercposprofit =

1

returnedobjs =

352.1200 365.1797 367.4163 365.5291 364.5039

350.6684 350.7545 338.3989 369.6956 344.1687

368.1006 346.5915 284.9607 347.0839 374.1877

382.2559 342.4029 347.9726 360.9181 368.1449

368.4929 314.2493 337.9552 366.8709 347.5744

308.3698 346.1058 348.8860 361.2791 360.3131

362.0465 362.9534 370.5608 355.7116 352.8156

343.9124 361.0174 357.8108 308.5644 365.7822

367.6772 350.4509 358.2158 322.7989 355.8567

373.0862 370.4600 356.8998 339.2889 353.8527

slsfobjs =

341.7866 359.8993 366.4921 367.4550 366.9679

339.4511 341.9548 341.4345 361.3918 335.8992

359.3706 323.2345 296.7703 348.5440 365.2551

388.5654 343.4124 344.3432 353.0545 377.7169

374.1486 290.2588 320.9735 343.1727 337.8809

311.2352 331.2573 345.9853 354.2402 360.6752

355.0865 363.1528 364.0802 354.9343 350.7242

318.9994 358.9236 330.8545 309.2288 366.1370

336.9107 340.0400 351.8799 316.0228 347.7287

369.7038 371.1814 338.3151 319.3466 358.9401

slsfavecomp =

9.1506 11.3604 10.8791 13.6955 10.2984

9.1949 9.9360 9.2009 10.6634 8.3786

10.6675 9.4182 10.7121 9.1021 11.8688

13.2825 12.1135 9.6541 11.3898 10.1189

9.6482 9.4300 12.0657 11.3381 9.5715

9.9790 14.7083 10.3193 8.9438 9.6246

10.5805 10.7009 12.1662 9.8972 9.5506

13.3037 10.8191 12.0345 11.5722 11.5349

14.4597 12.1839 9.8221 9.0600 12.5162

12.5696 10.9196 11.3941 9.6317 8.0616

lcfavecomp =

9.4344 11.6635 11.1311 14.4730 10.7355

9.6736 10.5899 9.9438 10.7827 9.0288

10.6363 9.9888 11.3292 9.5014 11.8046

13.6373 12.8114 10.2480 11.8049 10.5684

10.0305 9.9708 12.2854 11.0536 10.1378

10.3140 15.0226 10.6187 9.1833 9.9111

10.9916 11.0240 12.4560 10.2030 9.8051

13.2711 11.0158 12.0929 11.8274 12.1371

14.3956 12.6790 10.1524 10.0234 12.9114

12.8628 11.2420 11.8352 9.7598 8.5388

lcfaveperccomp =

0.8824 0.8680 0.8722 0.8844 0.8743

0.9537 0.8765 0.8823 0.8284 0.9150

0.8351 0.9228 0.9252 0.9045 0.8697

0.8548 0.9831 0.9241 0.9216 0.9036

0.8616 0.9000 0.9369 0.8936 0.9408

0.8788 0.8380 0.8438 0.8376 0.8390

0.8780 0.8856 0.8614 0.8648 0.8639

0.8753 0.8224 0.8541 0.8717 0.8536

0.8915 0.8602 0.8795 0.9469 0.8979

0.8664 0.8775 0.8944 0.8795 0.8853

lcfavetotprofit =

71.2299 83.3517 82.2433 81.5947 76.6880

65.6453 69.4445 66.6775 84.6361 61.6555

83.2222 61.0014 57.9020 71.2590 87.9245

94.5637 63.7729 66.2021 72.3918 77.7967

77.4896 60.9410 70.6269 80.7409 64.9114

67.4716 92.1745 75.7335 74.1317 76.9936

76.6871 79.7168 82.1643 75.2040 75.6404

81.8072 82.4370 82.5078 71.7634 78.3505

86.8648 78.4443 75.2576 51.6037 80.5022

90.6056 83.1917 73.7043 72.3197 65.5146

slsfavetotprofit =

76.9097 90.3566 89.4533 100.5878 86.6754

77.3556 81.3743 77.5527 87.5362 73.8330

85.1196 73.7419 72.5762 77.1134 91.2482

102.5833 88.6020 78.9212 86.6415 86.7630

84.7116 69.5103 83.7727 83.7741 78.9363

75.1340 98.6916 83.0089 78.8513 82.7420

86.3558 87.3611 91.2108 82.2294 80.9351

87.2838 86.9252 86.8004 80.4376 90.4643

95.7203 89.0627 81.7156 72.3349 93.5266

97.1960 89.9795 88.0382 76.4058 74.5327

returnedobjs =

352.1200 365.1797 367.4163 365.5291 364.5039

350.6684 350.7545 338.3989 369.6956 344.1687

368.1006 346.5915 284.9607 347.0839 374.1877

382.2559 342.4029 347.9726 360.9181 368.1449

368.4929 314.2493 337.9552 366.8709 347.5744

308.3698 346.1058 348.8860 361.2791 360.3131

362.0465 362.9534 370.5608 355.7116 352.8156

343.9124 361.0174 357.8108 308.5644 365.7822

367.6772 350.4509 358.2158 322.7989 355.8567

373.0862 370.4600 356.8998 339.2889 353.8527

slsfobjs =

341.7866 359.8993 366.4921 367.4550 366.9679

339.4511 341.9548 341.4345 361.3918 335.8992

359.3706 323.2345 296.7703 348.5440 365.2551

388.5654 343.4124 344.3432 353.0545 377.7169

374.1486 290.2588 320.9735 343.1727 337.8809

311.2352 331.2573 345.9853 354.2402 360.6752

355.0865 363.1528 364.0802 354.9343 350.7242

318.9994 358.9236 330.8545 309.2288 366.1370

336.9107 340.0400 351.8799 316.0228 347.7287

369.7038 371.1814 338.3151 319.3466 358.9401

lcfrejs =

0.1246 0.1364 0.0034 0.2475 0.0112

0.0415 0.1864 0.8312 0.0649 0.3188

0.1042 0.0927 2.0035 0.4969 0.0054

0.0007 0.1352 0.3403 0.0100 0.0051

0.0006 1.2975 0.6007 0.0012 0.1155

1.9094 1.9168 0.4363 0.1409 0.0732

0.0223 0.0428 0.1581 0.5836 0.6558

0.6695 0.7152 0.4102 2.3334 0.0277

0.0740 0.2771 0.0878 0.5060 0.2059

0.1515 0.0489 0.1951 0.8733 0.0262

slsfrejs =

1.5373 0.7982 0.5830 1.0610 0.3318

1.5159 1.5257 1.3784 0.8590 1.6137

1.1094 2.6268 4.0951 1.2538 1.0756

0.1065 2.1471 1.3676 1.5321 0.0499

0.0445 4.3169 2.9298 2.0411 1.4650

3.3146 2.6185 1.5789 0.8884 0.5988

1.1379 0.6151 1.2494 1.1201 1.1484

3.5675 1.1215 2.5043 3.3910 0.7542

2.8317 1.8785 1.1052 2.7595 2.1056

0.7016 0.4336 2.0646 2.6941 0.4112

menusizes =

4.9000 4.7500 4.9000 4.7500 5.0000

4.8000 4.9500 4.8000 5.0000 4.7500

5.0000 4.9500 4.8500 4.7500 4.8500

4.9500 4.9000 4.8000 4.8500 4.9500

4.5500 4.8000 4.5500 4.7500 4.8500

4.8000 5.0000 4.6500 4.5500 5.0000

4.9500 4.9500 4.1500 4.9000 4.8500

5.0000 4.8000 4.8500 4.7500 4.8000

5.0000 4.9500 4.9500 4.6000 4.9500

4.7000 5.0000 4.7000 5.0000 4.8000

avepij =

0.1688 0.1616 0.1858 0.1771 0.1714

0.1587 0.1721 0.1512 0.1770 0.1529

0.1674 0.1921 0.1560 0.1671 0.1722

0.1777 0.1852 0.1601 0.1862 0.1848

0.1805 0.1438 0.1445 0.1844 0.1639

0.1362 0.1520 0.1598 0.1526 0.1616

0.1796 0.1692 0.1541 0.1638 0.1781

0.1461 0.1641 0.1481 0.1399 0.1794

0.1708 0.1513 0.1694 0.1600 0.1669

0.1568 0.1670 0.1629 0.1550 0.1646

pijover5 =

66 66 75 72 69

61 68 58 69 57

66 79 66 65 67

73 82 63 76 76

78 55 54 74 66

46 60 61 59 63

71 68 71 65 72

56 65 54 50 72

73 58 65 67 61

61 66 65 63 65

pijequal1 =

31 26 42 39 32

32 35 19 34 29

26 43 24 33 34

34 43 25 46 37

36 17 19 48 29

24 20 26 28 31

38 29 31 29 36

18 29 11 26 40

30 19 36 32 36

24 36 32 23 33

runtimes =

130.2163 114.8453 105.6421 124.4207 103.2739

128.1554 132.8763 146.3391 100.4734 98.4745

134.2462 158.0067 106.4468 129.8262 130.8444

104.0890 113.9276 119.9548 133.1504 103.1168

104.1305 136.0937 133.1959 132.8907 106.4234

107.9213 144.6629 111.0059 101.9164 111.8443

107.7076 107.3823 132.1383 105.7874 104.7413

142.3734 126.8819 177.7365 218.8033 118.5467

139.8311 119.8348 119.4954 105.1432 107.1395

129.0961 111.7385 117.2496 172.3667 143.6496

bestest =

-0.0304 -0.0214 -0.0001 -0.1172 -0.0003

-0.0279 -0.0450 -0.4777 -0.0012 -0.2887

-0.0016 -0.0136 -2.0002 -0.1563 -0.0001

-0.0000 -0.0484 -0.1696 -0.0217 -0.0001

-0.0000 -0.5598 -0.6212 -0.0000 -0.1535

-1.4242 -0.6070 -0.4038 -0.0461 -0.0174

-0.0201 -0.0262 -0.3158 -0.4923 -0.2810

-0.8180 -0.2554 -0.0336 -2.1639 -0.0098

-0.0454 -0.1509 -0.0392 -0.3782 -0.1499

-0.0538 -0.0209 -0.2725 -0.8167 -0.0021

guessbestiter =

7 2 6 3 1

7 3 6 4 7

4 5 7 4 6

6 6 6 7 2

1 5 7 6 6

2 2 4 4 5

7 2 1 3 6

5 2 3 6 7

6 3 3 5 5

4 6 5 2 6

estslsfobjs =

347.7959 360.8383 366.4486 364.1675 360.2487

348.4461 350.7203 335.9868 368.3795 336.8019

358.6758 324.5116 300.2660 351.8278 363.3297

389.6919 345.5974 328.8016 357.1204 377.6116

371.3092 293.4716 316.0424 343.8833 340.9534

311.4552 331.9527 352.1562 344.4883 350.1902

357.5377 356.3586 363.0766 356.9245 357.5961

322.3401 357.5460 341.4496 318.7774 364.5237

336.2804 338.3265 355.9897 315.6433 351.0493

374.8319 372.5898 351.0526 330.2812 357.1714

compportion80 =

0.6224 0.6947 0.6531 0.7684 0.8000

0.7292 0.7879 0.6771 0.6500 0.6000

0.7800 0.7475 0.7216 0.7158 0.5773

0.7273 0.8265 0.8125 0.8041 0.6970

0.6813 0.8333 0.7912 0.6316 0.7010

0.6354 0.6800 0.7204 0.6374 0.7300

0.6970 0.6970 0.6988 0.7755 0.6804

0.7000 0.6875 0.6907 0.7789 0.7708

0.7300 0.6869 0.7374 0.8152 0.7071

0.6383 0.7100 0.7553 0.7200 0.7083

compportionmin =

0.6224 0.6947 0.6531 0.7684 0.8000

0.7292 0.7879 0.6771 0.6500 0.6000

0.7800 0.7475 0.7216 0.7158 0.5773

0.7273 0.8265 0.8125 0.8041 0.6970

0.6813 0.8333 0.7912 0.6316 0.7010

0.6354 0.6800 0.7204 0.6374 0.7300

0.6970 0.6970 0.6988 0.7755 0.6804

0.7000 0.6875 0.6907 0.7789 0.7708

0.7300 0.6869 0.7374 0.8152 0.7071

0.6383 0.7100 0.7553 0.7200 0.7083

**98th experiment, Fixed Scens Welfare Profit b=0.8, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gp=0.1, no v,**

lcfiterbetter =

0.8200

lcfiterworse =

0.1800

avepercbetter =

0.0299

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.6556

lcfiterave =

352.0256

slsfave =

342.3420

averuntime =

208.8125

avelcfrejs =

0.6560

aveslsfrejs =

1.7995

percbetter =

0.0039 0.0102 -0.0229 0.0598 0.0066

-0.0083 0.0007 0.0088 0.0801 -0.0176

0.0023 0.0638 0.0291 -0.0147 0.0386

0.0906 0.0506 0.0439 0.0052 0.0294

-0.0024 0.0695 0.0108 0.0423 0.1247

0.0732 0.0177 -0.0079 -0.0023 0.1021

0.0028 0.0364 0.0288 0.0086 0.0059

0.0362 0.0416 0.1103 0.0585 0.0273

0.0091 0.1241 0.0350 -0.0051 0.0286

-0.0184 0.0211 0.0134 0.0131 0.0283

avelcfavecomp =

11.2081

aveslsfavecomp =

10.9441

avelcfaveperccomp =

0.8765

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

76.9553

aveslsfavetotprofit =

84.1405

avelcfpercposprofit =

1

returnedobjs =

356.7508 371.8407 366.0958 304.3291 355.2075

322.2488 376.8675 349.2288 346.3372 337.1879

375.7497 354.0657 350.6903 353.1104 334.9187

355.0932 356.6539 348.5169 377.6723 359.8354

342.9043 353.1105 357.2871 352.3274 334.5717

350.4606 354.0949 369.3126 366.4665 328.2610

346.9426 367.5529 339.8585 338.1406 337.6013

354.5778 350.2249 363.1992 340.4352 357.2421

368.8146 368.0383 319.3479 367.5317 357.1540

365.1308 329.1882 358.8933 340.7039 369.5037

slsfobjs =

355.3622 368.0769 374.6871 287.1437 352.8675

324.9449 376.6223 346.1823 320.6639 343.2168

374.9021 332.8414 340.7727 358.3713 322.4566

325.5930 339.4631 333.8478 375.7344 349.5590

343.7247 330.1583 353.4858 338.0161 297.4715

326.5701 347.9231 372.2589 367.3137 297.8388

345.9705 354.6473 330.3586 335.2600 335.6274

342.1978 336.2295 327.1105 321.6068 347.7356

365.4909 327.4136 308.5543 369.4342 347.2222

371.9885 322.3727 354.1627 336.3001 359.3444

slsfavecomp =

10.2045 11.7836 10.1138 9.5659 10.7490

12.4138 12.0599 10.8232 12.2282 9.9357

11.0451 12.7717 10.2226 10.1805 12.2270

11.3172 11.9648 11.3219 11.3647 10.8529

8.1365 13.3083 8.5684 10.3773 11.2575

11.7875 9.7724 10.7684 11.8311 10.0035

10.5158 12.1527 10.5907 12.8028 11.2730

11.7131 9.8668 11.4395 9.3756 11.7168

10.4148 13.2772 9.4512 10.8602 11.6881

9.9146 6.9501 10.4982 11.6907 12.0583

lcfavecomp =

10.5630 11.9232 10.5954 9.8919 11.1886

12.6726 12.2422 11.1177 12.4314 10.3095

11.1246 12.8140 10.9950 10.5835 12.3965

11.6943 12.2658 11.8271 11.4646 11.0812

8.7325 12.9495 8.8924 10.3425 11.4011

11.4993 9.9647 11.0818 11.9371 10.1255

10.9081 12.4673 10.9536 13.0851 11.6822

12.3045 10.3860 11.2069 9.7703 12.0117

10.7061 12.8590 9.7806 11.2755 12.2496

10.3455 7.3504 10.7831 11.9855 12.1852

lcfaveperccomp =

0.8840 0.8179 0.8986 0.8587 0.9002

0.8849 0.8433 0.8825 0.9189 0.8782

0.8204 0.8789 0.9157 0.8940 0.8500

0.9229 0.8951 0.8796 0.8167 0.8879

0.9403 0.8644 0.8776 0.8521 0.9032

0.8744 0.8855 0.8391 0.8275 0.8572

0.8531 0.8435 0.8572 0.8424 0.8339

0.8842 0.9663 0.8759 0.9097 0.8862

0.8364 0.8736 0.9055 0.8817 0.8826

0.9369 0.9249 0.8728 0.8767 0.8304

lcfavetotprofit =

77.5560 91.0091 77.0836 62.0695 75.5329

74.3195 91.3335 76.5453 78.0852 74.5469

88.6528 78.7564 70.4151 76.9193 78.5040

68.2025 75.3151 71.2960 89.1234 78.4757

62.4551 86.9643 71.1510 77.2984 66.5485

81.7982 73.7089 84.1236 89.7383 69.1940

75.9601 84.6407 75.5761 81.6068 78.4628

76.9617 67.9203 78.6290 65.5890 82.1682

80.2190 84.8467 63.6349 79.6440 74.1929

74.8883 56.0026 80.4719 81.1963 88.4320

slsfavetotprofit =

84.1795 92.8733 86.7626 67.6378 85.5334

85.4106 95.4646 83.1095 86.1716 81.5898

90.5739 88.7919 81.7672 85.1705 83.4522

81.8421 87.2026 84.3928 91.7059 84.1824

74.5785 87.6912 77.6487 78.8876 74.5910

82.7710 79.7862 89.4620 92.9451 70.2022

82.3660 93.3856 82.0153 89.9066 85.1033

88.6238 80.2130 81.1296 75.8549 91.0160

86.2246 87.7911 73.2286 89.1338 89.5300

85.0215 64.2627 85.8540 87.3247 92.6622

returnedobjs =

356.7508 371.8407 366.0958 304.3291 355.2075

322.2488 376.8675 349.2288 346.3372 337.1879

375.7497 354.0657 350.6903 353.1104 334.9187

355.0932 356.6539 348.5169 377.6723 359.8354

342.9043 353.1105 357.2871 352.3274 334.5717

350.4606 354.0949 369.3126 366.4665 328.2610

346.9426 367.5529 339.8585 338.1406 337.6013

354.5778 350.2249 363.1992 340.4352 357.2421

368.8146 368.0383 319.3479 367.5317 357.1540

365.1308 329.1882 358.8933 340.7039 369.5037

slsfobjs =

355.3622 368.0769 374.6871 287.1437 352.8675

324.9449 376.6223 346.1823 320.6639 343.2168

374.9021 332.8414 340.7727 358.3713 322.4566

325.5930 339.4631 333.8478 375.7344 349.5590

343.7247 330.1583 353.4858 338.0161 297.4715

326.5701 347.9231 372.2589 367.3137 297.8388

345.9705 354.6473 330.3586 335.2600 335.6274

342.1978 336.2295 327.1105 321.6068 347.7356

365.4909 327.4136 308.5543 369.4342 347.2222

371.9885 322.3727 354.1627 336.3001 359.3444

lcfrejs =

0.4701 0.1350 0 2.9204 0.2211

2.2835 0.1931 1.0128 1.0327 1.0384

0.2036 0.5073 0.4597 0.7119 1.8675

0.0452 0.1136 0.1725 0.1402 0.1568

0.2429 1.2328 0.1023 0.6052 1.1068

0.6482 0.3864 0.0327 0.5541 1.8241

1.1800 0.2189 0.8009 1.7730 1.3558

0.4556 0.2080 0.1095 0.6870 0.4373

0.1121 0.1636 1.5308 0.0809 0.0226

0.0515 0.9712 0.3908 1.6856 0.1430

slsfrejs =

0.9271 0.5930 0.1301 4.5327 1.0170

2.8478 0.4746 1.5925 2.8495 1.4080

0.3996 2.7032 1.7051 0.9244 2.8678

2.7782 2.0315 2.1256 0.4898 1.5541

1.0976 3.1781 0.7418 2.1423 4.3773

2.9701 1.3130 0.2713 0.7628 4.0229

1.5565 1.4030 2.0634 2.6113 1.8111

1.9514 1.6154 2.7776 2.1706 1.4526

0.4340 3.1611 3.1422 0.4817 1.6984

0.2133 2.0859 1.3012 2.1386 1.0766

menusizes =

4.8000 4.9000 4.7500 4.0500 4.6000

4.3500 4.8000 4.5500 4.6500 4.7500

4.9000 4.7500 4.8000 4.7000 4.7500

4.8000 4.9500 4.8000 4.7000 4.5000

4.8000 4.7000 5.0000 4.5000 4.2500

4.6000 4.7000 4.9500 4.9000 4.3000

4.5500 4.7500 4.6500 4.8500 4.0500

4.8500 4.4000 4.9500 4.8000 5.0000

4.8500 4.9000 4.9000 4.9500 4.8000

4.9000 4.6500 4.8000 4.9500 4.9000

avepij =

0.1557 0.1611 0.1660 0.1203 0.1421

0.1327 0.1681 0.1589 0.1487 0.1460

0.1832 0.1774 0.1464 0.1590 0.1382

0.1648 0.1636 0.1562 0.1845 0.1562

0.1467 0.1576 0.1644 0.1500 0.1524

0.1503 0.1670 0.1758 0.1788 0.1280

0.1370 0.1738 0.1544 0.1473 0.1417

0.1639 0.1483 0.1598 0.1546 0.1709

0.1655 0.1568 0.1523 0.1880 0.1708

0.1818 0.1549 0.1522 0.1560 0.1563

pijover5 =

60 62 65 46 55

51 65 65 60 55

71 78 57 62 57

68 67 65 78 62

58 58 65 57 66

63 68 71 72 51

51 71 65 61 60

65 59 67 60 67

72 66 64 79 71

72 61 55 61 59

pijequal1 =

20 30 36 15 26

21 30 31 18 20

38 36 23 29 13

24 27 22 41 27

24 24 27 27 31

25 34 34 41 10

19 39 24 17 31

33 28 24 28 33

17 13 21 41 34

40 33 25 22 20

runtimes =

233.1402 295.3046 118.8039 239.8522 332.4100

330.4688 123.6842 314.6891 301.8442 299.4987

104.5989 291.0922 207.7840 244.3814 120.5768

215.1020 209.1184 128.3022 108.8700 298.5219

271.4068 300.3676 203.7266 260.9090 258.8680

234.0235 301.8286 106.2904 114.0954 300.4354

302.4938 112.7819 231.8472 134.1956 257.4497

170.7594 135.0212 232.3939 129.9594 163.6758

131.3264 266.8613 131.6782 110.6573 259.4897

109.1661 264.3930 130.2384 111.5635 184.6792

bestest =

-0.4483 -0.0210 0 -2.1983 -0.1183

-1.8779 -0.2181 -1.0006 -1.1004 -0.9907

-0.1248 -0.5043 -0.3544 -0.2871 -1.4477

-0.0542 -0.0444 -0.0689 -0.0158 -0.4846

-0.0889 -1.2480 -0.0023 -0.2393 -1.1165

-0.1800 -0.2226 -0.0316 -0.1473 -1.6342

-1.1614 -0.1999 -0.4454 -1.8603 -1.1699

-0.3623 -0.0938 -0.0888 -0.0571 -0.3346

-0.0358 -0.0171 -1.3157 -0.1038 -0.0313

-0.0183 -0.9584 -0.3287 -1.1794 -0.0207

guessbestiter =

7 6 5 3 1

7 4 4 4 2

6 6 6 1 7

2 5 3 1 6

6 7 6 4 7

3 4 7 4 2

6 6 7 2 1

4 7 7 7 2

1 5 6 3 7

7 7 4 3 6

estslsfobjs =

351.5754 367.5810 371.6655 289.3945 353.3429

323.8543 377.7354 348.7361 332.6591 340.9475

379.3821 331.5080 348.8132 363.4895 318.0461

330.2928 341.2673 320.5883 372.6507 345.9553

348.8210 329.4744 366.0519 335.8621 295.6019

332.4879 343.3114 369.5759 369.1381 299.5738

340.5130 361.3050 335.4930 329.8122 330.8688

345.1881 343.0546 326.6834 310.5714 352.6478

363.9238 327.2831 312.1752 370.3065 347.6697

372.8476 322.7772 359.3785 341.6038 353.9981

compportion80 =

0.6979 0.6633 0.6105 0.6790 0.7717

0.6897 0.5625 0.6703 0.6774 0.6737

0.5816 0.7368 0.5938 0.6809 0.7474

0.8229 0.8283 0.7604 0.7660 0.6778

0.6250 0.5851 0.6300 0.6667 0.7294

0.6848 0.7340 0.6667 0.6531 0.6163

0.7143 0.6000 0.7312 0.7216 0.7284

0.6804 0.8068 0.6970 0.7396 0.6600

0.7320 0.7347 0.7041 0.6162 0.7188

0.7041 0.6989 0.7188 0.6566 0.6735

compportionmin =

0.6979 0.6633 0.6105 0.6790 0.7717

0.6897 0.5625 0.6703 0.6774 0.6737

0.5816 0.7368 0.5938 0.6809 0.7474

0.8229 0.8283 0.7604 0.7660 0.6778

0.6250 0.5851 0.6300 0.6667 0.7294

0.6848 0.7340 0.6667 0.6531 0.6163

0.7143 0.6000 0.7312 0.7216 0.7284

0.6804 0.8068 0.6970 0.7396 0.6600

0.7320 0.7347 0.7041 0.6162 0.7188

0.7041 0.6989 0.7188 0.6566 0.6735

**99th experiment, Fixed Scens Welfare Profit b=0.7, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gp=0.1, no v,**

lcfiterbetter =

0.8000

lcfiterworse =

0.2000

avepercbetter =

0.0305

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.8392

lcfiterave =

348.0791

slsfave =

338.2104

averuntime =

206.6303

avelcfrejs =

0.3989

aveslsfrejs =

1.9122

percbetter =

0.0061 0.0225 0.0837 -0.0358 -0.0021

0.0315 0.0344 0.0200 0.0084 0.0443

0.0075 0.0179 -0.0010 0.0028 0.0559

0.0411 0.0241 0.0174 0.0050 0.0349

0.0622 0.0802 0.0359 0.0606 -0.0058

-0.0044 0.0216 0.1072 0.0134 0.1381

-0.0030 0.0612 0.0258 0.1069 0.0379

0.0352 0.0203 0.0636 0.0367 -0.0049

0.0740 -0.0150 0.0093 0.0062 -0.0250

0.0312 -0.0023 0.0071 0.0430 0.0911

avelcfavecomp =

10.6972

aveslsfavecomp =

10.2819

avelcfaveperccomp =

0.8964

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

70.6339

aveslsfavetotprofit =

80.7676

avelcfpercposprofit =

1

returnedobjs =

363.5680 340.1644 348.2788 312.8632 368.7182

365.8196 354.1241 354.4046 373.5304 354.7704

341.1083 344.4962 347.7261 367.0562 363.2861

338.4807 359.7735 360.8138 363.1797 347.4282

364.3658 340.8739 341.2362 352.9560 302.5259

333.9214 346.3207 335.3132 354.9765 324.8481

310.9337 345.5107 364.3537 343.1230 324.8624

333.3650 358.9499 357.5938 358.9080 363.5733

343.3570 357.4453 298.9020 361.7065 381.5783

340.9018 363.2681 334.0263 361.0623 333.6038

slsfobjs =

361.3806 332.6837 321.3662 324.4853 369.5033

354.6340 342.3517 347.4473 370.4348 339.7270

338.5765 338.4332 348.0613 366.0200 344.0650

325.1221 351.3013 354.6515 361.3832 335.7067

343.0298 315.5699 329.4159 332.7776 304.3029

335.3964 338.9955 302.8537 350.2992 285.4394

311.8761 325.5911 355.1875 309.9875 313.0014

322.0171 351.8103 336.2230 346.1904 365.3589

319.6888 362.8791 296.1589 359.4665 391.3695

330.5904 364.1132 331.6784 346.1619 305.7560

slsfavecomp =

11.0139 10.7295 10.8238 9.2532 10.4140

10.9466 9.5279 9.2776 12.3089 9.2297

8.9689 9.7826 9.4969 10.2483 12.8892

10.5241 10.2890 11.0789 12.7825 9.0062

11.8593 11.1379 11.2964 11.0533 8.3389

9.6563 9.2046 10.0939 10.0613 10.1404

12.6800 9.7094 11.0473 10.2712 8.5208

8.9440 10.2359 10.3101 9.8477 8.4185

11.3461 10.9063 9.8239 9.2753 12.8423

11.0590 9.4197 8.7476 9.7862 9.4703

lcfavecomp =

11.3521 11.3210 11.0957 9.7677 10.8060

11.0433 10.0447 9.8700 12.6564 9.3157

9.6242 10.6544 9.9613 10.5590 13.2673

10.9414 10.4860 11.3241 13.5224 9.2659

11.8388 11.3464 11.6750 11.3549 9.4678

10.9325 9.7832 10.7033 10.6747 10.2155

13.0518 10.3587 11.3502 10.0875 9.0429

9.2546 10.6346 10.6623 10.3654 8.5687

11.5615 11.5848 9.8396 9.6952 13.2632

11.3875 9.7723 9.0327 10.0356 10.4385

lcfaveperccomp =

0.8707 0.8700 0.9068 0.9027 0.8725

0.8698 0.9035 0.9141 0.8531 0.8303

0.9085 0.9659 0.8898 0.8532 0.8709

0.9111 0.8948 0.8726 0.8993 0.9543

0.8982 0.9960 0.8572 0.8764 0.9987

0.9581 0.9233 0.9691 0.9129 0.9126

0.8838 0.9436 0.8477 0.8811 0.9376

0.8893 0.8796 0.9216 0.8988 0.8379

0.8533 0.9375 0.8690 0.8867 0.9110

0.8446 0.8650 0.8292 0.8375 0.9486

lcfavetotprofit =

81.3153 71.4366 71.4859 61.3718 78.4669

79.3090 68.0876 67.7103 86.3433 75.9325

60.1273 58.1390 70.4297 80.4369 80.8672

67.1058 74.7537 78.0334 78.8603 64.8025

80.4980 60.0485 75.4349 75.0578 45.6095

53.9792 64.9261 58.4485 68.3721 66.0781

74.2087 57.9487 80.8875 71.8361 58.6622

64.1681 75.1932 70.6727 69.9764 74.8535

76.0043 71.1956 65.7972 72.2275 92.0775

76.3734 75.1955 68.7222 76.3579 55.8688

slsfavetotprofit =

88.8730 81.9633 81.5909 73.5499 87.0844

84.9329 78.7866 78.5674 95.4511 77.8420

74.7282 78.9134 80.2787 86.1758 91.0713

79.9112 82.3381 85.5811 96.0103 74.1963

86.9760 78.5397 81.8023 84.1683 68.6729

79.0916 77.7794 74.2361 83.0060 70.4081

83.1784 76.3270 87.6615 74.1123 70.3763

70.7866 84.8576 79.1057 80.8915 78.0064

81.6739 86.4339 68.5158 79.8112 100.8686

83.0332 82.1963 72.5954 81.6987 73.7251

returnedobjs =

363.5680 340.1644 348.2788 312.8632 368.7182

365.8196 354.1241 354.4046 373.5304 354.7704

341.1083 344.4962 347.7261 367.0562 363.2861

338.4807 359.7735 360.8138 363.1797 347.4282

364.3658 340.8739 341.2362 352.9560 302.5259

333.9214 346.3207 335.3132 354.9765 324.8481

310.9337 345.5107 364.3537 343.1230 324.8624

333.3650 358.9499 357.5938 358.9080 363.5733

343.3570 357.4453 298.9020 361.7065 381.5783

340.9018 363.2681 334.0263 361.0623 333.6038

slsfobjs =

361.3806 332.6837 321.3662 324.4853 369.5033

354.6340 342.3517 347.4473 370.4348 339.7270

338.5765 338.4332 348.0613 366.0200 344.0650

325.1221 351.3013 354.6515 361.3832 335.7067

343.0298 315.5699 329.4159 332.7776 304.3029

335.3964 338.9955 302.8537 350.2992 285.4394

311.8761 325.5911 355.1875 309.9875 313.0014

322.0171 351.8103 336.2230 346.1904 365.3589

319.6888 362.8791 296.1589 359.4665 391.3695

330.5904 364.1132 331.6784 346.1619 305.7560

lcfrejs =

0.2589 1.0127 0.3367 1.0620 0.0051

0.0061 0.0943 0.0179 0.0090 0.3241

0.1916 0.0077 0.6095 0.0198 0.2214

0.4984 0.0188 0.1881 0.2548 0.0443

0.0472 0.2516 0.6915 0.2556 1.2057

0.1514 0.0798 0.2091 0.0048 1.3043

1.0584 0.0306 0.0046 0.8203 1.0558

1.1249 0.0096 0.0056 0.0069 0.0000

1.1535 0.0107 2.4853 0.0052 0.0014

1.3375 0.0003 1.2573 0.0371 0.1595

slsfrejs =

0.8836 1.9073 3.1441 2.5186 0.3502

1.3015 1.4766 1.1529 0.8670 1.7039

1.8279 1.5200 1.3567 0.3456 2.1325

2.7141 1.3710 1.3214 1.2155 1.7863

2.0819 3.3041 2.7172 2.2628 2.9953

1.5118 1.6774 3.7477 1.2069 4.4798

3.5467 2.4497 0.9921 3.5702 2.8709

2.6199 1.0470 2.1132 1.5157 0.1510

2.8122 1.0266 4.1625 0.6284 0.0170

2.3430 0.3598 2.0745 1.2312 3.1987

menusizes =

4.9000 4.5500 4.9000 4.5500 4.9500

4.8500 4.7500 4.9000 5.0000 4.8000

4.4000 4.7000 5.0000 4.9500 4.6500

4.5500 4.8000 5.0000 4.9000 4.8500

4.9500 4.6500 4.7500 4.9000 4.4000

4.3500 4.8000 4.6500 4.9000 4.7000

4.9000 4.7500 4.9000 4.7500 4.7500

4.4000 4.9000 4.9500 4.8000 4.8500

4.6500 4.5000 4.4500 4.9500 4.8000

4.8500 4.8000 4.6500 4.9000 4.7000

avepij =

0.1636 0.1358 0.1567 0.1541 0.1810

0.1613 0.1625 0.1611 0.1760 0.1601

0.1574 0.1716 0.1651 0.1665 0.1553

0.1608 0.1761 0.1636 0.1818 0.1624

0.1729 0.1539 0.1336 0.1626 0.1421

0.1657 0.1687 0.1464 0.1646 0.1350

0.1636 0.1788 0.1781 0.1582 0.1620

0.1440 0.1839 0.1619 0.1655 0.1775

0.1535 0.1639 0.1442 0.1763 0.2036

0.1373 0.1679 0.1502 0.1580 0.1530

pijover5 =

57 56 60 61 67

60 66 66 70 60

63 75 63 62 59

63 64 64 70 63

62 59 46 62 53

71 68 55 65 47

65 71 69 61 63

52 72 62 66 70

59 64 53 65 88

47 67 54 62 63

pijequal1 =

31 12 28 31 39

24 23 19 30 36

34 32 34 25 29

32 36 24 42 26

32 27 20 25 31

35 30 27 27 20

20 44 34 27 29

25 41 32 28 39

25 37 24 38 49

18 28 29 23 19

runtimes =

111.5890 306.2563 294.7779 305.1869 143.8506

200.6305 226.8992 192.4521 206.5406 176.2454

109.0422 204.4277 108.6515 121.1244 284.6985

204.1528 175.8250 191.7815 200.5671 213.9494

201.9409 197.4392 310.8236 262.8797 280.8647

236.1738 142.8429 229.4538 204.4336 312.0921

312.8314 162.9125 164.8415 310.5750 177.4792

289.6931 147.0412 246.6280 148.5966 112.0775

313.0865 163.5672 305.7471 139.8829 128.7021

120.8390 118.4986 109.7843 235.9245 265.2144

bestest =

-0.0817 -1.0714 -0.1528 -1.0589 -0.0010

-0.0024 -0.0353 -0.0133 -0.0046 -0.0090

-0.2625 -0.0057 -0.2496 -0.0011 -0.1162

-0.5769 -0.0035 -0.0988 -0.2284 -0.0017

-0.0228 -0.3871 -0.7624 -0.0225 -1.1775

-0.0344 -0.0672 -0.0101 -0.0024 -1.1084

-1.0106 -0.0922 -0.0001 -0.8305 -0.9454

-1.0409 -0.0002 -0.0001 -0.0243 -0.0000

-1.0855 -0.0011 -2.3204 -0.0012 0

-0.5586 -0.0002 -1.0122 -0.0071 -0.0178

guessbestiter =

5 6 5 5 5

3 6 5 5 4

7 6 6 3 6

7 6 4 4 7

7 7 7 7 5

4 3 5 7 7

5 6 3 4 4

4 6 6 6 6

3 5 3 5 1

1 3 2 7 4

estslsfobjs =

353.3801 337.0225 329.1290 326.1325 368.4585

350.2590 349.0908 343.6993 367.6049 342.4122

346.6747 331.5401 345.8196 366.4233 333.2249

322.4341 356.0753 356.7172 363.9615 331.2839

342.3701 318.5349 326.2426 336.7141 307.2159

340.3891 343.8457 309.5621 357.1864 280.8632

321.4627 324.5881 360.2237 309.3345 314.2366

323.9692 356.6513 334.0686 345.6145 363.3257

318.5082 363.3520 296.1027 356.9048 391.6483

338.3424 361.2171 330.2924 351.9872 296.1113

compportion80 =

0.6633 0.7912 0.8061 0.7582 0.7273

0.7010 0.8000 0.7857 0.6600 0.6771

0.6477 0.8511 0.6600 0.7172 0.7634

0.6923 0.6771 0.7700 0.6735 0.7835

0.6768 0.7957 0.7474 0.6837 0.7841

0.7816 0.8125 0.7204 0.7755 0.7660

0.7551 0.7789 0.6735 0.6737 0.7474

0.6705 0.7143 0.7475 0.7500 0.5258

0.6559 0.7000 0.7528 0.6667 0.7500

0.6907 0.7292 0.6774 0.6837 0.7553

compportionmin =

0.6633 0.7912 0.8061 0.7582 0.7273

0.7010 0.8000 0.7857 0.6600 0.6771

0.6477 0.8511 0.6600 0.7172 0.7634

0.6923 0.6771 0.7700 0.6735 0.7835

0.6768 0.7957 0.7474 0.6837 0.7841

0.7816 0.8125 0.7204 0.7755 0.7660

0.7551 0.7789 0.6735 0.6737 0.7474

0.6705 0.7143 0.7475 0.7500 0.5258

0.6559 0.7000 0.7528 0.6667 0.7500

0.6907 0.7292 0.6774 0.6837 0.7553

**100th experiment, Fixed Scens Welfare Profit b=0.65, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gp=0.1, no v,**

lcfiterbetter =

0.6800

lcfiterworse =

0.3200

avepercbetter =

0.0177

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.8739

lcfiterave =

350.9403

slsfave =

345.3547

averuntime =

248.9636

avelcfrejs =

0.2726

aveslsfrejs =

1.6439

percbetter =

0.0087 -0.0299 -0.0267 -0.0232 0.0354

0.0889 -0.0018 -0.0306 -0.0117 0.0551

-0.0176 0.0073 0.0856 0.0476 -0.0354

0.0016 -0.0351 0.0033 -0.0049 0.0748

0.0405 -0.0034 0.0368 0.0120 -0.0091

0.0621 0.0770 -0.0090 -0.0071 -0.0000

0.0482 0.0105 0.0216 0.0185 0.0120

0.0266 0.0066 0.0362 -0.0138 0.0087

0.0308 0.0073 0.0042 0.0405 0.0093

0.0664 0.0281 0.0626 0.0527 0.0167

avelcfavecomp =

11.4891

aveslsfavecomp =

10.8788

avelcfaveperccomp =

0.9032

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

70.8620

aveslsfavetotprofit =

84.6351

avelcfpercposprofit =

1

returnedobjs =

323.2655 352.3109 351.7432 379.5935 354.9820

343.2428 339.5324 373.0951 351.8517 356.9717

364.9343 287.9656 339.1144 352.0791 366.9658

349.5514 367.1935 351.1072 369.2937 349.4964

344.6186 375.8586 322.0088 354.4495 370.1864

351.7101 351.3462 361.2032 350.1142 360.1373

334.0965 344.5201 357.8962 342.7139 356.8299

359.5417 333.7385 350.8806 371.4739 339.0938

349.9974 360.0164 384.6295 349.9172 320.7190

362.6279 360.5298 329.4893 333.1790 339.2004

slsfobjs =

320.4840 363.1772 361.3846 388.5894 342.8373

315.2063 340.1337 384.8916 356.0080 338.3145

371.4797 285.8809 312.3733 336.0830 380.4311

348.9893 380.5511 349.9387 371.1123 325.1667

331.2193 377.1529 310.5895 350.2468 373.5951

331.1556 326.2259 364.4772 352.6257 360.1434

318.7467 340.9552 350.3255 336.4812 352.5978

350.2299 331.5646 338.6228 376.6604 336.1816

339.5290 357.3987 383.0281 336.2829 317.7726

340.0363 350.6692 310.0682 316.5044 333.6149

slsfavecomp =

11.6559 9.1735 12.3597 13.0174 10.4715

9.7551 10.6439 13.9802 10.6018 11.3066

10.9958 12.7214 9.4230 12.9556 11.3587

9.1348 11.8608 8.5722 12.0113 10.5703

9.1758 11.8058 13.4141 11.0798 11.6139

11.3021 11.0454 9.9395 9.0862 10.7083

11.5085 9.3649 9.5381 8.6408 10.5108

12.9185 8.5361 11.0801 11.1153 8.3975

9.9074 11.0968 12.5216 10.0616 10.7640

12.0035 11.9919 10.6305 11.0844 10.5249

lcfavecomp =

12.2713 9.9667 13.3979 13.5997 10.9827

10.7515 11.4920 14.7007 11.5563 11.8535

11.4897 14.0773 9.7315 13.5661 12.0792

9.7048 12.5784 9.0449 12.2001 10.6578

10.0552 12.1454 14.1590 11.6517 12.0777

11.6764 11.6765 10.2265 9.6742 11.1818

12.2696 10.4265 9.7410 9.4641 10.8712

13.6050 9.7571 11.2850 11.4861 9.0341

10.4728 11.6628 12.6863 10.5536 11.3640

12.0251 12.6376 11.3886 12.1108 11.3873

lcfaveperccomp =

0.8729 0.9254 0.9019 0.8439 0.8533

0.9451 0.9401 0.8555 0.9050 0.9035

0.8886 0.9718 0.9174 0.8913 0.9404

0.9292 0.9188 0.8888 0.8249 0.8591

0.9191 0.8470 0.9085 0.9001 0.8618

0.8923 0.8954 0.8483 0.8971 0.8899

0.9295 0.9618 0.8736 0.9796 0.9145

0.8892 0.9529 0.8742 0.8426 0.9394

0.9130 0.8761 0.8538 0.9191 0.9222

0.9319 0.9105 1.0033 0.9634 0.8707

lcfavetotprofit =

67.5522 64.8268 70.8372 88.7669 75.8296

57.2886 61.0739 89.6107 66.9804 71.6915

79.2564 50.3480 65.5575 73.4613 78.3096

67.2368 79.7698 68.0298 90.4466 75.2455

58.1071 86.7379 66.6353 69.5631 83.4695

73.4992 68.1572 78.5067 66.3604 73.8543

66.2718 54.8619 73.6998 60.7113 71.5389

76.9677 49.7163 76.8427 83.5446 59.6294

68.8520 76.5436 92.9524 68.5965 64.8762

76.4741 72.2374 58.3545 56.1904 67.2281

slsfavetotprofit =

82.2092 81.1205 92.3846 100.8007 85.3917

74.8287 82.6291 104.8923 85.7680 82.9758

90.2417 78.0569 72.2714 92.1947 93.0909

79.9318 94.6880 77.2233 94.2884 78.1224

75.2294 93.9595 87.9167 85.4745 93.4932

84.8207 82.5024 84.5051 78.8081 85.8965

83.9243 77.1061 79.6463 75.8378 83.7087

93.0707 73.1284 84.2082 91.6989 73.5880

80.4256 88.8162 97.4264 81.4673 77.8756

85.6451 89.2853 75.7481 80.5994 82.8328

returnedobjs =

323.2655 352.3109 351.7432 379.5935 354.9820

343.2428 339.5324 373.0951 351.8517 356.9717

364.9343 287.9656 339.1144 352.0791 366.9658

349.5514 367.1935 351.1072 369.2937 349.4964

344.6186 375.8586 322.0088 354.4495 370.1864

351.7101 351.3462 361.2032 350.1142 360.1373

334.0965 344.5201 357.8962 342.7139 356.8299

359.5417 333.7385 350.8806 371.4739 339.0938

349.9974 360.0164 384.6295 349.9172 320.7190

362.6279 360.5298 329.4893 333.1790 339.2004

slsfobjs =

320.4840 363.1772 361.3846 388.5894 342.8373

315.2063 340.1337 384.8916 356.0080 338.3145

371.4797 285.8809 312.3733 336.0830 380.4311

348.9893 380.5511 349.9387 371.1123 325.1667

331.2193 377.1529 310.5895 350.2468 373.5951

331.1556 326.2259 364.4772 352.6257 360.1434

318.7467 340.9552 350.3255 336.4812 352.5978

350.2299 331.5646 338.6228 376.6604 336.1816

339.5290 357.3987 383.0281 336.2829 317.7726

340.0363 350.6692 310.0682 316.5044 333.6149

lcfrejs =

2.0234 0.0038 0.3458 0.0012 0.3134

0.0623 0.6563 0.0569 0.0577 0.0101

0.0481 1.1590 0.7970 0.0814 0.0002

0.0002 0.0315 0.0188 0.6005 0.6642

0.0618 0.0049 1.4596 0.0023 0.0035

0.0572 0.0265 0.1745 0.0504 0.0041

0.9844 0.0072 0.0050 0.0691 0.0132

0.0167 0.0798 0.4624 0.0001 0.0635

0.0401 0.0097 0.0007 0.0132 1.5018

0.0042 0.0149 1.0151 0.0417 0.5083

slsfrejs =

3.2789 0.3654 1.2845 0.0823 1.0648

3.0176 2.0274 0.5586 1.0405 2.2382

0.3362 4.9820 3.1602 2.3605 0.0772

0.6731 0.2458 0.8209 0.7994 2.8572

1.9209 0.3721 3.6486 1.5597 0.3758

2.1626 2.5896 0.4523 1.0406 0.9191

2.7178 1.5318 1.1755 1.6660 1.3152

1.7166 1.9425 2.0673 0.1875 1.6485

1.7728 0.8448 0.3926 1.5551 2.9281

2.3983 1.5930 3.4799 2.9161 2.0326

menusizes =

4.4000 4.7500 4.8000 4.9500 5.0000

4.7000 4.8000 4.9500 4.8000 4.9500

4.8500 4.8000 4.6000 4.9000 4.9500

4.8500 4.9500 4.8000 4.8000 4.5500

4.8500 4.5500 4.8000 4.9000 4.9500

5.0000 5.0000 4.6500 4.7500 4.9500

4.9500 4.5000 5.0000 4.9500 4.7500

4.8000 4.7500 4.8000 4.7500 4.4000

4.8000 4.8500 4.3000 4.9500 4.4000

4.8500 4.8500 4.6500 4.7500 4.7500

avepij =

0.1422 0.1901 0.1664 0.1982 0.1743

0.1568 0.1717 0.1760 0.1623 0.1716

0.1786 0.1537 0.1473 0.1658 0.1940

0.1901 0.1834 0.1608 0.1711 0.1464

0.1619 0.1703 0.1488 0.1793 0.1726

0.1653 0.1685 0.1647 0.1665 0.1694

0.1577 0.1615 0.1746 0.1599 0.1650

0.1676 0.1601 0.1568 0.1909 0.1663

0.1594 0.1603 0.1716 0.1597 0.1499

0.1813 0.1777 0.1523 0.1574 0.1729

pijover5 =

48 82 66 81 68

64 68 70 60 72

67 61 55 65 81

77 77 59 63 53

63 69 51 78 67

62 64 59 63 64

58 64 63 56 63

66 63 56 79 66

56 58 67 55 55

69 74 56 64 67

pijequal1 =

21 44 27 45 30

23 30 31 27 27

30 18 27 27 37

41 32 39 39 29

31 31 18 26 32

28 31 36 33 30

19 33 34 30 32

28 30 25 45 43

31 26 40 26 27

28 32 21 19 31

runtimes =

216.3318 188.9220 263.6253 156.5448 239.2835

320.6017 126.9819 224.7779 320.5277 303.3314

155.0723 365.4633 353.1841 273.0919 183.3557

232.1257 134.4019 237.9170 119.5081 292.8787

264.2999 124.7296 309.4490 169.9756 135.6710

187.1942 218.0986 124.5478 216.9940 125.5913

261.4280 286.5310 248.8777 350.6890 296.0594

279.3869 138.0206 316.8396 118.2206 124.1678

182.9929 248.8593 160.1587 321.9203 345.7547

493.8702 437.5110 456.4523 500.8134 295.1467

bestest =

-1.9765 -0.0000 -0.2420 0 -0.0780

-0.0011 -0.4509 -0.0011 -0.0496 -0.0007

-0.0017 -1.0493 -0.5405 -0.0391 -0.0000

0 -0.0001 0 -0.2314 -0.8677

-0.0003 -0.0004 -1.2570 -0.0002 -0.0037

-0.0133 -0.0025 -0.0829 -0.0102 -0.0042

-0.7065 -0.0151 -0.0002 -0.0075 -0.0083

-0.0119 -0.0088 -0.2728 -0.0000 -0.1170

-0.0384 -0.0005 0 -0.0035 -1.1577

-0.0004 -0.0084 -1.0022 -0.0529 -0.3145

guessbestiter =

4 5 7 3 7

5 5 4 3 5

2 6 4 2 1

2 2 4 5 3

6 1 4 2 3

5 7 3 7 7

7 7 6 4 7

7 4 7 5 5

5 7 4 7 4

5 7 6 7 7

estslsfobjs =

314.7342 363.0160 363.9719 389.6058 361.9092

320.3933 340.7949 387.0131 352.4587 341.0424

375.8906 280.6394 310.3885 355.7475 380.4323

355.4819 378.4372 354.8490 372.6130 325.2745

336.6718 378.2033 301.9940 344.7913 374.0638

327.8342 319.5009 359.9705 354.1800 366.2594

320.3707 342.6322 349.5616 340.4303 354.7912

354.4886 328.8770 339.6956 375.8066 335.5367

337.9134 351.5874 384.6010 336.8175 306.5420

334.8157 355.5599 316.0959 312.0942 327.3910

compportion80 =

0.6591 0.7474 0.8854 0.7172 0.7400

0.7979 0.7917 0.8283 0.7813 0.6970

0.7629 0.8125 0.7500 0.7857 0.7475

0.7320 0.7071 0.6146 0.6979 0.7033

0.7938 0.7253 0.8750 0.8367 0.7071

0.7600 0.7800 0.7419 0.8000 0.6970

0.7879 0.8111 0.7300 0.7172 0.6947

0.8333 0.8105 0.7292 0.6947 0.8182

0.7292 0.7216 0.6047 0.7576 0.7727

0.8454 0.8351 0.7419 0.8211 0.8105

compportionmin =

0.6591 0.7474 0.8854 0.7172 0.7400

0.7979 0.7917 0.8283 0.7813 0.6970

0.7629 0.8125 0.7500 0.7857 0.7475

0.7320 0.7071 0.6146 0.6979 0.7033

0.7938 0.7253 0.8750 0.8367 0.7071

0.7600 0.7800 0.7419 0.8000 0.6970

0.7879 0.8111 0.7300 0.7172 0.6947

0.8333 0.8105 0.7292 0.6947 0.8182

0.7292 0.7216 0.6047 0.7576 0.7727

0.8454 0.8351 0.7419 0.8211 0.8105

**101st experiment, Fixed Scens Welfare Profit b=0.7, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gp=0.1, no v,**

lcfiterbetter =

0.7200

lcfiterworse =

0.2800

avepercbetter =

0.0259

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.8433

lcfiterave =

349.8386

slsfave =

341.6235

averuntime =

205.2509

avelcfrejs =

0.3493

aveslsfrejs =

1.7335

percbetter =

0.0161 -0.0069 -0.0114 0.1098 0.0064

0.0781 -0.0027 0.0017 0.0825 0.0403

0.0014 0.0767 -0.0042 0.0655 0.0849

0.0204 0.1030 0.0086 0.0342 -0.0038

0.0168 -0.0137 0.0438 0.0235 0.0242

0.0001 -0.0171 0.0184 0.0296 0.0223

-0.0048 0.0229 -0.0097 0.0647 0.0281

0.0429 -0.0071 0.0194 -0.0010 0.0297

0.0083 -0.0097 0.0358 0.0412 -0.0131

0.0338 0.0523 0.1165 0.0125 -0.0169

avelcfavecomp =

10.8618

aveslsfavecomp =

10.4015

avelcfaveperccomp =

0.9028

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

70.9966

aveslsfavetotprofit =

82.1946

avelcfpercposprofit =

1

returnedobjs =

344.7099 359.6674 364.6985 341.5128 345.6145

346.7901 380.1203 338.6734 331.3751 326.6591

364.3170 341.4721 355.2830 330.1149 347.3721

337.8055 337.3768 352.1781 338.5254 367.8509

333.9678 345.7970 363.8276 354.4685 341.0176

363.0913 376.3988 354.9844 345.9101 364.8881

370.8825 348.8654 378.5099 334.7206 351.1307

345.7208 365.0497 361.1224 345.4289 337.4439

355.8430 305.3193 339.6553 348.4004 368.4004

353.1339 348.0083 323.4176 357.5267 356.8803

slsfobjs =

339.2590 362.1651 368.9042 307.7378 343.4082

321.6800 381.1608 338.0832 306.1175 313.9991

363.8224 317.1346 356.7888 309.8300 320.1770

331.0394 305.8612 349.1595 327.3356 369.2720

328.4436 350.6097 348.5486 346.3434 332.9675

363.0416 382.9400 348.5783 335.9575 356.9325

372.6753 341.0600 382.2112 314.3845 341.5296

331.4963 367.6446 354.2504 345.7814 327.7095

352.9217 308.3038 327.9079 334.6001 373.2912

341.5930 330.7099 289.6837 353.1074 363.0145

slsfavecomp =

9.3380 10.4138 11.3391 9.3411 8.2708

11.5653 12.6338 8.9016 12.6438 9.8765

10.3537 11.2367 10.1365 9.5591 11.1024

10.6868 9.7166 9.6907 9.6184 11.2472

10.4496 10.0443 12.1246 9.6249 10.7197

11.2198 11.3338 9.6221 7.4937 10.0688

11.3022 12.1048 11.1232 8.8826 11.2504

12.5260 10.5356 9.6262 11.2769 8.8419

9.9229 9.7434 11.9780 8.4918 10.1442

10.5281 11.1394 9.5587 10.3833 10.3423

lcfavecomp =

9.8999 10.8471 11.8241 9.8600 8.8315

11.7233 12.8957 9.4884 13.0206 10.6231

10.7281 11.7823 10.4954 10.2675 11.0355

11.0628 10.0388 10.1442 10.3380 11.5863

11.0839 10.9998 12.4100 10.2439 10.9209

11.6685 11.5752 10.3209 8.0057 10.3201

11.7182 12.6826 11.3040 9.4922 11.7547

12.8256 10.9600 9.9100 11.6276 9.4764

10.4571 10.3271 12.8069 8.9535 10.4039

10.7632 11.7667 10.1448 10.7529 10.9197

lcfaveperccomp =

0.9172 0.8644 0.9025 1.0225 0.9090

0.8636 0.8469 0.9280 0.9027 0.9480

0.8845 0.9254 0.8827 0.9379 0.8519

0.8648 0.9513 0.8721 0.9241 0.8642

0.9028 0.9489 0.8636 0.9746 0.9243

0.9151 0.8482 0.8975 0.9292 0.8707

0.8971 0.8853 0.8286 1.0600 0.8956

0.8648 0.8648 0.8433 0.8746 0.9093

0.9023 0.9702 0.8848 0.9300 0.8461

0.8500 0.8899 1.0424 0.8714 0.8900

lcfavetotprofit =

62.1340 78.3955 80.2647 57.6671 61.2248

78.4514 92.9062 60.8571 70.8425 58.6597

77.7151 67.0560 76.9715 59.0898 76.4305

73.2496 63.5487 69.7602 61.9791 82.4780

64.5699 59.7252 80.7463 66.9687 69.1160

78.0773 87.0447 66.6005 60.0890 76.5115

81.1645 73.4255 87.6873 54.6039 69.2870

77.1894 79.0973 76.8751 76.8515 61.3720

71.2290 58.5356 69.3569 62.7502 80.5813

77.5768 70.3791 49.6050 77.1883 75.9433

slsfavetotprofit =

77.5964 87.0606 90.7646 74.7053 74.1630

83.7367 98.7528 74.6045 83.4895 74.5799

86.3861 79.8740 85.2886 72.6289 79.5132

82.9986 74.4333 80.6312 77.5961 90.5974

78.9451 82.8691 90.7990 80.9272 77.9145

89.5201 92.7960 80.6072 70.0077 82.4485

91.2108 89.7521 91.7926 71.8005 85.1085

86.5096 87.8961 81.6313 85.4433 73.9631

82.7201 71.1775 86.9454 72.9798 86.2726

84.0811 82.7958 68.7166 85.2418 87.4563

returnedobjs =

344.7099 359.6674 364.6985 341.5128 345.6145

346.7901 380.1203 338.6734 331.3751 326.6591

364.3170 341.4721 355.2830 330.1149 347.3721

337.8055 337.3768 352.1781 338.5254 367.8509

333.9678 345.7970 363.8276 354.4685 341.0176

363.0913 376.3988 354.9844 345.9101 364.8881

370.8825 348.8654 378.5099 334.7206 351.1307

345.7208 365.0497 361.1224 345.4289 337.4439

355.8430 305.3193 339.6553 348.4004 368.4004

353.1339 348.0083 323.4176 357.5267 356.8803

slsfobjs =

339.2590 362.1651 368.9042 307.7378 343.4082

321.6800 381.1608 338.0832 306.1175 313.9991

363.8224 317.1346 356.7888 309.8300 320.1770

331.0394 305.8612 349.1595 327.3356 369.2720

328.4436 350.6097 348.5486 346.3434 332.9675

363.0416 382.9400 348.5783 335.9575 356.9325

372.6753 341.0600 382.2112 314.3845 341.5296

331.4963 367.6446 354.2504 345.7814 327.7095

352.9217 308.3038 327.9079 334.6001 373.2912

341.5930 330.7099 289.6837 353.1074 363.0145

lcfrejs =

0.0933 0.2913 0.0204 0.0113 0.0657

0.7604 0.0069 0.8387 1.4098 0.8664

0.0293 0.2382 0.2907 0.6641 1.0172

1.3089 0.3533 0.0518 0.6366 0.0881

0.3494 0.0205 0.0247 0.0306 1.0384

0.0808 0.0000 0.0011 0.0002 0.0001

0.0031 0.6011 0.0015 0.1940 0.2016

0.2549 0.0414 0.0257 1.0668 0.2649

0.0690 2.4513 1.0257 0.0402 0.0066

0.2560 0.1051 0.2369 0.0282 0.0029

slsfrejs =

1.5735 0.6085 0.4752 2.9204 1.2965

3.0970 0.2272 1.8115 3.8824 3.1081

0.7295 3.1203 0.7380 3.2301 3.1208

2.4570 3.4522 1.2729 2.3452 0.6589

2.3914 1.2039 1.7721 1.1342 2.4679

0.9372 0.1517 1.1316 1.1896 1.0976

0.5312 2.1583 0.0921 2.7437 1.9523

2.7455 0.3660 0.7993 1.9154 1.7550

1.0363 3.3969 2.4496 1.5596 0.2246

1.6494 2.4305 4.1613 0.7834 0.3235

menusizes =

4.8000 4.9500 5.0000 4.8000 4.7000

4.9500 4.9000 4.7000 4.8500 4.4500

4.6500 4.7000 4.9000 4.8000 4.6000

4.7500 4.8500 4.9000 4.7500 4.9000

4.6000 4.8000 4.8500 4.9500 4.6500

4.9000 4.7500 4.9000 4.8000 4.7000

4.8000 4.9000 4.8500 4.7500 4.7500

4.8500 4.4000 4.8500 4.7000 4.7500

4.8000 4.4000 4.5500 4.8000 4.8000

4.9500 4.8500 4.7500 4.8500 5.0000

avepij =

0.1752 0.1685 0.1783 0.1713 0.1684

0.1424 0.1893 0.1684 0.1615 0.1459

0.1572 0.1507 0.1638 0.1504 0.1418

0.1719 0.1556 0.1621 0.1608 0.1705

0.1617 0.1764 0.1767 0.1765 0.1514

0.1781 0.1920 0.1726 0.1697 0.1849

0.1758 0.1728 0.1823 0.1686 0.1735

0.1566 0.1494 0.1710 0.1556 0.1550

0.1663 0.1284 0.1677 0.1652 0.1706

0.1601 0.1469 0.1519 0.1557 0.1874

pijover5 =

71 64 72 67 63

47 79 71 63 59

58 58 61 54 54

62 60 60 65 66

65 69 69 69 61

71 83 72 69 76

68 69 76 68 70

63 57 66 58 62

63 43 71 67 61

61 57 59 56 78

pijequal1 =

38 31 26 29 37

20 36 35 26 21

32 27 32 25 21

41 26 32 21 29

34 46 33 27 21

35 41 33 36 44

36 31 31 36 29

22 25 35 33 21

27 20 32 26 38

26 13 23 33 41

runtimes =

219.2003 205.2162 267.7178 122.9443 118.0986

318.3488 117.4978 155.1700 354.5222 347.7466

242.9678 311.2997 277.7844 285.3649 313.7330

139.7957 270.5250 144.7421 134.9694 118.3265

313.6354 126.4971 173.7393 139.3760 283.2237

148.1536 121.2449 250.0227 264.2026 126.4915

123.5829 144.6695 117.6443 273.2702 124.9933

290.4484 134.7707 193.6281 174.8905 257.0418

138.8984 316.4225 254.7407 217.2033 119.8546

160.0204 220.3971 214.6390 228.0686 144.8023

bestest =

-0.1770 -0.0550 -0.0010 -0.0025 -0.0208

-0.1870 -0.0004 -0.5978 -1.4245 -0.9522

-0.0143 -0.8097 -0.1533 -0.3487 -0.7958

-1.3474 -0.1572 -0.1042 -0.3134 -0.0460

-0.4963 -0.0166 -0.0077 -0.0082 -1.0123

-0.0188 0 -0.0026 0 -0.0014

-0.0064 -0.2440 -0.0000 -0.0890 -0.0482

-0.0123 -0.0113 -0.0047 -1.1446 -0.1422

-0.1532 -2.5780 -1.0105 -0.0092 -0.0002

-0.0411 -0.8480 -0.1197 -0.0066 -0.0006

guessbestiter =

6 6 7 5 6

5 5 4 7 5

7 6 6 7 2

7 7 6 7 7

5 6 4 5 4

5 3 7 7 4

6 7 2 5 2

5 6 4 6 5

6 5 7 4 5

7 6 7 5 2

estslsfobjs =

341.8813 358.3396 373.1335 298.2423 341.0093

327.9886 383.2237 337.7908 313.0612 307.0598

363.7874 326.0280 357.8448 307.3661 322.9127

334.8128 312.4153 347.2285 326.0352 367.1861

319.4282 344.3847 353.4266 343.5783 335.3503

361.5023 383.3885 333.2405 337.2358 358.7836

371.9258 336.9495 383.3121 317.2626 340.6008

330.0702 373.1669 357.2638 341.0838 321.6676

347.2305 308.3019 324.1584 334.6481 376.0775

347.1512 338.5762 296.8072 354.9590 369.2647

compportion80 =

0.7917 0.6869 0.7600 0.7708 0.6915

0.6566 0.7245 0.8298 0.7010 0.8427

0.7204 0.7553 0.7143 0.7292 0.6739

0.6211 0.7629 0.6633 0.7684 0.6939

0.6739 0.7708 0.7320 0.6869 0.7527

0.7347 0.7684 0.7653 0.7604 0.8085

0.7292 0.7551 0.7113 0.8211 0.7684

0.7320 0.7159 0.7320 0.7340 0.7895

0.6771 0.6591 0.7912 0.7396 0.6354

0.6465 0.7938 0.7895 0.6701 0.7600

compportionmin =

0.7917 0.6869 0.7600 0.7708 0.6915

0.6566 0.7245 0.8298 0.7010 0.8427

0.7204 0.7553 0.7143 0.7292 0.6739

0.6211 0.7629 0.6633 0.7684 0.6939

0.6739 0.7708 0.7320 0.6869 0.7527

0.7347 0.7684 0.7653 0.7604 0.8085

0.7292 0.7551 0.7113 0.8211 0.7684

0.7320 0.7159 0.7320 0.7340 0.7895

0.6771 0.6591 0.7912 0.7396 0.6354

0.6465 0.7938 0.7895 0.6701 0.7600

**102nd experiment, Fixed Scens Welfare Profit b=0.7, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gp=0.1, no v, w/unhap**

lcfiterbetter =

0.7800

lcfiterworse =

0.2200

avepercbetter =

0.0311

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.8917

lcfiterave =

352.4205

slsfave =

342.6527

averuntime =

220.7531

avelcfrejs =

0.2547

aveslsfrejs =

1.7534

avelcfunhap =

0.0862

aveslsfunhap =

0.2696

percbetter =

0.0576 0.0756 -0.0003 0.0011 0.0029

0.0218 0.0408 0.0939 0.0111 0.0500

0.0052 -0.0064 0.0127 0.0367 0.0118

0.0049 0.0464 0.1002 0.0602 0.0715

0.0206 0.0840 -0.0226 -0.0124 0.0445

-0.0067 0.1996 0.0723 0.0146 -0.0053

0.0682 -0.0262 0.0053 -0.0165 0.0358

-0.0265 0.0474 0.0775 -0.0160 0.0489

0.0623 0.0086 0.0201 0.0353 0.0186

0.0576 0.0448 -0.0155 0.0196 0.0173

avelcfavecomp =

11.3637

aveslsfavecomp =

10.8763

avelcfaveperccomp =

0.8987

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

72.3224

aveslsfavetotprofit =

84.3325

avelcfpercposprofit =

1

returnedobjs =

337.2525 325.1016 365.3557 379.4194 367.5784

339.3705 341.6427 345.4949 365.5418 314.0358

323.3158 363.3984 361.8449 358.2089 345.5368

357.5262 353.6956 339.0869 335.5182 333.3053

354.5265 327.3324 360.0256 377.0894 348.2877

370.3176 334.9570 303.4073 358.0844 362.3859

362.8005 364.8199 364.6618 347.6138 333.4313

356.4180 366.8925 344.7549 378.9648 354.4701

368.1417 350.2819 361.3131 364.2941 362.7757

336.4265 365.2311 363.4797 365.9043 359.7057

slsfobjs =

318.8925 302.2611 365.4474 378.9852 366.5239

332.1399 328.2367 315.8342 361.5339 299.0954

321.6459 365.7346 357.3034 345.5426 341.5037

355.7824 338.0160 308.2102 316.4752 311.0595

347.3653 301.9670 368.3677 381.8209 333.4647

372.8277 279.2220 282.9490 352.9235 364.3230

339.6453 374.6376 362.7269 353.4619 321.9221

366.1175 350.2800 319.9603 385.1292 337.9384

346.5472 347.2959 354.1946 351.8592 356.1583

318.0990 349.5803 369.1861 358.8634 353.5769

slsfavecomp =

9.6722 9.6499 11.7249 13.2673 11.0044

12.1390 8.9974 11.1572 10.8770 8.5840

12.7573 9.0715 13.2603 12.4672 10.2736

8.4849 10.5636 12.5877 11.8737 9.1267

10.4988 8.9734 9.3088 11.5042 10.6459

11.3769 10.5820 9.1520 12.1665 12.5824

10.6614 10.1531 11.8660 9.6813 10.6446

10.9276 10.7290 9.7999 12.5354 10.1401

10.7235 10.2842 11.0712 11.2102 10.4777

9.5832 12.3660 10.8762 15.5759 10.1784

lcfavecomp =

10.7841 10.6045 12.1946 13.4944 11.2737

13.3341 9.4263 11.8965 11.0409 8.9811

13.0513 9.3598 13.6285 12.8024 10.9968

8.7811 11.1017 12.7426 12.7996 9.6185

10.9334 9.6649 9.7964 11.8062 11.1913

11.7612 10.5609 9.5789 12.7353 13.1767

10.8537 10.8206 12.2538 10.6345 11.2028

11.7463 10.7353 10.2397 12.7547 10.7304

10.6254 10.7513 11.6844 11.6254 10.8326

10.1010 12.6986 11.4110 16.6161 10.7514

lcfaveperccomp =

0.9822 0.9695 0.8547 0.8209 0.8685

0.9483 0.8736 0.9571 0.8881 0.9124

0.8845 0.8520 0.9241 0.8737 0.8726

0.8391 0.8625 0.9643 0.9366 0.8817

0.8925 0.9771 0.8974 0.8444 0.8920

0.8614 1.0278 0.9232 0.9052 0.9282

0.8898 0.9090 0.8524 1.0076 0.8908

0.9246 0.8743 0.9329 0.8389 0.8863

0.8623 0.9284 0.9037 0.9047 0.8506

0.8890 0.8781 0.8705 0.8640 0.8611

lcfavetotprofit =

51.5531 49.4265 81.4750 96.0477 83.4193

59.6287 67.7615 64.1913 78.9792 59.7686

74.7911 75.7801 81.1663 80.9068 69.3856

71.8451 72.7596 68.4922 61.6855 64.1793

72.1265 53.1204 72.3005 87.3177 69.0906

83.0354 54.2050 56.8176 75.5608 77.1376

73.2259 73.8998 84.2001 60.1620 67.5255

69.9812 78.4073 66.2061 93.4558 70.2385

79.2028 72.6291 71.6505 76.0261 77.5671

64.2289 84.0788 78.2674 87.8942 73.3173

slsfavetotprofit =

76.3887 72.9277 91.5547 101.6260 89.6223

87.4428 76.7652 81.8040 85.7611 68.8614

85.7512 81.3263 95.4507 89.7262 83.5299

77.5534 84.7441 80.0469 82.4961 72.0894

82.8310 68.6121 82.1048 93.7619 82.7096

92.0830 67.7293 66.4860 91.5143 93.8525

81.5727 87.3776 92.9269 81.7869 81.8106

88.0853 83.4104 76.1244 98.2178 80.7160

82.2283 84.2795 86.8341 87.0621 86.0464

75.6237 93.2085 89.3487 109.2548 83.5588

returnedobjs =

337.2525 325.1016 365.3557 379.4194 367.5784

339.3705 341.6427 345.4949 365.5418 314.0358

323.3158 363.3984 361.8449 358.2089 345.5368

357.5262 353.6956 339.0869 335.5182 333.3053

354.5265 327.3324 360.0256 377.0894 348.2877

370.3176 334.9570 303.4073 358.0844 362.3859

362.8005 364.8199 364.6618 347.6138 333.4313

356.4180 366.8925 344.7549 378.9648 354.4701

368.1417 350.2819 361.3131 364.2941 362.7757

336.4265 365.2311 363.4797 365.9043 359.7057

slsfobjs =

318.8925 302.2611 365.4474 378.9852 366.5239

332.1399 328.2367 315.8342 361.5339 299.0954

321.6459 365.7346 357.3034 345.5426 341.5037

355.7824 338.0160 308.2102 316.4752 311.0595

347.3653 301.9670 368.3677 381.8209 333.4647

372.8277 279.2220 282.9490 352.9235 364.3230

339.6453 374.6376 362.7269 353.4619 321.9221

366.1175 350.2800 319.9603 385.1292 337.9384

346.5472 347.2959 354.1946 351.8592 356.1583

318.0990 349.5803 369.1861 358.8634 353.5769

lcfrejs =

0.0370 0.1192 0.0292 0.0310 0.0196

0.3857 0.7637 0.0191 0.0078 1.9780

1.0092 0.0083 0.0243 0.6244 0.3406

0.0015 0.3322 0.3097 0.4876 0.4296

0.2628 0.2006 0.0004 0.0014 0.4270

0.0004 0.0526 2.1297 0.0668 0.0073

0.0034 0.0003 0.1352 0.0694 0.8260

0.0994 0.0221 0.2620 0.0077 0.0035

0.0058 0.3289 0.0380 0.0271 0.0025

0.6406 0.0720 0.0060 0.0590 0.0188

slsfrejs =

2.8744 3.3274 0.7668 0.5076 0.3785

2.5860 2.0175 2.9080 1.0663 3.4468

3.3378 0.1382 1.5257 1.8306 1.2896

0.5091 1.8882 3.9878 3.1257 2.7266

1.5932 3.4384 0.1474 0.2003 2.1608

0.4964 5.2007 4.3762 1.4473 1.1278

2.0714 0.1289 0.7469 1.0498 2.7939

0.5543 1.6441 2.6109 0.1172 1.8271

1.8237 1.3337 1.4405 1.5165 0.9414

2.8780 1.3533 0.3930 1.2058 0.8124

lcfunhap =

0.0387 0.1174 0.0055 0.0202 0.0108

0.0137 0.0558 0.0198 0.0156 0.0520

1.7118 0.0129 0.0062 0.0276 0.1026

0.0000 0.0122 0.2655 0.0626 0.5025

0.0175 0.0723 0.0001 0.0001 0.0636

0.0001 0.0720 0.1183 0.0152 0.0137

0.0040 0 0.0469 0.0049 0.0405

0.0129 0.0422 0.2210 0.0020 0.0025

0.0000 0.3103 0.0007 0.0000 0.0016

0.1082 0.0214 0.0064 0.0373 0.0221

slsfunhap =

0.1708 0.6586 0.2324 0.0713 0.2137

0.2975 0.4055 0.7428 0.0255 0.3088

0.1359 0.2100 0.0654 0.4392 0.6705

0.2241 0.3676 0.1226 0.5974 0.4905

0.1932 0.1947 0.0712 0.0375 0.2921

0.0992 0.0937 0.5728 0.3418 0.0206

0.0824 0.0756 0.4361 0.1104 0.1355

0.2901 0.0207 0.3228 0.0517 0.2225

0.0829 0.4357 0.1096 0.0701 0.1386

0.1142 0.9340 0.2599 0.5789 0.6435

menusizes =

4.9000 4.6000 4.8500 5.0000 4.9000

4.9000 4.7500 4.9000 4.7500 4.7500

4.8500 4.5500 5.0000 4.6500 4.8500

4.9000 4.5000 4.9500 4.7500 4.9000

4.9000 4.9500 4.5000 4.6500 4.7000

5.0000 4.6000 4.3000 4.9000 4.7000

5.0000 4.8000 4.8500 4.9500 4.7500

4.7000 4.7500 4.6500 4.8000 4.8500

4.7000 4.8500 4.6500 4.8000 4.7500

4.5500 4.9000 5.0000 4.9500 4.8000

avepij =

0.1834 0.1557 0.1685 0.1778 0.1737

0.1677 0.1538 0.1594 0.1738 0.1494

0.1577 0.1681 0.1871 0.1620 0.1563

0.1677 0.1576 0.1555 0.1471 0.1496

0.1564 0.1548 0.1626 0.1742 0.1696

0.1680 0.1471 0.1401 0.1623 0.1638

0.1736 0.1859 0.1785 0.1767 0.1589

0.1732 0.1769 0.1476 0.1802 0.1580

0.1778 0.1668 0.1755 0.1784 0.1652

0.1456 0.1539 0.1732 0.1684 0.1638

pijover5 =

75 63 67 69 66

70 58 61 69 55

59 71 81 64 60

65 66 54 56 56

58 61 67 68 69

65 58 56 61 65

76 75 73 73 57

74 70 55 68 64

68 65 71 76 67

55 59 69 66 65

pijequal1 =

44 23 22 33 32

25 24 23 32 27

26 28 33 25 28

35 24 21 16 20

25 23 34 36 35

29 23 25 27 23

27 45 34 34 32

37 38 23 43 21

41 34 37 42 27

26 21 28 28 22

runtimes =

361.1774 282.6151 170.6954 138.7349 170.2209

315.5109 194.6204 308.0607 285.3290 127.5833

323.1505 127.6215 284.0535 182.0002 289.8191

133.7483 161.2213 290.4053 324.7655 335.1529

183.6558 289.5666 153.1365 133.0240 155.1981

150.6479 327.5024 243.8721 149.5951 249.9515

182.8531 133.4368 163.7336 133.6013 140.2369

275.2865 191.7867 341.5557 151.6268 227.9293

182.1006 336.2264 202.8798 253.8428 144.9876

195.7121 182.6673 184.2568 343.8827 226.413

bestest =

-0.0749 -0.0879 -0.0093 -0.0085 -0.0027

-0.4032 -0.6603 -0.0170 -0.0590 -1.2009

-1.0003 -0.0013 -0.0031 -0.1038 -0.1669

-0.0000 -0.2985 -0.3214 -0.3418 -0.1078

-0.1374 -0.0322 -0.0000 -0.0001 -0.2451

-0.0001 -0.0831 -2.0290 -0.0006 -0.0012

-0.0001 0 -0.0140 -0.0207 -0.4915

-0.0236 -0.0003 -0.0632 -0.0002 -0.0001

-0.0056 -0.0198 -0.0037 -0.0003 -0.0102

-0.3492 -0.0241 -0.0000 -0.0282 -0.0016

guessbestiter =

7 6 4 2 6

6 2 7 7 5

4 1 7 3 7

4 7 7 7 6

6 6 1 4 2

4 6 7 4 6

4 5 3 5 4

7 3 7 4 5

6 6 3 7 6

5 6 7 5 5

estslsfobjs =

324.1099 299.1425 359.6235 382.3403 365.2871

338.4762 328.3615 318.4966 360.8841 296.4763

322.8093 363.4385 361.4609 337.6571 348.3530

358.3583 343.5309 305.5622 314.1117 308.8183

342.8345 302.2465 364.1737 378.2689 319.8076

377.1456 285.7393 280.8158 348.6134 363.9220

337.3617 378.0107 362.3296 351.7072 317.1402

376.0730 350.3333 321.4692 375.6735 335.5781

346.1112 340.9773 350.8763 351.1501 355.5565

317.4720 348.4646 365.9589 362.3184 366.7245

compportion80 =

0.7755 0.8370 0.7010 0.7300 0.7347

0.8265 0.7158 0.7755 0.7684 0.7579

0.7629 0.7802 0.7800 0.6129 0.7732

0.6939 0.7000 0.7677 0.7474 0.7449

0.7653 0.7273 0.7222 0.6559 0.6702

0.7200 0.7935 0.8372 0.7653 0.7766

0.8100 0.6979 0.7010 0.7879 0.7474

0.7766 0.6211 0.7527 0.6979 0.7010

0.7021 0.7423 0.7957 0.7292 0.7789

0.6813 0.7245 0.6600 0.7475 0.7292

compportionmin =

0.7755 0.8370 0.7010 0.7300 0.7347

0.8265 0.7158 0.7755 0.7684 0.7579

0.7629 0.7802 0.7800 0.6129 0.7732

0.6939 0.7000 0.7677 0.7474 0.7449

0.7653 0.7273 0.7222 0.6559 0.6702

0.7200 0.7935 0.8372 0.7653 0.7766

0.8100 0.6979 0.7010 0.7879 0.7474

0.7766 0.6211 0.7527 0.6979 0.7010

0.7021 0.7423 0.7957 0.7292 0.7789

0.6813 0.7245 0.6600 0.7475 0.7292

**103rd experiment, Fixed Scens Welfare Profit b=0.7, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gp=0.1,w/v, w/unhap**

lcfiterbetter =

0.7800

lcfiterworse =

0.1800

avepercbetter =

0.0288

lcfrejbetter =

0.9600

lcfrejworse =

0

avepercrejbetter =

0.8405

lcfiterave =

351.9620

slsfave =

342.5841

averuntime =

202.9183

avelcfrejs =

0.3285

aveslsfrejs =

1.7360

avelcfunhap =

0.1061

aveslsfunhap =

0.2593

percbetter =

-0.0003 0.0869 0.0390 0.0323 0.0134

-0.0077 -0.0131 0.0540 0.0249 0.0089

0.0041 0.0869 -0.0013 0.0487 0.0146

0.0436 0.0031 0 0.0026 -0.0049

0.0390 0.0543 -0.0053 0.0014 0.0999

0.0725 0.1300 0 0.0269 0.0312

0.0336 0.0222 0.0612 0.0646 -0.0037

0.0480 0.0175 0.0182 0.0071 0.0205

0.1072 0.0331 0.0065 -0.0215 -0.0070

0.0305 0.0021 0.0065 0.0560 0.0532

avelcfavecomp =

11.0843

aveslsfavecomp =

10.6531

avelcfaveperccomp =

0.8957

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

72.6005

aveslsfavetotprofit =

83.0827

avelcfpercposprofit =

1

returnedobjs =

355.2465 350.7468 355.4826 351.3697 356.5902

376.9853 373.2165 350.1751 350.4251 348.1838

369.6260 324.2799 352.6062 318.6296 345.0426

337.3278 322.9386 339.9137 365.1246 339.1561

362.4829 343.3491 362.5860 368.9787 343.2566

356.6169 356.2349 358.2018 333.9835 348.4929

368.9096 356.0472 347.4701 355.6370 369.9999

345.6652 339.3726 329.6490 362.2845 344.2555

357.8440 351.5768 344.2800 379.9492 366.5678

326.6754 362.8400 361.0353 367.3039 343.4871

slsfobjs =

355.3622 322.6925 342.1480 340.3887 351.8630

379.9050 378.1775 332.2330 341.9094 345.1138

368.1102 298.3590 353.0804 303.8353 340.0655

323.2294 321.9561 339.9137 364.1841 340.8214

348.8919 325.6799 364.5188 368.4783 312.0794

332.4960 315.2415 358.2018 325.2324 337.9571

356.9224 348.3048 327.4451 334.0691 371.3846

329.8311 333.5419 323.7592 359.7148 337.3421

323.2061 340.3222 342.0708 388.2800 369.1486

317.0190 362.0649 358.6979 347.8140 326.1401

slsfavecomp =

10.2045 10.0710 11.4910 9.8244 9.6207

12.1460 10.8639 8.2763 12.4299 11.0175

11.0461 9.7583 9.4163 11.3814 10.1341

11.6477 10.5352 10.5438 9.8136 10.9289

11.2479 10.8494 9.1046 12.1069 10.8027

12.1337 9.6701 10.3144 10.3699 9.5201

11.3903 9.8599 9.9999 11.1551 12.2916

10.1671 8.7024 11.5462 10.2141 9.5335

11.7293 8.2201 10.0300 12.7044 9.6665

11.5238 11.6891 11.2832 12.8694 10.8077

lcfavecomp =

10.7328 10.5467 12.1727 10.4686 9.9880

12.3715 11.1560 8.5342 12.6837 11.9929

11.1912 9.8673 9.8208 11.7595 10.7096

11.7860 11.2476 10.5438 10.1324 11.8188

11.4662 11.8580 9.4616 12.3275 11.5553

12.9368 9.7325 10.3144 11.0602 9.8652

11.6460 10.2827 10.7788 11.0541 12.8004

10.8079 9.3672 12.0732 10.6739 10.2384

11.8437 8.5643 10.5359 13.0501 9.8779

11.9111 12.2227 11.8515 13.0780 11.4544

lcfaveperccomp =

0.9116 0.9478 0.9226 0.9254 0.9177

0.8507 0.8527 0.9111 0.8543 0.9687

0.8571 0.8458 0.9741 0.9353 0.8911

0.9226 0.9390 0.8000 0.8534 0.9565

0.8869 0.9246 0.8417 0.8335 0.9446

0.9099 0.8650 0.8000 0.8954 0.8776

0.8752 0.8809 0.9510 0.9268 0.8842

0.9284 0.8975 0.8854 0.8549 0.9157

0.8829 0.8941 0.8791 0.8467 0.8307

0.9680 0.9153 0.9315 0.8949 0.9274

lcfavetotprofit =

72.8697 64.3392 69.7050 67.6392 67.7472

89.8760 84.9136 65.0857 85.1247 64.3201

83.3882 67.6379 67.1416 63.5178 68.8058

70.2731 61.3306 84.9225 76.1194 62.3914

75.8129 65.6502 73.6825 88.0927 63.5535

71.9478 71.7754 85.6163 63.9419 68.0968

81.2977 70.8760 61.3220 72.3991 85.1693

66.4241 64.0866 67.5216 74.2600 64.8089

75.0981 65.2923 71.0751 92.3131 80.1435

66.8644 78.7715 76.6987 82.6722 67.6096

slsfavetotprofit =

84.1795 77.1565 86.1674 80.5576 78.8833

95.7206 90.7879 71.3617 91.8631 86.9409

89.1341 68.2842 78.2724 74.7969 81.9282

79.2604 78.3842 84.9225 83.5997 84.7675

84.8480 80.1287 80.9023 94.5373 81.2140

90.6996 72.8917 85.6163 78.4530 77.3807

88.2214 80.9826 79.1914 81.3495 95.9830

79.7019 74.8076 81.5255 83.0926 78.5860

79.9606 73.3815 82.1293 99.8427 84.1660

80.4754 92.2555 88.8816 93.0487 82.9141

returnedobjs =

355.2465 350.7468 355.4826 351.3697 356.5902

376.9853 373.2165 350.1751 350.4251 348.1838

369.6260 324.2799 352.6062 318.6296 345.0426

337.3278 322.9386 339.9137 365.1246 339.1561

362.4829 343.3491 362.5860 368.9787 343.2566

356.6169 356.2349 358.2018 333.9835 348.4929

368.9096 356.0472 347.4701 355.6370 369.9999

345.6652 339.3726 329.6490 362.2845 344.2555

357.8440 351.5768 344.2800 379.9492 366.5678

326.6754 362.8400 361.0353 367.3039 343.4871

slsfobjs =

355.3622 322.6925 342.1480 340.3887 351.8630

379.9050 378.1775 332.2330 341.9094 345.1138

368.1102 298.3590 353.0804 303.8353 340.0655

323.2294 321.9561 339.9137 364.1841 340.8214

348.8919 325.6799 364.5188 368.4783 312.0794

332.4960 315.2415 358.2018 325.2324 337.9571

356.9224 348.3048 327.4451 334.0691 371.3846

329.8311 333.5419 323.7592 359.7148 337.3421

323.2061 340.3222 342.0708 388.2800 369.1486

317.0190 362.0649 358.6979 347.8140 326.1401

lcfrejs =

0.0682 0.0121 0.0262 0.0976 0.0173

0.0021 0.0101 0.0975 1.1281 0.0947

0.0031 2.0241 0.1440 1.3631 0.5982

0.9624 1.0748 1.6795 0.0021 0.2265

0.0869 0.0053 0.0150 0.1347 0.0950

0.0175 0.0178 0.9972 0.7509 0.0225

0.0175 0.0576 0.0079 0.0469 0.0565

0.3463 0.4947 1.2119 0.0475 0.0289

0.0471 0.0125 0.3454 0.0022 0.0553

1.2840 0.0273 0.0411 0.0191 0.4985

slsfrejs =

0.9271 2.5690 1.9694 1.6791 1.2855

0.2959 0.0862 1.7984 2.1740 1.5246

0.5439 4.1463 1.1804 4.1488 1.7035

3.1729 2.6342 1.6795 0.4949 1.6598

1.6867 2.4408 0.2568 0.8631 2.2151

1.7363 3.2415 0.9972 2.5845 1.5580

1.2379 1.3554 2.1295 2.4365 0.6557

2.0748 1.8695 2.9735 0.9382 1.7180

3.2197 1.3736 1.4941 0.0671 0.2175

3.2884 0.8609 1.0471 1.9330 2.6547

lcfunhap =

0.0250 0.0100 0.0037 0.0304 0.0143

0.0024 0.0081 0.0645 0.2959 0.0527

0.0022 0.0412 0.0551 1.1320 0.0089

0.4516 0.0315 0.2431 0.0024 0.1090

0.0246 0.0027 0.0081 0.0209 0.0362

0.0033 0.0272 0.1621 0.2041 0.0178

0.0002 0.0036 0.0027 0.0294 0.0024

0.1740 0.3128 0.1758 0.0127 0.0447

0.0776 0.0018 0.3613 0.0002 0.0029

0.9199 0.0009 0.0411 0.0030 0.0477

slsfunhap =

0.2077 0.4799 0.2373 0.2510 0.0247

0.0763 0.0264 0.1980 0.2692 0.3342

0.1452 0.0109 0.0171 0.0596 0.5926

0.0755 0.2505 0.2431 0.3376 0.4565

0.1139 0.2133 0.1529 0.1137 1.4202

1.4212 0.0298 0.1621 0.2687 0.1895

0.1605 0.0911 0.5929 0.0487 0.1964

0.5715 0.2393 0.1806 0.1061 0.8399

0.0469 0.0909 0.3399 0.0202 0.0160

0.1617 0.2524 0.2254 0.2140 0.1921

menusizes =

4.8500 5.0000 5.0000 5.0000 4.7000

4.9500 4.8000 4.8500 4.8500 4.8500

4.8000 4.3500 4.8500 4.6000 4.7500

4.6000 4.7500 4.8500 4.9500 4.4500

4.7000 4.8500 4.6500 4.8000 4.8000

4.9000 4.9000 4.9000 4.9500 5.0000

4.9000 4.8000 4.9500 5.0000 4.8500

4.8500 4.4000 4.6500 4.8000 4.9000

4.9500 4.9000 4.9000 4.9500 4.8000

4.6500 4.9000 5.0000 5.0000 4.9500

avepij =

0.1625 0.1530 0.1710 0.1635 0.1712

0.1849 0.1644 0.1599 0.1479 0.1678

0.1779 0.1510 0.1651 0.1454 0.1524

0.1489 0.1632 0.1513 0.1678 0.1651

0.1713 0.1567 0.1607 0.1705 0.1655

0.1849 0.1730 0.1668 0.1556 0.1641

0.1728 0.1669 0.1609 0.1796 0.1778

0.1548 0.1529 0.1393 0.1617 0.1653

0.1672 0.1709 0.1567 0.1938 0.1678

0.1536 0.1746 0.1680 0.1734 0.1559

pijover5 =

60 56 69 64 63

72 67 59 48 66

69 59 59 57 58

61 64 60 67 67

74 66 64 66 67

80 71 70 61 64

67 63 70 72 75

58 58 49 60 64

66 65 57 82 65

59 71 62 69 56

pijequal1 =

32 24 28 25 43

36 28 24 21 32

34 30 40 21 28

18 30 23 25 36

33 16 27 35 31

32 31 33 20 29

30 29 25 34 42

28 32 19 24 28

22 32 25 46 33

25 32 30 29 26

runtimes =

277.1759 243.5413 273.7129 157.0794 123.0914

117.2157 114.7261 198.4318 288.4136 253.2852

159.9090 264.5476 153.1474 290.8834 125.3643

225.3156 284.1666 119.5273 117.0051 187.1574

220.6975 329.3790 238.6329 268.3866 277.0576

292.4108 211.3658 104.3324 306.8207 128.5717

185.4919 122.2774 191.2380 156.9859 173.8548

234.0277 269.2268 306.7817 211.3924 188.0134

201.7533 106.7321 147.2667 113.0787 115.6194

306.1737 144.3483 181.7938 250.4994 188.0085

bestest =

-0.0721 -0.0028 -0.0026 -0.0076 -0.0020

-0.0008 -0.0001 -0.0076 -0.8763 -0.1343

-0.0005 -2.0303 -0.1220 -1.0585 -0.8615

-0.8525 -1.2399 -0.7823 -0.0000 -0.1640

-0.0183 -0.0124 -0.0039 -0.0070 -0.0322

-0.0055 -0.0014 -0.5206 -0.9135 -0.0038

-0.0002 -0.0054 -0.0018 -0.0133 -0.0061

-0.1883 -0.9083 -1.1277 -0.0086 -0.0422

-0.0017 -0.0177 -0.0142 -0.0000 -0.0053

-1.1921 -0.0018 -0.0074 -0.0004 -0.5777

guessbestiter =

7 7 4 4 6

7 1 4 7 6

4 6 4 7 7

3 6 0 2 6

3 7 4 1 4

7 6 0 7 6

4 5 7 7 4

4 4 4 3 6

5 4 3 6 2

6 5 7 4 7

estslsfobjs =

351.5754 319.8476 348.6865 337.5600 350.6093

379.2034 373.9564 331.9651 349.6511 357.7467

368.9727 298.1902 352.2102 303.7417 342.2704

324.0223 322.6012 356.8502 369.8651 347.5367

338.9641 321.9531 367.0007 367.7729 310.9243

347.6659 311.6958 366.3045 305.7506 334.9781

354.9505 353.9381 334.5557 335.0465 374.7721

327.9124 325.1715 316.3642 350.0066 342.3791

322.8119 346.6869 347.4043 387.9631 371.2122

319.0625 364.2496 363.2282 340.3453 322.9011

compportion80 =

0.6804 0.7200 0.7700 0.7900 0.6064

0.6667 0.7813 0.7320 0.6495 0.7938

0.6250 0.7241 0.6804 0.7609 0.6842

0.7283 0.7263 0 0.6667 0.8202

0.7340 0.7938 0.7204 0.5625 0.7604

0.7653 0.7551 0 0.8384 0.7400

0.7755 0.7500 0.7677 0.8000 0.7526

0.6598 0.7273 0.7742 0.6563 0.6735

0.7980 0.7449 0.7143 0.7576 0.6250

0.7634 0.7245 0.7300 0.7900 0.7879

compportionmin =

0.6804 0.7200 0.7700 0.7900 0.6064

0.6667 0.7813 0.7320 0.6495 0.7938

0.6250 0.7241 0.6804 0.7609 0.6842

0.7283 0.7263 1.0000 0.6667 0.8202

0.7340 0.7938 0.7204 0.5625 0.7604

0.7653 0.7551 1.0000 0.8384 0.7400

0.7755 0.7500 0.7677 0.8000 0.7526

0.6598 0.7273 0.7742 0.6563 0.6735

0.7980 0.7449 0.7143 0.7576 0.6250

0.7634 0.7245 0.7300 0.7900 0.7879

**104th experiment, Fixed Scens Welfare Profit b=0.7, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gp=0.1, w/v, w/unhap, noz**

lcfiterbetter =

0.8200

lcfiterworse =

0.1800

avepercbetter = 0.0348

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.8806

lcfiterave =

353.5629

slsfave =

342.3328

averuntime =

193.1683

avelcfrejs =

0.2558

aveslsfrejs =

1.7587

avelcfunhap =

0.1617

aveslsfunhap =

0.3132

percbetter =

0.0899 0.0278 0.0265 0.0287 0.0300

0.0662 0.0502 0.0669 0.0010 0.0030

0.0429 0.0563 -0.0235 0.0577 0.0245

0.0123 0.0748 0.0220 -0.0171 -0.0016

-0.0105 0.0277 0.0649 0.0080 -0.0088

0.0337 -0.0128 0.0180 0.0044 -0.0080

0.0562 0.0926 0.0024 0.1117 0.0489

0.0326 0.0360 0.1998 0.0015 -0.0088

0.1103 0.0418 -0.0011 0.0695 0.0146

0.0461 0.0439 0.0181 0.0530 0.0148

avelcfavecomp =

11.5140

aveslsfavecomp =

11.1018

avelcfaveperccomp =

0.8955

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

74.5891

aveslsfavetotprofit =

85.2961

avelcfpercposprofit =

1

returnedobjs =

344.3205 360.8516 363.1564 347.3202 360.2915

350.5477 345.8603 359.2211 366.3974 354.8426

364.9178 355.2168 366.8711 351.0930 366.4765

358.4997 308.5958 362.2773 364.0456 349.2763

367.1235 353.9846 346.5263 348.8191 348.5950

359.4197 358.2342 346.2452 356.1210 372.7503

330.5594 349.6449 352.3891 308.6891 344.2180

358.0751 374.2885 353.3447 299.4087 371.7659

346.8098 372.0838 371.2007 369.3958 347.1641

348.3685 355.8998 346.8739 370.5129 349.5521

slsfobjs =

315.9213 351.0861 353.7867 337.6376 349.7946

328.7949 329.3216 336.6991 366.0210 353.7917

349.8972 336.2765 375.6924 331.9312 357.6979

354.1479 287.1253 354.4915 370.3931 349.8347

371.0295 344.4350 325.4002 346.0668 351.6801

347.7183 362.8959 340.1279 354.5693 375.7622

312.9781 320.0033 351.5510 277.6625 328.1584

346.7684 361.2690 294.5110 298.9558 375.0544

312.3630 357.1521 371.6084 345.4022 342.1777

333.0264 340.9312 340.7232 351.8707 344.4455

slsfavecomp =

10.6915 10.4311 10.6624 10.2558 10.4514

10.4827 11.3640 12.7830 9.4560 10.5327

11.9718 10.1922 10.5179 10.6975 12.5368

11.0941 10.6949 10.5084 9.8010 10.7920

10.9666 10.4723 11.7988 11.7806 9.3807

10.3153 11.8929 8.7867 10.2831 13.4829

8.7512 9.0126 13.0581 9.0290 11.4154

11.7298 13.9831 13.9187 9.6031 11.0814

13.0483 13.5024 11.6262 12.9782 10.0834

11.4696 11.8771 11.4058 12.0304 10.4093

lcfavecomp =

11.0603 11.0024 10.7250 10.9178 10.6119

11.1831 12.1573 13.1287 9.7145 11.1797

12.4425 11.0364 10.9066 10.7640 12.6923

11.7836 11.2146 10.5204 10.2588 11.1143

11.4434 10.9512 12.3594 11.9954 10.0163

10.5468 11.9750 9.2608 11.1018 13.8186

9.3362 9.5826 13.4800 9.4505 11.8359

12.0599 14.1766 13.2518 10.1795 11.2991

14.1817 13.6524 11.8704 13.4587 10.5594

11.9448 12.7085 12.0347 12.0274 10.7280

lcfaveperccomp =

0.8663 0.8761 0.8387 0.9465 0.8816

0.9493 0.9362 0.8752 0.8432 0.9329

0.8569 0.9224 0.8634 0.9248 0.8525

0.9301 0.8921 0.8479 0.8663 0.8876

0.9015 0.8774 0.9070 0.8722 0.9300

0.8668 0.8263 0.9523 0.9064 0.8595

0.9512 0.9069 0.9484 1.0184 0.9145

0.9109 0.8743 0.8712 0.9066 0.8414

0.9120 0.8976 0.8469 0.9088 0.8736

0.9370 0.9315 0.8752 0.8722 0.8888

lcfavetotprofit =

72.3351 73.8365 81.7505 64.4827 77.1241

64.5009 70.1792 81.2366 77.9308 71.9771

79.5384 62.9690 80.7553 71.1530 87.6612

73.1849 60.6262 79.1834 76.0006 75.8187

79.0442 72.4647 68.1952 84.3037 65.6852

76.5370 88.6423 64.7619 66.4854 93.0197

57.2205 65.3951 80.1837 50.2381 69.2167

77.7333 88.2350 84.2383 62.0570 86.7157

69.7862 89.0443 86.6163 81.4356 71.6281

71.2901 67.4467 72.7838 83.1188 73.6888

slsfavetotprofit =

80.8824 85.9261 84.8212 81.0506 82.8646

80.4929 85.8810 88.3531 82.3088 86.0896

91.0717 81.5362 88.9061 79.8161 93.1087

87.9311 75.8349 83.1764 85.1069 85.5313

89.7623 84.1765 84.6435 90.4643 80.0400

83.0016 90.4798 76.2668 84.5712 101.4709

70.5518 75.5815 94.5541 64.7252 82.3305

88.8789 97.1400 83.5330 72.1248 91.4795

88.4459 97.7823 92.7404 94.2216 83.0575

86.3266 87.1133 87.5051 88.9757 82.1722

returnedobjs =

344.3205 360.8516 363.1564 347.3202 360.2915

350.5477 345.8603 359.2211 366.3974 354.8426

364.9178 355.2168 366.8711 351.0930 366.4765

358.4997 308.5958 362.2773 364.0456 349.2763

367.1235 353.9846 346.5263 348.8191 348.5950

359.4197 358.2342 346.2452 356.1210 372.7503

330.5594 349.6449 352.3891 308.6891 344.2180

358.0751 374.2885 353.3447 299.4087 371.7659

346.8098 372.0838 371.2007 369.3958 347.1641

348.3685 355.8998 346.8739 370.5129 349.5521

slsfobjs =

315.9213 351.0861 353.7867 337.6376 349.7946

328.7949 329.3216 336.6991 366.0210 353.7917

349.8972 336.2765 375.6924 331.9312 357.6979

354.1479 287.1253 354.4915 370.3931 349.8347

371.0295 344.4350 325.4002 346.0668 351.6801

347.7183 362.8959 340.1279 354.5693 375.7622

312.9781 320.0033 351.5510 277.6625 328.1584

346.7684 361.2690 294.5110 298.9558 375.0544

312.3630 357.1521 371.6084 345.4022 342.1777

333.0264 340.9312 340.7232 351.8707 344.4455

lcfrejs =

0.7407 0.0055 0.1059 0.1815 0.0659

0.0046 0.2903 0.2012 0.0002 0.0961

0.0484 0.0123 0.0001 0.0158 0.1036

0.0571 1.4171 0.1013 0.0012 0.5298

0.0021 0.1912 0.0686 0.6936 0.0694

0.1201 0.5038 0.2084 0.0085 0.3459

0.2395 0.0160 0.1947 1.7324 0.2442

0.0712 0.0112 0.8939 1.6415 0.0041

0.1114 0.0101 0.0004 0.0098 0.1782

0.4038 0.0159 0.1995 0.0035 0.6202

slsfrejs =

3.0073 0.8831 1.1659 1.9871 1.0663

2.3805 2.2526 2.3375 0.2653 1.0929

1.6501 1.7737 0.1126 2.2974 1.2597

1.1067 3.9738 1.3521 0.1270 1.4015

0.4890 1.4983 2.9071 1.2911 1.0290

1.3955 1.1219 1.5044 1.2908 0.7003

2.8544 1.7822 1.7297 4.7357 2.5247

1.6590 1.6088 4.7461 3.7762 0.1729

3.0718 1.5070 0.4028 1.5201 1.7133

2.5300 2.0011 1.6624 1.7686 1.4465

lcfunhap =

0.0531 0.0069 0.1185 0.0620 0.0724

0.0064 0.1930 0.2361 0.0000 0.0223

0.0139 0.0149 0.0001 0.0119 0.1495

0.0357 1.0556 0.1921 0.0012 0.2326

0.0012 0.0538 0.0731 0.3481 0.0120

0.1746 0.8123 0.2021 0.0042 0.0057

0.3111 0.0156 0.3143 0.1028 0.3837

0.0597 0.0125 0.0610 2.3374 0.0024

0.1036 0.0138 0.0005 0.0072 0.0489

0.0216 0.0221 0.0265 0.0030 0.0745

slsfunhap =

0.3239 0.5824 0.1318 0.1987 0.3500

0.2793 0.6944 0.3786 0.1840 0.2894

0.1935 0.8394 0.0171 0.0500 0.1350

0.2604 1.1669 0.0069 0.1496 0.1527

0.0920 0.3496 0.0925 0.4515 0.0874

0.3286 0.0424 0.3806 0.1464 0.0306

0.2827 1.3014 0.1016 0.3726 0.2940

0.1749 0.0766 0.2539 0.4623 0.0393

0.8723 0.1428 0.0848 0.8442 0.2287

0.0942 0.2496 0.8747 0.0789 0.4458

menusizes =

5.0000 5.0000 4.9000 4.7500 4.9500

4.9000 5.0000 4.8500 4.9000 5.0000

4.9000 5.0000 4.8500 5.0000 5.0000

4.6000 4.9000 4.9000 4.8000 5.0000

4.7500 4.9500 4.9500 4.8000 5.0000

4.9500 4.8500 4.9000 4.9000 5.0000

4.8000 4.9000 5.0000 4.8000 4.7500

4.9500 4.9500 5.0000 4.8500 4.9500

4.7500 4.7500 4.8000 4.9500 4.9000

4.7500 4.9000 5.0000 4.8000 5.0000

avepij =

0.1588 0.1755 0.1619 0.1577 0.1732

0.1792 0.1561 0.1646 0.1852 0.1719

0.1839 0.1832 0.1757 0.1727 0.1760

0.1722 0.1439 0.1570 0.1701 0.1669

0.1807 0.1724 0.1635 0.1711 0.1691

0.1696 0.1696 0.1628 0.1707 0.1849

0.1544 0.1602 0.1645 0.1523 0.1667

0.1812 0.1734 0.1602 0.1396 0.1833

0.1551 0.1635 0.1665 0.1826 0.1608

0.1710 0.1745 0.1671 0.1666 0.1577

pijover5 =

58 71 59 63 70

79 60 66 77 66

79 78 70 70 65

71 56 58 64 63

70 68 65 68 63

66 62 60 67 73

59 63 61 58 65

74 71 62 51 72

64 59 61 74 58

70 76 64 65 62

pijequal1 =

26 35 30 25 22

35 26 19 36 31

39 34 33 22 34

33 18 25 41 31

44 34 27 31 35

28 40 35 28 33

27 26 26 27 29

37 27 23 17 35

24 30 34 36 34

36 25 30 26 23

runtimes =

142.2688 138.2008 112.5911 122.8490 125.4756

143.5187 167.2370 158.5716 110.4563 110.9428

108.1555 151.5491 113.3054 148.4804 144.0341

130.5308 150.9560 135.5343 107.5813 130.1771

105.5513 138.6863 158.4199 143.5501 121.4218

140.1059 108.2348 130.2492 257.5976 269.4899

271.6423 317.5926 422.3442 308.6372 304.5088

313.6575 303.9168 304.6392 315.8337 271.7488

346.5362 377.1781 299.8371 333.7696 155.1268

145.7760 176.4951 155.5728 152.5904 155.2911

bestest =

-0.0666 -0.0009 -0.1157 -0.0110 -0.0080

-0.0008 -0.0194 -0.0544 0 -0.0085

-0.1329 -0.0001 0 -0.0028 -0.1334

-0.0256 -1.8189 -0.0004 -0.0000 -0.1650

0 -0.0310 -0.0862 -0.3366 -0.0130

-0.0069 -0.4128 -0.0002 -0.0124 -0.0623

-0.2155 -0.0008 -0.0644 -1.4649 -0.0227

-0.0403 -0.0009 -0.3396 -1.8508 -0.0003

-0.0285 -0.0017 -0.0000 -0.0011 -0.0988

-0.1394 -0.0030 -0.0566 -0.0034 -0.1757

guessbestiter =

3 7 7 7 5

6 4 7 2 6

7 3 3 6 7

4 6 6 7 6

6 6 7 5 3

5 4 5 6 3

4 5 4 7 7

3 4 3 5 5

6 6 3 2 6

6 6 6 5 3

estslsfobjs =

321.4566 336.2046 354.8466 333.7474 354.5089

325.8862 326.9033 325.7308 365.1329 359.3407

346.5637 347.3296 373.0855 330.5712 360.0820

359.2788 285.0331 355.8612 371.9558 343.8578

366.0325 338.0944 321.6583 350.6270 352.3529

349.5155 361.1104 339.7844 357.7904 374.3581

315.4744 337.7067 348.1629 280.1757 335.5666

344.7127 362.2925 294.9040 304.5106 376.9769

312.6465 360.4979 372.2876 335.7523 348.3401

334.6260 325.1534 339.2242 355.8822 347.0356

compportion80 =

0.7100 0.7400 0.6327 0.8105 0.7677

0.7755 0.7500 0.7526 0.7653 0.7600

0.8367 0.8200 0.7423 0.7700 0.7400

0.8913 0.7551 0.6735 0.6563 0.7100

0.6421 0.6768 0.7374 0.6667 0.7600

0.7071 0.6289 0.8469 0.7959 0.6400

0.6875 0.7857 0.7300 0.8542 0.7789

0.8384 0.6869 0.7100 0.7835 0.5960

0.8105 0.6947 0.6979 0.8384 0.7143

0.7895 0.8061 0.7900 0.7292 0.7400

compportionmin =

0.7100 0.7400 0.6327 0.8105 0.7677

0.7755 0.7500 0.7526 0.7653 0.7600

0.8367 0.8200 0.7423 0.7700 0.7400

0.8913 0.7551 0.6735 0.6563 0.7100

0.6421 0.6768 0.7374 0.6667 0.7600

0.7071 0.6289 0.8469 0.7959 0.6400

0.6875 0.7857 0.7300 0.8542 0.7789

0.8384 0.6869 0.7100 0.7835 0.5960

0.8105 0.6947 0.6979 0.8384 0.7143

0.7895 0.8061 0.7900 0.7292 0.7400

**105th experiment, Fixed Scens Welfare Profit b=0.7, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gp=0.1, w/v, w/unhap, noz, slsfscens=50**

lcfiterbetter =

0.6200

lcfiterworse =

0.3800

avepercbetter =

0.0275

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.8332

lcfiterave

352.2053

slsfave =

343.6152

averuntime =

124.4937

avelcfrejs =

0.2684

aveslsfrejs =

1.6600

avelcfunhap =

0.1655

aveslsfunhap =

0.2363

percbetter =

0.0707 -0.0088 0.1256 -0.0089 0.0621

-0.0013 0.0283 -0.0220 -0.0007 -0.0018

-0.0238 0.0189 0.0459 0.0003 0.0349

0.0502 -0.0128 0.0766 0.0986 -0.0250

-0.0091 0.0534 0.0493 -0.0129 0.0636

-0.0112 0.0995 0.0315 0.0316 0.0146

0.0049 0.0251 0.0559 -0.0123 -0.0137

0.0317 0.1629 0.0558 -0.0116 0.0397

0.0113 -0.0004 0.0223 0.0011 -0.0061

-0.0091 -0.0071 0.0464 0.1471 0.0115

avelcfavecomp =

11.0101

aveslsfavecomp =

10.6014

avelcfaveperccomp =

0.8900

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

73.1191

aveslsfavetotprofit =

83.2908

avelcfpercposprofit

1

returnedobjs =

349.5986 365.2985 348.4555 328.2223 352.3361

353.3935 337.7624 344.5025 330.1429 360.8257

367.9736 342.9606 351.6533 361.5918 354.4222

343.4885 356.8231 363.2350 353.1543 363.4099

352.3768 347.4665 333.6591 370.1085 365.9708

358.4037 312.8981 377.4406 329.9617 350.2441

355.5942 365.4026 351.3225 368.9922 358.5965

359.9283 325.8027 346.7944 360.4662 343.5693

355.6786 360.9875 343.7867 362.5108 354.8521

351.8581 377.9923 337.6721 339.7839 360.8930

slsfobjs =

326.5154 368.5337 309.5710 331.1645 331.7255

353.8617 328.4754 352.2521 330.3685 361.4933

376.9417 336.5921 336.2214 361.4685 342.4744

327.0571 361.4670 337.4057 321.4463 372.7096

355.5967 329.8408 317.9831 374.9407 344.0784

362.4598 284.5695 365.9208 319.8635 345.1935

353.8769 356.4667 332.7250 373.5874 363.5704

348.8833 280.1546 328.4615 364.6814 330.4486

351.7206 361.1145 336.2987 362.0946 357.0150

355.0799 380.6951 322.7030 296.2171 356.7742

slsfavecomp =

9.4680 10.3626 10.9691 12.1716 9.8921

11.0359 8.7744 11.0410 9.9787 9.6818

10.7459 10.7378 10.4069 9.9939 8.9494

10.7072 10.0179 13.6239 13.1835 10.7850

11.0529 10.3828 8.8209 12.0735 10.8829

10.9146 10.9775 12.5549 8.7106 9.0785

10.4954 11.8287 11.0391 11.5702 9.9364

12.7912 8.9612 9.1756 9.3899 11.1432

9.4918 11.2331 14.0000 11.0788 10.2783

7.5307 11.6498 10.8713 9.7948 9.8343

lcfavecomp =

9.8489 10.8940 11.1750 12.2998 10.1186

11.3915 9.3201 11.5861 10.0713 10.0871

11.1681 11.3571 11.0269 10.1198 9.2746

11.3526 10.4982 13.7937 14.1192 11.1873

11.6095 11.1111 9.7070 12.4978 10.8867

11.5248 11.0405 12.4528 8.9764 9.6839

10.7291 12.1261 11.2220 11.9913 10.5163

13.2729 9.5147 9.5764 9.7479 11.3311

10.0159 11.8942 14.2647 11.6386 10.6806

7.9889 11.8581 11.6181 10.2899 10.0465

lcfaveperccomp =

0.8703 0.8946 0.8963 0.8815 0.9284

0.9062 0.9366 0.8879 0.8445 0.8811

0.8980 0.9041 0.8931 0.8169 0.8797

0.9207 0.8803 0.9449 0.9819 0.8572

0.8898 0.8954 0.9350 0.8554 0.8436

0.9301 0.9613 0.8336 0.8528 0.9158

0.8340 0.8724 0.8809 0.8676 0.9210

0.8984 0.9376 0.9111 0.8580 0.8636

0.8976 0.8720 0.8555 0.8640 0.8624

0.8877 0.8507 0.8969 0.9293 0.9204

lcfavetotprofit =

69.2289 76.3603 65.8896 75.3752 66.0724

77.4798 64.4104 74.6628 73.4361 73.1936

79.7281 70.1996 72.2045 83.0425 68.9217

64.4100 75.8037 76.9890 62.7555 81.2482

75.1147 64.9513 56.3780 85.0471 81.1774

74.0210 59.0743 90.9597 66.9342 64.0144

80.0876 83.5557 76.9607 84.0192 71.8837

76.9387 55.9191 64.7978 75.0403 78.0040

70.5896 76.7978 85.2210 75.8917 76.2945

63.2406 89.3247 68.7683 61.2338 72.3034

slsfavetotprofit =

76.4165 87.3086 76.6936 83.7342 76.7692

86.5766 76.0884 86.5171 76.6871 82.5788

88.7636 82.9457 84.0586 85.1615 75.8350

82.7922 84.1728 92.8279 89.9635 89.6049

88.0020 78.6836 72.3654 94.7678 82.7175

88.0977 71.0382 93.5624 70.7223 78.0908

85.0379 92.3802 82.2948 92.0044 85.0272

92.1920 65.7279 76.4525 82.2335 84.9463

81.5459 90.1071 96.3322 87.9127 85.4986

72.2235 94.4459 82.9983 70.4223 81.2134

returnedobjs =

349.5986 365.2985 348.4555 328.2223 352.3361

353.3935 337.7624 344.5025 330.1429 360.8257

367.9736 342.9606 351.6533 361.5918 354.4222

343.4885 356.8231 363.2350 353.1543 363.4099

352.3768 347.4665 333.6591 370.1085 365.9708

358.4037 312.8981 377.4406 329.9617 350.2441

355.5942 365.4026 351.3225 368.9922 358.5965

359.9283 325.8027 346.7944 360.4662 343.5693

355.6786 360.9875 343.7867 362.5108 354.8521

351.8581 377.9923 337.6721 339.7839 360.8930

slsfobjs =

326.5154 368.5337 309.5710 331.1645 331.7255

353.8617 328.4754 352.2521 330.3685 361.4933

376.9417 336.5921 336.2214 361.4685 342.4744

327.0571 361.4670 337.4057 321.4463 372.7096

355.5967 329.8408 317.9831 374.9407 344.0784

362.4598 284.5695 365.9208 319.8635 345.1935

353.8769 356.4667 332.7250 373.5874 363.5704

348.8833 280.1546 328.4615 364.6814 330.4486

351.7206 361.1145 336.2987 362.0946 357.0150

355.0799 380.6951 322.7030 296.2171 356.7742

lcfrejs =

0.1106 0.0022 0.0308 1.0841 0.0227

0.3204 0.4388 0.5554 0.7956 0.0014

0.0133 0.3009 0.0288 0.6176 0.0204

0.5798 0.2105 0.0384 0.1034 0.0161

0.5472 0.0700 0.1724 0.0291 0.0226

0.1524 0.7764 0.0000 1.0262 0.0454

0.5684 0.0775 0.3270 0.1330 0.0060

0.0148 0.3368 0.1020 0.1920 1.2317

0.0001 0.0089 1.1091 0.0101 0.1884

0.0240 0.0011 0.7810 0.1722 0.0036

slsfrejs =

2.3924 0.4663 3.6464 2.7685 2.2600

1.2606 1.6954 1.5280 2.4253 0.4792

0.1857 1.6810 1.6383 0.7995 1.3478

2.3558 0.6604 2.6352 2.6804 0.1278

1.4491 2.4564 2.5170 0.4031 1.9931

0.6850 5.0028 1.2014 2.4628 1.3984

1.1805 0.8853 2.3578 0.3772 0.7169

1.8241 4.7674 1.9421 0.4062 2.0293

1.0320 0.8382 2.4165 0.8254 0.6303

0.5339 0.1243 2.3820 4.0816 1.0442

lcfunhap =

0.0518 0.0021 0.0251 0.7024 0.0179

0.3443 0.4165 0.2236 0.8544 0.0024

0.0016 0.1589 0.0095 0.0055 0.0221

0.6034 0.0880 0.0118 0.1343 0.0169

0.1720 0.0730 0.2840 0.0159 0.0231

0.0137 1.0133 0.0000 0.9022 0.0728

0.0139 0.0281 0.4032 0.0568 0.0006

0.0241 0.5053 0.0072 0.0065 0.1716

0.0001 0.0038 0.1877 0.0053 0.0110

0.0240 0.0011 0.3782 0.1788 0.0036

slsfunhap =

0.1481 0.1945 0.0801 0.1043 0.1685

0.1404 0.4997 0.0717 0.0643 0.2771

0.0744 0.6395 0.6269 0.0088 0.0891

0.5220 0.0651 0.2832 1.0694 0.1035

0.0431 0.1919 0.2918 0.1019 0.0218

0.2893 0.1102 0.0114 0.3184 0.2158

0.0472 0.4574 0.2862 0.2729 0.0181

0.2137 0.1739 0.2662 0.0986 0.5167

0.0491 0.4077 0.6359 0.0905 0.3101

0.0599 0.0433 0.8775 0.1360 0.0282

menusizes =

4.9000 4.1000 4.9000 4.6500 4.7500

4.9500 4.7500 4.9000 4.9500 4.9500

4.8500 5.0000 5.0000 4.8500 4.9000

4.9500 4.8500 4.9500 4.4000 4.7500

4.9000 4.9000 4.7500 4.8000 4.6000

4.8500 4.9000 4.7000 4.8500 4.6000

4.6000 5.0000 4.9500 4.9500 4.9000

4.8500 5.0000 4.6500 5.0000 4.9500

5.0000 4.9500 4.8500 4.7000 4.9000

4.1500 4.5500 4.9500 4.7500 4.5500

avepij =

0.1665 0.1548 0.1778 0.1642 0.1729

0.1574 0.1689 0.1606 0.1710 0.1683

0.1662 0.1595 0.1625 0.1857 0.1668

0.1832 0.1723 0.1742 0.1571 0.1611

0.1743 0.1532 0.1618 0.1637 0.1614

0.1712 0.1574 0.1721 0.1488 0.1677

0.1563 0.1753 0.1627 0.1741 0.1753

0.1751 0.1670 0.1628 0.1818 0.1593

0.1739 0.1707 0.1477 0.1674 0.1718

0.1500 0.1817 0.1603 0.1472 0.1613

pijover5 =

68 66 72 61 69

58 63 59 68 65

60 62 63 76 65

79 63 68 66 61

65 57 62 61 63

66 56 71 53 69

59 65 60 70 67

70 69 65 75 59

67 67 58 68 66

58 77 58 60 62

pijequal1 =

24 28 35 24 30

26 39 29 30 30

30 24 25 40 28

38 38 29 25 31

38 24 27 27 30

28 23 31 25 35

26 36 28 27 42

35 21 26 39 25

32 26 23 30 32

34 34 24 27 33

runtimes =

184.2583 105.5081 137.3548 133.3884 128.3402

124.3630 102.6014 105.8020 133.1120 130.4873

113.7339 140.4910 135.2911 102.4628 131.5766

126.1849 105.2241 138.8219 141.7905 126.0152

106.9180 109.6895 114.9611 110.4618 139.0065

112.4364 132.8625 135.6026 132.5738 112.0382

139.0457 122.0390 133.9773 128.2075 107.1158

145.8765 137.8892 108.6942 108.7987 108.8413

109.6686 123.0103 153.8709 132.1752 114.7783

108.5969 109.6326 124.7087 144.0569 110.3441

bestest =

-0.0213 -0.0007 -0.0197 -1.0188 -0.0016

-0.1827 -0.5419 -0.1741 -0.4707 -0.0000

-0.0006 -0.4131 -0.0031 -0.3249 -0.0078

-0.1854 -0.1845 -0.0232 -0.0708 -0.0004

-0.6036 -0.0283 -0.0767 -0.0046 -0.0003

-0.0603 -0.3057 0 -1.0341 -0.0816

-0.0798 -0.1225 -0.2683 -0.0011 -0.0002

-0.0035 -0.2335 -0.0705 -0.0255 -0.5071

-0.0000 -0.0004 -0.9904 -0.0034 -0.0259

-0.0129 0 -0.2236 -0.2528 -0.0000

guessbestiter =

3 5 5 4 4

6 6 7 5 3

6 3 6 1 3

7 2 7 7 6

5 3 7 7 4

4 5 2 5 7

2 6 5 4 7

6 7 3 1 3

6 6 3 2 3

1 2 7 7 6

estslsfobjs =

333.7314 370.6799 314.0995 329.3952 331.4627

348.6411 325.0886 358.5983 334.6702 353.2799

380.9448 341.3036 357.4743 357.6678 340.3976

328.0027 348.1355 332.6038 303.9344 367.2629

359.0922 321.5175 325.2084 379.9777 346.8827

364.0790 288.4677 366.8124 322.0091 350.2939

352.4942 360.3156 327.2340 367.0550 361.6316

348.7117 283.9546 342.0133 358.0938 328.2685

348.1633 358.6992 338.8864 356.7015 355.7301

360.1157 382.4382 319.9550 299.5178 356.3684

compportion80 =

0.7551 0.7317 0.7653 0.6344 0.7789

0.7374 0.7474 0.6531 0.6667 0.7071

0.6186 0.7800 0.6900 0.7010 0.7143

0.7778 0.6289 0.7879 0.8295 0.7474

0.6837 0.7347 0.6526 0.7604 0.6413

0.7216 0.6224 0.6596 0.7526 0.7391

0.7391 0.7000 0.7172 0.7778 0.6735

0.7423 0.7500 0.7312 0.7700 0.7071

0.7200 0.8283 0.7216 0.7872 0.6122

0.6988 0.6374 0.7172 0.7684 0.6813

cmpportionmin =

0.7551 0.7317 0.7653 0.6344 0.7789

0.7374 0.7474 0.6531 0.6667 0.7071

0.6186 0.7800 0.6900 0.7010 0.7143

0.7778 0.6289 0.7879 0.8295 0.7474

0.6837 0.7347 0.6526 0.7604 0.6413

0.7216 0.6224 0.6596 0.7526 0.7391

0.7391 0.7000 0.7172 0.7778 0.6735

0.7423 0.7500 0.7312 0.7700 0.7071

0.7200 0.8283 0.7216 0.7872 0.6122

0.6988 0.6374 0.7172 0.7684 0.6813

**106th experiment, Fixed Scens b=0.7, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gp=0.1, diff lcf scens, not =wt**

lcfiterbetter =

0.7000

lcfiterworse =

0.3000

avepercbetter =

0.0185

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.7660

lcfiterave =

351.6373

slsfave =

345.6771

averuntime =

189.6451

avelcfrejs =

0.3967

aveslsfrejs =

1.5771

avelcfunhap =

0.0675

aveslsfunhap =

0.2063

percbetter =

0.0161 0.0280 0.0038 -0.0208 -0.0104

0.0201 0.0205 -0.0211 0.0804 0.0080

0.0231 0.0665 0.0094 -0.0136 0.0035

0.0896 0.0018 -0.0006 -0.0039 0.0414

-0.0086 0.0174 0.0365 0.0468 0.0191

-0.0160 0.0018 0.0787 0.0332 0.0213

0.0439 0.0047 -0.0105 0.0166 -0.0094

0.0161 -0.0337 0.0290 0.0843 -0.0137

0.0012 -0.0049 0.0671 0.0258 -0.0321

0.0808 0.0328 0.0301 -0.0003 0.0230

avelcfavecomp =

10.9619

aveslsfavecomp =

10.5254

avelcfaveperccomp =

0.8898

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

72.9291

aveslsfavetotprofit =

83.3102

avelcfpercposprofit =

1

returnedobjs =

356.3975 327.3562 299.3185 345.6676 344.4174

357.5825 358.1504 370.7694 335.3634 363.4210

353.5554 329.9108 362.4190 362.7954 363.6771

353.3639 346.6729 358.6051 338.7111 365.9431

337.9606 358.6649 331.4547 355.2045 346.1295

337.2628 350.0795 338.9254 344.0049 360.9905

363.3629 373.2457 357.8348 354.4323 358.9637

337.1708 356.8926 366.6171 344.6306 373.5361

357.5896 369.4471 332.8787 367.0172 338.3367

333.8995 348.3975 363.5895 368.7309 360.5172

slsfobjs =

350.7676 318.4305 298.1810 353.0101 348.0337

350.5428 350.9483 378.7510 310.4039 360.5393

345.5877 309.3482 359.0382 367.7986 362.4118

324.3066 346.0596 358.8250 340.0509 351.4032

340.8975 352.5356 319.7972 339.3156 339.6372

342.7535 349.4479 314.2000 332.9603 353.4732

348.0675 371.5016 361.6276 348.6288 362.3790

331.8223 369.3429 356.2959 317.8347 378.7179

357.1696 371.2795 311.9336 357.7878 349.5478

308.9272 337.3234 352.9722 368.8445 352.3964

slsfavecomp =

9.3517 9.1947 11.5011 13.5773 10.0769

10.7590 9.7030 12.0903 9.4274 10.7285

8.9863 10.0447 10.3491 9.5141 10.8082

10.7978 11.2445 12.0932 8.3107 10.6819

8.7279 10.3863 9.7800 11.8100 10.7284

8.7143 9.4227 10.5301 10.2128 9.8000

10.5379 10.8000 9.8155 11.8823 11.2891

8.8608 11.5158 11.8322 9.9800 12.1243

11.7193 10.4206 10.7239 12.2908 8.1186

8.5195 12.2392 10.7696 10.9267 12.5520

lcfavecomp =

9.8662 9.8358 12.1076 14.4957 10.5817

10.9387 9.9525 12.5727 9.7966 10.9401

9.4818 10.3744 10.5669 9.8974 11.0461

11.2648 11.7441 12.5075 9.0639 10.8407

9.7975 11.0445 10.3055 12.0581 11.1400

9.3613 9.9458 10.8745 10.7354 10.0227

10.9516 11.0611 10.3972 12.3340 11.7144

9.6072 12.3999 11.9776 10.6849 12.4238

12.0212 10.6055 10.8768 12.6608 8.5747

9.2123 12.4796 10.8438 11.1554 12.9510

lcfaveperccomp =

0.9398 0.9226 0.9094 0.8957 0.8579

0.8421 0.8727 0.9113 0.9301 0.8851

0.9248 0.9232 0.8344 0.9048 0.8536

0.8842 0.8624 0.8362 0.9630 0.8617

0.9717 0.9357 0.8701 0.8987 0.8696

0.9323 0.9002 0.8881 0.9509 0.8516

0.8774 0.8366 0.9223 0.8664 0.8470

0.9012 0.9368 0.8556 0.9419 0.8650

0.8562 0.8323 0.8908 0.8775 0.9034

0.9161 0.8479 0.8591 0.8474 0.9243

lcfavetotprofit =

67.4033 58.6387 58.6342 77.0168 71.3562

82.2564 74.9462 85.8797 60.3599 79.5454

66.8105 64.6989 80.6652 75.1225 81.1072

72.6024 75.6938 83.2193 58.7941 78.7423

53.4295 69.4570 67.2498 75.8464 72.8913

62.5688 68.8171 67.6274 64.1140 76.4620

75.7376 84.5109 71.8014 80.7000 78.6110

60.0331 72.9057 84.3885 58.2813 89.1723

83.4320 83.1099 69.1374 83.1909 64.7341

54.5866 79.3188 80.7968 84.0218 76.0271

slsfavetotprofit =

78.8973 72.2318 76.1977 96.4821 81.5526

84.8163 80.4269 95.9846 71.1301 86.4212

77.3575 73.1936 85.1858 83.2691 87.0272

82.4113 84.7952 90.7186 74.1444 84.2888

76.3437 84.5941 76.6428 87.9983 83.4342

75.0950 80.0170 77.6626 80.0282 81.6476

85.1386 90.0116 83.9378 91.3797 88.4622

74.6721 92.4054 90.1433 77.5018 96.0390

90.7477 87.4795 77.8039 93.7910 73.3310

68.7745 88.5631 84.5352 89.3068 91.4909

returnedobjs =

356.3975 327.3562 299.3185 345.6676 344.4174

357.5825 358.1504 370.7694 335.3634 363.4210

353.5554 329.9108 362.4190 362.7954 363.6771

353.3639 346.6729 358.6051 338.7111 365.9431

337.9606 358.6649 331.4547 355.2045 346.1295

337.2628 350.0795 338.9254 344.0049 360.9905

363.3629 373.2457 357.8348 354.4323 358.9637

337.1708 356.8926 366.6171 344.6306 373.5361

357.5896 369.4471 332.8787 367.0172 338.3367

333.8995 348.3975 363.5895 368.7309 360.5172

slsfobjs =

350.7676 318.4305 298.1810 353.0101 348.0337

350.5428 350.9483 378.7510 310.4039 360.5393

345.5877 309.3482 359.0382 367.7986 362.4118

324.3066 346.0596 358.8250 340.0509 351.4032

340.8975 352.5356 319.7972 339.3156 339.6372

342.7535 349.4479 314.2000 332.9603 353.4732

348.0675 371.5016 361.6276 348.6288 362.3790

331.8223 369.3429 356.2959 317.8347 378.7179

357.1696 371.2795 311.9336 357.7878 349.5478

308.9272 337.3234 352.9722 368.8445 352.3964

lcfrejs =

0.0149 1.0649 2.3315 0.7992 1.0007

0.6766 0.0521 0.0004 0.6596 0.2334

0.0657 1.0992 0.4752 0.0488 0.1418

0.1054 1.0101 1.0035 0.0720 0.0314

0.0645 0.0012 1.1757 0.0187 0.1518

0.5530 0.3104 0.4460 0.0956 0.1128

0.0022 0.0067 0.0000 0.5632 0.2831

0.6855 0.0105 0.0246 0.0502 0.2243

0.6347 0.0132 1.1306 0.0239 1.0000

0.3074 0.9623 0.0486 0.0289 0.0172

slsfrejs =

1.2687 2.5282 4.1804 1.7573 1.3594

1.5809 1.1852 0.1981 3.2401 0.9598

1.1385 3.4915 0.9292 0.2932 0.9000

2.2679 1.8448 1.2721 1.3502 1.3477

1.3981 1.4472 2.8223 2.0546 1.8944

1.2857 1.1332 3.2255 2.1614 0.7779

1.4852 0.2642 0.3910 1.5892 0.9650

1.9274 0.5998 1.3414 2.5281 0.3061

1.1879 0.3212 3.3673 1.1990 1.0360

3.3030 2.2444 1.3351 0.4662 1.7061

lcfunhap =

0.0049 0.0472 0.2370 0.5320 0.0000

0.0148 0.0321 0.0001 0.0097 0.0028

0.0045 0.3126 0.1089 0.0489 0.0114

0.0144 0.1211 0.0036 0.0092 0.0289

0.0019 0.0007 0.2596 0.0070 0.1053

0.4989 0.0319 0.2065 0.0339 0.0424

0.0025 0.0071 0.0000 0.0240 0.0076

0.0093 0.0192 0.0265 0.0130 0.0067

0.0294 0.0028 0.3199 0.0103 0.0000

0.0224 0.0956 0.0125 0.0057 0.0303

slsfunhap =

0.0279 0.7446 0.1438 0.5935 0.0710

0.0269 0.1004 0.0249 0.4584 0.2392

0.3654 0.1363 0.1777 0.1996 0.0614

0.6494 0.0744 0.2010 0.0763 0.3182

0.2254 0.0659 0.2725 0.1809 0.1858

0.2602 0.1524 0.1555 0.1715 0.4301

0.2390 0.2835 0.2325 0.2020 0.0769

0.2797 0.0957 0.1070 0.5949 0.1037

0.2077 0.0661 0.2860 0.2004 0.0305

0.0889 0.2158 0.0401 0.1026 0.0692

menusizes =

4.6000 4.6500 4.6000 4.6000 4.6500

4.9500 4.6500 4.9000 4.5500 4.9000

4.9000 4.6500 4.3000 5.0000 4.9500

5.0000 4.4500 4.7000 4.9500 4.8500

4.6500 4.8000 4.9000 5.0000 4.7000

4.7000 5.0000 4.9500 4.8000 5.0000

4.9500 4.4000 5.0000 4.8000 4.7500

4.3000 4.9500 4.8500 4.7500 5.0000

4.9500 4.8000 4.7000 4.9000 4.7500

4.7500 4.9500 4.9000 4.8500 4.9500

avepij =

0.1548 0.1472 0.1701 0.1579 0.1777

0.1662 0.1599 0.1896 0.1487 0.1683

0.1652 0.1505 0.1464 0.1716 0.1691

0.1619 0.1430 0.1743 0.1649 0.1700

0.1571 0.1798 0.1436 0.1693 0.1480

0.1543 0.1583 0.1596 0.1695 0.1671

0.1731 0.1574 0.1838 0.1670 0.1681

0.1407 0.1660 0.1723 0.1744 0.1647

0.1619 0.1676 0.1535 0.1647 0.1701

0.1655 0.1561 0.1702 0.1735 0.1809

pijover5 =

57 59 71 70 76

64 61 75 61 60

63 57 58 68 58

63 52 75 64 67

60 74 49 70 54

56 57 62 68 64

69 64 70 64 68

53 67 67 77 65

59 61 58 62 64

65 61 58 65 77

pijequal1 =

27 18 33 25 39

30 32 42 23 33

27 25 27 34 42

26 26 36 35 24

32 39 18 23 25

28 34 30 34 26

22 30 42 32 26

28 28 42 35 25

28 30 31 25 43

31 19 36 31 38

runtimes =

244.4879 269.7166 218.1090 228.4606 183.7350

182.4024 226.0894 115.8244 258.9328 182.0594

123.8162 309.2814 149.8672 131.9507 116.0514

175.9673 157.1663 196.8453 225.5951 189.0567

234.7912 134.2659 225.7349 170.2148 176.6562

279.9190 113.6560 187.4253 225.0635 127.8811

167.4843 208.6972 140.3063 136.5939 129.6705

123.0368 134.0416 273.3095 122.9475 141.2602

204.3709 172.7024 127.9604 248.0455 111.3414

152.8475 349.2894 266.2143 270.0106 241.1030

bestest =

-0.0013 -1.0303 -2.0965 -0.5136 -1.0000

-0.4260 -0.0319 -0.0030 -0.4972 -0.0966

-0.0352 -1.0467 -0.0535 -0.0075 -0.0182

-0.1045 -1.0038 -1.0006 -0.1135 -0.0023

-0.2759 -0.0000 -0.8249 -0.0128 -0.2139

-0.3671 -0.0599 -0.1880 -0.1592 -0.0404

-0.0031 -0.0056 -0.0011 -0.0864 -0.0906

-0.7030 -0.0002 -0.0009 -0.0197 -0.0092

-0.2018 -0.0022 -0.7368 -0.0050 -1.0000

-0.3672 -0.6174 -0.0042 -0.0016 -0.0029

guessbestiter =

3 7 7 1 5

4 6 4 7 4

7 7 1 4 6

7 6 1 7 6

5 7 5 6 5

7 4 7 6 4

3 1 5 3 7

5 6 6 3 3

7 4 2 4 6

7 5 4 6 5

estslsfobjs =

353.1354 309.5008 302.8189 350.6219 354.7958

348.2981 351.5974 379.1952 300.2342 361.5669

347.2659 312.4236 364.7091 364.2775 365.4725

325.3377 342.2957 360.3473 336.0309 346.9603

350.8777 355.3990 326.3862 348.3784 340.7879

334.5393 345.4850 324.8842 331.7936 357.8959

349.4422 375.5792 369.7027 361.8374 362.9656

338.0087 372.0133 358.6895 326.3661 379.8086

357.6187 372.9418 332.2745 358.4685 347.7342

317.9382 343.2430 342.5123 366.0123 352.0762

compportion80 =

0.6739 0.7849 0.8043 0.7065 0.7419

0.7273 0.6882 0.6837 0.7582 0.7245

0.7449 0.7957 0.6512 0.7000 0.5859

0.6700 0.6292 0.7234 0.7374 0.7629

0.5591 0.7813 0.8061 0.7700 0.7234

0.7234 0.6700 0.7172 0.7813 0.7100

0.7374 0.7841 0.8000 0.7604 0.7053

0.7326 0.7778 0.7216 0.7158 0.6600

0.6667 0.6667 0.7979 0.7143 0.7474

0.6632 0.7475 0.6939 0.7113 0.7475

compportionmin =

0.6739 0.7849 0.8043 0.7065 0.7419

0.7273 0.6882 0.6837 0.7582 0.7245

0.7449 0.7957 0.6512 0.7000 0.5859

0.6700 0.6292 0.7234 0.7374 0.7629

0.5591 0.7813 0.8061 0.7700 0.7234

0.7234 0.6700 0.7172 0.7813 0.7100

0.7374 0.7841 0.8000 0.7604 0.7053

0.7326 0.7778 0.7216 0.7158 0.6600

0.6667 0.6667 0.7979 0.7143 0.7474

0.6632 0.7475 0.6939 0.7113 0.7475

**106th experiment, Fixed Scens b=0.7, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gp=0.1, same lcf scen, not =wt**

lcfiterbetter =

0.6600

lcfiterworse =

0.3400

avepercbetter =

0.0241

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.7771

lcfiterave =

349.0685

slsfave =

341.5130

averuntime =

214.3110

avelcfrejs =

0.4754

aveslsfrejs =

1.7718

avelcfunhap =

0.0982

aveslsfunhap =

0.2262

percbetter =

-0.0016 0.0287 0.1664 -0.0118 0.0399

0.0568 -0.0061 0.0107 0.0558 -0.0123

0.0359 -0.0116 0.0222 -0.0130 0.0104

-0.0008 0.0462 0.0905 -0.0052 -0.0022

-0.0060 -0.0000 0.0414 -0.0194 -0.0074

0.0118 0.0517 -0.0225 -0.0198 0.0698

0.1091 0.0363 0.0058 0.0252 0.0352

-0.0012 0.0335 0.0329 0.0107 0.0229

0.0729 0.0013 0.0417 0.0267 0.0493

0.0441 0.0070 -0.0080 0.0183 0.0409

avelcfavecomp =

11.0435

aveslsfavecomp =

10.5934

avelcfaveperccomp =

0.8942

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

72.3983

aveslsfavetotprofit =

82.8154

avelcfpercposprofit =

1

returnedobjs =

365.2895 351.5724 309.8140 365.1346 358.6092

345.5114 375.3787 365.6324 322.0731 377.4649

346.3908 333.2989 344.4858 365.1048 374.2083

339.3397 311.7259 317.2912 360.7563 347.0261

369.9113 361.7913 340.4958 350.2985 356.1557

330.3400 335.3770 352.0721 306.3616 365.1538

332.0586 349.5450 346.3283 365.8339 342.8491

328.6000 350.8056 336.0625 379.5155 358.0985

343.3910 343.2780 348.7902 338.1073 338.6066

358.8071 347.1263 365.7828 372.3529 363.4207

slsfobjs =

365.8895 341.7725 265.6219 369.5118 344.8403

326.9399 377.6699 361.7734 305.0437 382.1846

334.3812 337.2196 337.0176 369.9238 370.3541

339.6208 297.9729 290.9612 362.6264 347.7975

372.1404 361.8000 326.9680 357.2464 358.8078

326.5031 318.8834 360.1805 312.5368 341.3418

299.4054 337.3009 344.3207 356.8479 331.1822

328.9922 339.4446 325.3574 375.4954 350.0930

320.0714 342.8328 334.8425 329.3244 322.7127

343.6627 344.7142 368.7228 365.6635 349.1300

slsfavecomp =

10.1152 11.1341 12.7304 10.7045 10.6873

10.4179 12.5973 12.2233 10.6709 11.5020

10.8044 10.2402 9.8155 10.0215 11.6381

11.0531 9.0442 10.4653 10.3657 9.6807

11.8604 11.8802 11.4838 9.5755 10.2268

10.4063 8.8700 10.1902 9.7670 12.0844

9.2823 9.1099 8.3312 10.1894 11.2047

10.2302 9.4786 11.4841 14.2160 8.7041

9.7473 8.2171 9.0360 9.7354 11.3102

11.7287 11.5342 11.0900 11.5075 11.2779

lcfavecomp =

10.3418 11.2913 13.6330 11.0850 11.1570

10.9580 12.8463 12.4478 11.1756 11.7413

11.3715 10.7472 10.2006 10.4895 11.8913

11.8950 9.7574 10.9723 11.0088 10.1557

12.2144 12.3571 11.7136 10.0339 10.5903

11.2605 9.2490 10.8846 10.7856 12.2192

9.8868 9.8623 9.0267 10.4322 11.5422

10.5582 9.9538 12.0509 14.4667 9.0838

10.4474 8.6962 9.4274 9.9833 11.4665

12.0628 12.1477 11.3864 11.6321 11.5890

lcfaveperccomp =

0.8290 0.8292 0.9857 0.8686 0.8822

0.8939 0.8633 0.8359 0.8855 0.8409

0.9117 0.8999 0.8903 0.9178 0.8730

0.9074 0.9139 0.9131 0.8848 0.8866

0.8427 0.9496 0.9179 0.9038 0.8702

1.0269 0.9448 0.8838 0.9421 0.8931

0.9135 0.9026 0.9507 0.8642 0.8693

0.8564 0.9396 0.8818 0.8945 0.8678

0.9520 0.8943 0.9517 0.8843 0.8428

0.8640 0.9404 0.8502 0.8233 0.8778

lcfavetotprofit =

80.8958 80.3360 57.7820 80.4111 75.3727

66.2363 87.7240 88.3005 66.9532 89.0039

68.8216 70.2715 69.8296 76.7981 85.6336

63.5880 56.9077 61.2595 73.6670 67.7962

84.4592 79.9904 74.9619 69.8451 76.7045

51.6569 59.6691 70.5649 57.1090 81.5787

59.6310 62.8390 59.6352 78.4471 74.4640

71.0208 66.5716 72.5693 93.1084 70.2902

60.5381 65.0300 63.9731 68.9198 77.6600

82.3075 68.9114 84.2334 88.0777 77.5587

slsfavetotprofit =

85.4724 83.6120 79.7425 88.9784 85.5022

79.3351 94.7514 93.7345 75.8112 93.8532

82.8517 80.3927 78.4771 85.7676 92.4520

83.6285 70.0876 70.7914 86.9029 79.2487

93.1136 90.6485 81.9263 81.0495 84.2146

75.6080 71.1608 85.0383 74.7442 90.0141

70.7598 77.8738 73.9042 84.7125 83.8506

77.0343 78.9615 86.2521 102.8466 77.7725

75.2053 74.3514 74.4372 75.3779 82.3821

91.2747 86.5947 90.5097 91.5236 86.2330

returnedobjs =

365.2895 351.5724 309.8140 365.1346 358.6092

345.5114 375.3787 365.6324 322.0731 377.4649

346.3908 333.2989 344.4858 365.1048 374.2083

339.3397 311.7259 317.2912 360.7563 347.0261

369.9113 361.7913 340.4958 350.2985 356.1557

330.3400 335.3770 352.0721 306.3616 365.1538

332.0586 349.5450 346.3283 365.8339 342.8491

328.6000 350.8056 336.0625 379.5155 358.0985

343.3910 343.2780 348.7902 338.1073 338.6066

358.8071 347.1263 365.7828 372.3529 363.4207

slsfobjs =

365.8895 341.7725 265.6219 369.5118 344.8403

326.9399 377.6699 361.7734 305.0437 382.1846

334.3812 337.2196 337.0176 369.9238 370.3541

339.6208 297.9729 290.9612 362.6264 347.7975

372.1404 361.8000 326.9680 357.2464 358.8078

326.5031 318.8834 360.1805 312.5368 341.3418

299.4054 337.3009 344.3207 356.8479 331.1822

328.9922 339.4446 325.3574 375.4954 350.0930

320.0714 342.8328 334.8425 329.3244 322.7127

343.6627 344.7142 368.7228 365.6635 349.1300

lcfrejs =

0.1423 1.1175 1.6574 0.0460 0.0301

0.3515 0.0432 0.3018 1.6752 0.0037

0.4905 1.1957 0.5634 0.0008 0.0546

0.3157 1.6951 1.8073 0.0005 0.3042

0.0908 0.0703 0.7368 0.4287 0.4954

0.3452 0.1723 0.0332 2.1063 0.0142

0.3993 0.0036 0.0234 0.0265 0.5966

2.0062 0.0581 0.4862 0.0092 0.1051

0.0633 0.4289 0.2081 1.1579 1.0693

0.3175 0.2212 0.2816 0.0066 0.0107

slsfrejs =

0.4980 2.0658 5.6748 0.3982 1.6448

2.3670 0.4304 1.0851 3.8911 0.0436

2.1951 1.8345 1.9384 0.2609 0.7396

1.7968 3.3355 4.6386 0.7703 1.3991

0.5480 1.1642 2.8249 0.9959 1.0222

2.5990 2.6267 0.4855 2.9541 2.0845

3.7935 1.4086 1.2269 0.8434 2.1907

2.4112 1.3748 2.2834 0.9178 1.0217

2.6035 1.1429 1.9671 2.3422 2.8119

1.2968 1.6632 0.5395 0.7282 1.7127

lcfunhap =

0.0655 0.0065 0.5683 0.0442 0.0118

0.0638 0.0083 0.0570 0.0717 0.0105

0.0118 0.2259 0.2580 0.0005 0.0065

0.0406 0.1635 0.3391 0.0004 0.1915

0.0732 0.0667 0.6672 0.0015 0.0062

0.0314 0.2067 0.0255 0.1176 0.0124

0.2872 0.0010 0.0101 0.0215 0.2464

0.0139 0.0491 0.4897 0.0011 0.0006

0.0436 0.0063 0.0420 0.0828 0.2104

0.0204 0.0173 0.0036 0.0025 0.0087

slsfunhap =

0.1656 0.0597 0.6192 0.1515 0.2411

0.3498 0.1472 0.2368 0.0863 0.0630

0.1355 0.2991 0.1599 0.2092 0.1737

0.2101 0.5370 0.0578 0.1199 0.0054

0.2447 0.1001 0.0271 0.0089 0.1505

0.1466 0.3200 0.2496 0.4097 0.2462

0.1480 0.7263 0.0707 0.2510 0.2699

0.1307 0.5692 0.6054 0.0679 0.3666

0.2932 0.2594 0.1732 0.0709 0.1045

0.6081 0.2012 0.0917 0.1411 0.2305

menusizes =

4.9500 4.5500 4.3000 4.8000 4.8000

4.8500 4.7500 4.9000 4.7000 4.8000

4.7000 4.6500 4.7500 4.8500 4.9500

4.9500 4.5500 4.6000 4.8500 4.7000

4.8000 4.8000 4.6000 4.7000 4.9000

4.5500 4.8000 4.7500 4.4500 4.9000

4.9500 4.6000 4.8500 5.0000 4.9000

4.3500 4.8500 4.9500 4.9000 4.9500

4.9500 4.7500 4.8000 4.5500 4.7500

5.0000 4.8000 4.9500 4.7000 4.9000

avepij =

0.1590 0.1609 0.1287 0.1565 0.1600

0.1605 0.1668 0.1626 0.1426 0.1943

0.1590 0.1611 0.1592 0.1789 0.1727

0.1694 0.1433 0.1383 0.1781 0.1545

0.1522 0.1656 0.1379 0.1876 0.1764

0.1580 0.1641 0.1665 0.1387 0.1715

0.1540 0.1606 0.1638 0.1595 0.1458

0.1523 0.1622 0.1605 0.1741 0.1741

0.1687 0.1630 0.1665 0.1551 0.1432

0.1684 0.1551 0.1759 0.1580 0.1600

pijover5 =

59 63 53 61 61

66 65 60 49 78

59 63 59 70 64

68 55 50 77 56

58 65 51 78 66

68 66 68 55 63

57 64 60 58 52

62 64 64 69 68

62 61 66 58 53

63 55 68 61 61

pijequal1 =

27 33 20 32 30

18 29 34 22 42

28 31 30 34 36

36 28 22 34 29

23 36 20 38 35

27 27 29 18 33

24 28 34 29 18

26 29 23 30 36

30 38 29 31 20

27 25 35 21 23

runtimes =

286.0464 215.6567 307.7544 138.4296 306.1133

223.4748 154.2572 279.2664 304.9105 122.9811

118.5465 178.3263 193.6320 132.7351 123.8119

151.2363 204.3554 304.9305 207.7445 150.1161

303.7330 203.3468 307.3501 110.1499 112.0259

286.9319 208.5840 163.5588 265.5405 193.7025

280.8241 232.2643 138.1795 195.1713 259.2776

304.2066 283.1127 286.9030 143.3464 287.3065

289.0184 163.5630 186.6776 297.3221 230.8804

194.9986 156.0753 137.9487 197.1751 192.0502

bestest =

-0.0166 -1.0110 -1.3210 -0.0006 -0.0050

-0.2025 -0.0039 -0.0488 -1.3996 -0.0001

-0.1810 -1.0244 -0.3015 -0.0004 -0.0002

-0.3213 -1.6409 -1.5497 -0.0000 -0.2792

-0.0087 -0.0161 -0.6436 -0.1152 -0.1547

-0.1481 -0.0349 -0.0041 -1.9570 -0.0079

-0.4142 -0.0046 -0.0004 -0.0036 -0.8351

-2.0077 -0.0143 -0.0154 -0.0011 -0.2339

-0.0049 -0.1572 -0.1744 -1.0074 -0.9968

-0.2997 -0.2215 -0.0896 -0.0005 -0.0207

guessbestiter =

3 2 5 2 7

7 6 7 3 2

7 1 2 2 4

6 5 7 6 7

3 7 6 4 5

7 6 6 4 4

7 7 7 5 7

7 7 5 7 7

6 5 2 4 6

4 6 6 6 3

estslsfobjs =

371.3525 343.2239 277.5781 368.3477 355.1900

320.8649 361.6954 362.3481 307.2343 381.6874

340.0948 329.8016 326.4688 364.7898 368.6891

330.9937 299.6776 285.7812 361.3282 344.9582

378.6948 358.0530 326.0340 357.9820 361.8404

318.6085 322.7789 348.3947 311.0526 347.8311

311.7259 330.7444 345.5489 357.5563 334.7561

322.4557 335.5715 337.6675 371.6785 353.3913

320.0073 338.1631 332.6735 324.1563 321.2581

343.9885 346.7332 372.7607 370.7670 349.0804

compportion80 =

0.6667 0.7033 0.8256 0.7604 0.7813

0.7629 0.7368 0.6939 0.6915 0.6979

0.7340 0.7419 0.7789 0.7732 0.7273

0.8182 0.7473 0.7174 0.7938 0.7340

0.6979 0.7500 0.7283 0.7234 0.6327

0.7692 0.7708 0.8211 0.7978 0.7143

0.7475 0.7717 0.7526 0.7400 0.7245

0.7931 0.7526 0.7778 0.6735 0.7677

0.6566 0.6737 0.7292 0.7143 0.6737

0.7200 0.6875 0.7475 0.6702 0.7653

compportionmin =

0.6667 0.7033 0.8256 0.7604 0.7813

0.7629 0.7368 0.6939 0.6915 0.6979

0.7340 0.7419 0.7789 0.7732 0.7273

0.8182 0.7473 0.7174 0.7938 0.7340

0.6979 0.7500 0.7283 0.7234 0.6327

0.7692 0.7708 0.8211 0.7978 0.7143

0.7475 0.7717 0.7526 0.7400 0.7245

0.7931 0.7526 0.7778 0.6735 0.7677

0.6566 0.6737 0.7292 0.7143 0.6737

0.7200 0.6875 0.7475 0.6702 0.7653

**106th experiment, Fixed Scens b=0.7, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gp=0.1, diff lcf scen, =wt**

lcfiterbetter =

0.6600

lcfiterworse =

0.3400

avepercbetter =

0.0281

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.8404

lcfiterave =

352.0512

slsfave =

343.5029

averuntime =

222.5821

avelcfrejs =

0.4105

aveslsfrejs =

1.6986

avelcfunhap =

0.0838

aveslsfunhap =

0.2543

percbetter =

0.0600 0.0187 0.0638 -0.0091 0.0247

0.0564 -0.0128 -0.0020 -0.0159 0.0624

0.0032 -0.0088 -0.0072 0.0418 0.0460

0.0077 0.0164 -0.0106 0.0235 -0.0014

0.0434 -0.0212 0.0181 0.0614 -0.0117

0.0444 0.0135 -0.0228 0.0403 0.0379

0.0110 0.0243 0.0716 0.0732 0.1020

0.0314 0.1181 0.0039 -0.0062 -0.0089

-0.0023 0.0258 -0.0130 0.0050 -0.0188

0.3459 0.0008 0.0469 -0.0028 0.0382

avelcfavecomp =

11.2298

aveslsfavecomp =

10.8029

avelcfaveperccomp =

0.8919

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

73.9010

aveslsfavetotprofit =

84.2965

avelcfpercposprofit =

1

returnedobjs =

340.5890 338.9158 361.1414 363.7530 365.7462

328.2942 376.9398 358.6860 362.1175 365.6438

360.5719 316.2597 351.4171 355.4011 369.0801

364.0606 334.6683 368.1372 360.1596 372.2786

335.1250 370.5447 332.7824 374.3809 362.6645

343.4868 359.8241 377.2574 332.1972 341.9909

360.9504 358.0812 306.7342 326.0892 300.8178

329.7209 342.3039 324.7907 374.7547 385.7266

372.5265 369.6800 350.8521 335.0030 372.5398

362.5636 331.0655 350.6528 359.9595 343.6327

slsfobjs =

321.3252 332.6853 339.4853 367.0906 356.9203

310.7707 381.8158 359.3950 367.9794 344.1822

359.4326 319.0641 353.9556 341.1279 352.8401

361.2629 329.2764 372.0864 351.8892 372.7956

321.1744 378.5670 326.8657 352.7401 366.9571

328.8970 355.0314 386.0682 319.3349 329.5039

357.0140 349.5715 286.2432 303.8397 272.9812

319.6976 306.1449 323.5306 377.0872 389.2091

373.3707 360.3858 355.4668 333.3232 379.6650

269.3831 330.8117 334.9356 360.9824 330.9792

slsfavecomp =

9.5996 9.9348 12.9861 10.8746 12.0695

9.3729 11.8905 10.6450 9.6005 10.9908

10.1899 9.4820 11.9311 9.8772 13.5182

10.6474 11.5052 9.9714 11.4139 11.0063

10.7894 10.4776 9.9706 13.5480 9.9105

10.4564 10.2008 12.0467 8.1627 10.7685

10.8200 9.6433 12.3838 10.5817 11.4778

10.8461 9.8085 12.5284 11.0002 13.3294

10.5850 12.1423 8.8024 9.3336 10.3611

12.0136 10.1678 11.0650 9.0488 10.3660

lcfavecomp =

10.0158 10.5155 13.5743 11.1382 12.3649

9.8359 12.1718 11.0632 9.9256 10.8431

10.7332 10.3346 12.5145 10.2221 14.1397

11.1523 11.5949 10.3227 11.8229 11.2414

11.3367 10.8881 10.7790 13.5100 10.3483

10.8440 10.8421 12.4218 8.7934 11.3301

11.2703 9.9997 12.9738 11.2006 11.8231

11.4862 10.2207 13.0532 11.2214 13.4883

10.8649 12.5030 9.3134 10.3375 10.6593

11.7022 10.6130 11.8080 9.3991 10.9335

lcfaveperccomp =

0.9460 0.9434 0.9034 0.8380 0.8731

0.9373 0.8251 0.8690 0.8458 0.9133

0.8725 0.9753 0.8707 0.9539 0.8687

0.8657 0.8398 0.8623 0.8824 0.8298

0.9241 0.9092 0.9302 0.8804 0.8855

0.8853 0.8793 0.8648 0.9419 0.9061

0.8442 0.8730 0.9106 0.9236 0.9220

0.8884 0.9221 0.9135 0.8876 0.8148

0.8336 0.8754 0.9028 0.9629 0.8433

0.8538 0.8847 0.9798 0.8647 0.9726

lcfavetotprofit =

65.3319 65.1980 76.6105 82.6454 82.7239

63.1812 89.9602 78.8455 77.4383 77.8440

72.8951 59.2877 75.5224 66.5564 82.8593

76.8218 82.2783 79.4776 79.5040 85.3905

64.0828 80.4906 60.7834 88.4933 74.3061

68.9618 71.8603 88.9007 55.2263 71.0182

76.9412 70.8597 61.2906 62.8655 61.1825

68.9032 62.6969 73.3071 82.9800 99.3619

83.3852 81.6093 68.4493 59.7385 82.2072

82.8543 69.8161 64.5648 73.4469 64.0945

slsfavetotprofit =

76.9666 79.7930 92.5295 89.0422 89.8422

73.4266 95.7502 87.4740 83.7853 82.8330

84.1476 75.1585 90.2191 78.0827 97.9276

87.3513 85.8204 85.7098 88.9803 90.3867

78.1189 89.0162 77.7978 95.7995 84.4580

78.7691 84.6046 96.4527 68.5154 82.0280

87.0316 78.4615 80.6774 78.5200 70.5200

80.6412 72.5443 88.6931 89.5950 102.0448

88.7165 91.5877 79.0540 78.3110 88.1784

82.9172 80.6588 84.7680 80.9887 80.1291

returnedobjs =

340.5890 338.9158 361.1414 363.7530 365.7462

328.2942 376.9398 358.6860 362.1175 365.6438

360.5719 316.2597 351.4171 355.4011 369.0801

364.0606 334.6683 368.1372 360.1596 372.2786

335.1250 370.5447 332.7824 374.3809 362.6645

343.4868 359.8241 377.2574 332.1972 341.9909

360.9504 358.0812 306.7342 326.0892 300.8178

329.7209 342.3039 324.7907 374.7547 385.7266

372.5265 369.6800 350.8521 335.0030 372.5398

362.5636 331.0655 350.6528 359.9595 343.6327

slsfobjs =

321.3252 332.6853 339.4853 367.0906 356.9203

310.7707 381.8158 359.3950 367.9794 344.1822

359.4326 319.0641 353.9556 341.1279 352.8401

361.2629 329.2764 372.0864 351.8892 372.7956

321.1744 378.5670 326.8657 352.7401 366.9571

328.8970 355.0314 386.0682 319.3349 329.5039

357.0140 349.5715 286.2432 303.8397 272.9812

319.6976 306.1449 323.5306 377.0872 389.2091

373.3707 360.3858 355.4668 333.3232 379.6650

269.3831 330.8117 334.9356 360.9824 330.9792

lcfrejs =

0.6932 0.4855 0.0153 0.1378 0.0207

1.0833 0 0.2357 0.0795 0.0053

0.0089 0.6796 0.1989 0.0012 0.0856

0.0082 1.4010 0.0003 0.2099 0.0039

0.9059 0 1.0095 0.0199 0.0026

0.8947 0.0043 0.0001 0.2294 0.6952

0.1238 0.0292 2.5877 1.0761 2.4372

1.2886 0.2569 1.1494 0.0024 0.0059

0.0010 0.0202 0.0183 0.4322 0.0005

0.4832 1.2311 0.0088 0.0190 0.2381

slsfrejs =

2.4511 2.0515 1.9384 0.7406 1.3224

3.1073 0.0463 0.7326 0.2801 2.0117

0.8220 2.4193 1.5617 1.9308 1.7282

0.8454 2.3703 0.1697 1.3907 0.4114

2.8523 0.0414 2.6314 2.0600 0.4729

2.5680 0.8920 0.0631 2.3328 2.2153

1.1535 1.3777 4.7780 3.7464 5.3393

2.6695 3.5455 2.6835 0.2649 0.1018

0.3276 1.3074 0.5222 2.0294 0.0292

3.5446 2.2100 1.8617 0.5271 2.4518

lcfunhap =

0.0167 0.0351 0.0051 0.0033 0.0153

0.1743 0 0.0087 0.0656 0.0050

0.0019 0.8275 0.0923 0.0001 0.0073

0.0040 0.5033 0 0.0048 0.0010

0.1214 0 0.0657 0.0080 0.0001

0.0117 0.0054 0.0001 0.2351 0.3414

0.0026 0.0155 0.0871 0.2276 0.1951

0.2502 0.0467 0.4667 0.0000 0.0024

0.0010 0.0177 0.0013 0.0808 0.0002

0.1077 0.0717 0.0056 0.0068 0.0450

slsfunhap =

0.2611 0.3132 0.8707 0.0409 0.1070

0.2094 0.0440 0.2195 0.0672 0.0030

0.1760 0.2620 0.0832 0.0502 0.4485

0.1069 0.5233 0.0576 0.1544 0.0482

0.2394 0.0158 0.1553 0.0608 0.0548

0.0729 0.5095 0.0695 0.2741 0.4715

0.0616 0.0389 0.2843 0.6186 0.2750

0.6222 0.2484 0.3951 0.0420 0.0722

0.0884 0.0559 0.1284 0.1609 0.0182

2.9124 0.0997 0.4249 0.0434 0.1567

menusizes =

5.0000 4.9000 4.9500 4.9500 4.9000

4.9000 4.8500 5.0000 4.7500 4.6500

4.8500 4.9500 4.9500 4.9500 5.0000

4.9500 4.9000 4.7500 4.9000 4.9500

4.6000 4.7000 4.7000 4.6500 4.9500

4.2500 4.8500 4.9500 4.5500 4.6500

4.9000 4.7000 4.4000 4.7000 4.4000

4.7000 4.9500 4.8500 4.6500 4.8000

4.7500 4.8000 4.9500 4.9000 4.7000

4.8500 4.7500 5.0000 4.9500 4.5500

avepij =

0.1658 0.1664 0.1666 0.1833 0.1652

0.1523 0.1909 0.1644 0.1611 0.1613

0.1661 0.1531 0.1692 0.1798 0.1839

0.1818 0.1515 0.1891 0.1691 0.1777

0.1396 0.1877 0.1589 0.1696 0.1915

0.1516 0.1705 0.1815 0.1480 0.1507

0.1774 0.1501 0.1355 0.1437 0.1312

0.1450 0.1576 0.1505 0.1768 0.1839

0.1842 0.1837 0.1904 0.1824 0.1744

0.1675 0.1498 0.1727 0.1628 0.1589

pijover5 =

62 63 66 75 69

61 76 67 61 65

67 58 65 69 77

75 55 77 64 72

54 78 61 71 79

63 72 69 58 58

76 57 46 52 48

53 58 61 71 72

75 78 76 76 73

60 55 69 59 60

pijequal1 =

24 35 19 41 22

21 46 24 30 35

28 25 27 32 42

38 22 44 28 34

21 47 30 32 36

26 26 38 26 18

34 24 27 23 12

19 28 22 42 34

43 44 49 44 33

32 28 25 34 32

runtimes =

215.2731 196.5004 347.5423 116.5824 270.2498

179.3136 144.3395 134.0864 189.1044 184.9025

138.6308 356.4766 201.3044 213.5056 167.0076

165.7354 299.6626 120.3831 162.8640 122.0106

314.5556 120.8538 233.3912 297.9355 131.8432

312.7693 130.5233 125.2730 245.3112 357.9355

216.6170 141.6035 150.3084 198.1778 316.4131

235.4946 230.6163 337.2715 179.6431 148.0572

173.7632 283.7187 247.1794 177.1895 205.5463

349.4230 402.1221 344.9906 316.2607 278.8409

bestest =

-0.3331 -0.3612 -0.0071 -0.0512 -0.0054

-0.7832 0 -0.0242 -0.0007 -0.0016

-0.0038 -0.5732 -0.1794 -0.0001 -0.1823

-0.0022 -1.0256 -0.0000 -0.0526 -0.0014

-0.8669 0 -1.0136 -0.0092 -0.0048

-0.1530 -0.0002 -0.0000 -0.1795 -0.5356

-0.0311 -0.0021 -1.9508 -0.9930 -2.4669

-1.0627 -0.0332 -1.6135 -0.0002 -0.0018

-0.0000 -0.0136 -0.0049 -0.3326 -0.0000

-0.3835 -1.0029 -0.0024 -0.0001 -0.2470

guessbestiter =

6 6 7 2 7

2 4 2 4 5

7 5 5 6 7

6 2 2 4 7

6 1 5 7 5

1 5 5 7 3

6 5 7 4 6

7 4 5 6 3

7 7 5 4 5

7 5 6 3 3

estslsfobjs =

320.2061 338.7306 332.9208 364.9077 360.5761

303.1909 382.7457 357.9190 368.6232 344.4088

348.3833 311.3173 351.2360 342.7342 356.7962

362.8369 319.6828 366.9101 347.1158 377.0909

317.9345 379.5132 339.2931 352.7204 365.5547

329.9173 361.5517 386.9212 321.3329 326.9425

357.3091 343.8806 284.3217 309.6226 278.6374

319.1275 300.3733 317.3944 377.7486 386.9317

377.5462 361.6705 352.5194 337.8739 381.2370

286.9431 324.2040 326.1165 360.7227 339.4798

compportion80 =

0.6500 0.6531 0.8586 0.6263 0.7959

0.7347 0.6907 0.8000 0.6526 0.6989

0.6598 0.7475 0.7677 0.7172 0.7800

0.7980 0.7143 0.6842 0.6633 0.7071

0.7065 0.7340 0.8511 0.7527 0.6970

0.7647 0.7835 0.7374 0.7582 0.8387

0.8061 0.7128 0.7727 0.7872 0.7955

0.6809 0.7071 0.7629 0.7419 0.6979

0.5789 0.7396 0.7778 0.8061 0.7021

0.6289 0.7263 0.7900 0.7273 0.7033

compportionmin =

0.6500 0.6531 0.8586 0.6263 0.7959

0.7347 0.6907 0.8000 0.6526 0.6989

0.6598 0.7475 0.7677 0.7172 0.7800

0.7980 0.7143 0.6842 0.6633 0.7071

0.7065 0.7340 0.8511 0.7527 0.6970

0.7647 0.7835 0.7374 0.7582 0.8387

0.8061 0.7128 0.7727 0.7872 0.7955

0.6809 0.7071 0.7629 0.7419 0.6979

0.5789 0.7396 0.7778 0.8061 0.7021

0.6289 0.7263 0.7900 0.7273 0.7033

**107th experiment, Fixed Scens b=0.7, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gp=.1, diff lcf scen, =wt (same as 106)**

lcfiterbetter =

0.6200

lcfiterworse =

0.3800

avepercbetter =

0.0242

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.7956

lcfiterave =

350.1494

slsfave = 342.6580

averuntime =

275.2212

avelcfrejs =

0.3908

aveslsfrejs =

1.7110

avelcfunhap =

0.1039

aveslsfunhap =

0.2373

percbetter =

0.0061 0.0337 -0.0112 0.1142 -0.0039

-0.0092 -0.0075 0.0450 0.0759 0.0218

0.0694 0.0195 0.0963 0.1208 -0.0142

0.0181 -0.0096 0.0257 0.0305 -0.0049

-0.0193 0.0226 0.0254 0.1315 0.0695

0.0037 -0.0097 -0.0066 0.0123 -0.0213

0.0205 -0.0211 -0.0250 0.0284 0.0406

0.0370 0.0648 -0.0270 -0.0077 0.0506

0.0777 0.0442 0.0385 -0.0085 -0.0225

0.0505 -0.0185 -0.0138 0.0502 0.0273

avelcfavecomp =

11.0553

aveslsfavecomp =

10.5649

avelcfaveperccomp =

0.9007

aveslsfaveperccomp =

0.8000

Avelcfavetotprofit=

71.7870

aveslsfavetotprofit =

82.9802

avelcfpercposprofit =

1

returnedobjs =

363.9792 366.1462 371.7790 336.2198 368.1440

375.3620 359.8608 343.2121 350.9634 365.5366

341.5918 360.4015 341.2520 350.0266 339.9919

335.3393 361.3301 367.6420 361.8993 354.9065

369.6458 346.8286 340.2219 322.0975 332.8908

340.2863 368.6096 370.8540 355.3246 360.8822

346.7168 361.7548 346.0684 344.9826 327.0326

327.5906 345.1006 362.0191 342.0134 336.3023

327.3702 353.0886 347.7135 320.1917 352.9393

325.0436 357.8618 379.3121 348.6898 332.4540

slsfobjs =

361.7573 354.2251 375.9897 301.7639 369.5962

378.8486 362.5964 328.4263 326.1938 357.7299

319.4111 353.4987 311.2718 312.2984 344.9066

329.3620 364.8154 358.4473 351.1938 356.6435

376.9078 339.1548 331.7985 284.6656 311.2541

339.0414 372.2385 373.3055 351.0206 368.7545

339.7428 369.5600 354.9509 335.4405 314.2713

315.8904 324.0897 372.0548 344.6676 320.0899

303.7793 338.1468 334.8246 322.9400 361.0626

309.4087 364.6043 384.6167 332.0082 323.6348

slsfavecomp =

10.5822 12.1037 10.7318 8.3069 12.6467

12.4807 11.5162 12.3772 10.7046 10.7066

8.2485 10.3438 9.0615 10.9253 8.4205

10.7938 13.4039 11.9901 9.9278 11.8952

12.9282 9.9914 9.6216 10.4606 7.5225

9.1168 12.5811 10.2044 10.1135 10.9192

11.3031 11.3578 9.8771 12.2866 10.1107

8.2884 8.5245 11.0181 11.5489 11.5446

9.5205 9.8152 10.3971 8.9551 8.6213

9.9065 10.1720 11.9917 10.1404 12.2389

lcfavecomp =

10.9472 12.6081 11.0995 8.9116 12.7844

12.7509 12.2567 12.8594 10.9676 10.9073

9.0138 10.6289 9.5926 10.8907 8.9147

11.4556 14.3635 12.3563 10.1358 12.3767

13.4785 10.6850 10.7307 10.5214 8.2859

9.6291 13.1994 10.3468 10.4831 11.4228

11.6060 12.0284 10.2886 12.7302 10.9526

8.7729 9.1182 11.6199 12.2432 11.7977

9.8798 10.4396 10.9605 9.9231 9.1529

10.0793 10.7707 12.2933 10.4384 13.0634

lcfaveperccomp =

0.8665 0.8990 0.8387 0.9986 0.8364

0.8377 0.9396 0.9061 0.9118 0.8431

0.9641 0.8559 0.9203 0.9898 0.8942

0.9116 0.8964 0.8541 0.8755 0.8807

0.8757 0.9425 0.9595 0.9577 0.9432

0.9197 0.8431 0.8399 0.8626 0.8751

0.8543 0.9344 0.8965 0.8745 0.9099

0.9474 0.9206 0.9102 0.8733 0.9273

0.9259 0.9212 0.8732 0.8846 0.9248

0.9117 0.8912 0.8575 0.9200 0.9377

lcfavetotprofit =

78.8424 78.7775 81.9461 55.4670 91.2146

90.4512 73.9583 73.5363 69.6847 83.0632

58.6757 78.3807 60.6014 65.8484 64.6652

68.8645 76.8186 83.5096 75.5807 81.0413

85.2178 64.4959 56.8038 60.7557 53.1760

65.5802 84.4595 83.3100 75.8669 79.4309

78.8101 75.9508 73.1931 76.4202 59.8096

60.1389 58.3602 78.1206 73.1412 70.4168

60.3945 66.7573 71.8649 53.9343 67.3557

65.7982 73.1734 89.9168 70.6862 65.0852

slsfavetotprofit =

87.2621 90.1288 89.7576 67.0011 94.9724

96.9216 90.9395 87.7552 81.9141 87.9564

70.6755 85.0541 72.1926 76.5539 73.5568

82.9293 96.4468 92.7847 81.2527 91.4350

98.3592 81.5066 78.7213 70.2653 64.9391

74.5890 97.3198 86.8670 84.0064 89.0451

85.5883 91.4254 82.0768 87.6229 76.4790

69.9540 71.2955 90.1666 86.5443 81.8036

71.0323 80.2477 82.4991 71.1887 78.7665

72.3246 85.1353 96.4128 78.5048 86.8342

returnedobjs =

363.9792 366.1462 371.7790 336.2198 368.1440

375.3620 359.8608 343.2121 350.9634 365.5366

341.5918 360.4015 341.2520 350.0266 339.9919

335.3393 361.3301 367.6420 361.8993 354.9065

369.6458 346.8286 340.2219 322.0975 332.8908

340.2863 368.6096 370.8540 355.3246 360.8822

346.7168 361.7548 346.0684 344.9826 327.0326

327.5906 345.1006 362.0191 342.0134 336.3023

327.3702 353.0886 347.7135 320.1917 352.9393

325.0436 357.8618 379.3121 348.6898 332.4540

slsfobjs =

361.7573 354.2251 375.9897 301.7639 369.5962

378.8486 362.5964 328.4263 326.1938 357.7299

319.4111 353.4987 311.2718 312.2984 344.9066

329.3620 364.8154 358.4473 351.1938 356.6435

376.9078 339.1548 331.7985 284.6656 311.2541

339.0414 372.2385 373.3055 351.0206 368.7545

339.7428 369.5600 354.9509 335.4405 314.2713

315.8904 324.0897 372.0548 344.6676 320.0899

303.7793 338.1468 334.8246 322.9400 361.0626

309.4087 364.6043 384.6167 332.0082 323.6348

lcfrejs =

0.0376 0.0090 0.0008 0.2668 0.9082

0.0203 0.0184 0.8894 0.1451 0.0508

0.2263 0.1497 0.1374 0.0339 1.0042

0.6885 0.1935 0.0455 0.0762 0.4610

0.0186 0.0711 0.0148 0.6712 0.2752

0.7696 0.0363 0.0003 0.3832 0.0235

1.0300 0.0033 0.8421 0.8713 1.1420

1.0569 0.0373 0.0485 1.0214 1.5807

0.8869 0.0186 0.3090 1.2334 0.0168

1.2476 0.0063 0.0001 0.1475 0.4155

slsfrejs =

0.6932 1.4075 0.1050 3.5419 1.1384

0.3239 0.8358 2.6873 2.5665 1.0592

1.9176 1.1350 2.7424 3.5626 1.2511

2.2716 1.2671 0.9812 1.3353 0.9755

0.5167 1.7874 1.7061 4.9305 2.8523

1.9761 0.5476 0.1540 0.9356 0.3462

2.0023 0.7759 0.9974 2.3792 2.9274

2.7671 2.3833 0.3020 1.8032 2.9962

3.4708 1.7904 1.8285 2.5336 0.3005

3.2927 0.3262 0.0474 2.2625 2.8106

lcfunhap =

0.0052 0.0043 0.0013 0.0994 0.0778

0.0035 0.0130 0.1212 0.0542 0.0761

0.1219 0.0733 0.0607 0.0377 0.0041

0.1774 0.0038 0.0101 0.0118 0.2609

0.0003 0.0223 0.0058 0.8327 0.2678

0.6086 0.0079 0.0000 0.0142 0.0046

0.0264 0.0083 0.1116 0.2280 0.0227

0.5990 0.0472 0.0441 0.0193 0.0763

0.3222 0.0098 0.1877 0.0082 0.0011

0.0820 0.0076 0.0001 0.1947 0.2176

slsfunhap =

0.1361 0.3469 0.1017 0.0405 0.0138

0.1277 0.2236 0.2625 0.2920 0.0478

1.0412 0.1332 0.7337 0.0515 0.1288

0.2185 0.2230 0.4508 0.0264 0.5272

0.0978 0.1329 0.8835 0.0825 0.1333

0.0059 0.2377 0.0262 0.5276 0.1962

0.1720 0.0247 0.0379 0.3104 0.3859

0.2951 0.1405 0.1044 0.2200 0.6246

0.3826 0.3655 0.4202 0.0283 0.0419

0.0179 0.1839 0.0626 0.0967 0.5016

menusizes =

4.6500 4.7500 4.9000 4.7000 4.6500

4.9500 4.8500 4.8500 5.0000 5.0000

4.9000 4.7500 5.0000 4.8000 4.1000

4.8500 4.9500 4.9500 4.9000 4.8000

4.6000 4.8500 4.9000 4.8000 4.6000

4.2000 4.7500 4.9000 5.0000 5.0000

4.7000 4.9000 4.8500 4.7500 4.4500

4.4500 4.4000 4.8500 4.7500 4.6500

4.9000 4.8500 4.8500 4.3000 4.7500

4.4000 5.0000 4.6000 4.8500 4.6000

avepij =

0.1676 0.1686 0.1821 0.1654 0.1749

0.1723 0.1698 0.1400 0.1671 0.1772

0.1630 0.1547 0.1552 0.1790 0.1435

0.1538 0.1841 0.1720 0.1817 0.1485

0.1637 0.1741 0.1669 0.1393 0.1484

0.1497 0.1638 0.1871 0.1620 0.1643

0.1573 0.1940 0.1623 0.1659 0.1455

0.1567 0.1526 0.1689 0.1625 0.1522

0.1484 0.1721 0.1534 0.1472 0.1803

0.1491 0.1656 0.1917 0.1556 0.1641

pijover5 =

64 69 72 68 70

65 71 51 64 66

60 57 58 74 57

59 82 70 71 55

68 73 68 51 58

58 65 79 59 65

62 78 59 72 56

63 60 68 65 54

56 69 59 58 70

57 68 80 57 66

pijequal1 =

34 25 43 31 37

34 29 19 31 33

30 31 23 41 28

29 17 28 36 19

31 36 32 23 23

33 24 36 28 25

28 45 34 22 22

33 26 33 29 30

20 28 31 24 42

27 23 53 22 33

runtimes =

137.6884 277.2066 120.8947 284.5485 292.2759

132.3263 256.3744 366.5805 138.7867 162.0139

235.6524 227.8251 402.0868 299.9933 293.7300

207.9873 376.0286 275.2168 304.9849 387.8228

157.0594 174.7165 255.1234 364.7498 322.3360

453.1556 226.5875 123.6058 359.3660 327.5631

338.0487 271.1032 203.1470 380.0060 312.6205

411.0382 272.7314 352.4152 324.3640 306.1844

336.7904 321.6778 147.4364 271.8331 131.3197

315.5470 143.3728 259.5102 402.3857 315.2397

bestest =

-0.0026 -0.0035 0 -0.0207 -0.7929

-0.0006 -0.0227 -0.8965 -0.2292 -0.0012

-0.0999 -0.1497 -0.0680 -0.0051 -1.0005

-0.5895 -0.3381 -0.0119 -0.0663 -0.0559

-0.0161 -0.0761 -0.0044 -0.6520 -0.1001

-0.5912 -0.0008 -0.0000 -0.1048 -0.0032

-1.0014 -0.0002 -0.7982 -0.8402 -1.0571

-0.9566 -0.0101 -0.0007 -1.0014 -1.4430

-0.8794 -0.0007 -0.1573 -1.0464 -0.0027

-1.1880 -0.0037 0 -0.0951 -0.2276

guessbestiter =

6 5 2 6 1

6 6 7 7 5

4 6 7 6 1

7 7 7 7 1

1 7 6 6 4

7 6 2 6 2

3 6 7 7 7

4 5 3 5 6

7 7 7 5 6

5 2 4 5 6

estslsfobjs =

361.4448 353.9813 375.0168 298.5744 371.5568

383.1893 354.4177 336.3956 326.6407 360.1800

312.1060 355.0106 325.0585 310.7682 347.6781

332.1903 365.4274 366.9747 352.1735 353.7012

383.4958 336.7047 333.5654 287.0604 309.6650

342.5732 377.0550 369.9505 346.7302 361.2641

344.3195 369.2509 355.7920 356.7809 322.4565

314.7239 323.5913 368.0568 341.2531 312.1450

310.6418 339.3783 351.0409 326.8869 363.6723

305.4348 349.6783 385.6181 332.0867 331.3370

compportion80 =

0.8065 0.7474 0.6837 0.8191 0.6237

0.6970 0.7835 0.7732 0.6700 0.7000

0.7245 0.7474 0.7600 0.7500 0.6951

0.7526 0.8586 0.7677 0.6939 0.7083

0.6739 0.7629 0.7653 0.7292 0.7717

0.6786 0.8000 0.6633 0.7300 0.6900

0.6915 0.7041 0.6701 0.7895 0.8090

0.7978 0.7614 0.8351 0.7579 0.6559

0.7857 0.7938 0.7526 0.7326 0.7053

0.7841 0.7800 0.7500 0.7526 0.7609

compportionmin =

0.8065 0.7474 0.6837 0.8191 0.6237

0.6970 0.7835 0.7732 0.6700 0.7000

0.7245 0.7474 0.7600 0.7500 0.6951

0.7526 0.8586 0.7677 0.6939 0.7083

0.6739 0.7629 0.7653 0.7292 0.7717

0.6786 0.8000 0.6633 0.7300 0.6900

0.6915 0.7041 0.6701 0.7895 0.8090

0.7978 0.7614 0.8351 0.7579 0.6559

0.7857 0.7938 0.7526 0.7326 0.7053

0.7841 0.7800 0.7500 0.7526 0.7609

**108th experiment, Fixed Scens b=0.7, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with double test, mutated scens equal wt, minitest=rej, gp=.1, same lcf scen, =wt (best known)**

lcfiterbetter =

0.6800

lcfiterworse =

0.3200

avepercbetter =

0.0238

lcfrejbetter

1

lcfrejworse =

0

avepercrejbetter =

0.8032

lcfiterave =

350.8657

slsfave =

343.2187

averuntime =

220.1570

avelcfrejs =

0.5012

aveslsfrejs =

1.7215

avelcfunhap =

0.1077

aveslsfunhap =

0.2216

percbetter =

0.0176 0.0761 -0.0219 0.0329 0.0409

0.0307 0.0266 0.0206 0.0326 -0.0107

0.0106 0.0177 0.0459 0.0271 0.0964

-0.0011 -0.0221 0.0156 -0.0234 0.0259

0.0098 0.0041 0.0917 -0.0057 -0.0044

0.0374 0.0088 0.0516 0.0282 0.0166

0.0405 0.0118 0.0520 0.0933 0.0365

-0.0083 0.1361 0.0252 -0.0146 -0.0052

0.0832 -0.0011 0.0277 -0.0098 0.0326

0.0598 -0.0185 -0.0103 -0.0069 -0.0095

avelcfavecomp =

11.0545

aveslsfavecomp =

10.6583

avelcfaveperccomp =

0.8825

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

73.8977

aveslsfavetotprofit =

83.2418

avelcfpercposprofit =

1

returnedobjs =

333.4501 355.3707 355.8262 336.3705 326.2919

366.1709 367.0130 344.9053 347.2816 365.3030

363.9401 370.3208 329.0874 277.7035 370.5706

380.7444 373.3490 369.2345 360.5769 325.6644

357.9412 352.7079 361.4117 315.0510 363.8600

333.0115 366.0608 354.9304 358.6397 343.4311

347.7537 365.3514 317.3912 326.6651 372.7196

368.6029 344.1928 341.3993 365.0071 354.5939

330.6877 374.4582 353.5338 375.4103 360.2906

360.0902 351.9713 315.9622 342.4873 348.4947

slsfobjs =

327.6731 330.2393 363.7967 325.6415 313.4637

355.2766 357.5002 337.9543 336.3030 369.2573

360.1131 363.8903 314.6539 270.3723 337.9969

381.1594 381.7922 363.5750 369.2354 317.4539

354.4826 351.2584 331.0518 316.8550 365.4633

320.9930 362.8803 337.5217 348.8160 337.8331

334.2336 361.0821 301.7169 298.7835 359.5872

371.6830 302.9717 332.9944 370.4172 356.4351

305.2974 374.8752 343.9980 379.1084 348.9098

339.7630 358.6227 319.2551 344.8568 351.8384

slsfavecomp =

9.7769 11.1807 8.1288 12.4409 11.6299

9.4337 11.8906 10.7118 8.6011 12.6607

11.3542 12.6985 9.8732 9.9817 11.6605

13.0486 11.7842 10.8600 9.8191 8.0566

9.5493 11.7908 14.2453 9.9509 11.4906

10.1510 11.0634 10.5971 9.7708 8.3784

9.4462 10.8800 10.3370 9.5917 13.2855

11.1868 8.9329 10.2509 11.0958 8.4200

8.6772 12.2307 10.2117 11.4861 11.6114

13.2205 8.9082 10.9657 10.3643 9.2328

lcfavecomp =

10.5743 11.6331 8.5867 12.9385 12.1680

9.5640 12.2446 11.0976 9.2589 13.6000

12.0006 13.1027 10.3707 10.1587 11.2457

13.4452 12.1741 10.8890 10.2934 8.6806

9.9709 12.1451 14.3230 10.5699 11.7867

10.4137 11.4209 11.0554 10.1839 8.8001

10.0839 11.3872 10.5978 10.2028 13.1236

11.7033 9.2000 10.5617 11.4055 8.8414

9.3527 12.4760 10.4838 11.9820 11.9303

12.9333 9.3606 11.5320 11.0602 9.8123

lcfaveperccomp =

0.9026 0.8938 0.9012 0.9002 0.9535

0.8340 0.8614 0.9426 0.8903 0.9068

0.8925 0.8773 0.8957 0.8470 0.8527

0.8556 0.8624 0.8636 0.9008 0.9756

0.8915 0.8612 0.8567 0.8827 0.8413

0.8286 0.8356 0.9279 0.8891 0.9139

0.8980 0.8553 0.8634 0.9110 0.8486

0.8652 0.9012 0.8607 0.8488 0.8917

0.8980 0.8405 0.8664 0.8592 0.9066

0.8274 0.8731 0.9099 0.9211 0.9386

lcfavetotprofit =

61.9388 71.3503 67.5136 74.2105 65.2242

77.1654 82.2762 70.6920 63.4295 73.6486

77.4117 85.9833 63.3762 60.0738 85.8853

90.8486 86.1282 81.8861 74.3215 54.6443

72.0425 78.8558 91.6007 66.9478 84.0987

72.6423 81.0193 67.9354 72.6328 64.1665

65.2202 76.8296 65.7578 57.6888 92.8591

80.5099 65.2825 71.3639 81.9818 68.4810

60.4828 89.2648 77.2698 82.3425 76.5356

92.4510 71.0999 67.8314 63.8319 67.8496

slsfavetotprofit =

76.0707 84.1016 76.6135 87.7048 82.4882

79.7850 90.8696 82.0638 74.8002 94.9706

90.9643 97.1099 74.5855 63.8004 86.2192

99.7536 94.8314 86.5934 84.1559 67.8667

81.5269 89.2699 93.4090 76.0887 90.9242

77.1307 88.3281 81.0669 81.1030 73.8901

78.3179 87.5888 72.6278 72.9760 96.5444

90.8298 68.5648 79.0290 89.3136 77.3774

71.3375 95.3923 82.8640 92.9840 86.1728

91.7604 79.4504 78.0706 82.1466 80.6558

returnedobjs =

333.4501 355.3707 355.8262 336.3705 326.2919

366.1709 367.0130 344.9053 347.2816 365.3030

363.9401 370.3208 329.0874 277.7035 370.5706

380.7444 373.3490 369.2345 360.5769 325.6644

357.9412 352.7079 361.4117 315.0510 363.8600

333.0115 366.0608 354.9304 358.6397 343.4311

347.7537 365.3514 317.3912 326.6651 372.7196

368.6029 344.1928 341.3993 365.0071 354.5939

330.6877 374.4582 353.5338 375.4103 360.2906

360.0902 351.9713 315.9622 342.4873 348.4947

slsfobjs =

327.6731 330.2393 363.7967 325.6415 313.4637

355.2766 357.5002 337.9543 336.3030 369.2573

360.1131 363.8903 314.6539 270.3723 337.9969

381.1594 381.7922 363.5750 369.2354 317.4539

354.4826 351.2584 331.0518 316.8550 365.4633

320.9930 362.8803 337.5217 348.8160 337.8331

334.2336 361.0821 301.7169 298.7835 359.5872

371.6830 302.9717 332.9944 370.4172 356.4351

305.2974 374.8752 343.9980 379.1084 348.9098

339.7630 358.6227 319.2551 344.8568 351.8384

lcfrejs =

0.5587 0.0224 0.0001 0.9473 1.4534

0.0006 0.1883 0.4350 0.0110 0.0028

0.0045 0.0197 1.2891 4.2549 0.0306

0.0056 0.0094 0.0008 0.0127 1.0000

0.0396 0.1841 0.9033 2.4178 0.1629

1.7524 0.0825 0.0211 0.0129 0.3640

0.0174 0.0026 2.1386 1.0538 0.1782

0.0360 0.0726 1.0211 0.0079 0.0007

0.5385 0.0941 0.4143 0.0006 0.1549

0.9964 0.4002 1.4544 0.1741 0.1145

slsfrejs =

2.3109 2.5108 0.1450 2.8461 3.0260

1.0482 1.4331 1.7968 1.6439 0.7944

0.7681 1.0640 2.9301 5.3909 2.4266

0.3627 0.1488 1.0023 0.1903 2.5869

0.7938 1.3686 3.0144 3.0684 0.6055

2.8904 0.8691 2.2611 1.2942 1.3038

1.7330 0.9462 3.8009 3.3777 1.3577

0.5750 3.6873 2.3129 0.3518 0.3304

3.2316 0.5667 1.5814 0.3060 1.7545

2.3986 0.6354 2.9459 1.4738 0.8152

lcfunhap =

0.4757 0.0016 0.0002 0.3219 0.3099

0.0004 0.0109 0.5259 0.0043 0.0023

0.0003 0.0227 0.0115 0.2562 0.0219

0.0035 0.0094 0.0009 0.0009 0

0.0220 0.0727 0.1995 0.3437 0.1621

0.0982 0.0277 0.0287 0.0069 0.0612

0.0173 0.0045 0.1845 0.1913 0.0236

0.0019 0.0847 0.0439 0.0092 0.0010

0.2363 0.0026 0.1487 0.0011 0.1557

0.1074 0.1264 0.8694 0.0686 0.1046

slsfunhap =

0.2492 0.1772 0.1482 0.3476 0.6946

0.0270 0.0980 0.5910 0.0809 0.2123

0.4228 0.1943 0.2447 0.1942 0.0221

0.2841 0.0195 0.0022 0.0494 0.2095

0.3351 0.1177 0.2653 0.5785 0.2330

0.1404 0.1569 0.1223 0.1093 0.5456

0.5444 0.0897 0.3496 0.5749 0.2068

0.1175 0.0188 0.0815 0.1108 0.2068

0.3422 0.0494 0.1190 0.0140 0.1913

0.1956 0.2232 0.3371 0.2015 0.2328

menusizes =

4.6500 4.9500 4.9000 4.9000 4.7000

4.7000 4.9000 4.8500 4.8500 4.5500

4.5000 5.0000 4.5500 3.7000 4.9000

4.9000 3.9000 4.7000 4.8500 4.4000

4.8000 4.8500 4.9000 4.3500 4.5500

4.7500 4.9500 4.8000 4.9500 4.7500

4.9000 4.9500 4.0500 4.6000 4.9500

4.7500 4.8500 4.6500 4.8500 4.8500

4.7500 4.8500 4.8500 4.8000 4.7500

4.9000 4.9500 4.6500 4.7500 4.8500

avepij =

0.1396 0.1713 0.1607 0.1601 0.1366

0.1661 0.1658 0.1563 0.1656 0.1715

0.1779 0.1752 0.1519 0.1133 0.1737

0.1759 0.1545 0.1524 0.1690 0.1640

0.1665 0.1636 0.1503 0.1267 0.1628

0.1462 0.1546 0.1657 0.1688 0.1669

0.1622 0.1864 0.1303 0.1521 0.1798

0.1760 0.1554 0.1629 0.1640 0.1954

0.1445 0.1673 0.1499 0.1877 0.1600

0.1551 0.1653 0.1394 0.1564 0.1647

pijover5 =

55 68 58 64 45

63 63 60 67 77

72 68 59 40 63

76 60 56 64 64

62 68 56 41 61

54 57 70 67 61

61 77 50 59 69

72 62 68 63 80

57 66 49 78 65

53 64 54 60 59

pijequal1 =

19 34 35 24 16

26 28 23 27 35

40 29 26 21 33

28 42 31 32 43

36 27 22 17 33

21 23 19 30 37

30 45 25 20 36

32 27 27 36 42

19 27 27 46 24

24 29 14 30 38

runtimes =

284.5016 228.3805 129.4984 323.2282 302.4066

173.2006 158.4213 306.0307 173.5339 174.0223

148.6714 206.8348 324.8957 302.2503 275.8835

181.8939 138.8678 148.4263 143.6627 157.8222

172.3583 245.8245 298.3326 327.1127 282.6575

162.7925 212.6719 233.2016 138.9414 277.1194

277.8845 152.8466 233.5904 151.4342 235.1070

153.9574 317.9671 294.6232 171.0582 137.9071

278.5623 137.9823 322.1568 140.0083 197.7408

329.3426 164.4340 330.7971 140.5129 206.4943

bestest =

-0.9033 -0.0026 -0.0000 -1.0153 -0.9542

-0.0000 -0.3012 -0.1577 -0.0018 -0.0018

-0.0008 -0.0015 -1.1087 -4.0837 -0.0244

-0.0014 -0.0001 -0.0000 -0.0015 -1.0000

-0.0146 -0.1682 -0.7186 -2.1272 -0.0288

-1.5567 -0.0921 -0.0015 -0.0002 -0.4071

-0.0004 -0.0000 -2.0877 -0.7161 -0.0259

-0.0007 -0.0504 -1.0003 -0.0003 -0.0000

-0.5201 -0.0161 -0.3181 -0.0001 -0.0202

-0.8756 -0.0912 -1.0991 -0.5811 -0.0042

guessbestiter =

3 5 3 5 6

3 6 5 7 7

2 6 7 3 3

1 7 7 5 7

6 7 3 4 3

7 2 5 2 6

3 7 7 3 6

2 6 5 7 5

7 2 3 7 3

7 3 2 7 4

estslsfobjs =

328.7846 339.7780 363.2769 331.8654 330.3624

355.7161 358.3782 336.4055 337.7391 380.0209

369.7576 356.5961 300.1006 272.9130 335.3107

384.9282 383.7381 363.4893 368.8460 316.4578

339.8837 355.5918 306.0460 324.9773 360.8731

318.8749 360.3535 342.1527 340.0288 338.7056

328.0258 360.4970 297.9129 304.4167 361.7573

372.4177 304.7467 337.0679 374.0648 348.3222

301.5593 377.2627 352.3240 378.6174 355.7194

340.6739 362.8520 326.9998 344.0112 352.9532

compportion80 =

0.7849 0.6768 0.6735 0.7449 0.7979

0.6596 0.6939 0.6598 0.7835 0.8352

0.7778 0.6400 0.7473 0.7432 0.6224

0.7245 0.6026 0.6809 0.6804 0.7045

0.7500 0.8041 0.7245 0.7241 0.7363

0.6526 0.7172 0.8229 0.7172 0.6947

0.7245 0.7273 0.7531 0.7826 0.6869

0.8632 0.7216 0.6452 0.6804 0.6082

0.8211 0.7629 0.7732 0.8229 0.7158

0.7143 0.7677 0.8172 0.7368 0.7423

compportionmin =

0.7849 0.6768 0.6735 0.7449 0.7979

0.6596 0.6939 0.6598 0.7835 0.8352

0.7778 0.6400 0.7473 0.7432 0.6224

0.7245 0.6026 0.6809 0.6804 0.7045

0.7500 0.8041 0.7245 0.7241 0.7363

0.6526 0.7172 0.8229 0.7172 0.6947

0.7245 0.7273 0.7531 0.7826 0.6869

0.8632 0.7216 0.6452 0.6804 0.6082

0.8211 0.7629 0.7732 0.8229 0.7158

0.7143 0.7677 0.8172 0.7368 0.7423

**109th experiment, Fixed Scens b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, minitest=rej, gp=.1, diff lcf scen, /=wt**

lcfiterbetter =

0.8000

lcfiterworse =

0.2000

avepercbetter =

0.0253

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.7777

lcfiterave =

353.4117

slsfave =

345.1542

averuntime =

209.0836

avelcfrejs =

0.4917

aveslsfrejs =

1.6662

avelcfunhap =

0.0966

aveslsfunhap =

0.2045

percbetter =

0.0607 0.0125 0.0139 -0.0029 0.0052

0.0312 -0.0060 0.0759 -0.0247 0.0543

0.0054 -0.0113 0.0260 0.0936 0.0174

0.0066 0.0438 0.0090 0.0209 -0.0143

0.0248 0.1425 0.0241 -0.0099 0.0722

0.0582 0.0127 0.0272 0.0617 0.0033

0.0127 -0.0100 0.0446 0.0186 0.0481

0.0301 0.0204 -0.0189 -0.0082 0.0222

0.0351 0.0327 0.0820 0.0030 0.0221

0.0090 -0.0011 0.0236 0.0531 0.0137

avelcfavecomp =

11.3045

aveslsfavecomp =

10.9617

avelcfaveperccomp =

0.8766

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

76.7893

aveslsfavetotprofit =

85.3376

avelcfpercposprofit =

1

returnedobjs =

344.7698 364.7546 322.1757 368.8153 365.0742

367.0383 333.7229 311.7708 359.9920 352.2219

349.6173 364.8819 365.1596 351.3242 352.5754

315.5029 337.1901 366.7939 361.2135 367.8778

380.5884 336.8246 353.5531 373.6284 339.4883

366.9186 343.4015 368.0946 348.0079 360.0233

354.9972 364.4607 343.9855 357.1645 351.7462

352.2418 350.0614 365.3691 370.5449 365.5494

376.8484 363.4334 350.5220 369.9809 355.9866

345.3857 319.0586 335.3075 320.9765 363.9642

slsfobjs =

325.0311 360.2436 317.7620 369.9047 363.1770

355.9195 335.7394 289.7693 369.1094 334.0968

347.7506 369.0580 355.9135 321.2412 346.5509

313.4462 323.0455 363.5312 353.8153 373.2016

371.3714 294.8194 345.2286 377.3591 316.6417

346.7416 339.0979 358.3633 327.7857 358.8408

350.5531 368.1384 329.3141 350.6302 335.6116

341.9630 343.0749 372.4258 373.6044 357.6073

364.0611 351.9317 323.9450 368.8601 348.2753

342.3215 319.4128 327.5898 304.7793 359.0549

slsfavecomp =

10.0360 10.3372 11.8875 11.5206 11.0660

10.8082 11.6399 9.9796 10.0658 8.8426

10.4264 12.3555 11.7984 9.7338 14.3993

11.4096 8.9309 12.9796 12.3474 10.4235

14.1246 12.9871 9.3055 11.5847 10.7639

11.1603 9.2122 10.5681 11.7824 10.6617

9.5714 10.6920 11.3107 12.4942 9.8115

12.9060 10.7050 9.3022 10.7720 11.5777

13.2650 11.3517 10.1508 10.6879 9.9004

11.9397 9.8215 10.4432 8.3431 9.9032

lcfavecomp =

10.5979 10.6727 12.1250 11.7697 11.5339

10.9960 12.3672 10.3094 10.5656 9.3298

10.9407 12.5811 12.1752 9.9191 14.6739

11.8100 9.2949 13.3557 12.4671 10.7812

14.0172 13.2406 9.7513 11.9849 10.6464

11.0704 9.6186 10.9393 12.5398 11.1284

9.9135 11.2424 11.6254 12.9335 10.2542

13.2730 11.0176 9.6595 11.1010 12.1589

13.1336 11.6163 10.5172 10.9978 10.3400

12.4005 10.1469 10.8833 8.5301 10.2768

lcfaveperccomp =

0.9427 0.8353 0.8494 0.8590 0.8769

0.8932 0.9281 0.8738 0.9103 0.9167

0.9117 0.8726 0.8857 0.9540 0.8542

0.8770 0.8673 0.8995 0.8201 0.8647

0.8474 0.8571 0.9377 0.8384 0.8450

0.8280 0.8694 0.8530 0.8975 0.8601

0.8805 0.9200 0.8646 0.8427 0.9231

0.8487 0.8602 0.8774 0.8588 0.8742

0.8485 0.9055 0.8702 0.8553 0.8859

0.8922 0.8604 0.8717 0.8841 0.8785

lcfavetotprofit =

65.6901 79.6431 73.2012 86.6145 78.7648

79.5338 68.7483 64.5864 75.1152 64.0753

73.5952 85.2754 82.0262 66.6618 87.8017

71.7145 65.9675 87.2998 89.9425 81.0139

97.7551 83.3950 66.7720 85.1560 76.3931

84.5586 69.1637 79.2919 69.2236 78.4122

74.8154 75.7765 73.9044 81.2655 67.7259

85.7160 74.7416 75.2645 82.6577 78.3360

91.7058 78.9080 69.0322 82.1474 72.2485

76.9774 70.7315 71.7936 63.4078 74.9167

slsfavetotprofit =

78.9840 86.0023 82.1890 92.4650 89.3588

85.9894 87.8520 72.5571 85.3842 73.8437

85.0240 93.2162 90.9072 74.6487 98.7433

79.3550 72.5336 97.7133 94.2308 87.9867

101.2064 87.8896 78.8117 93.3543 77.0923

86.0101 76.1809 86.4345 86.4328 86.1805

81.9099 87.6863 83.8911 93.2349 79.3710

94.5993 83.4316 82.8246 89.7397 90.9250

95.5135 87.6585 79.6842 88.7729 81.3362

88.7768 76.1820 80.1346 69.5633 83.0674

returnedobjs =

344.7698 364.7546 322.1757 368.8153 365.0742

367.0383 333.7229 311.7708 359.9920 352.2219

349.6173 364.8819 365.1596 351.3242 352.5754

315.5029 337.1901 366.7939 361.2135 367.8778

380.5884 336.8246 353.5531 373.6284 339.4883

366.9186 343.4015 368.0946 348.0079 360.0233

354.9972 364.4607 343.9855 357.1645 351.7462

352.2418 350.0614 365.3691 370.5449 365.5494

376.8484 363.4334 350.5220 369.9809 355.9866

345.3857 319.0586 335.3075 320.9765 363.9642

slsfobjs =

325.0311 360.2436 317.7620 369.9047 363.1770

355.9195 335.7394 289.7693 369.1094 334.0968

347.7506 369.0580 355.9135 321.2412 346.5509

313.4462 323.0455 363.5312 353.8153 373.2016

371.3714 294.8194 345.2286 377.3591 316.6417

346.7416 339.0979 358.3633 327.7857 358.8408

350.5531 368.1384 329.3141 350.6302 335.6116

341.9630 343.0749 372.4258 373.6044 357.6073

364.0611 351.9317 323.9450 368.8601 348.2753

342.3215 319.4128 327.5898 304.7793 359.0549

lcfrejs =

0.0948 0.0237 2.2848 0.1056 0.0028

0.0543 0.7760 2.0497 0.0643 0.0193

0.7266 0.1428 0.0559 0.0369 0.9764

2.3539 1.0218 0.1963 0.6727 0.0677

0.0058 1.5301 0.0054 0.0005 1.1712

0.0690 0.8517 0.0033 0.3524 0.3160

0.1821 0.0091 0.6806 0.5886 0.1121

0.5558 0.5655 0.0024 0.0163 0.0048

0.0409 0.1194 0.1363 0.0331 0.0462

0.7826 1.6654 1.3056 1.6799 0.0272

slsfrejs =

2.1773 0.5330 3.4262 0.6001 0.8088

1.1240 2.3999 4.2611 0.3165 1.7539

1.3412 1.0259 1.0510 2.8419 2.5225

3.1983 2.4804 1.2146 1.3215 0.1836

1.0720 3.9259 1.2154 0.2885 3.1588

1.7581 1.5843 0.8980 2.3822 0.8500

0.8445 0.6242 2.8481 1.7636 1.8495

2.2275 1.9510 0.1533 0.3783 1.0622

1.3567 1.4691 2.3432 0.5072 1.3675

2.0473 2.5736 2.2060 3.1373 0.8844

lcfunhap =

0.1245 0.0336 0.1432 0.0146 0.0034

0.0074 0.4261 0.4747 0.1164 0.0178

0.0236 0.1402 0.0338 0.0228 0.0090

0.3221 0.0115 0.0242 0.0489 0.0038

0.0106 0.5393 0.0020 0.0000 0.2706

0.0430 0.0792 0.0031 0.0489 0.0479

0.0191 0.0015 0.0416 0.0418 0.0159

0.2290 0.0965 0.0000 0.0000 0.0040

0.0157 0.0735 0.0983 0.0026 0.0017

0.0834 0.5948 0.1936 0.2539 0.0177

slsfunhap =

0.3109 0.2741 0.0459 0.0382 0.0559

0.3298 0.2747 0.2296 0.0897 0.2618

0.4362 0.0200 0.2984 0.0080 0.0602

0.4289 0.0900 0.1751 0.1650 0.1205

0.0809 0.7840 0.2801 0.0578 0.0729

0.0309 0.3522 0.2987 0.5528 0.2163

0.3573 0.0726 0.0248 0.2254 0.2261

0.0777 0.0540 0.0040 0.0019 0.3026

0.0730 0.3818 0.4188 0.0626 0.1082

0.2589 0.3032 0.4698 0.2091 0.1530

menusizes =

5.0000 5.0000 4.3500 4.9000 4.8500

5.0000 4.8000 4.6000 4.7000 4.7500

4.8500 4.6500 4.7500 4.8500 4.9000

4.7000 4.7000 5.0000 4.9500 4.9500

4.8500 4.5500 4.8000 4.8500 4.6000

4.8000 4.9000 4.9000 5.0000 4.9000

5.0000 4.8000 4.5500 5.0000 4.9000

5.0000 4.4500 4.4500 4.7000 4.7500

4.8000 4.7000 5.0000 4.9500 4.9500

4.6500 4.7000 4.6000 4.8500 4.9000

avepij =

0.1662 0.1714 0.1289 0.1591 0.1883

0.1813 0.1647 0.1409 0.1595 0.1564

0.1656 0.1610 0.1523 0.1656 0.1655

0.1294 0.1538 0.1722 0.1727 0.1778

0.1797 0.1378 0.1694 0.1832 0.1359

0.1715 0.1497 0.1658 0.1674 0.1607

0.1705 0.1767 0.1682 0.1818 0.1695

0.1621 0.1427 0.1720 0.1761 0.1738

0.1625 0.1501 0.1755 0.1892 0.1824

0.1502 0.1402 0.1487 0.1580 0.1631

pijover5 =

71 73 48 59 79

70 67 53 65 60

66 62 58 68 63

46 61 67 71 72

73 49 67 74 50

70 59 64 73 62

65 72 66 76 69

61 58 73 72 73

64 57 74 79 70

57 51 60 58 61

pijequal1 =

28 26 17 25 41

38 33 18 30 27

30 34 21 29 26

16 27 36 33 34

34 22 28 45 20

27 20 27 30 30

34 37 35 32 30

24 29 35 37 42

25 26 36 41 41

23 23 28 28 34

runtimes =

299.3902 134.4977 327.5008 160.7181 175.6891

237.0710 294.1791 318.9863 215.9663 222.0159

166.8929 209.7336 153.7410 247.3167 143.2745

169.6269 257.4124 175.2435 162.2890 135.1852

260.5518 336.4977 161.0188 158.8833 321.5209

276.2284 212.7091 213.8590 281.7822 156.8235

162.9742 148.7628 137.1775 166.3995 143.8397

203.4377 315.8448 131.7306 145.4449 244.5324

230.5479 172.6925 147.2182 139.7298 157.8639

266.5792 335.0024 291.8003 150.1814 175.8133

bestest =

-0.0499 -0.0030 -2.0007 -0.0430 -0.0010

-0.0018 -0.3317 -1.5010 -0.0030 -0.0143

-0.1987 -0.0831 -0.0092 -0.0171 -0.4064

-1.7046 -1.0225 -0.2264 -0.3518 -0.0025

-0.0112 -2.0283 -0.0009 -0.0000 -1.0022

-0.1527 -0.3708 -0.0011 -0.0573 -0.2002

-0.2758 -0.0039 -0.8830 -0.2917 -0.0369

-0.5028 -0.0670 -0.0005 -0.0013 -0.0098

-0.0298 -0.0823 -0.1195 -0.0006 -0.0812

-0.6462 -1.2585 -1.2453 -0.8803 -0.0015

guessbestiter =

5 2 6 7 4

4 5 3 2 4

3 5 6 6 7

2 5 4 2 3

6 5 5 5 4

6 7 4 5 6

6 7 5 5 6

6 4 5 4 6

6 6 6 5 6

2 5 4 3 6

estslsfobjs =

330.5870 361.6164 317.0729 370.2752 347.8173

357.0226 344.3726 295.7567 364.9356 333.7103

353.1512 369.5589 354.2720 319.8314 348.2038

311.4715 329.0529 367.9156 352.5142 374.7411

368.8642 291.8121 334.6552 380.3634 315.8840

338.8074 333.3280 371.2691 339.1292 367.5189

348.1310 371.2002 324.8198 353.1995 336.7620

349.9253 348.1313 368.9887 374.3749 359.6728

360.3839 357.3794 323.2536 366.7217 349.4760

329.2370 321.0933 320.8307 303.5308 356.0752

compportion80 =

0.8000 0.7600 0.7356 0.6837 0.7835

0.6700 0.7708 0.6413 0.6489 0.6526

0.7423 0.6667 0.6632 0.7113 0.6224

0.6383 0.7553 0.6200 0.7576 0.6263

0.6392 0.7143 0.7083 0.8247 0.5870

0.6458 0.6531 0.6531 0.7000 0.6633

0.7700 0.6667 0.7033 0.6900 0.8163

0.7100 0.5955 0.6629 0.6915 0.7158

0.6875 0.7128 0.7300 0.7374 0.6364

0.7634 0.7660 0.8152 0.7320 0.6633

compportionmin =

0.8000 0.7600 0.7356 0.6837 0.7835

0.6700 0.7708 0.6413 0.6489 0.6526

0.7423 0.6667 0.6632 0.7113 0.6224

0.6383 0.7553 0.6200 0.7576 0.6263

0.6392 0.7143 0.7083 0.8247 0.5870

0.6458 0.6531 0.6531 0.7000 0.6633

0.7700 0.6667 0.7033 0.6900 0.8163

0.7100 0.5955 0.6629 0.6915 0.7158

0.6875 0.7128 0.7300 0.7374 0.6364

0.7634 0.7660 0.8152 0.7320 0.6633

**110th experiment, Fixed Scens b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, minitest=rej, gp=.1, diff lcf scen, =wt**

lcfiterbetter =

0.9000

lcfiterworse =

0.1000

avepercbetter =

0.0341

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter =

0.7040

lcfiterave =

349.9751

slsfave =

338.9236

averuntime =

262.5332

avelcfrejs =

0.5976

aveslsfrejs =

1.9304

avelcfunhap =

0.2250

aveslsfunhap =

0.2793

percbetter =

0.0752 0.0215 0.0866 0.0025 0.0931

0.0308 -0.0082 0.0550 0.0036 -0.0430

0.0336 0.0911 0.0577 0.0030 0.0631

0.0015 -0.0117 0.1376 0.1603 0.0146

0.0225 0.0032 0.0464 0.0086 0.0123

0.0682 0.0646 0.0142 0.1067 0.0383

0.0204 -0.0099 0.0390 0.0468 0.0004

0.0241 0.0072 0.0042 0.0380 0.0160

0.0064 -0.0024 0.0241 0.0084 0.0405

0.0644 0.0279 0.0215 0.0513 0.0240

avelcfavecomp =

11.0587

aveslsfavecomp =

10.7962

avelcfaveperccomp =

0.8742

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

75.8856

aveslsfavetotprofit =

83.1445

avelcfpercposprofit =

1

returnedobjs =

358.8711 359.1239 324.7598 353.4112 355.4160

345.6799 366.1339 344.4418 358.4435 317.1346

345.7482 334.2714 339.7339 345.8712 341.7938

357.8895 345.1664 356.7179 352.7620 351.4959

355.9684 326.4271 356.0140 372.5663 349.1884

349.9488 358.4154 327.9236 344.1045 329.4783

375.9549 379.0409 339.9765 336.5132 360.5114

369.4097 370.4813 335.3273 330.7915 355.7224

357.3397 344.6964 351.2741 357.6177 349.0470

355.4327 339.7016 340.2038 345.3273 379.4858

slsfobjs =

333.7825 351.5762 298.8798 352.5459 325.1576

335.3382 369.1634 326.4839 357.1670 331.3866

334.5019 306.3534 321.1927 344.8332 321.4928

357.3403 349.2583 313.5696 304.0171 346.4245

348.1450 325.3987 340.2156 369.3747 344.9486

327.6194 336.6561 323.3181 310.9316 317.3266

368.4340 382.8150 327.2058 321.4659 360.3627

360.7170 367.8236 333.9107 318.6939 350.1327

355.0788 345.5328 342.9941 354.6291 335.4595

333.9387 330.4769 333.0505 328.4705 370.5901

slsfavecomp =

10.8489 9.5526 11.3730 10.6448 8.8593

11.1386 10.9126 10.0697 10.0785 11.0753

10.2850 12.9544 10.5920 9.7113 9.3255

9.9179 10.2893 12.6711 14.9990 9.4564

10.0950 11.5895 10.7982 11.9518 11.1492

9.8300 10.1923 9.6896 10.5075 11.2099

11.6051 11.5695 11.1179 12.3756 11.5483

11.4937 10.7012 8.6292 7.4442 11.4547

9.8324 10.3324 10.7815 10.9349 10.4459

11.0376 11.1346 10.8621 11.0864 13.6568

lcfavecomp =

10.7951 9.8432 11.5958 10.8052 8.8912

11.3531 11.3055 9.9987 10.6290 11.3373

10.5095 13.0806 10.7730 9.9665 9.7241

10.2904 10.7195 12.6406 14.9351 10.0121

10.2521 11.8193 10.9025 12.2268 11.8192

10.2501 10.4837 10.1596 11.1430 11.4486

11.7922 11.7469 11.7499 12.7185 11.8718

11.7081 10.9921 9.1788 7.8182 11.6768

10.1070 10.6668 10.9856 11.2419 10.6277

11.1685 11.2715 10.8588 11.2964 13.7495

lcfaveperccomp =

0.8765 0.8933 0.8789 0.8518 0.8613

0.8611 0.8438 0.8690 0.9317 0.9194

0.8467 0.9199 0.8763 0.8689 0.8924

0.8748 0.9110 0.8630 0.8799 0.9622

0.8284 0.8293 0.8806 0.8598 0.9126

0.9207 0.8856 0.8866 0.9023 0.8318

0.8288 0.8327 0.8698 0.8866 0.8635

0.8751 0.8391 0.8969 0.8701 0.8336

0.8760 0.8480 0.9210 0.8644 0.8706

0.8949 0.8298 0.8241 0.9127 0.8516

lcfavetotprofit =

77.7065 72.6559 69.9462 79.1166 70.4750

75.5856 81.7545 74.0811 71.2599 68.8467

75.4167 71.4573 71.5567 71.8704 62.5743

76.9816 73.1055 84.3265 81.7994 64.5361

78.1107 81.8265 79.0499 87.8966 72.3862

67.6496 73.4300 67.2563 63.8911 78.4416

89.2635 91.0940 68.8522 77.4077 83.6469

82.7634 81.1217 61.7837 62.2183 84.4934

75.4101 74.5711 74.2411 81.2678 75.7785

75.7639 81.0441 78.9783 73.6826 95.9074

slsfavetotprofit =

81.6719 80.7959 77.3139 84.2058 71.0824

82.9974 89.9908 76.9890 84.2073 81.2977

80.0760 82.8903 76.5677 78.3364 72.9876

84.5417 83.6122 89.4267 87.4546 79.1136

81.4218 85.9760 84.5160 94.4658 87.4818

77.0372 82.2898 77.2286 76.8429 83.0272

92.0967 94.6551 82.8426 87.0919 91.1878

88.5323 87.4767 73.2100 68.4295 90.2754

82.5055 82.3467 82.9138 87.8003 80.7161

82.1543 83.8847 82.6452 80.1966 100.4169

returnedobs =

358.8711 359.1239 324.7598 353.4112 355.4160

345.6799 366.1339 344.4418 358.4435 317.1346

345.7482 334.2714 339.7339 345.8712 341.7938

357.8895 345.1664 356.7179 352.7620 351.4959

355.9684 326.4271 356.0140 372.5663 349.1884

349.9488 358.4154 327.9236 344.1045 329.4783

375.9549 379.0409 339.9765 336.5132 360.5114

369.4097 370.4813 335.3273 330.7915 355.7224

357.3397 344.6964 351.2741 357.6177 349.0470

355.4327 339.7016 340.2038 345.3273 379.4858

slsfobjs =

333.7825 351.5762 298.8798 352.5459 325.1576

335.3382 369.1634 326.4839 357.1670 331.3866

334.5019 306.3534 321.1927 344.8332 321.4928

357.3403 349.2583 313.5696 304.0171 346.4245

348.1450 325.3987 340.2156 369.3747 344.9486

327.6194 336.6561 323.3181 310.9316 317.3266

368.4340 382.8150 327.2058 321.4659 360.3627

360.7170 367.8236 333.9107 318.6939 350.1327

355.0788 345.5328 342.9941 354.6291 335.4595

333.9387 330.4769 333.0505 328.4705 370.5901

lcfrejs =

0.1765 0.0953 1.4357 0.5813 0.1701

0.6126 0.0211 0.7992 0.0102 1.1409

0.9258 0.8654 1.1073 1.0014 0.3999

0.0950 0.8827 0.3334 0.3083 0.0362

0.3922 1.7687 0.6087 0.0583 0.3105

0.0425 0.0942 1.4980 0.1247 2.0002

0.0210 0.0022 1.0731 1.4251 0.4406

0.0055 0.0089 0.9109 1.0186 0.9739

0.2223 0.8335 0.2919 0.3760 0.7096

0.2305 1.0999 1.1807 1.0024 0.1557

slsfrejs =

2.5228 1.2994 4.1005 1.3326 2.5692

2.2940 0.5038 2.7035 0.8502 2.4619

1.9109 3.9925 3.0801 1.5899 2.5832

0.4584 1.5351 3.3923 4.5826 1.4367

1.5665 2.1096 1.9037 0.4274 1.5632

2.3180 1.7492 2.2856 3.3188 2.9492

0.4785 0.0246 2.2963 2.7937 0.8037

1.0906 0.6099 1.7138 1.9316 1.4879

1.0228 1.5582 1.8786 0.9416 1.9911

2.3912 2.2894 2.1235 2.7602 0.9420

lcfunhap =

0.3622 0.0144 0.2395 0.2389 0.1017

0.7621 0.0083 0.6674 0.0179 1.5147

0.4514 0.6479 0.2091 0.0008 0.0223

0.0925 0.3860 0.0511 0.2906 0.0366

0.2304 1.2113 0.0505 0.0295 0.0545

0.0402 0.0674 0.4303 0.0032 0.2329

0.0203 0.0000 0.0817 0.3787 0.0636

0.0036 0.0038 0.0155 0.2072 0.1779

0.0827 0.0075 0.3548 0.4088 0.1974

0.1790 0.3954 0.1937 0.0011 0.0127

slsfunhap =

0.0372 0.0272 0.2426 0.1353 0.0095

0.0995 0.0567 0.0919 0.4110 0.0738

0.7708 0.2041 0.0152 0.0275 0.3495

0.5333 0.1558 0.3096 0.1292 0.0449

0.0955 1.2925 0.2378 0.2638 0.3092

0.2457 0.4987 0.5783 0.3891 0.4104

0.4183 0.0037 0.5613 0.6621 0.2512

0.1825 0.0757 0.2223 0.6288 0.7246

0.0954 0.0600 0.0067 0.7870 0.2230

0.0801 0.2057 0.3586 0.1122 0.2589

menusizes =

4.9500 4.7500 4.8500 4.8000 5.0000

4.7500 4.8000 4.8000 4.8000 4.6000

4.9000 4.7000 4.4000 4.7500 4.3500

4.7000 4.9000 4.9500 4.8500 4.7000

4.7000 4.4500 4.9500 4.9000 4.9500

4.8000 4.9000 4.5500 4.7000 4.8000

4.8500 4.7000 4.6000 4.9000 4.9000

4.7000 4.6000 4.4500 4.9000 4.9500

4.8000 4.7000 4.8000 4.9000 4.7000

4.9500 4.8000 4.9000 4.4500 4.9000

avepij =

0.1639 0.1676 0.1463 0.1542 0.1584

0.1671 0.1617 0.1546 0.1711 0.1668

0.1498 0.1531 0.1310 0.1631 0.1622

0.1546 0.1663 0.1656 0.1511 0.1495

0.1572 0.1497 0.1648 0.1668 0.1625

0.1511 0.1604 0.1541 0.1634 0.1554

0.1700 0.1751 0.1536 0.1469 0.1660

0.1683 0.1527 0.1537 0.1586 0.1666

0.1577 0.1622 0.1570 0.1417 0.1541

0.1586 0.1369 0.1610 0.1523 0.1626

pijover5 =

69 65 59 60 55

68 64 63 71 78

57 61 49 65 72

65 71 65 64 57

61 61 64 66 66

57 64 58 69 59

67 74 63 62 62

72 60 62 60 64

61 63 64 46 60

61 47 57 60 59

pijequal1 =

27 34 13 23 33

37 32 28 28 28

19 26 19 27 34

26 26 29 21 28

27 28 26 25 32

20 23 27 35 31

25 35 21 16 25

21 22 33 23 29

33 33 23 23 21

24 17 27 30 24

runtimes =

335.4232 139.2486 288.7757 290.8228 322.3773

339.6884 245.1275 336.3659 296.8351 339.6330

268.0610 337.0637 335.7274 143.5741 312.9952

280.4518 145.2684 304.6606 340.1275 189.4278

303.5834 337.7172 225.1269 162.5083 269.7648

245.6765 175.3317 339.6903 324.3934 308.2575

190.8418 145.7615 273.3577 314.6316 247.4807

197.6136 150.1372 191.1953 242.1554 156.7178

151.5880 194.7940 312.9603 342.3415 228.3555

328.7422 342.8461 145.5800 342.3514 343.5035

bestest =

-0.1242 -0.0467 -0.9478 -0.3889 -0.0412

-0.7067 -0.0093 -0.1256 -0.0003 -1.2386

-0.9558 -0.6837 -1.3504 -1.0003 -0.1912

-0.0432 -0.1972 -0.1143 -0.6488 -0.0272

-0.1153 -1.5913 -0.2154 -0.0310 -0.2086

-0.0117 -0.0230 -1.1954 -0.0076 -1.7054

-0.0013 -0.0001 -1.0189 -1.1460 -0.3378

-0.0016 -0.0012 -0.9255 -0.6442 -0.4526

-0.0740 -0.6336 -0.0018 -0.3474 -0.6116

-0.2472 -0.9332 -0.7814 -1.0004 -0.4237

guessbestiter =

6 5 5 2 4

5 5 5 7 5

3 6 6 2 6

1 1 6 7 3

3 1 3 4 7

5 3 6 5 6

6 1 5 1 3

5 5 6 5 3

7 4 6 6 4

7 5 3 5 3

estslsfobjs =

335.3528 352.9872 305.5064 355.2604 325.3974

340.0381 375.8078 325.6389 360.5598 327.4002

338.5573 316.7884 326.1315 342.9287 324.7761

359.5779 347.3386 311.3483 302.8760 338.0139

335.3892 322.7151 343.0762 358.9902 353.3242

325.7334 330.2081 324.6980 317.3547 325.0220

366.0051 380.0853 316.0635 321.2470 363.6333

361.0419 365.5767 336.9021 300.4191 360.4436

340.6667 346.3433 342.4865 352.7271 330.7077

333.9304 333.3168 334.0985 339.1613 344.1061

compportion80 =

0.6667 0.7053 0.7423 0.6771 0.6500

0.7579 0.6667 0.6875 0.7188 0.7935

0.7449 0.8298 0.5795 0.6737 0.8046

0.7340 0.7041 0.7677 0.7938 0.7766

0.6915 0.7191 0.6869 0.6429 0.7273

0.7292 0.7449 0.6923 0.6277 0.6667

0.7732 0.6489 0.8043 0.7653 0.6633

0.6596 0.6196 0.6517 0.6939 0.6869

0.7188 0.6064 0.8021 0.6429 0.7234

0.6768 0.7500 0.5612 0.6854 0.6531

compportionmin =

0.6667 0.7053 0.7423 0.6771 0.6500

0.7579 0.6667 0.6875 0.7188 0.7935

0.7449 0.8298 0.5795 0.6737 0.8046

0.7340 0.7041 0.7677 0.7938 0.7766

0.6915 0.7191 0.6869 0.6429 0.7273

0.7292 0.7449 0.6923 0.6277 0.6667

0.7732 0.6489 0.8043 0.7653 0.6633

0.6596 0.6196 0.6517 0.6939 0.6869

0.7188 0.6064 0.8021 0.6429 0.7234

0.6768 0.7500 0.5612 0.6854 0.6531

**111th experiment, Fixed Scens b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, minitest=rej, gp=.1, diff lcf scen, /=wt**

lcfiterbetter =

0.7600

lcfiterworse =

0.2400

avepercbetter =

0.0298

lcfrejbetter =

1

lcfrejworse =

0

avepercrejbetter ¿

0.7780

lcfiterave =

352.9855

slsfave =

343.4915

averuntime =

284.1390

avelcfrejs =

0.5168

aveslsfrejs =

1.6911

avelcfunhap =

0.1328

aveslsfunhap =

0.2913

percbetter =

-0.0163 0.0223 0.0442 -0.0042 0.0636

0.0237 0.0756 0.0646 0.0486 -0.0092

0.1595 0.0594 0.0617 0.0439 0.0232

0.0226 0.0035 -0.0095 0.0050 -0.0151

-0.0070 0.0885 0.0844 0.0556 -0.0006

0.0469 0.0784 0.0151 0.0019 0.0039

0.0384 0.0520 0.0344 0.0003 0.1884

0.0003 0.0334 -0.0137 -0.0193 0.0099

0.0077 0.0632 -0.0031 -0.0366 -0.0216

0.0535 0.0458 0.0172 0.0037 0.0020

avelcfavecomp =

11.2536

aveslsfavecomp =

10.9189

avelcfaveperccomp =

0.8766

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

76.5607

aveslsfavetotprofit =

84.6367

avelcfpercposprofit =

1

returnedobjs =

364.4892 371.1645 366.6829 360.8953 266.7902

368.6502 323.8723 328.4289 340.2174 384.7605

335.3442 326.1246 349.5566 365.4633 320.7043

345.9819 363.7265 356.5534 373.7237 361.4937

375.6770 356.6205 362.8595 339.0016 350.7789

380.2681 363.1855 359.4441 300.0257 372.7927

367.4613 360.3857 354.3358 370.1845 369.8577

359.3406 353.3194 359.0181 369.0069 354.3447

365.0743 346.9689 371.9907 331.5150 356.5021

342.8858 359.8883 316.3324 350.3823 355.2014

slsfobjs =

370.5379 363.0710 351.1774 362.4135 250.8466

360.1170 301.0981 308.4896 324.4458 388.3271

289.2087 307.8343 329.2446 350.0865 313.4417

338.3411 362.4502 359.9789 371.8489 367.0413

378.3289 327.6288 334.6083 321.1443 351.0052

363.2403 336.7750 354.1141 299.4571 371.3331

353.8583 342.5574 342.5481 370.0629 311.2133

359.2293 341.8880 364.0053 376.2524 350.8705

362.2787 326.3461 373.1643 344.1124 364.3560

325.4796 344.1205 310.9893 349.1041 354.5019

slsfavecomp =

10.5915 11.6003 12.3058 8.8102 9.5028

10.0919 10.4129 9.3919 10.3226 13.4079

10.8735 9.8150 10.0903 10.6858 11.2977

11.3704 10.6276 11.2209 12.3809 9.0606

11.6537 12.4939 11.0660 9.5046 10.9949

12.6076 12.7991 11.8440 12.4174 11.4840

12.0317 9.9209 8.4878 11.5620 13.4636

9.8825 9.5102 11.0798 11.8397 9.6577

9.7870 10.2828 12.1778 10.2018 11.2667

12.5745 11.3622 10.2463 10.6566 9.2264

lcfavecomp =

10.9736 11.4482 12.3973 9.1685 10.1416

10.3121 10.9532 9.8869 10.5011 13.7735

10.9851 10.2750 10.4223 10.8782 12.0184

11.6262 11.1121 11.6994 12.6048 9.5052

11.9758 12.4551 11.0583 10.0482 11.5825

12.6609 12.7994 12.5164 12.6755 11.8609

12.3175 10.2025 8.9236 11.9090 12.9373

10.2931 10.0419 11.4254 12.3496 10.0620

10.0168 10.7525 12.7500 11.0307 11.7206

12.8318 11.5234 10.7048 10.9052 9.6672

lcfaveperccomp =

0.8935 0.8533 0.8263 0.8760 0.9801

0.8580 0.8923 0.9069 0.8392 0.8267

0.8938 0.8611 0.8666 0.8686 0.8810

0.8405 0.8708 0.8957 0.8842 0.9063

0.8400 0.9051 0.8652 0.9629 0.9079

0.8222 0.8477 0.8665 0.8714 0.8512

0.8679 0.8713 0.9049 0.8670 0.8362

0.8743 0.8833 0.8745 0.9202 0.8992

0.8321 0.9208 0.8483 0.9062 0.8659

0.8567 0.8745 0.9168 0.8537 0.8963

lcfavetotprofit =

79.9853 86.3501 86.9018 71.6109 42.3876

80.1690 64.3283 65.5132 75.0943 94.8988

73.9920 65.0932 72.5636 76.1864 74.1075

79.4816 79.1594 79.2161 88.4415 71.6905

86.7153 77.2597 77.1528 63.5788 74.1537

91.4912 87.5251 76.8069 70.5076 84.2196

79.0013 73.8676 65.3128 84.8848 90.9129

75.1296 69.7320 83.1772 84.3897 71.8081

79.4260 69.4266 83.5208 65.0409 79.7685

81.9461 79.9959 63.0257 79.4496 71.6360

slsfavetotprofit =

88.3618 89.3867 90.9789 79.3978 58.6739

84.5241 74.2414 74.6536 79.3325 102.2623

78.7870 74.0331 79.3883 83.6786 85.4533

85.3376 86.6359 89.9519 95.2510 80.6472

93.3336 86.1135 81.1211 75.9024 87.8321

95.4362 90.8525 91.7593 79.6899 92.2019

89.3412 81.1752 73.8522 92.6759 85.9506

83.1954 80.3034 88.9008 95.2748 81.8418

83.4059 79.6061 94.8651 80.8126 90.4764

86.7212 87.9404 74.5723 84.6330 81.0689

returnedobjs =

364.4892 371.1645 366.6829 360.8953 266.7902

368.6502 323.8723 328.4289 340.2174 384.7605

335.3442 326.1246 349.5566 365.4633 320.7043

345.9819 363.7265 356.5534 373.7237 361.4937

375.6770 356.6205 362.8595 339.0016 350.7789

380.2681 363.1855 359.4441 300.0257 372.7927

367.4613 360.3857 354.3358 370.1845 369.8577

359.3406 353.3194 359.0181 369.0069 354.3447

365.0743 346.9689 371.9907 331.5150 356.5021

342.8858 359.8883 316.3324 350.3823 355.2014

slsfobjs =

370.5379 363.0710 351.1774 362.4135 250.8466

360.1170 301.0981 308.4896 324.4458 388.3271

289.2087 307.8343 329.2446 350.0865 313.4417

338.3411 362.4502 359.9789 371.8489 367.0413

378.3289 327.6288 334.6083 321.1443 351.0052

363.2403 336.7750 354.1141 299.4571 371.3331

353.8583 342.5574 342.5481 370.0629 311.2133

359.2293 341.8880 364.0053 376.2524 350.8705

362.2787 326.3461 373.1643 344.1124 364.3560

325.4796 344.1205 310.9893 349.1041 354.5019

lcfrejs =

0.0651 0.0205 0.2157 0.0095 3.5369

0.0847 1.6604 1.3625 0.8518 0.0009

0.9290 1.2056 0.4377 0.0789 1.8207

1.1479 0.0293 0.2507 0.0263 0.0007

0.0185 0.1558 0.0237 0.6730 0.1009

0.0090 0.6147 0.0776 3.2082 0.0327

0.0226 0.0748 0.0469 0.0798 0.0870

0.0459 0.2590 0.7123 0.0010 0.1633

0.0711 0.4163 0.0055 0.8874 0.4597

1.0782 0.3662 1.7017 0.6829 0.0310

slsfrejs =

0.2399 1.1084 1.9062 0.4465 6.2941

0.8825 3.6803 3.0330 2.5727 0.1607

3.5915 3.4854 2.0959 1.4899 2.6737

2.2172 0.6914 0.6749 0.6934 0.2357

0.3115 2.6995 2.2972 2.5657 1.1292

1.0247 1.9373 1.0756 4.2147 0.4239

1.5465 1.2028 1.3539 0.5519 4.0733

0.5775 1.5367 0.9082 0.1824 1.1630

0.5155 2.2036 0.4914 1.5963 0.8281

2.7914 1.9684 3.2423 1.3928 0.5744

lcfunhap =

0.0048 0.0219 0.1119 0.0001 0.4026

0.0007 0.0618 0.4520 0.1376 0.0008

0.5912 0.2389 0.1781 0.0483 1.5437

0.0990 0.0190 0.0292 0.0188 0.0005

0.0004 0.1663 0.0337 0.1564 0.0329

0.0043 0.0088 0.0252 0.2258 0.0074

0.0116 0.0587 0.0246 0.0023 0.1262

0.0143 0.0224 0.1058 0.0017 0.0284

0.0203 0.0989 0.0028 0.1893 0.1371

0.5903 0.0398 0.2892 0.2329 0.0195

slsfunhap =

0.0568 0.0177 0.0123 0.1118 0.2540

0.1003 0.5095 0.5657 0.2749 0.0518

1.5863 0.1058 0.7732 0.2091 2.0436

0.0928 0.1543 0.2658 0.1154 0.0839

0.0357 0.2772 0.0913 0.1733 0.2117

0.4217 0.5762 0.5031 0.1686 0.2131

0.1207 0.7448 0.1701 0.0594 0.0209

0.1924 0.2866 0.0433 0.0545 0.0753

0.2532 0.8292 0.2174 0.1808 0.0764

0.4129 0.1231 0.1133 0.0127 0.5193

menusizes =

4.9500 4.6000 4.8000 4.8000 3.7500

5.0000 4.5000 4.7000 4.7500 4.9000

4.8000 4.7000 4.9000 4.9000 4.6000

4.7500 4.9000 5.0000 4.9000 4.7000

4.9000 4.6500 4.8000 4.7500 5.0000

4.9000 5.0000 4.5000 4.5500 4.8000

4.8500 4.7500 4.6000 4.8000 4.8500

5.0000 4.7500 4.7500 4.8000 4.9500

4.9500 4.9000 4.8000 4.4500 4.8500

4.9000 5.0000 4.6500 4.5500 4.9500

avepij =

0.1981 0.1575 0.1568 0.1698 0.1113

0.1754 0.1448 0.1432 0.1442 0.1875

0.1435 0.1504 0.1595 0.1588 0.1301

0.1534 0.1576 0.1690 0.1728 0.1699

0.1720 0.1540 0.1675 0.1601 0.1709

0.1679 0.1699 0.1430 0.1224 0.1738

0.1684 0.1513 0.1474 0.1753 0.1621

0.1751 0.1655 0.1845 0.1790 0.1712

0.1635 0.1632 0.1772 0.1565 0.1576

0.1265 0.1784 0.1426 0.1454 0.1821

pijover5 =

84 61 56 69 44

67 58 57 54 80

54 60 63 67 45

61 58 69 67 67

73 62 72 62 70

65 67 52 43 73

67 58 54 73 62

69 66 77 70 67

65 66 70 63 68

40 71 53 53 74

pijequal1 =

37 28 24 35 17

34 21 28 24 42

20 26 24 21 21

22 24 24 26 35

25 19 25 34 23

28 20 28 17 29

30 24 23 33 28

30 38 42 39 31

23 27 39 32 19

19 39 23 28 42

runtimes =

204.5080 332.3645 396.4265 252.1405 416.1901

218.5294 413.1826 411.3285 341.2846 167.2536

394.7581 281.6912 341.7382 249.2739 393.4393

386.1343 240.0232 353.4959 244.2120 219.6610

226.7149 398.9551 397.9478 323.1611 229.5334

358.5617 327.2025 406.9108 350.1611 168.6470

201.6529 196.8105 285.0801 162.9473 278.3839

166.5808 271.9334 196.3312 166.8599 163.3156

176.3268 303.0062 243.4472 354.9506 166.7085

352.6093 174.1292 323.8107 322.2097 254.4265

bestest =

-0.0004 -0.0043 -0.0440 -0.0000 -3.4708

-0.0311 -1.5321 -0.8392 -1.0357 -0.0000

-0.6024 -0.9453 -0.4479 -0.0203 -1.3026

-0.2106 -0.0230 -0.1284 -0.0103 -0.0066

-0.0015 -0.3862 -0.0056 -0.5184 -0.0346

-0.0060 -0.0797 -0.0549 -2.7101 -0.0008

-0.0251 -0.0803 -0.0267 -0.0804 -0.0178

-0.0028 -0.1437 -0.5371 -0.0016 -0.1685

-0.0215 -0.1626 -0.0003 -0.7452 -0.1291

-0.9210 -0.0633 -1.6951 -0.7144 -0.0125

guessbestiter =

6 6 4 2 4

2 7 5 4 2

6 7 6 6 1

3 5 1 6 2

1 7 6 6 7

4 4 6 7 4

3 4 6 5 3

2 4 2 6 6

3 5 2 4 3

7 7 7 4 7

estslsfobjs =

372.4100 364.2159 348.0521 360.4154 255.2665

362.0981 312.5466 320.5957 310.7226 388.7425

279.5988 311.1226 325.3227 353.7786 314.3978

341.0916 363.9904 355.9697 374.1052 365.3597

369.5738 320.3756 335.0173 330.4088 346.4446

367.4811 323.6480 340.7896 286.8940 368.4817

360.9662 346.7519 336.4735 375.3659 307.6797

353.4636 346.9204 363.9695 378.6664 351.4022

367.4305 315.8674 381.3038 345.7095 367.2763

317.0890 340.9426 310.0592 349.1116 359.8750

compportion80 =

0.7071 0.7609 0.6146 0.6458 0.7867

0.6800 0.7000 0.6915 0.7158 0.7245

0.6875 0.7553 0.7041 0.7041 0.6957

0.7053 0.7347 0.6700 0.7959 0.7234

0.7041 0.6667 0.7604 0.7474 0.8000

0.6633 0.7500 0.7000 0.6813 0.6979

0.7423 0.7368 0.6848 0.7604 0.6804

0.7300 0.6737 0.7263 0.6875 0.7071

0.6869 0.7143 0.7708 0.7079 0.8041

0.6633 0.6900 0.7527 0.6703 0.7677

compportionmin =

0.7071 0.7609 0.6146 0.6458 0.7867

0.6800 0.7000 0.6915 0.7158 0.7245

0.6875 0.7553 0.7041 0.7041 0.6957

0.7053 0.7347 0.6700 0.7959 0.7234

0.7041 0.6667 0.7604 0.7474 0.8000

0.6633 0.7500 0.7000 0.6813 0.6979

0.7423 0.7368 0.6848 0.7604 0.6804

0.7300 0.6737 0.7263 0.6875 0.7071

0.6869 0.7143 0.7708 0.7079 0.8041

0.6633 0.6900 0.7527 0.6703 0.7677

**111th experiment, Base Model b=0.75, min 80 %, f=15) –10 scens,-- equal wt, gp=.1**

slsfobjs =

293.8396 332.3594 362.3340 333.9868 338.2766

lcfobjs =

272.8907 305.8219 341.7965 299.9111 294.4035

slsftimes =

19.4102 2.9267 3.2364 26.3550 30.1807

lcftimes

4.5047 3.1663 5.1516 3.5357 6.9706

nontrivialvals =

43 32 42 28 63

lcfgaps =

0.0600 0.0870 0.0888 0.0764 0.0846

slsfrejs =

4.5466 1.6171 1.2245 2.2415 2.5875

lcfrejs =

4.6111 2.4323 2.1491 2.6724 3.4562

**112th experiment, Iter Graph b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, minitest=rej, gp=.1, diff lcf scen, =wt**

Took about an hour

returnedobjs =

362.0586 355.6875 354.9192 365.9347 358.3254

avelcfobj =

360.7844 353.5821 352.6722 368.0259 357.7105

aveslsfobj =

356.3621

averuntimes =

21.6052 16.3602 23.8025 19.1242 21.4707

lcfobjs =

357.8422 346.1295 350.5739 369.2919 357.7598

360.3232 351.5457 350.1562 367.1431 357.7017

359.9064 352.6768 351.4294 366.6961 355.8476

361.4783 355.6786 354.9192 369.2959 357.1456

360.5920 356.6225 351.4236 370.4590 358.3830

363.2903 356.7345 354.8702 367.3606 358.3254

362.0586 355.6875 355.3325 365.9347 358.8102

returnedrejs =

0.0201 0.1548 0.2103 0.0177 0.0666

slsfobjs =

358.9585 338.3737 348.6492 375.4166 360.4123

lcfrejs =

0.2738 1.2413 0.5729 0.3780 0.1100

0.2135 0.9048 0.5518 0.5639 0.0874

0.1143 0.5935 0.4424 0.6166 0.0904

0.0933 0.4874 0.2103 0.2502 0.1432

0.0404 0.4276 0.4597 0.4065 0.1442

0.0545 0.3211 0.2663 0.4660 0.0666

0.0201 0.1548 0.0797 0.0177 0.1380

returnedrejs =

0.0201 0.1548 0.2103 0.0177 0.0666

slsfrejs =

0.7525 1.9371 0.8199 0.5545 0.7701

lcfavecomp =

10.3804 10.8723 9.0693 13.0345 10.0558

10.2690 10.7632 9.0652 12.8677 10.0988

10.3657 10.9984 9.0014 12.8064 10.1006

10.2672 10.7812 8.9964 12.9161 10.0851

10.3218 10.7795 9.0367 12.8910 10.0105

10.3354 10.8051 9.0019 13.0013 10.1100

10.3722 10.9005 9.1280 13.1350 10.0789

slsfavecomp =

10.0372 10.5708 8.7539 12.4156 9.6283

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

lcfaveperccomp =

0.8620 0.8769 0.8608 0.8862 0.8997

0.8546 0.8717 0.8625 0.8655 0.9047

0.8681 0.8846 0.8549 0.8657 0.9036

0.8562 0.8880 0.8574 0.8784 0.9021

0.8638 0.8950 0.8585 0.8703 0.8974

0.8625 0.8943 0.8576 0.8809 0.9083

0.8678 0.9044 0.8691 0.8979 0.9050

slsfaveperccomp =

0.8000 0.8000 0.8000 0.8000 0.8000

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

lcfavetotprofit =

75.6034 76.6532 71.6808 84.5593 73.1418

78.3383 78.3721 71.7860 90.4962 72.4289

76.1249 72.8757 72.8465 91.4765 72.3822

78.0090 76.8514 72.5302 88.2432 72.6558

76.8278 76.2601 71.8468 89.5703 74.1873

76.4901 75.7325 72.6262 87.1903 71.8012

75.5927 74.0040 70.2600 82.8182 72.5183

slsfavetotprofit =

83.4789 83.8607 77.3611 96.9240 82.6349

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

lcfpercposprofit =

1 1 1 1 1

1 1 1 1 1

1 1 1 1 1

 1 1 1 1 1

1 1 1 1 1

1 1 1 1 1

1 1 1 1 1

slsfpercposprofit =

1 1 1 1 1

lcfaveextratime =

0.4274 0.4990 0.3806 0.5040 0.4009

0.4403 0.5032 0.4041 0.5204 0.4124

0.4407 0.4992 0.3957 0.4909 0.4119

0.4558 0.4966 0.3946 0.5024 0.4179

0.4481 0.4994 0.3915 0.5054 0.4170

0.4377 0.4945 0.3949 0.4983 0.4216

0.4297 0.4985 0.3928 0.5118 0.4063

slsfaveextratime =

0.4283 0.4925 0.3735 0.5080 0.4050

menusizes =

4.2500 4.8500 4.4500 4.6000 4.8500

4.9000 5.0000 4.7000 4.9500 4.9000

4.9000 4.9500 4.9000 4.9000 4.8500

4.9000 4.9000 4.7000 4.9500 4.9500

4.8500 4.9000 4.9000 4.9500 4.8500

4.8500 4.8500 4.8000 4.8500 4.8500

4.6500 4.9000 4.7000 4.2000 4.9500

menudiffs =

73 51 67 89 67

58 45 58 71 63

68 77 40 59 66

53 54 44 58 46

48 53 46 62 62

48 45 60 55 58

cumcompdiffs =

85 97 89 92 97

128 124 125 140 131

148 140 142 164 152

166 163 149 178 163

172 172 157 192 170

179 179 165 202 176

188 184 170 208 180

bestest =

-0.0060 -0.1934 -0.0570 -0.0006 -0.0065

guessbestiter =

7 7 4 7 6

estobjs =

359.8646 328.7608 346.9377 381.2566 365.0859

360.8014 350.3326 346.6034 371.0599 363.4369

360.6316 348.4626 351.9423 367.1524 358.4131

354.6019 352.5680 359.0780 371.7785 351.4367

361.9736 362.3745 352.5501 374.0032 356.6180

361.2072 352.1899 352.1150 371.0547 361.2661

363.5964 356.5547 348.1756 368.0893 358.7542

361.4475 358.2848 355.1906 365.3897 361.5309

testedtwice =

1 1 1 1 1

1 1 1 0 1

0 1 1 0 1

1 1 1 1 1

1 0 0 0 0

1 1 0 0 1

1 1 1 1 0

failedsecond =

0 0 0 1 0

0 0 0 0 1

0 0 1 0 1

0 0 0 0 1

1 0 0 0 0

0 0 0 0 0

0 0 1 0 0

runtimes =

151.2366 114.5215 166.6172 133.8692 150.2949

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

compportion80 =

0.1925 0.2475 0.1625 0.2725 0.1800

0.2500 0.2875 0.2150 0.3525 0.2400

0.3100 0.3225 0.2500 0.3825 0.2700

0.3375 0.3625 0.2525 0.4025 0.2875

0.3400 0.3800 0.2625 0.4350 0.2975

0.3550 0.3850 0.2800 0.4450 0.3025

0.3900 0.3875 0.2900 0.4700 0.3125

compportionmin =

0.1925 0.2475 0.1625 0.2725 0.1800

0.2500 0.2875 0.2150 0.3525 0.2400

0.3100 0.3225 0.2500 0.3825 0.2700

0.3375 0.3625 0.2525 0.4025 0.2875

0.3400 0.3800 0.2625 0.4350 0.2975

0.3550 0.3850 0.2800 0.4450 0.3025

0.3900 0.3875 0.2900 0.4700 0.3125

**113th experiment, Iter Graph b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, minitest=rej, gp=.01, diff lcf scen, =wt**

returnedobjs =

357.0526 322.5672 365.2743 368.5741 326.7326

avelcfobj =

355.6098 312.8053 366.4676 367.2979 321.6485

aveslsfobj =

337.9295

averuntimes =

21.2868 196.1454 32.0436 28.9272 24.3523

lcfobjs =

357.6770 299.7536 364.6462 366.1488 311.5814

357.0526 316.2275 369.6162 366.7186 315.8158

352.9748 315.2323 366.4374 368.5741 321.4254

354.3901 302.2757 366.0478 363.2030 323.0626

354.8286 315.1701 363.0070 367.0921 326.7326

355.7338 318.4108 364.9990 371.4413 324.9131

356.6114 322.5672 370.5194 367.9073 328.0085

returnedrejs =

0.8257 1.7381 0.9366 0.3355 1.3897

slsfobjs =

361.0969 289.9992 365.2743 369.6096 303.6675

lcfrejs =

0.9062 3.2305 0.7366 0.4338 2.7269

0.8257 2.2061 0.5989 0.4425 2.3084

1.1977 2.0380 0.6640 0.3355 2.0722

1.1166 3.3923 0.7076 0.3748 1.6455

1.0101 1.7570 0.8035 0.2863 1.3897

1.0321 1.9372 0.7079 0.1655 1.2553

0.9407 1.7381 0.5410 0.2865 1.5602

returnedrejs =

0.8257 1.7381 0.9366 0.3355 1.3897

slsfrejs =

0.9266 4.2164 0.9366 0.4913 3.5053

lcfavecomp =

10.7887 9.7314 13.1552 11.7556 8.7138

10.8151 9.7777 13.0083 11.7036 8.6771

10.7643 9.8014 13.0673 11.6272 8.7256

10.8002 9.8548 13.0520 11.9404 8.7272

10.8227 9.8368 13.0431 11.7171 8.7933

10.7543 9.7143 13.1532 11.6952 8.8150

10.7718 9.6688 13.0094 11.7717 8.7457

slsfavecomp =

10.5038 9.5353 12.9435 11.5160 8.5371

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

lcfaveperccomp =

0.8503 0.8441 0.8228 0.8380 0.8580

0.8532 0.8707 0.8115 0.8310 0.8630

0.8472 0.8907 0.8171 0.8292 0.8719

0.8475 0.8642 0.8187 0.8549 0.8764

0.8560 0.8911 0.8154 0.8397 0.8855

0.8461 0.8818 0.8299 0.8389 0.8991

0.8503 0.8722 0.8135 0.8397 0.8862

slsfaveperccomp =

0.8000 0.8000 0.8000 0.8000 0.8000

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

lcfavetotprofit =

81.8779 64.2722 93.2560 86.6375 65.2584

80.9334 63.4328 97.0839 87.8253 65.0884

82.3168 62.7295 95.3421 89.0496 64.0756

82.0902 61.9993 95.6393 83.1898 63.7633

80.1047 61.5604 96.1967 87.1563 62.3033

82.7476 63.7737 94.0933 87.3820 61.4302

82.1148 65.0203 96.4562 86.2839 63.0739

slsfavetotprofit =

86.6634 67.6539 97.6997 91.6877 69.1704

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

lcfpercposprofit =

1 1 1 1 1

1 1 1 1 1

1 1 1 1 1

1 1 1 1 1

1 1 1 1 1

1 1 1 1 1

1 1 1 1 1

slsfpercposprofit =

1 1 1 1 1

lcfaveextratime =

0.4738 0.4587 0.5840 0.5260 0.4028

0.4826 0.4560 0.5779 0.5240 0.4071

0.4779 0.4415 0.5839 0.5098 0.3993

0.4748 0.4445 0.5788 0.5132 0.4000

0.4697 0.4546 0.5772 0.4951 0.3997

0.4769 0.4639 0.5799 0.4989 0.4136

0.4818 0.4502 0.5860 0.4982 0.4034

slsfaveextratime =

0.4698 0.4540 0.5895 0.5244 0.4054

menusizes =

4.9000 4.0500 4.6500 4.7500 4.5500

4.8000 4.3500 4.9000 4.7000 4.8000

4.9000 4.1000 5.0000 5.0000 4.8000

4.8000 3.9000 4.7500 4.6500 4.8500

4.9500 4.3000 5.0000 4.9500 4.6500

5.0000 4.3500 4.2000 4.6500 4.8500

4.9500 4.5500 5.0000 4.5000 4.7500



menudiffs =

68 64 71 79 41

66 65 62 62 48

54 62 51 57 37

55 54 71 70 38

61 57 56 60 40

49 50 64 61 36

cumcompdiffs =

98 81 93 95 91

131 116 131 134 114

153 137 156 147 130

165 152 166 161 137

175 160 182 175 143

184 169 186 180 150

189 177 198 189 151

bestest =

-0.5672 -1.7875 -0.2872 -0.1738 -1.2258

guessbestiter =

2 7 0 3 5

estobjs =

363.6551 293.6393 376.5498 362.7598 300.4923

366.3683 290.6762 362.2815 364.0369 311.0234

359.8774 316.7902 370.3140 370.3374 310.7582

346.4617 319.5972 358.1183 371.1016 322.7447

352.3755 301.6217 363.6535 370.4480 327.4356

345.3245 322.9587 366.7055 367.9110 331.7731

355.4771 320.2964 367.1477 366.4038 321.3838

356.7511 326.4717 373.2347 366.9453 332.5319

testedtwice =

1 1 0 1 1

1 1 0 1 1

0 0 0 1 1

0 0 0 1 1

0 1 0 0 1

0 1 0 0 0

0 1 0 0 0

failedsecond =

0 0 0 1 0

0 0 0 0 0

0 0 0 0 0

0 0 0 1 0

0 1 0 0 0

0 1 0 0 0

0 0 0 0 0

runtimes =

1.0e+03 \*

0.1490 1.3730 0.2243 0.2025 0.1705

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

compportion80 =

0.1800 0.1650 0.2250 0.2750 0.2250

0.2600 0.2200 0.2725 0.3500 0.2650

0.2950 0.2675 0.3175 0.3625 0.2900

0.3100 0.3000 0.3450 0.3925 0.3025

0.3350 0.3200 0.3675 0.4100 0.3275

0.3450 0.3375 0.3675 0.4200 0.3300

0.3525 0.3575 0.3850 0.4375 0.3350

compportionmin =

0.1800 0.1650 0.2250 0.2750 0.2250

0.2600 0.2200 0.2725 0.3500 0.2650

0.2950 0.2675 0.3175 0.3625 0.2900

0.3100 0.3000 0.3450 0.3925 0.3025

0.3350 0.3200 0.3675 0.4100 0.3275

0.3450 0.3375 0.3675 0.4200 0.3300

0.3525 0.3575 0.3850 0.4375 0.3350

**114th experiment, Iter Graph b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, minitest=rej, gp=.01, diff lcf scen, =wt**

lcfiterbetter =

0.8800

lcfiterworse =

0.0800

avepercbetter =

0.0335

lcfrejbetter =

0.9600

lcfrejworse =

0

avepercrejbetter =

0.5485

lcfiterave =

346.2766

slsfave =

335.5780

averuntime =

404.1476

avelcfrejs =

0.9629

aveslsfrejs =

2.0495

avelcfunhap =

0.2052

aveslsfunhap =

0.2782

percbetter =

0.0228 0.1363 0.0853 0.1485 0.0220

0.0028 0.0062 0.0768 0.0695 0.0243

-0.0085 0.0237 0.0091 -0.0008 0.0489

0.0329 0.0308 0.0307 0.0230 0.0193

0.0512 0.1304 0.0639 0.0722 0.0101

0.0216 -0.0021 0.0055 0.0658 0.0257

0.0141 0.0017 0.0178 0.0012 0.0232

0.0175 0.0003 0.0025 -0.0096 0.0686

0.0649 0.0379 0 0.0255 0.0168

0.0289 0.0485 0 0.0157 0.0537

avelcfavecomp =

10.7993

aveslsfavecomp =

10.5865

avelcfaveperccomp =

0.8685

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

75.9798

aveslsfavetotprofit =

81.7851

avelcfpercposprofit =

1

returnedobjs =

338.0465 270.0581 308.9644 345.0946 355.8660

329.6713 340.2194 364.0146 354.0700 366.2245

358.5137 337.7303 361.1022 365.5481 345.4394

340.4959 379.4964 349.8960 306.7840 348.8698

329.4913 359.3284 354.9671 360.8269 355.0041

358.4717 343.9283 343.3188 350.8572 340.8932

360.7862 356.4087 338.9651 339.2043 326.2599

327.4042 384.7654 334.4196 327.6661 343.7929

333.8038 354.1031 343.0508 355.5601 357.3968

338.7038 334.7915 360.0405 366.4491 367.0666

slsfobjs =

330.5210 237.6555 284.6758 300.4750 348.2092

328.7439 338.1198 338.0530 331.0586 357.5433

361.5728 329.8960 357.8449 365.8377 329.3348

329.6363 368.1506 339.4906 299.8797 342.2551

313.4566 317.8768 333.6488 336.5296 351.4692

350.8811 344.6656 341.4393 329.2055 332.3459

355.7602 355.7982 333.0423 338.7968 318.8518

321.7608 384.6354 333.5875 330.8488 321.7377

313.4691 341.1794 343.0508 346.7128 351.4956

329.1892 319.3090 360.0405 360.7903 348.3706

slsfavecomp =

8.9513 12.3008 10.1994 11.4465 9.3683

10.0968 11.0782 11.7953 9.3896 11.1564

10.1337 11.1293 8.3386 9.6998 12.3812

10.6665 12.6996 9.0510 9.7379 9.8645

9.6263 11.8978 11.0597 10.7072 11.4462

12.1605 9.5929 9.6978 10.6136 11.7627

11.6741 10.8367 8.9637 12.3337 9.8693

10.0202 12.6766 9.5165 8.5102 8.2516

11.7033 11.6962 10.7000 11.7225 9.4168

11.6758 9.5983 10.7130 10.7431 10.6558

lcfavecomp =

9.3902 12.4112 10.2897 11.5094 9.7431

10.4750 11.2315 12.0193 9.5855 11.3749

10.4893 11.2777 8.4122 9.9025 12.5231

11.1654 12.6007 9.1958 10.4383 10.2308

9.8764 11.9388 11.0835 10.7729 11.8132

12.3641 9.8517 9.9165 10.8191 12.0542

11.7637 11.0843 9.1092 12.5231 10.1593

10.3122 12.8443 9.7380 8.9495 8.5962

11.7213 11.8617 10.7000 12.2435 9.5448

11.9206 9.7047 10.7130 10.9516 10.7674

lcfaveperccomp =

0.8534 0.8788 0.9137 0.9381 0.8687

0.8997 0.8744 0.8553 0.9442 0.8180

0.8890 0.8771 0.8212 0.8595 0.8437

0.8632 0.8296 0.8630 0.9090 0.8772

0.9299 0.8456 0.8488 0.8948 0.8981

0.8234 0.8560 0.8520 0.8984 0.9167

0.8629 0.8533 0.8378 0.8660 0.8809

0.9178 0.8466 0.8402 0.8616 0.9103

0.8619 0.8429 0.8000 0.8636 0.8415

0.8463 0.9095 0.8000 0.9019 0.8397

lcfavetotprofit =

68.1766 61.4940 63.2845 67.8268 72.9092

67.3290 75.8937 81.9739 66.9379 86.4718

77.9143 75.5533 74.5356 79.2113 82.6548

71.6839 92.8172 72.2792 58.2464 72.3470

64.4092 81.5920 79.7918 75.5260 78.9753

87.8225 75.5239 76.6670 74.7655 76.2383

83.4934 82.4560 71.3085 83.7561 71.2617

68.5030 95.0298 73.0765 66.9432 65.5324

78.6574 84.0575 85.7450 75.9416 77.1590

77.4942 70.2308 87.5972 78.5166 81.3812

slsfavetotprofit =

75.0163 68.7165 69.6418 78.3467 79.0651

76.2564 83.6741 86.6752 74.6105 90.0619

85.5610 83.1142 76.1054 83.9275 86.3843

81.8712 94.9000 75.8572 71.7677 80.4006

71.3896 82.4084 82.5483 81.2237 88.5197

92.9634 80.9557 80.8613 81.9323 85.7369

88.3141 87.6226 74.2567 89.5792 79.3731

76.2977 98.6926 76.6708 73.2084 71.3133

82.2053 88.9408 85.7450 88.4548 80.2935

84.6880 75.1189 87.5972 86.0099 84.3827

returnedobjs =

338.0465 270.0581 308.9644 345.0946 355.8660

329.6713 340.2194 364.0146 354.0700 366.2245

358.5137 337.7303 361.1022 365.5481 345.4394

340.4959 379.4964 349.8960 306.7840 348.8698

329.4913 359.3284 354.9671 360.8269 355.0041

358.4717 343.9283 343.3188 350.8572 340.8932

360.7862 356.4087 338.9651 339.2043 326.2599

327.4042 384.7654 334.4196 327.6661 343.7929

333.8038 354.1031 343.0508 355.5601 357.3968

338.7038 334.7915 360.0405 366.4491 367.0666

slsfobjs =

330.5210 237.6555 284.6758 300.4750 348.2092

328.7439 338.1198 338.0530 331.0586 357.5433

361.5728 329.8960 357.8449 365.8377 329.3348

329.6363 368.1506 339.4906 299.8797 342.2551

313.4566 317.8768 333.6488 336.5296 351.4692

350.8811 344.6656 341.4393 329.2055 332.3459

355.7602 355.7982 333.0423 338.7968 318.8518

321.7608 384.6354 333.5875 330.8488 321.7377

313.4691 341.1794 343.0508 346.7128 351.4956

329.1892 319.3090 360.0405 360.7903 348.3706

lcfrejs =

0.9066 4.7461 2.1834 0.4910 0.3028

1.6620 0.7948 0.1775 0.1296 0.2345

0.2039 1.6413 0.2784 0.0377 0.9561

0.9645 0.0239 0.5005 1.9696 0.7877

1.2247 0.5959 0.4100 0.2736 0.5320

0.9521 0.7854 1.3368 0.7638 1.7432

0.4260 0.8856 1.4294 1.9243 1.7281

1.8534 0.0017 1.4218 1.3852 0.7225

1.7871 0.9938 1.4656 0.2316 0.5530

1.4843 1.4571 0.7183 0.0130 0.0536

slsfrejs =

1.9726 6.9048 4.5334 4.0979 1.2218

2.6815 2.0258 2.0308 2.3050 0.7517

0.4976 2.4344 0.5748 0.3227 2.8357

2.3670 1.0619 1.7281 3.6772 1.7152

3.2864 3.3214 2.1707 2.2568 1.2381

1.4941 1.1308 1.6825 2.0410 2.4674

1.3527 1.1513 1.9042 2.2863 2.5874

2.7183 0.2175 1.8772 1.7121 2.1516

3.4426 1.7917 1.4656 1.3781 1.0637

2.3854 2.8788 0.7183 1.0073 1.5542

lcfunhap =

0.4794 0.4895 0.6698 0.0620 0.0633

0.4014 0.5807 0.0115 0.0389 0.0549

0.0610 0.0899 0.0178 0.0017 0.6784

0.0383 0.0139 0.2822 0.3512 0.0473

0.5184 0.1135 0.4706 0.0223 0.2131

0.0204 0.5872 0.0504 0.1194 0.0433

0.2004 0.0551 0.1145 0.2299 0.6665

0.1319 0.0016 0.4030 0.3673 0.0937

0.2382 0.1684 0.3032 0.1774 0.0630

0.0831 0.1151 0.1662 0.0098 0.0809

slsfunhap =

0.3805 1.1387 0.2159 0.4092 0.1016

0.0079 0.4437 0.2537 0.0172 0.5665

0.0936 0.2595 0.0918 0.0607 0.1549

0.2441 0.0292 0.0989 0.3382 0.1452

0.0552 0.2262 0.3222 0.0838 0.5634

0.3456 0.5650 0.0973 0.5372 0.3546

0.0791 0.1513 0.2866 0.2228 0.8865

0.1968 0.0545 0.2922 0.3571 0.4512

0.4231 0.4420 0.3032 0.5866 0.1943

0.2274 0.1171 0.1662 0.0053 0.2672

menusizes =

4.8000 4.0000 4.2500 4.5500 4.5500

4.0500 4.7000 4.8500 4.3000 4.9500

4.9000 4.7500 4.4500 4.4500 4.6500

4.9000 4.5000 4.6500 4.4500 4.7500

4.3000 4.9000 4.7000 4.4500 4.6000

4.8000 4.5500 4.9000 4.8500 4.8500

4.6500 4.9000 4.5000 4.6000 4.8500

4.7500 4.4000 4.4000 4.5500 4.9000

4.9000 4.9000 4.9000 4.5500 4.9000

4.3500 4.7500 4.9500 4.7000 4.8500

avepij =

0.1432 0.1210 0.1232 0.1543 0.1540

0.1420 0.1445 0.1599 0.1502 0.1719

0.1652 0.1557 0.1565 0.1492 0.1556

0.1461 0.1559 0.1594 0.1294 0.1661

0.1446 0.1579 0.1496 0.1542 0.1645

0.1575 0.1448 0.1620 0.1624 0.1475

0.1470 0.1646 0.1563 0.1507 0.1554

0.1521 0.1714 0.1415 0.1543 0.1533

0.1425 0.1516 0.1500 0.1553 0.1639

0.1523 0.1525 0.1546 0.1630 0.1535

pijover5 =

55 45 43 61 60

56 58 63 59 68

65 62 63 58 60

58 60 62 46 65

59 60 58 66 69

62 53 65 65 59

55 66 64 60 59

63 70 53 60 61

56 56 59 64 68

59 61 64 66 59

pijequal1 =

19 18 16 22 30

30 21 21 27 35

31 24 32 28 29

22 31 34 20 30

26 17 20 23 29

23 25 30 23 20

26 33 25 28 32

17 38 28 28 23

18 25 20 24 28

27 25 29 30 29

runtimes =

1.0e+03 \*

0.2192 1.0302 0.5574 0.7120 0.2548

0.3439 0.5594 0.6513 0.3351 0.2672

0.2553 0.4739 0.1721 0.1646 0.7664

0.8777 0.2953 0.2551 0.9335 0.2183

0.3652 0.6340 0.7568 0.3106 0.3763

0.3237 0.3426 0.1542 0.2092 0.3828

0.3576 0.1550 0.2356 0.3278 0.3228

0.6543 0.1723 0.3673 0.2751 0.1800

0.6860 0.2570 0.1900 1.0069 0.1965

0.5574 0.2722 0.2603 0.2630 0.2722

bestest =

-0.6451 -4.5182 -1.9966 -0.6622 -0.2411

-1.7624 -0.4795 -0.1416 -0.0975 -0.0989

-0.2208 -1.4257 -0.2236 -0.0066 -0.3705

-0.6030 -0.2074 -0.3071 -2.0374 -0.6122

-1.1477 -0.1616 -0.4177 -0.0768 -0.2875

-0.6216 -0.1962 -1.1257 -0.5922 -1.0602

-0.1433 -0.5235 -1.2302 -1.2679 -1.4522

-1.3802 -0.0020 -1.0168 -1.3293 -0.6689

-1.3495 -1.0390 -0.6152 -0.0875 -0.1463

-1.0241 -1.0979 -0.4812 -0.0073 -0.0052

guessbestiter =

6 5 3 4 3

4 2 6 5 7

7 3 4 6 4

2 6 5 2 7

3 6 7 4 1

3 1 1 2 7

5 1 3 1 5

2 3 2 4 4

5 4 0 1 5

5 3 0 3 4

estslsfobjs =

326.6413 241.9654 284.1492 317.3999 350.2974

329.4360 328.4897 339.9453 332.7084 364.3484

359.6640 323.9066 358.6747 368.7270 343.0398

330.6265 368.4955 339.3008 299.9920 341.2604

317.3259 324.3139 345.7366 336.9431 353.3755

357.3276 350.4783 331.8310 328.7168 333.8008

349.9074 359.0660 328.5762 332.5420 314.0807

324.5501 386.8289 338.2833 333.4594 335.3427

309.6738 346.2086 362.2008 343.2025 353.9786

336.0899 320.0180 362.9911 360.8636 356.8959

compportion80 =

0.7396 0.8000 0.8000 0.6923 0.6484

0.7160 0.7447 0.7732 0.6977 0.7172

0.6429 0.8316 0.6517 0.6854 0.7634

0.8265 0.6444 0.6882 0.8427 0.7263

0.6977 0.6735 0.6702 0.7528 0.8043

0.8125 0.7143 0.6735 0.7629 0.6804

0.7742 0.6939 0.7111 0.7500 0.7938

0.7474 0.6477 0.7386 0.7912 0.6939

0.6837 0.6224 0 0.7473 0.6735

0.7816 0.7263 0 0.7021 0.7423

compportionmin =

0.7396 0.8000 0.8000 0.6923 0.6484

0.7160 0.7447 0.7732 0.6977 0.7172

0.6429 0.8316 0.6517 0.6854 0.7634

0.8265 0.6444 0.6882 0.8427 0.7263

0.6977 0.6735 0.6702 0.7528 0.8043

0.8125 0.7143 0.6735 0.7629 0.6804

0.7742 0.6939 0.7111 0.7500 0.7938

0.7474 0.6477 0.7386 0.7912 0.6939

0.6837 0.6224 1.0000 0.7473 0.6735

0.7816 0.7263 1.0000 0.7021 0.7423

**115th experiment, LCF Gap b=0.75, min 80 %, f=15) –**

**base model, gap=5%**

lcftimes =

4.9879 4.9083 4.7398 4.7413 5.7504 6.5074 5.6206 5.8357 6.4316 5.8693

lcfgaps =

0.0353 0.0190 0.0276 0.0435 0.0311 0.0367 0.0409 0.0428 0.0448 0.0222

ans =

5.5392

**base model, gap=2%**

lcfgaps =

0.0139 0.0150 0.0078 0.0164 0.0154 0.0135 0.0149 0.0124 0.0179 0.0149

lcftimes =

5.6407 4.6975 6.0074 6.2144 5.8708 6.5802 6.7178 5.2436 8.5288 5.8790

ans =

6.1380

**base model, gap=1%**

lcfgaps =

0.0063 0.0091 0.0078 0.0071 0.0087 0.0010 0.0093 0.0090 0.0097 0.0050

lcftimes =

4.9616 6.0109 4.7732 4.3500 2.8821 4.7532 6.2623 4.8317 5.9717 5.8911

ans =

5.0688

**LCF-FMS model, gap=5%**

lcfgaps =

0.0326 0.0334 0.0365 0.0307 0.0343 0.0311 0.0331 0.0265 0.0436 0.0232

lcftimes =

1.0847 1.1508 1.0360 0.9882 1.1155 1.0732 1.1596 1.2505 1.0200 1.2180

ans =

1.1097

**LCF-FMS model, gap=10%**

lcfgaps =

0.0546 0.0635 0.0598 0.0572 0.0628 0.0812 0.0501 0.0346 0.0641 0.0493

lcftimes =

1.0438 1.0303 1.4725 1.5564 1.1048 1.7841 1.1404 1.0689 1.2684 1.1221

ans =

1.2592

**LCF-FMS model, gap=2%**

lcfgaps =

0.0193 0.0087 0.0052 0.0095 0.0157 0.0078 0.0104 0.0154 0.0139 0.0063

lcftimes =

1.1915 1.0771 1.0805 1.1497 2.0773 1.3212 1.0734 1.1140 1.1438 1.4185

ans =

1.2647

**LCF-FMS model, gap=1%**

lcfgaps =

0.0057 0.0095 0.0052 0.0071 0 0.0055 0.0027 0.0005 0.0064 0.0093

lcftimes =

1.3764 1.1114 1.0672 1.3513 1.2262 1.1005 1.1922 1.4830 1.1310 1.4932

ans =

1.2532

**116th experiment, LCF gap b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=100, gp=.02, diff lcf scen, =wt**

lcfiterbetter =

0.7800

lcfiterworse =

0.0200

avepercbetter =

0.0321

lcfrejbetter =

0.8000

lcfrejworse =

0

avepercrejbetter =

0.4705

lcfiterave =

348.7834

slsfave =

338.4371

averuntime =

247.7258

avelcfrejs =

1.0148

aveslsfrejs =

1.9792

avelcfunhap =

0.1530

aveslsfunhap =

0.2064

percbetter =

0.2294 0 0.0735 0.0370 0

0.0082 0.0151 0.0595 0.0247 0.0139

0.0365 0 0.0771 0.0529 0.0296

0.0847 0.0455 0.0224 0 0

0.0394 0 0.0134 0.0537 0.0162

0.0139 0 0.0017 0.0515 0.0307

0.1034 0.0237 0.0042 0.0266 -0.0003

0.1229 0.0021 0.0429 0 0.0468

0.0519 0.0744 0.0232 0.0057 0.0120

0.0108 0 0.0024 0 0.0239

avelcfavecomp =

10.7693

aveslsfavecomp

10.6319

avelcfaveperccomp =

0.8526

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

78.3157

aveslsfavetotprofit =

82.1248

avelcfpercposprofit =

1

returnedobjs =

363.7381 319.4826 332.6904 356.1769 378.4015

361.8382 343.2908 336.7061 361.6753 339.2252

330.4691 341.3322 352.5617 355.7857 366.6223

327.6007 359.2771 369.1237 371.9127 337.1972

359.4643 337.5716 364.9293 373.1974 358.3550

365.5401 358.8131 343.1403 281.6812 298.4677

346.5659 332.7391 360.1391 375.2525 377.3873

339.5898 310.5300 353.2563 371.4040 312.8799

362.6650 367.5062 356.6164 347.9686 353.0081

324.4652 364.9117 342.3623 344.8490 348.8070

slsfobjs =

295.8620 319.4826 309.9227 343.4734 378.4015

358.8783 338.1922 317.8015 352.9444 334.5704

318.8427 341.3322 327.3348 337.8953 356.0800

302.0084 343.6519 361.0280 371.9127 337.1972

345.8482 337.5716 360.0862 354.1709 352.6297

360.5222 358.8131 342.5572 267.8865 289.5867

314.0951 325.0410 358.6492 365.5345 377.5191

302.4344 309.8818 338.7347 371.4040 298.8890

344.7780 342.0452 348.5360 346.0115 348.8284

320.9993 364.9117 341.5522 344.8490 340.6766

slsfavecomp =

11.7420 10.7124 9.6103 10.7413 11.7481

10.0162 8.5122 10.2123 11.9566 10.8584

10.6295 8.7860 11.1413 10.8522 9.7043

9.9817 10.3710 11.2131 10.5681 10.9529

10.2195 9.7390 11.5658 12.2670 10.7116

11.1281 9.8878 10.5167 11.0645 9.7194

10.0415 9.8522 11.5406 13.0619 12.0817

13.4917 10.8466 10.7565 10.6358 9.8309

9.9398 12.1245 10.4439 10.7477 10.7235

10.2775 9.3591 8.8001 9.4705 10.4409

lcfavecomp =

11.5571 10.7124 9.5399 10.9662 11.7481

10.3362 9.2396 10.6014 11.9026 11.0883

11.0730 8.7860 10.8022 11.1047 9.8262

10.0910 10.6018 11.4469 10.5681 10.9529

10.3651 9.7390 11.8747 12.2240 10.8204

11.3135 9.8878 10.8826 11.3351 10.3331

9.7469 10.1159 11.7455 12.9386 12.2199

13.4900 11.0602 10.8529 10.6358 10.0507

10.1820 11.9392 10.4698 11.1166 10.9328

10.6718 9.3591 9.1645 9.4705 10.5833

lcfaveperccomp =

0.8866 0.8000 0.8827 0.8370 0.8000

0.9099 0.9291 0.9000 0.8609 0.8409

0.9145 0.8000 0.9135 0.8950 0.8439

0.9407 0.8883 0.8532 0.8000 0.8000

0.8553 0.8000 0.8441 0.8529 0.8331

0.8302 0.8000 0.8919 0.8536 0.8982

0.8150 0.8405 0.8396 0.8373 0.8358

0.8976 0.8192 0.8448 0.8000 0.8692

0.8903 0.8528 0.8661 0.8498 0.8562

0.8581 0.8000 0.8673 0.8000 0.8323

lcfavetotprofit =

75.9710 78.9092 68.4780 80.3553 94.1131

77.3583 58.4617 68.6432 87.5576 80.5013

68.0579 75.4527 76.2213 77.8329 78.6979

64.6038 76.8423 84.8137 88.3238 81.4797

77.7366 79.7073 85.5522 87.7778 83.2449

84.5803 81.5433 75.0361 64.4045 60.9020

77.6596 73.7668 88.3430 92.5364 92.2446

75.3394 75.0335 82.5079 88.5848 65.6747

75.4837 85.6734 78.8039 79.3875 79.5116

70.1831 82.4110 70.0607 79.8210 79.5968

slsfavetotprofit =

75.3687 78.9092 70.5025 84.9448 94.1131

84.0854 73.2429 77.0450 88.9583 84.2568

79.7083 75.4527 80.7815 85.2723 80.7683

71.8297 82.2843 89.7107 88.3238 81.4797

82.7237 79.7073 89.5801 90.8263 85.9769

87.0867 81.5433 83.8941 68.6860 69.0666

73.6312 78.4673 91.2084 95.2032 95.0044

84.0923 78.3108 85.3891 88.5848 69.0708

79.9911 88.4051 83.3130 85.2988 84.8191

78.6064 82.4110 75.8918 79.8210 82.5934

returnedobjs =

363.7381 319.4826 332.6904 356.1769 378.4015

361.8382 343.2908 336.7061 361.6753 339.2252

330.4691 341.3322 352.5617 355.7857 366.6223

327.6007 359.2771 369.1237 371.9127 337.1972

359.4643 337.5716 364.9293 373.1974 358.3550

365.5401 358.8131 343.1403 281.6812 298.4677

346.5659 332.7391 360.1391 375.2525 377.3873

339.5898 310.5300 353.2563 371.4040 312.8799

362.6650 367.5062 356.6164 347.9686 353.0081

324.4652 364.9117 342.3623 344.8490 348.8070

slsfobjs =

295.8620 319.4826 309.9227 343.4734 378.4015

358.8783 338.1922 317.8015 352.9444 334.5704

318.8427 341.3322 327.3348 337.8953 356.0800

302.0084 343.6519 361.0280 371.9127 337.1972

345.8482 337.5716 360.0862 354.1709 352.6297

360.5222 358.8131 342.5572 267.8865 289.5867

314.0951 325.0410 358.6492 365.5345 377.5191

302.4344 309.8818 338.7347 371.4040 298.8890

344.7780 342.0452 348.5360 346.0115 348.8284

320.9993 364.9117 341.5522 344.8490 340.6766

lcfrejs =

0.0531 3.0211 1.4944 0.4847 0.2364

0.1330 0.1333 0.4964 0.5990 1.6179

1.3688 1.3761 0.3487 0.3976 0.0565

1.3716 0.1624 0.2319 0.2463 2.1323

0.3525 1.5216 0.6048 0.1206 0.9047

0.6820 1.0441 0.7372 4.6655 3.2804

1.3077 1.6575 0.8876 0.2349 0.0422

1.1817 3.2853 0.9100 0.3037 2.8003

0.0692 0.5532 0.2309 1.0010 0.9542

1.7797 0.2444 0.8582 1.3996 1.1637

slsfrejs =

4.4410 3.0211 3.5616 1.7615 0.2364

0.6673 1.5814 2.5931 1.7354 2.0768

2.8159 1.3761 2.9341 1.7370 1.0494

3.7552 1.5623 0.7812 0.2463 2.1323

1.3654 1.5216 1.1353 1.6611 1.2021

1.1532 1.0441 1.4620 5.8780 4.2088

3.2315 2.3621 1.2040 1.2801 0.2569

4.0671 3.5091 1.5689 0.3037 4.0477

1.7268 2.4514 1.3572 1.4736 1.6028

2.8391 0.2444 1.5980 1.3996 1.7411

lcfunhap =

0.0277 0.1783 0.5130 0.1342 0.0318

0.0799 0.0798 0.5451 0.4202 0.0714

0.1862 0.1329 0.4974 0.1948 0.0495

0.3472 0.0905 0.1070 0.0956 0.0621

0.0458 0.5465 0.0401 0.0518 0.0571

0.0022 0.0122 0.3199 0.0638 0.2657

0.0932 0.1387 0.0423 0.1331 0.0172

0.0360 0.0998 0.0489 0.1284 0.0618

0.0798 0.0950 0.2118 0.1037 0.0693

0.3608 0.3727 0.0196 0.0817 0.2079

slsfunhap =

0.3248 0.1783 0.0169 0.1131 0.0318

0.3867 0.1553 0.8678 0.0383 0.2057

0.3803 0.1329 0.0783 0.5116 0.0124

0.1368 0.2435 0.3602 0.0956 0.0621

0.4788 0.5465 0.2040 0.1037 0.2410

0.1620 0.0122 0.2309 0.1071 0.5629

0.1022 0.3398 0.0841 0.0374 0.0841

0.3069 0.1933 0.3883 0.1284 0.0851

0.1038 0.0227 0.0851 0.2040 0.1216

0.2087 0.3727 0.0289 0.0817 0.3576

menusizes =

4.6500 4.7500 4.6000 4.8000 4.9000

4.8000 4.0500 4.7500 4.8000 5.0000

4.6500 4.6500 4.9500 4.7500 4.6000

4.5000 4.9500 4.8500 4.7500 4.3000

4.8500 4.4500 4.6500 4.6000 4.9500

4.4500 3.5500 4.8500 3.6000 4.2000

4.4000 4.8500 4.6500 4.1500 5.0000

4.4000 4.3500 4.9500 4.7000 4.1000

4.4500 4.8500 4.3000 4.4500 4.7500

4.8500 4.4500 4.7500 4.7500 5.0000

avepij =

0.1595 0.1362 0.1447 0.1535 0.1526

0.1663 0.1487 0.1410 0.1588 0.1533

0.1495 0.1443 0.1571 0.1593 0.1604

0.1459 0.1693 0.1665 0.1532 0.1310

0.1615 0.1368 0.1585 0.1538 0.1570

0.1601 0.1369 0.1618 0.1061 0.1232

0.1432 0.1641 0.1565 0.1491 0.1647

0.1319 0.1339 0.1571 0.1545 0.1278

0.1527 0.1632 0.1496 0.1493 0.1597

0.1550 0.1454 0.1600 0.1495 0.1632

pijover5 =

72 54 58 64 64

66 62 57 62 60

59 53 63 64 64

57 72 69 64 57

65 53 64 58 60

64 60 63 41 46

55 61 62 60 64

53 52 64 60 45

60 61 62 58 66

62 62 64 65 63

pijequal1 =

19 19 24 20 21

37 33 18 29 25

17 30 26 26 28

24 33 28 26 16

30 24 26 27 24

30 32 29 18 17

24 29 28 29 24

12 19 22 27 24

35 31 26 23 25

25 20 31 19 29

runtimes =

678.4288 134.1869 238.0715 276.8998 132.8101

234.0754 121.9673 366.8588 269.7544 159.4807

255.2774 132.1227 322.7726 206.7386 294.3273

354.1151 304.5643 150.2945 136.3387 323.5799

168.2666 335.2248 151.1522 302.7131 202.0419

327.9041 175.6092 188.4439 331.5653 336.0030

329.6851 149.7370 226.2663 232.4947 170.6137

788.0605 273.3728 150.7991 153.5554 335.5080

259.0678 284.6740 234.8106 160.5281 153.5692

165.2122 223.4401 143.2615 153.9781 186.0653

bestest =

365.3044 326.2684 344.8577 361.7728 377.3185

362.6437 340.3030 332.6483 360.4041 343.2399

334.1753 347.0656 361.4531 362.2805 367.2412

326.3942 355.6594 374.8989 375.0141 338.2502

361.6833 345.1476 369.0343 367.3987 360.4757

365.1085 358.2747 345.1835 300.0585 308.5803

348.4094 340.0102 361.2173 378.9918 377.2501

341.3181 320.5417 362.9346 371.0540 318.0731

364.6620 371.6765 361.4492 354.8046 362.4372

331.1266 368.2211 348.9105 349.5005 350.8543

guessbestiter =

5 0 2 6 0

4 6 6 3 2

3 0 4 4 7

7 7 1 0 0

3 0 2 7 4

4 0 7 6 1

2 7 3 5 3

6 1 3 0 6

6 2 3 3 3

1 0 5 0 5

estslsfobjs =

287.2254 326.2684 315.8811 349.3743 377.3185

359.6543 333.2274 300.1317 352.0810 334.2004

327.8930 347.0656 328.5888 326.2220 355.3149

301.6403 348.8614 366.8486 375.0141 338.2502

344.9204 345.1476 361.2469 352.9448 357.3998

364.7211 358.2747 334.7805 270.3331 288.2465

317.7937 320.2407 354.5772 364.1342 373.4468

303.0614 310.4662 339.6602 371.0540 300.5172

340.7289 343.8508 350.8026 340.4306 346.5093

324.8830 368.2211 342.6005 349.5005 342.1057

compportion80 =

0.8495 0 0.6957 0.6875 0

0.7292 0.7654 0.8421 0.6875 0.7200

0.6344 0 0.6566 0.7368 0.7391

0.8333 0.7475 0.6598 0 0

0.7320 0 0.6774 0.6522 0.7172

0.7079 0 0.6598 0.7500 0.7381

0.7045 0.7320 0.7097 0.7108 0.6500

0.7727 0.6552 0.7576 0 0.6951

0.7079 0.6289 0.6860 0.7640 0.6737

0.7938 0 0.7474 0 0.6200

compportionmin =

0.8495 1.0000 0.6957 0.6875 1.0000

0.7292 0.7654 0.8421 0.6875 0.7200

0.6344 1.0000 0.6566 0.7368 0.7391

0.8333 0.7475 0.6598 1.0000 1.0000

0.7320 1.0000 0.6774 0.6522 0.7172

0.7079 1.0000 0.6598 0.7500 0.7381

0.7045 0.7320 0.7097 0.7108 0.6500

0.7727 0.6552 0.7576 1.0000 0.6951

0.7079 0.6289 0.6860 0.7640 0.6737

0.7938 1.0000 0.7474 1.0000 0.6200

**117th experiment, LCF gap b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=100, gp=.05, diff lcf scen, =wt**

lcfiterbetter =

0.7600

lcfiterworse =

0.0400

avepercbetter =

0.0367

lcfrejbetter =

0.8000

lcfrejworse =

0

avepercrejbetter =

0.5669

lcfiterave =

353.1073

slsfave =

341.2199

averuntime =

223.1316

avelcfrejs =

0.6509

aveslsfrejs =

1.8286

avelcfunhap =

0.1608

aveslsfunhap =

0.2653

percbetter =

0.0441 0.1312 0.1001 0.0332 0.0218

0.0409 0.0437 0.0433 0 0

0.0054 0.0154 0.0481 0 0.0181

0 0.1067 0.1230 0.0880 0.0687

0.0521 0 0.0258 0.0368 0

0.0691 0.0071 0.0065 0.0348 0

0.0430 0 0.0299 0.0393 0.1694

0.0627 0.0297 -0.0013 -0.0094 0.0471

0.0145 0.0343 0.0007 0.0538 0

0.0149 0 0.0358 0.1087 0.0004

avelcfavecomp =

11.0078

aveslsfavecomp =

10.8658

avelcfaveperccomp =

0.8594

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

78.6895

aveslsfavetotprofit =

83.8319

avelcfpercposprofit =

1

returnedobjs =

346.4979 364.5756 349.4502 339.3115 353.1730

349.4091 349.2007 348.0257 367.6171 353.6550

362.0230 350.4635 341.9938 360.5374 350.2450

378.0427 357.6572 352.8487 339.5113 365.9635

343.7582 337.8290 364.6887 339.8587 361.7185

310.1350 351.4865 343.2971 367.7157 363.7276

370.4822 355.0180 336.9923 341.7108 342.3609

342.7351 361.7590 378.1082 362.8160 356.4250

340.3913 351.5323 357.6894 362.4449 376.6845

352.0561 359.7088 349.7107 334.0109 358.3131

slsfobjs =

331.8601 322.2960 317.6564 328.4170 345.6346

335.6922 334.5693 333.5793 367.6171 353.6550

360.0628 345.1558 326.2924 360.5374 344.0329

378.0427 323.1846 314.1920 312.0423 342.4238

326.7410 337.8290 355.5157 327.7955 361.7185

290.0894 349.0104 341.0898 355.3548 363.7276

355.2116 355.0180 327.2238 328.7805 292.7747

322.5106 351.3296 378.5868 366.2736 340.3803

335.5252 339.8645 357.4376 343.9337 376.6845

346.9036 359.7088 337.6094 301.2572 358.1635

slsfavecomp =

12.0648 11.4317 12.2570 9.4269 11.1989

12.4916 8.4899 9.0768 10.5701 9.3184

11.0863 9.5607 11.8518 11.8444 11.5124

10.5134 12.6322 11.3213 12.4850 14.0558

12.7197 10.5083 10.5253 11.4950 11.1687

10.5176 10.2160 11.4430 11.2879 9.3915

12.8262 9.0722 9.6094 10.8260 9.9726

11.5177 9.5196 11.1092 11.7429 9.8214

9.2560 12.2769 10.6017 10.4827 10.8563

10.4022 10.6775 11.0624 9.6019 9.5933

lcfavecomp =

12.4665 11.2284 11.9910 9.6648 11.3056

12.6133 8.6651 9.2580 10.5701 9.3184

11.4027 10.0707 12.3027 11.8444 11.9254

10.5134 12.4445 11.1762 12.2175 13.7595

12.5666 10.5083 10.9559 11.8131 11.1687

10.7029 10.4711 11.7114 11.3092 9.3915

13.0001 9.0722 10.4292 11.1768 9.8188

11.5175 9.6509 11.1991 11.9366 10.0076

9.8792 12.5480 10.9941 10.5673 10.8563

10.6169 10.6775 11.4614 9.7762 9.8692

lcfaveperccomp =

0.8625 0.8639 0.8355 0.8811 0.8305

0.8399 0.8845 0.8451 0.8000 0.8000

0.8581 0.9158 0.9134 0.8000 0.8809

0.8000 0.8831 0.8818 0.9430 0.9047

0.8755 0.8000 0.8774 0.8744 0.8000

0.8985 0.8262 0.9189 0.8664 0.8000

0.8788 0.8000 0.9685 0.8757 0.8958

0.8314 0.8595 0.8137 0.8214 0.8796

0.8807 0.8950 0.8687 0.8824 0.8000

0.8404 0.8000 0.8831 0.8987 0.8379

lcfavetotprofit =

75.6548 80.7398 84.7671 70.2843 82.8882

87.3964 68.3528 72.5744 86.7867 81.1519

80.3935 67.4103 73.2683 92.4096 77.4027

89.0441 82.3816 73.3391 73.8724 87.0381

83.3741 84.6902 74.0666 76.7453 90.1993

67.7900 77.5379 75.6332 80.7848 82.5762

87.0568 79.7542 57.6654 74.3789 70.1477

82.1067 75.8164 89.7670 86.1738 72.8206

68.4151 80.5156 76.1919 77.6150 90.7394

78.9588 87.4375 75.2905 65.4160 77.6527

slsfavetotprofit =

88.0354 82.6182 81.7467 75.7587 86.9657

92.0166 73.5258 75.5265 86.7867 81.1519

88.6538 79.5169 83.7695 92.4096 86.9232

89.0441 85.1017 78.4359 81.3189 94.6918

86.6013 84.6902 83.0580 84.7647 90.1993

75.7700 81.5092 84.2424 86.9509 82.5762

95.2389 79.7542 77.2336 82.7470 71.3181

83.7173 79.3790 91.7287 92.1100 79.7395

76.6375 90.6533 86.4027 81.6524 90.7394

83.9650 87.4375 83.7371 70.5494 82.4956

returnedobjs =

346.4979 364.5756 349.4502 339.3115 353.1730

349.4091 349.2007 348.0257 367.6171 353.6550

362.0230 350.4635 341.9938 360.5374 350.2450

378.0427 357.6572 352.8487 339.5113 365.9635

343.7582 337.8290 364.6887 339.8587 361.7185

310.1350 351.4865 343.2971 367.7157 363.7276

370.4822 355.0180 336.9923 341.7108 342.3609

342.7351 361.7590 378.1082 362.8160 356.4250

340.3913 351.5323 357.6894 362.4449 376.6845

352.0561 359.7088 349.7107 334.0109 358.3131

slsfobjs =

331.8601 322.2960 317.6564 328.4170 345.6346

335.6922 334.5693 333.5793 367.6171 353.6550

360.0628 345.1558 326.2924 360.5374 344.0329

378.0427 323.1846 314.1920 312.0423 342.4238

326.7410 337.8290 355.5157 327.7955 361.7185

290.0894 349.0104 341.0898 355.3548 363.7276

355.2116 355.0180 327.2238 328.7805 292.7747

322.5106 351.3296 378.5868 366.2736 340.3803

335.5252 339.8645 357.4376 343.9337 376.6845

346.9036 359.7088 337.6094 301.2572 358.1635

lcfrejs =

0.2131 0.1103 0.8835 0.7743 0.7668

1.1859 0.0937 0.5261 0.5551 0.7432

0.2093 0.1805 1.0640 1.2884 0.8442

0.1217 0.6776 0.3074 1.3713 0.1066

1.3339 1.4811 0.0685 1.2339 0.7804

2.5953 1.0288 1.0106 0.0381 0.3752

0.0914 0.9455 0.3516 1.2001 0.7900

1.6104 0.0448 0.0720 0.2204 0.1278

0.9591 0.3838 0.0613 0.1090 0.0585

0.7725 0.7426 0.5930 1.2073 0.2373

slsfrejs =

2.3491 2.6033 3.5400 2.3268 1.5395

2.1577 1.4991 1.6686 0.5551 0.7432

1.1504 1.3559 2.4824 1.2884 1.6263

0.1217 3.2259 3.4822 3.8078 2.7376

3.1651 1.4811 1.2508 2.5077 0.7804

3.8546 1.5086 2.0420 1.4468 0.3752

1.3682 0.9455 2.3460 2.2910 4.4180

2.6799 1.1838 0.1964 0.9332 1.6324

1.7108 1.8889 1.0045 1.6408 0.0585

1.4676 0.7426 1.9912 3.7018 0.5566

lcfunhap =

0.2074 0.0212 0.4502 0.7441 0.0921

0.2323 0.0555 0.3113 0.1580 0.1012

0.0462 0.0837 0.0360 0.0463 0.0676

0.0090 0.4101 0.1737 0.2134 0.1315

0.1306 1.3257 0.0776 0.1777 0.2231

0.4259 0.0101 0.0014 0.0050 0.1937

0.0424 0.0628 0.0596 0.1721 0.0333

0.2069 0.0235 0.0027 0.0513 0.0087

0.0311 0.1576 0.0006 0.1260 0.0322

0.3081 0.3714 0.0431 0.0172 0.1255

slsfunhap =

0.3489 0.3155 0.1228 0.1611 0.2518

0.4738 0.5055 0.5373 0.1580 0.1012

0.0527 0.1986 0.7190 0.0463 0.3264

0.0090 0.4097 0.1284 0.2425 0.0283

0.0154 1.3257 0.1005 0.3877 0.2231

0.9853 0.0447 0.0034 0.0288 0.1937

0.3208 0.0628 0.1589 0.5127 0.0363

0.4937 0.0526 0.0648 0.0312 0.3112

0.3040 0.4456 0.2524 0.3473 0.0322

0.4127 0.3714 0.1667 0.2148 0.2253

menusizes =

4.8500 4.9000 4.9000 4.7000 5.0000

4.9500 4.7000 4.8500 4.3500 4.8000

4.9500 4.9500 4.5500 4.7000 4.7000

4.6500 4.7500 4.4500 4.8000 4.7500

4.6500 4.8500 4.7500 5.0000 4.8500

4.6500 4.5500 4.4500 4.9500 4.5000

4.8500 4.6500 4.6500 4.7500 4.6500

4.8000 4.8000 4.9500 4.9000 5.0000

4.6000 4.9500 4.9500 4.8500 4.6500

4.9000 4.8000 4.7000 4.6500 4.6000

avepij =

0.1623 0.1797 0.1359 0.1636 0.1580

0.1582 0.1630 0.1516 0.1412 0.1583

0.1766 0.1530 0.1497 0.1575 0.1585

0.1922 0.1423 0.1428 0.1472 0.1713

0.1503 0.1424 0.1703 0.1548 0.1541

0.1440 0.1447 0.1648 0.1754 0.1497

0.1590 0.1576 0.1624 0.1516 0.1554

0.1508 0.1699 0.1875 0.1630 0.1808

0.1523 0.1631 0.1840 0.1647 0.1549

0.1557 0.1569 0.1456 0.1487 0.1378

pijover5 =

68 77 49 62 65

62 65 59 59 71

68 60 61 63 65

80 59 57 57 72

61 57 75 62 65

54 56 68 77 68

66 73 65 58 61

59 64 77 65 73

60 66 74 66 67

62 66 51 58 52

pijequal1 =

22 33 13 31 24

24 31 22 22 25

35 24 21 32 24

51 16 21 18 27

28 22 32 22 23

28 25 35 25 23

26 27 35 20 22

21 35 40 28 37

25 25 42 26 23

24 22 27 27 21

runtimes =

305.6882 225.9623 323.3076 316.8986 183.0922

152.0733 278.1835 243.4604 139.4205 138.7116

134.9952 221.9923 321.5066 123.4869 327.3164

123.0247 291.5659 323.7949 198.6548 240.9991

319.8636 319.7937 215.4453 156.1170 139.0982

206.3453 313.6873 178.6396 166.4878 122.2661

198.5627 164.3406 197.4268 278.8107 325.0515

319.9974 240.7517 133.1804 126.6457 197.0352

156.5945 230.8226 143.6705 212.4711 146.3572

251.2883 140.6692 315.1432 307.7850 318.0970

bestest =

355.9179 366.0673 344.7332 342.7366 354.1353

356.1868 351.0376 346.2219 370.9808 355.5877

365.5486 352.1420 342.7498 370.1201 353.3676

379.4626 356.9733 360.6080 346.3330 368.0710

353.1006 355.1739 366.6011 347.0896 366.7400

310.4821 352.9477 343.3946 369.2496 370.6757

372.9957 359.0496 340.9137 346.1811 345.6147

353.8827 363.0462 378.8025 369.2843 358.6902

341.1467 355.8017 360.9452 365.4980 376.7910

355.9967 368.5847 350.0394 334.0971 361.0147

guessbestiter =

3 3 2 6 1

4 7 5 0 0

3 6 6 0 7

0 5 7 4 4

5 0 6 7 0

2 4 7 4 0

6 0 4 1 6

2 6 1 3 2

6 7 4 6 0

7 0 3 3 1

estslsfobjs =

338.9875 334.5574 314.0605 336.1092 344.4266

311.6315 334.0997 324.0940 370.9808 355.5877

358.3434 326.2059 335.8144 370.1201 344.7178

379.4626 322.2432 317.7468 302.5889 348.1914

328.7363 355.1739 347.2792 329.3499 366.7400

285.8782 351.0208 340.7687 357.0944 370.6757

363.7351 359.0496 329.2607 329.8064 294.3863

329.4061 347.6314 372.6162 365.8267 346.8594

323.4290 348.5160 359.0467 336.9853 376.7910

353.4973 368.5847 335.3890 298.2770 360.2736

compportion80 =

0.7938 0.7143 0.6122 0.7340 0.6900

0.7576 0.7553 0.6804 0 0

0.6263 0.7576 0.7582 0 0.7234

0 0.7579 0.7640 0.7500 0.6947

0.7204 0 0.8000 0.8500 0

0.7742 0.5934 0.6742 0.7273 0

0.7010 0 0.7634 0.6316 0.7742

0.6979 0.6875 0.6465 0.6939 0.7300

0.7717 0.7172 0.7475 0.6392 0

0.6837 0 0.6702 0.7419 0.7500

compportionmin =

0.7938 0.7143 0.6122 0.7340 0.6900

0.7576 0.7553 0.6804 1.0000 1.0000

0.6263 0.7576 0.7582 1.0000 0.7234

1.0000 0.7579 0.7640 0.7500 0.6947

0.7204 1.0000 0.8000 0.8500 1.0000

0.7742 0.5934 0.6742 0.7273 1.0000

0.7010 1.0000 0.7634 0.6316 0.7742

0.6979 0.6875 0.6465 0.6939 0.7300

0.7717 0.7172 0.7475 0.6392 1.0000

0.6837 1.0000 0.6702 0.7419 0.7500

**118th experiment, LCF gap b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=100, gp=.01, diff lcf scen, =wt**

lcfiterbetter =

0.7600

lcfiterworse =

0.0600

avepercbetter =

0.0219

lcfrejbetter =

0.8000

lcfrejworse =

0.0200

avepercrejbetter =

0.4429

lcfiterave =

352.7067

slsfave =

345.4285

averuntime =

370.6805

avelcfrejs =

0.7914

aveslsfrejs =

1.5716

avelcfunhap =

0.1559

aveslsfunhap =

0.2453

percbetter =

0.0270 0.0372 0 0.0596 0.0170

0.0021 0.0739 0.0673 0.0188 0.0049

0.0423 0.0346 0 0.0080 0.0053

0 0 0.0369 0.0236 0.0160

0.0090 0.0007 0.0142 0.0423 0.0186

0.0073 0 0.0290 0.0176 -0.0122

0.0232 0 0.0202 0.0544 0.0187

-0.0264 0 0.0088 0.0479 0.0557

0 0.0744 0.0289 0.0366 0.060

0.0347 0.0445 0 0.0223 -0.0086

avelcfavecomp =

10.7381

aveslsfavecomp =

10.5672

avelcfaveperccomp =

0.8509

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

79.2705

aveslsfavetotprofit =

83.5720

avelcfpercposprofit =

1

returnedobjs =

368.9475 364.5837 380.1493 338.6181 364.9911

369.7820 353.8399 347.7807 357.1933 357.9401

353.5730 360.3382 337.2083 351.8609 362.7229

368.9439 353.1397 347.1922 333.9626 359.1563

367.7595 359.9907 340.4604 347.3254 365.8247

379.3268 367.7156 327.4479 313.8733 377.0018

345.1485 360.5028 366.2267 340.5051 362.8751

328.9559 361.9715 349.7076 334.2648 352.3998

368.6275 357.9341 360.6722 322.3589 334.3409

319.5939 317.8057 352.7197 368.7456 351.3297

slsfobjs =

359.2616 351.5165 380.1493 319.5617 358.8788

368.9928 329.4944 325.8419 350.5867 356.1960

339.2127 348.2888 337.2083 349.0839 360.8110

368.9439 353.1397 334.8520 326.2469 353.5079

364.4677 359.7245 335.6888 333.2258 359.1329

376.5850 367.7156 318.2287 308.4595 381.6539

337.3268 360.5028 358.9753 322.9469 356.2035

337.8632 361.9715 346.6425 318.9715 333.8016

368.6275 333.1477 350.5317 310.9757 315.3615

308.8633 304.2804 352.7197 360.6890 354.3644

slsfavecomp =

10.9241 10.7679 14.2237 13.0098 11.6510

10.6844 10.7047 8.0353 10.3221 11.7115

10.6197 11.1189 10.3184 8.3765 10.7158

10.4742 8.6125 11.4574 9.0812 10.2039

11.3731 10.0977 10.9701 11.8368 11.7854

12.4914 10.5411 10.3503 7.6857 12.5870

9.4619 9.4164 10.8963 9.2358 11.9054

10.2868 8.9724 10.1206 11.5489 10.3842

9.7465 12.4761 10.0614 8.3377 11.0408

12.9318 9.4899 8.5888 10.5763 10.1496

lcfavecomp =

10.8286 10.8261 14.2237 12.9556 12.0949

10.8188 10.6513 8.2032 10.4298 11.8520

10.9228 11.3746 10.3184 8.4352 10.9493

10.4742 8.6125 11.7362 9.4813 10.2767

11.5006 10.2627 11.1681 12.3116 12.0307

12.5653 10.5411 10.6261 7.9172 12.7503

9.8475 9.4164 11.0179 9.5683 11.8727

10.6418 8.9724 10.3244 11.7094 10.5756

9.7465 12.5308 10.1772 9.0261 11.3600

13.4761 9.6684 8.5888 10.7866 10.4574

lcfaveperccomp =

0.8129 0.8644 0.8000 0.8284 0.9108

0.8209 0.9008 0.8639 0.8723 0.8218

0.8491 0.8443 0.8000 0.8147 0.8409

0.8000 0.8000 0.9044 0.8778 0.8237

0.8240 0.8732 0.8574 0.9316 0.8637

0.8529 0.8000 0.8583 0.8706 0.8282

0.8566 0.8000 0.8772 0.8749 0.8095

0.8722 0.8000 0.8195 0.8433 0.8989

0.8000 0.9700 0.8479 0.9864 0.8709

0.8687 0.8338 0.8000 0.8440 0.8611

lcfavetotprofit =

87.3562 80.5021 105.4902 84.0160 81.3420

86.2568 76.3993 67.4358 79.1684 86.9455

77.3157 81.4129 78.5786 75.2809 82.7880

87.3013 77.1169 78.2312 65.3298 82.1211

86.9602 78.6787 81.3613 72.3624 86.6059

91.1640 88.2021 72.7784 60.2619 94.2645

71.2399 82.7092 78.4746 70.0573 88.8570

73.2486 78.4597 80.3921 81.3542 75.6364

84.6255 74.8821 79.2221 52.5361 74.5462

78.6605 69.2975 77.1403 82.4486 76.7080

slsfavetotprofit =

86.5550 84.9186 105.4902 86.1691 90.7560

88.5875 80.6529 70.6912 83.2852 90.1786

83.9465 87.1582 78.5786 76.3560 87.6776

87.3013 77.1169 86.0748 73.5624 84.3393

90.2707 83.6337 86.2823 86.0499 91.8327

95.0758 88.2021 78.7996 63.5109 97.7384

77.6075 82.7092 85.0420 74.9318 89.1215

80.7243 78.4597 81.9152 85.2352 82.6136

84.6255 86.5802 81.8661 68.4654 79.6622

89.5211 72.0227 77.1403 86.7521 82.8111

returnedobjs =

368.9475 364.5837 380.1493 338.6181 364.9911

369.7820 353.8399 347.7807 357.1933 357.9401

353.5730 360.3382 337.2083 351.8609 362.7229

368.9439 353.1397 347.1922 333.9626 359.1563

367.7595 359.9907 340.4604 347.3254 365.8247

379.3268 367.7156 327.4479 313.8733 377.0018

345.1485 360.5028 366.2267 340.5051 362.8751

328.9559 361.9715 349.7076 334.2648 352.3998

368.6275 357.9341 360.6722 322.3589 334.3409

319.5939 317.8057 352.7197 368.7456 351.3297

slsfobjs =

359.2616 351.5165 380.1493 319.5617 358.8788

368.9928 329.4944 325.8419 350.5867 356.1960

339.2127 348.2888 337.2083 349.0839 360.8110

368.9439 353.1397 334.8520 326.2469 353.5079

364.4677 359.7245 335.6888 333.2258 359.1329

376.5850 367.7156 318.2287 308.4595 381.6539

337.3268 360.5028 358.9753 322.9469 356.2035

337.8632 361.9715 346.6425 318.9715 333.8016

368.6275 333.1477 350.5317 310.9757 315.3615

308.8633 304.2804 352.7197 360.6890 354.3644

lcfrejs =

0.1869 0.1186 0.4835 1.9073 0.3019

0.1509 0.6925 0.1812 0.4578 1.0653

0.5274 0.3317 2.1395 0.7132 0.5237

0.1899 0.8327 1.1482 1.2287 0.6336

0.4652 0.4145 1.2195 0.3219 0.3661

0.1021 0.2474 2.1198 2.3426 0.2841

0.8375 0.6310 0.0634 0.9676 1.0425

1.7086 0.7295 1.0959 2.0728 0.3883

0.2213 0.0764 0.1474 1.0071 1.4987

1.1899 2.3838 0.9352 0.0897 0.7877

slsfrejs =

1.1037 1.4144 0.4835 3.5099 1.0554

0.3589 2.6530 1.9989 1.3670 1.2747

1.8560 1.4828 2.1395 0.9602 0.7877

0.1899 0.8327 2.2674 2.3416 0.9408

0.7742 0.7981 1.7221 2.4235 0.9943

0.5681 0.2474 2.9239 3.1379 0.2516

1.6572 0.6310 1.1597 2.4721 1.5625

2.0053 0.7295 1.3399 3.1900 2.0686

0.2213 2.6035 1.1978 2.8868 3.0938

2.8443 3.3898 0.9352 0.6531 1.0803

lcfunhap =

0.1994 0.1594 0.2421 0.0486 0.0413

0.1013 0.0329 0.2118 0.2079 0.0732

0.1093 0.0272 0.0276 0.0086 0.0561

0.1834 0.0594 0.1144 0.0770 0.1367

0.0172 0.0283 0.9828 0.1266 0.0956

0.1653 0.3395 0.1102 0.5315 0.0738

0.0942 0.0929 0.1017 0.0639 0.0470

0.0766 0.0120 0.0748 0.2512 0.1018

0.1700 0.0570 0.2234 0.2523 0.0600

0.8247 0.3216 0.1381 0.0877 0.1539

slsfunhap =

0.0447 0.0623 0.2421 0.0482 0.3631

0.1913 0.0585 0.2395 0.1457 0.1865

0.2075 0.2299 0.0276 0.0179 0.1417

0.1834 0.0594 0.2203 0.0809 0.3629

0.1571 0.0198 1.1624 0.3826 0.5323

0.1624 0.3395 0.2718 0.0613 0.0721

0.3436 0.0929 0.1215 0.2612 0.0673

0.1390 0.0120 0.1314 0.2528 0.1597

0.1700 0.3611 0.1477 0.4255 0.1866

1.9326 0.4285 0.1381 0.4328 0.1856

menusizes =

4.5000 4.9000 4.9000 4.7500 4.8500

4.9500 4.8000 4.6500 4.8000 4.7500

4.9500 4.9500 4.2000 4.7500 4.7000

4.0000 4.5500 4.8000 4.9000 4.7500

4.9500 4.9000 4.9000 4.8500 4.9000

4.5000 4.9000 4.5000 3.9500 4.9000

4.9500 4.5000 4.8000 4.7000 4.5500

4.6000 4.3000 4.5000 4.6500 4.9000

4.7000 4.8500 5.0000 4.6000 4.4500

4.8500 4.4500 4.4500 4.7000 4.8000

avepij =

0.1619 0.1735 0.1564 0.1499 0.1742

0.1640 0.1564 0.1484 0.1456 0.1512

0.1735 0.1501 0.1489 0.1637 0.1647

0.1393 0.1425 0.1600 0.1520 0.1599

0.1642 0.1803 0.1493 0.1582 0.1571

0.1545 0.1572 0.1296 0.1308 0.1734

0.1650 0.1517 0.1727 0.1481 0.1579

0.1554 0.1551 0.1563 0.1462 0.1709

0.1643 0.1570 0.1725 0.1484 0.1321

0.1502 0.1458 0.1415 0.1623 0.1682

pijover5 =

63 68 65 57 70

67 60 54 55 59

70 59 63 63 64

64 55 62 59 65

70 76 54 66 60

62 66 50 54 72

69 62 69 58 62

62 63 61 56 66

68 66 70 59 51

56 58 57 65 60

pijequal1 =

35 34 24 24 32

29 23 26 27 24

30 16 26 36 27

22 28 36 21 24

23 39 26 24 26

22 20 18 22 26

27 31 35 28 31

24 31 32 25 33

33 23 29 26 18

25 25 25 28 31

runtimes =

294.4343 237.3075 261.5432 929.6507 192.1073

198.9077 317.9969 436.8304 320.0575 410.8470

616.0484 436.3267 349.3134 146.2298 265.5017

182.4811 150.1652 188.1093 844.4161 182.3815

312.3552 180.8483 525.9570 989.0520 276.9087

170.4699 354.0852 367.4888 334.1623 186.2464

809.0572 151.3782 502.1034 359.4746 179.9226

469.1181 170.5712 321.8907 626.8605 218.7792

153.3023 488.4340 261.3504 424.0540 456.3111

897.7812 579.6559 235.0132 284.4505 286.2877

bestest =

374.0492 370.0617 384.9062 340.3910 366.4205

373.4767 352.9101 343.0116 356.4897 365.2383

355.4944 369.9824 339.3515 358.9070 360.5717

372.3109 357.8497 347.5837 341.0896 364.9765

370.7436 362.4728 345.9564 354.8413 370.7758

382.0959 364.0963 336.1224 317.0980 380.1371

347.1482 360.8110 369.1623 340.7491 364.9643

346.8839 363.1305 352.2209 341.3889 355.1760

371.5657 353.6421 361.5999 328.5119 334.8295

325.0535 323.2570 353.8415 370.7486 353.4002

guessbestiter =

3 7 0 6 4

3 5 6 7 5

3 2 0 1 2

0 0 5 3 1

1 3 1 5 5

5 0 4 4 2

5 0 6 7 6

4 0 4 1 3

0 7 7 7 6

2 2 0 5 3

estslsfobjs =

359.8651 326.3709 384.9062 318.3387 360.3376

372.3064 337.4553 327.7457 352.8869 360.5532

337.1143 359.0340 339.3515 350.1077 355.1485

372.3109 357.8497 338.9413 323.2119 355.9244

360.3635 359.3802 336.0506 305.3127 361.2243

373.1562 364.0963 322.9325 311.6592 379.4022

339.9440 360.8110 360.1713 326.1120 346.5218

333.7670 363.1305 349.4988 331.0195 332.6818

371.5657 340.9198 352.5431 320.7170 308.1954

315.8341 303.2797 353.8415 361.1609 353.1135

compportion80 =

0.5778 0.6429 0 0.7158 0.6392

0.7475 0.6250 0.7312 0.5938 0.7158

0.7475 0.7677 0 0.5474 0.6170

0 0 0.7083 0.8265 0.6947

0.7374 0.7143 0.6327 0.7938 0.7245

0.6556 0 0.7000 0.6582 0.6224

0.8081 0 0.7604 0.7766 0.6264

0.7065 0 0.6444 0.7097 0.7143

0 0.7835 0.6900 0.7717 0.7753

0.7526 0.6966 0 0.6277 0.5938

compportionmin =

0.5778 0.6429 1.0000 0.7158 0.6392

0.7475 0.6250 0.7312 0.5938 0.7158

0.7475 0.7677 1.0000 0.5474 0.6170

1.0000 1.0000 0.7083 0.8265 0.6947

0.7374 0.7143 0.6327 0.7938 0.7245

0.6556 1.0000 0.7000 0.6582 0.6224

0.8081 1.0000 0.7604 0.7766 0.6264

0.7065 1.0000 0.6444 0.7097 0.7143

1.0000 0.7835 0.6900 0.7717 0.7753

0.7526 0.6966 1.0000 0.6277 0.5938

**119th experiment, LCF gap b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=100, gp=.1, diff lcf scen, =wt**

lcfiterbetter =

0.7200

lcfiterworse =

0.1400

avepercbetter =

0.0350

lcfrejbetter =

0.8600

lcfrejworse =

0

avepercrejbetter =

0.6091

lcfiterave =

354.3898

slsfave =

343.3965

averuntime =

232.5481

avelcfrejs =

0.5968

aveslsfrejs =

1.6589

avelcfunhap

0.1111

aveslsfunhap =

0.2555

percbetter =

0 0.0360 0.0313 0.0363 0

0.0121 0.0073 0.0178 -0.0014 0.0593

0.0778 0.0276 0.0066 0.0179 0.0291

0.0500 0.0372 0 -0.0137 0

0.1082 0 0.0652 0.1280 0.0060

0.0720 0.0196 0 0.1792 -0.0011

0.0124 0.1752 0.0280 0.0030 0.0833

0.0087 0 0.0567 -0.0007 0.0327

0.0898 0.0153 0.0551 -0.0011 0.0148

0.0401 -0.0075 0.0150 -0.0033 0.1235

avelcfavecomp =

10.8698

aveslsfavecomp =

10.6532

avelcfaveperccomp =

0.8610

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

78.2252

aveslsfavetotprofit =

83.7597

avelcfpercposprofit =

1

returnedobjs =

374.2761 353.8641 355.2197 374.3464 361.5073

370.2197 356.0092 371.2822 354.4967 352.9410

313.3299 368.1318 342.5170 356.1688 363.1023

344.6061 360.0092 394.1621 369.7069 369.6247

315.8072 378.3344 343.4252 359.2139 365.1448

347.8093 336.0118 366.1772 315.1439 347.0110

369.4189 338.4755 373.9777 361.2121 343.9963

372.4432 363.3440 332.7150 361.4204 323.0967

347.8275 333.9772 349.3735 366.2083 343.4396

341.3812 351.6642 361.5549 357.4534 346.9121

slsfobjs =

374.2761 341.5627 344.4485 361.2416 361.5073

365.7806 353.4145 364.8055 354.9868 333.1732

290.7104 358.2337 340.2557 349.9043 352.8203

328.1822 347.1002 394.1621 374.8563 369.6247

284.9617 378.3344 322.3963 318.4626 362.9743

324.4520 329.5615 366.1772 267.2423 347.3901

364.9029 288.0244 363.8050 360.1469 317.5345

369.2216 363.3440 314.8555 361.6638 312.8626

319.1538 328.9600 331.1394 366.6152 338.4176

328.2127 354.3270 356.2126 358.6515 308.7726

slsfavecomp =

11.8319 9.6913 9.1896 13.5667 11.3727

11.5418 10.3589 12.0709 8.4289 11.8794

10.6931 11.8735 10.7129 9.9715 11.1991

9.6439 10.6889 14.4034 11.4703 9.6455

10.3830 10.1793 10.6334 13.1501 9.5632

11.5993 10.2613 10.7147 11.3846 10.3287

11.4689 10.2957 12.4320 9.0978 9.8297

12.6461 10.0635 9.3867 12.3666 9.7176

10.4289 8.7216 10.3870 11.4200 8.5196

9.3659 9.8010 9.7793 8.7238 9.7782

lcfavecomp =

11.8319 10.2494 9.3928 13.6063 11.3727

11.6702 10.6940 12.2628 8.8070 11.9944

10.9715 12.0192 11.0981 10.2924 11.5491

9.9074 10.9472 14.4034 11.8714 9.6455

10.9365 10.1793 10.6997 12.6564 9.7541

11.7758 10.4034 10.7147 11.4138 10.5629

11.5371 10.4962 12.7386 9.3371 9.8970

12.8184 10.0635 9.9846 12.6006 9.9594

10.6568 9.4735 10.7722 11.7550 8.9599

9.4707 10.1685 10.0487 9.1360 9.9329

lcfaveperccomp =

0.8000 0.9538 0.9277 0.8499 0.8000

0.8295 0.8640 0.8415 0.8901 0.8251

0.8594 0.8274 0.8420 0.8868 0.8559

0.9200 0.8662 0.8000 0.8625 0.8000

0.8958 0.8000 0.8343 0.8566 0.8623

0.8675 0.8224 0.8000 0.9098 0.8508

0.8263 0.9154 0.8325 0.8523 0.8764

0.8675 0.8000 0.8758 0.8585 0.8545

0.9014 0.9568 0.8749 0.8722 0.8705

0.8607 0.9042 0.8621 0.9075 0.8808

lcfavetotprofit =

93.7411 68.1544 68.3362 90.2240 89.7821

87.4666 75.1829 89.8107 68.6703 86.5236

69.6028 91.3793 78.0680 74.3222 81.5347

68.6999 77.2743 107.9812 83.0340 84.2310

61.4347 87.6634 78.3483 85.9952 77.7057

78.5361 76.1030 88.6161 64.0488 77.1507

87.7626 68.8182 89.0841 74.3810 70.6402

90.5193 85.2628 62.3316 88.8405 72.3824

71.6221 57.4061 72.9632 81.9296 68.2968

70.2207 73.6475 78.7038 69.6475 67.1786

slsfavetotprofit =

93.7411 77.5748 76.7767 97.8948 89.7821

91.6860 84.1175 94.6345 76.0927 87.4908

74.9406 93.3492 84.3843 82.3096 87.7524

77.9853 84.4180 107.9812 92.2013 84.2310

71.1176 87.6634 81.2802 86.0126 82.8848

85.7611 79.8717 88.6161 72.4644 83.1120

89.4498 73.5707 94.5481 80.1643 75.0431

95.5189 85.2628 73.5215 94.7997 78.2404

77.9408 74.2198 81.2849 89.9814 74.1155

74.9435 82.3085 83.4838 78.2271 73.2315

returnedobjs =

374.2761 353.8641 355.2197 374.3464 361.5073

370.2197 356.0092 371.2822 354.4967 352.9410

313.3299 368.1318 342.5170 356.1688 363.1023

344.6061 360.0092 394.1621 369.7069 369.6247

315.8072 378.3344 343.4252 359.2139 365.1448

347.8093 336.0118 366.1772 315.1439 347.0110

369.4189 338.4755 373.9777 361.2121 343.9963

372.4432 363.3440 332.7150 361.4204 323.0967

347.8275 333.9772 349.3735 366.2083 343.4396

341.3812 351.6642 361.5549 357.4534 346.9121

slsfobjs =

374.2761 341.5627 344.4485 361.2416 361.5073

365.7806 353.4145 364.8055 354.9868 333.1732

290.7104 358.2337 340.2557 349.9043 352.8203

328.1822 347.1002 394.1621 374.8563 369.6247

284.9617 378.3344 322.3963 318.4626 362.9743

324.4520 329.5615 366.1772 267.2423 347.3901

364.9029 288.0244 363.8050 360.1469 317.5345

369.2216 363.3440 314.8555 361.6638 312.8626

319.1538 328.9600 331.1394 366.6152 338.4176

328.2127 354.3270 356.2126 358.6515 308.7726

lcfrejs =

0.5115 0.1104 0.0581 0.1038 0.9465

0.1143 0.4380 0.2907 0.0298 0.8723

2.3967 0.5362 1.0535 0.1175 0.1689

0.5341 0.1715 0.0775 0.0648 0.1416

2.0434 0.0110 0.7430 0.8756 0.0060

1.2499 1.6814 0.6469 2.2479 0.6809

0.0687 0.6316 0.0875 0.0529 0.5254

0.2948 0.8063 1.0769 0.7809 2.1651

0.5987 0.7914 0.3942 0.0320 0.4509

1.0153 0.6977 0.1319 0.0262 0.2900

slsfrejs =

0.5115 1.7097 1.3467 1.6387 0.9465

0.9951 1.3194 0.6828 0.4692 2.2685

4.0165 0.9948 1.7759 1.1493 1.1942

2.1322 1.7060 0.0775 0.3624 0.1416

4.4974 0.0110 2.3826 3.5695 0.5810

2.6453 2.1276 0.6469 5.4340 1.2295

0.6460 3.5484 0.9820 0.5579 2.9198

0.8579 0.8063 2.7684 1.1894 3.1506

2.8771 2.0159 2.0067 0.7255 1.5036

2.2267 1.0702 0.7378 0.4476 3.3427

lcfunhap =

0.1233 0.0978 0.0365 0.0342 0.4669

0.0149 0.0044 0.0454 0.0115 0.3688

0.4362 0.0361 0.0507 0.0291 0.1035

0.0500 0.0575 0.0335 0.0402 0.2084

0.1295 0.0000 0.2215 0.0432 0.0005

0.0286 0.0596 0.1232 0.1450 0.1145

0.1014 0.6926 0.0171 0.0086 0.4151

0.0294 0.0169 0.0402 0.0985 0.1549

0.1190 0.0642 0.2002 0.0093 0.1539

0.0082 0.0443 0.0115 0.0304 0.2249

slsfunhap =

0.1233 0.1010 0.1633 0.0440 0.4669

0.0012 0.0616 0.4947 0.2084 0.5187

0.6548 0.2440 0.2481 0.4493 0.4832

0.1973 0.0827 0.0335 0.1147 0.2084

0.3818 0.0000 0.4354 0.1437 0.0704

0.3528 0.3701 0.1232 0.6088 0.2327

0.1888 1.2942 0.2336 0.1011 0.1633

0.1841 0.0169 0.3581 0.1567 0.1781

0.2057 0.2597 0.6297 0.0927 0.2069

0.1367 0.0522 0.2450 0.1721 0.2825

menusizes =

4.7500 4.6500 4.9000 4.8500 4.8500

4.8000 4.8000 4.8500 4.7000 4.9000

4.3500 4.9500 4.7000 4.9000 5.0000

4.8500 4.9000 4.6000 4.8500 4.4500

4.5500 4.7000 5.0000 4.7000 4.7500

4.9500 4.7000 4.8500 4.5000 4.8000

4.8000 4.6500 4.9500 4.9500 4.9000

5.0000 4.8000 4.4500 4.8500 4.9500

4.7000 4.8500 4.8000 4.9000 4.8000

4.5000 4.6000 4.9500 5.0000 4.9500

avepij =

0.1606 0.1529 0.1634 0.1833 0.1491

0.1772 0.1674 0.1683 0.1557 0.1493

0.1328 0.1744 0.1480 0.1715 0.1599

0.1668 0.1669 0.1669 0.1647 0.1541

0.1337 0.1739 0.1521 0.1550 0.1750

0.1589 0.1300 0.1635 0.1377 0.1569

0.1591 0.1479 0.1613 0.1710 0.1460

0.1674 0.1733 0.1602 0.1734 0.1662

0.1455 0.1695 0.1390 0.1584 0.1540

0.1430 0.1556 0.1646 0.1778 0.1513

pijover5 =

72 63 61 81 60

69 68 63 63 60

51 67 53 72 62

62 66 76 65 63

49 77 57 61 63

59 43 68 53 60

63 58 68 68 60

65 69 65 70 61

56 70 52 62 56

54 63 64 73 65

pijequal1 =

25 24 29 38 24

39 38 36 22 18

21 40 23 29 22

38 29 27 26 29

12 34 23 22 44

26 21 33 18 24

26 22 17 31 16

31 40 31 37 37

21 35 15 24 34

24 33 30 34 15

runtimes =

177.2212 328.2895 252.9433 333.5117 307.4527

148.2046 140.7732 270.0510 179.2807 353.1706

281.2578 309.7771 283.1418 214.4028 354.3639

156.9323 205.8965 170.5327 169.8673 169.1339

163.6502 153.2532 290.4072 350.1117 158.2521

151.9728 344.2861 215.3018 344.4301 206.2624

250.7962 360.5346 248.6008 160.5648 348.5285

157.6757 151.5952 185.3989 162.3181 170.2017

333.7036 244.5078 284.4736 202.1305 166.4978

284.3506 135.0556 178.3724 190.1291 227.8391

bestest =

378.7430 353.2663 356.1886 375.8844 375.4593

374.7917 354.7663 373.6409 355.3826 355.4018

317.9624 369.3680 348.3189 358.3114 365.2481

347.0033 362.6624 390.5940 370.9767 372.0005

330.4108 377.5282 345.8198 359.3657 365.2473

353.1150 344.5364 368.6374 317.1393 356.2355

371.7679 337.2767 377.0199 361.4610 344.4854

370.9414 364.2732 332.7932 369.7320 335.6297

356.6111 339.2462 361.6625 369.4895 348.5588

342.8255 355.2183 362.9393 357.4798 355.2883

guessbestiter =

0 5 5 7 0

6 7 4 7 2

4 4 7 7 6

5 6 0 5 0

5 0 3 7 6

4 4 0 7 2

2 6 5 5 7

4 0 4 6 7

6 4 5 6 7

7 7 4 2 5

estslsfobjs =

378.7430 342.1266 349.4353 358.2035 375.4593

364.5508 349.8481 371.2611 348.0817 337.4636

296.8734 362.9743 338.7696 349.6212 354.1519

337.1256 348.6205 390.5940 369.4165 372.0005

283.4529 377.5282 324.1450 321.4949 359.0595

335.4275 328.6647 368.6374 266.9623 342.7316

362.0744 282.4620 357.6347 358.7033 290.1832

365.5899 364.2732 330.0653 364.8281 322.9193

325.1514 327.1773 310.5365 367.4287 343.1723

328.8808 350.7137 353.8931 343.1357 313.5943

compportion80 =

0 0.7634 0.6122 0.7113 0

0.5833 0.7083 0.6804 0.7021 0.6939

0.6437 0.7172 0.5638 0.7245 0.7000

0.7629 0.7245 0 0.7010 0

0.7363 0 0.6400 0.6170 0.6526

0.7172 0.5851 0 0.7222 0.7500

0.6979 0.7957 0.7677 0.7576 0.7653

0.7200 0 0.7191 0.6907 0.6768

0.6489 0.7526 0.7500 0.6224 0.6146

0.6889 0.7717 0.6061 0.7700 0.8182

compportionmin =

1.0000 0.7634 0.6122 0.7113 1.0000

0.5833 0.7083 0.6804 0.7021 0.6939

0.6437 0.7172 0.5638 0.7245 0.7000

0.7629 0.7245 1.0000 0.7010 1.0000

0.7363 1.0000 0.6400 0.6170 0.6526

0.7172 0.5851 1.0000 0.7222 0.7500

0.6979 0.7957 0.7677 0.7576 0.7653

0.7200 1.0000 0.7191 0.6907 0.6768

0.6489 0.7526 0.7500 0.6224 0.6146

0.6889 0.7717 0.6061 0.7700 0.8182

**120th experiment, LCF gap b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=100, gp=.02, diff lcf scen, =wt**

lcfiterbetter =

0.7800

lcfiterworse =

0.0800

avepercbetter =

0.0380

lcfrejbetter =

0.8600

lcfrejworse =

0

avepercrejbetter =

0.4766

lcfiterave =

350.3444

slsfave =

338.3478

averuntime =

350.2374

avelcfrejs =

0.9663

aveslsfrejs =

1.9741

avelcfunhap =

0.1678

aveslsfunhap =

0.2934

percbetter =

0.0207 0.0199 0.0278 0.0303 0

0.0129 0.0342 -0.0045 0.0195 0.0312

0.0948 0 0.0367 0.0212 0.0010

0.0795 0.0150 0.0181 -0.0026 0.0285

0 0.0415 0.2263 0.0486 0.0633

0.1239 0.1224 0.0644 0.0367 0.1140

0.1055 0.0112 0.0700 0.0122 0.1433

0.0295 0 -0.0076 -0.0048 0.0067

0 0.0501 0.0202 0.0219 0.0502

0 0.0134 0 0.0207 0.0308

avelcfavecomp =

11.0321

aveslsfavecomp =

10.9317

avelcfaveperccomp =

0.8539

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

79.8227

aveslsfavetotprofit =

83.5977

avelcfpercposprofit =

1

returnedobjs =

374.5880 366.3488 327.9933 367.2749 352.1421

311.7114 340.8293 352.6784 338.4258 348.1799

356.0649 372.1000 343.1228 316.8026 341.9121

354.6987 353.8011 362.6044 368.9156 330.4822

364.6871 361.2200 325.2233 349.3620 325.0565

310.0397 365.8695 354.8982 376.5448 330.7688

329.3760 358.0633 358.6498 356.5448 351.3673

354.3189 338.3668 362.1591 343.5804 369.3128

355.2804 362.0409 345.0511 347.2325 358.2235

370.0854 350.7702 368.9383 339.5738 353.9367

slsfobjs =

366.9906 359.1981 319.1310 356.4644 352.1421

307.7426 329.5716 354.2843 331.9568 337.6506

325.2229 372.1000 330.9821 310.2275 341.5727

328.5789 348.5613 356.1610 369.8649 321.3209

364.6871 346.8125 265.2017 333.1635 305.7110

275.8490 325.9723 333.4161 363.2094 296.9152

297.9380 354.1143 335.1773 352.2527 307.3149

344.1814 338.3668 364.9222 345.2383 366.8451

355.2804 344.7539 338.2221 339.7939 341.0927

370.0854 346.1430 368.9383 332.6901 343.3770

slsfavecomp =

12.5950 11.3383 8.7455 10.9427 10.1576

9.6509 8.8949 9.2328 8.0272 9.8563

11.6927 10.9581 13.9781 9.6649 9.6852

10.5819 10.2902 11.0044 11.2814 10.9491

11.0758 9.5431 11.6693 10.2533 10.8419

12.3451 12.8628 11.7937 12.0347 9.7339

14.0651 10.4505 12.3635 10.0905 12.9339

10.8060 9.5445 12.3240 10.4865 12.4098

10.8691 13.3561 12.6972 11.2097 9.4907

11.2219 12.3896 10.6039 8.2939 9.2971

lcfavecomp =

12.7326 11.6537 8.9874 10.9732 10.1576

9.7674 9.1053 9.3721 8.7405 10.0141

11.4068 10.9581 13.9064 9.8507 9.8972

10.5858 10.6373 11.1310 11.3887 10.8389

11.0758 9.6475 11.9156 10.2561 11.0179

12.5298 12.2274 11.8159 11.9320 10.2045

14.1425 10.6553 12.2124 10.3383 12.6146

10.9882 9.5445 12.4908 10.7459 12.5855

10.8691 13.3292 12.6641 11.3801 9.5873

11.2219 12.5715 10.6039 8.8731 9.4573

lcfaveperccomp =

0.8216 0.8567 0.9163 0.9038 0.8000

0.8562 0.8512 0.8454 1.0103 0.8483

0.8997 0.8000 0.8402 0.8404 0.8574

0.8571 0.8985 0.8304 0.8342 0.8223

0.8000 0.9277 0.8399 0.8258 0.8925

0.8551 0.8345 0.8586 0.8577 0.8986

0.8712 0.8557 0.8609 0.8659 0.8270

0.8324 0.8000 0.8251 0.8414 0.8231

0.8000 0.8858 0.8380 0.8540 0.8749

0.8000 0.8657 0.8000 0.9473 0.8485

lcfavetotprofit =

92.4716 83.4271 63.9791 79.9177 82.8296

71.0800 70.5094 77.1178 57.9059 76.5132

80.3847 89.7980 89.1991 72.5550 75.6729

77.5864 72.9408 83.6808 88.7592 78.1612

89.1450 71.0792 75.1758 79.5075 70.0293

73.7006 88.1469 80.9634 86.4824 66.1590

82.0981 80.7095 82.8621 78.4165 89.4438

80.9330 78.1449 89.1989 76.9622 92.2731

86.3883 84.8049 85.1596 79.3869 74.4305

91.2436 86.9064 88.3774 61.3011 77.2165

slsfavetotprofit =

96.5320 90.5040 70.5067 86.1995 82.8296

74.6872 74.6371 80.2043 72.4166 80.2204

82.8472 89.7980 90.3865 76.9488 80.1134

78.6278 82.0242 86.7519 91.4789 77.9248

89.1450 77.2756 78.9309 80.3233 76.9324

77.0996 85.4696 86.3056 89.6300 74.5077

87.4594 85.7137 86.1878 84.1269 85.4177

85.5336 78.1449 93.1751 82.4002 95.1910

86.3883 92.7673 88.8345 84.8369 79.2750

91.2436 90.9083 88.3774 73.2891 79.3581

returnedobjs =

374.5880 366.3488 327.9933 367.2749 352.1421

311.7114 340.8293 352.6784 338.4258 348.1799

356.0649 372.1000 343.1228 316.8026 341.9121

354.6987 353.8011 362.6044 368.9156 330.4822

364.6871 361.2200 325.2233 349.3620 325.0565

310.0397 365.8695 354.8982 376.5448 330.7688

329.3760 358.0633 358.6498 356.5448 351.3673

354.3189 338.3668 362.1591 343.5804 369.3128

355.2804 362.0409 345.0511 347.2325 358.2235

370.0854 350.7702 368.9383 339.5738 353.9367

slsfobjs =

366.9906 359.1981 319.1310 356.4644 352.1421

307.7426 329.5716 354.2843 331.9568 337.6506

325.2229 372.1000 330.9821 310.2275 341.5727

328.5789 348.5613 356.1610 369.8649 321.3209

364.6871 346.8125 265.2017 333.1635 305.7110

275.8490 325.9723 333.4161 363.2094 296.9152

297.9380 354.1143 335.1773 352.2527 307.3149

344.1814 338.3668 364.9222 345.2383 366.8451

355.2804 344.7539 338.2221 339.7939 341.0927

370.0854 346.1430 368.9383 332.6901 343.3770

lcfrejs =

0.2911 0.1817 1.3195 0.0634 1.2143

2.4930 1.1568 0.8928 0.5041 0.8053

0.4061 0.3820 2.0670 2.4811 1.5629

0.8270 0.6315 0.4045 0.3507 2.0949

0.8314 0.0405 1.9856 0.8851 1.8573

3.1388 0.3833 0.6828 0.0181 1.4021

2.0284 0.5115 0.6994 0.3935 1.2312

0.4359 1.4955 0.7156 1.0247 0.6860

1.1749 0.4519 1.6263 0.8194 0.3151

0.5217 0.9299 0.5683 0.6658 0.6637

slsfrejs =

0.6493 0.7803 2.5979 1.1476 1.2143

3.0268 2.1741 1.0359 1.5801 1.6096

2.9223 0.3820 3.2033 3.0269 1.7562

2.6284 1.5731 1.2259 0.6589 3.0160

0.8314 1.5407 3.8801 2.1216 3.6769

5.5763 3.1925 2.4093 1.2366 3.3194

4.5863 1.0717 2.7033 0.9198 3.7281

1.4072 1.4955 0.9737 1.5885 0.9543

1.1749 2.4390 2.3809 1.7618 1.4968

0.5217 1.7941 0.5683 1.7087 1.4384

lcfunhap =

0.1030 0.2143 0.2925 0.0030 0.0261

0.5423 0.0519 0.0917 0.1197 0.2616

0.3586 0.2473 0.0605 0.1879 0.0283

0.0452 0.0529 0.1544 0.2458 0.1490

0.1407 0.0354 0.4380 0.1714 0.3348

0.1859 0.2118 0.1251 0.0377 0.1434

0.1499 0.1743 0.1763 0.1890 0.2324

0.1481 0.4198 0.1103 0.2901 0.0681

0.1813 0.1310 0.1520 0.1545 0.0322

0.0938 0.4209 0.0292 0.0673 0.1118

slsfunhap =

0.5009 0.6621 0.2533 0.0985 0.0261

0.4496 0.0811 0.0526 0.6195 0.4604

0.3035 0.2473 0.0818 0.3707 0.0842

0.0893 0.0692 0.1138 0.0121 0.0166

0.1407 0.0913 2.7388 0.1714 0.4381

0.3356 0.0337 0.2031 0.1191 1.4022

0.1933 0.1854 0.0760 0.3887 0.3827

0.2304 0.4198 0.1718 0.1010 0.1136

0.1813 0.0560 0.2904 0.2056 0.6383

0.0938 0.2099 0.0292 0.1676 0.2663

menusizes =

4.9000 4.9000 4.6000 4.9000 4.8000

4.8000 4.6500 4.9000 4.7000 4.7500

4.9500 4.6500 4.1000 4.9500 4.9500

4.8500 4.8000 4.8000 4.9000 4.1500

4.9000 4.8500 4.5500 4.8500 4.6500

4.5000 4.6500 4.9000 4.7500 4.4500

4.6000 4.7500 4.8500 4.9500 5.0000

4.9000 4.8000 4.8000 4.8000 4.5000

4.7500 4.5500 4.9000 4.8000 4.9500

4.9500 4.8500 4.8500 4.5500 4.7500

avepij =

0.1702 0.1563 0.1336 0.1756 0.1596

0.1368 0.1567 0.1614 0.1578 0.1475

0.1538 0.1567 0.1369 0.1466 0.1623

0.1640 0.1585 0.1654 0.1744 0.1439

0.1554 0.1788 0.1316 0.1499 0.1340

0.1312 0.1516 0.1658 0.1809 0.1390

0.1366 0.1553 0.1519 0.1696 0.1487

0.1586 0.1450 0.1525 0.1453 0.1550

0.1477 0.1533 0.1442 0.1523 0.1654

0.1625 0.1644 0.1644 0.1706 0.1657

pijover5 =

70 63 49 72 68

48 59 60 57 57

61 66 54 54 64

67 64 63 66 58

62 75 52 58 51

50 59 68 77 53

53 59 57 67 55

64 60 58 55 61

60 62 55 60 66

70 64 69 69 65

pijequal1 =

23 23 20 29 29

21 35 30 34 19

18 24 26 22 28

29 28 31 39 28

27 38 12 28 18

23 26 29 34 25

16 33 22 34 20

24 20 21 25 26

22 28 16 18 23

25 27 31 37 35

runtimes =

385.8347 502.2162 529.2837 422.1933 375.9393

304.3232 156.7449 161.6090 323.4132 355.6846

325.1564 305.7624 366.3180 173.2232 167.5939

352.0055 165.9358 346.9819 170.2707 539.0795

404.5197 413.3968 795.5963 574.9319 572.0137

911.3308 632.2866 414.6238 399.9743 558.0871

683.3115 262.1141 362.3104 236.3338 304.3568

251.0769 239.8458 236.6981 229.6732 186.8295

178.9721 349.9206 288.1142 323.4342 179.9462

191.1878 367.9035 169.9369 174.9746 188.5989

bestest =

380.5124 369.4680 333.8202 367.8492 353.2331

321.3301 344.7676 358.7144 343.6934 353.1971

361.1102 376.2513 345.7700 337.0458 356.1563

356.8148 353.0862 365.9422 371.0509 332.2811

366.0713 362.7429 325.7453 347.6780 327.4497

317.8879 367.0834 353.7733 377.5069 327.0485

329.0163 364.5487 357.2107 361.9708 358.8431

353.5465 347.1057 376.0214 352.1139 373.7106

362.1869 367.5284 356.1175 355.3235 363.6005

375.1235 357.2261 375.9578 340.7799 352.6980

guessbestiter =

3 7 6 4 0

5 2 2 5 3

7 0 2 7 2

7 7 5 5 4

0 3 6 2 2

6 6 5 3 4

3 3 2 3 4

6 0 5 6 3

0 7 3 3 5

0 4 0 7 7

estslsfobjs =

368.5932 368.4991 316.6810 357.3624 353.2331

309.8545 331.7687 353.1709 318.9845 322.4352

333.1144 376.2513 333.3483 308.4787 337.4765

332.8253 339.2215 359.2725 366.8857 321.8239

366.0713 342.4551 240.0230 326.2630 291.9624

282.2349 327.2464 326.1887 360.1057 303.5752

304.3377 361.3086 341.7707 345.5395 311.5258

333.4305 347.1057 366.4159 339.6275 356.7994

362.1869 338.9220 342.0618 332.5600 351.8534

375.1235 348.5938 375.9578 336.2801 344.6348

compportion80 =

0.6837 0.7143 0.7826 0.7041 0

0.6354 0.6237 0.6122 0.7234 0.7158

0.5657 0 0.7561 0.6970 0.6263

0.6495 0.6771 0.6979 0.5918 0.7108

0 0.6907 0.7802 0.6907 0.7527

0.8222 0.6882 0.6224 0.6947 0.7753

0.7391 0.7053 0.7423 0.6869 0.6700

0.6735 0 0.6146 0.6771 0.5778

0 0.7692 0.7041 0.7083 0.6162

0 0.7010 0 0.7143 0.5789

compportionmin =

0.6837 0.7143 0.7826 0.7041 1.0000

0.6354 0.6237 0.6122 0.7234 0.7158

0.5657 1.0000 0.7561 0.6970 0.6263

0.6495 0.6771 0.6979 0.5918 0.7108

1.0000 0.6907 0.7802 0.6907 0.7527

0.8222 0.6882 0.6224 0.6947 0.7753

0.7391 0.7053 0.7423 0.6869 0.6700

0.6735 1.0000 0.6146 0.6771 0.5778

1.0000 0.7692 0.7041 0.7083 0.6162

1.0000 0.7010 1.0000 0.7143 0.5789

**121st experiment, LCF gap b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=30, gp=.01, diff lcf scen, =wt**

lcfiterbetter =

0.7000

lcfiterworse =

0.1000

avepercbetter =

0.0223

lcfrejbetter =

0.7800

lcfrejworse =

0.0200

avepercrejbetter =

0.3758

lcfiterave =

350.7891

slsfave =

343.6191

averuntime =

244.4430

avelcfrejs =

0.9959

aveslsfrejs =

1.7001

avelcfunhap =

0.1584

aveslsfunhap =

0.2281

percbetter =

-0.0038 0.0149 0.0669 0.0060 0.0540

0.0095 0.0188 0.0746 0 0.0041

0.0089 0 0.0094 0.0093 -0.0118

0.0022 0.0375 0 0.0023 0.0016

0.0554 0.0815 0.1217 0.0171 0

0.0150 0.0199 0.0012 0.0341 0

0 0.0219 0.0566 0 0

0.1251 0.0184 0.0609 0.0346 0

0.0390 0.0014 0.0592 -0.0089 0.0338

-0.0076 -0.0101 0 0.0243 0.0147

avelcfavecomp =

10.7969

aveslsfavecomp =

10.6632

avelcfaveperccomp =

0.8424

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

80.3056

aveslsfavetotprofit =

83.7537

avelcfpercposprofit =

1

returnedobjs =

354.0058 319.6711 343.2301 373.1940 332.0406

352.4979 343.6274 332.5801 360.4846 370.7652

336.0089 341.6532 374.1381 363.0320 376.6761

366.0205 357.6627 358.1968 365.5902 366.4179

364.7069 344.6388 347.5133 361.7354 365.9088

348.3336 306.0057 372.1745 344.4417 339.3546

357.9762 350.9556 358.6260 373.8541 346.3437

303.5347 356.1677 358.1015 340.7951 302.8618

331.1619 348.4440 369.7808 313.7125 335.2596

364.9453 377.4204 340.1131 368.9281 358.1664

slsfobjs =

355.3622 314.9726 321.7116 370.9729 315.0381

349.1904 337.2996 309.4960 360.4846 369.2406

333.0536 341.6532 370.6716 359.6708 381.1618

365.2113 344.7454 358.1968 364.7362 365.8331

345.5671 318.6777 309.8086 355.6658 365.9088

343.1841 300.0350 371.7211 333.0916 339.3546

357.9762 343.4255 339.4244 373.8541 346.3437

269.7892 349.7404 337.5488 329.3953 302.8618

318.7235 347.9634 349.1203 316.5164 324.2881

367.7568 381.2530 340.1131 360.1713 352.9707

slsfavecomp =

10.2045 10.1882 11.2907 12.0820 10.8402

11.2336 9.3349 10.5562 10.1555 11.2505

9.3234 9.0279 12.2852 11.3035 12.5194

10.6708 9.7910 9.9144 12.1020 11.7719

11.6468 9.7106 12.5230 10.2433 11.2439

9.0873 8.6883 11.2275 8.6131 8.8992

12.1639 10.0359 10.2034 11.2345 9.5372

9.3576 8.3168 10.1980 9.3669 12.7820

9.9534 11.1977 12.3750 10.3324 12.3754

11.0749 11.3508 13.1094 10.5364 9.9302

lcfavecomp =

10.5115 10.3340 11.4062 12.2800 10.7823

11.4568 9.4608 10.7980 10.1555 11.3041

9.5423 9.0279 12.4327 11.5113 12.6853

10.8231 9.7895 9.9144 12.2061 12.0030

11.6630 9.9440 12.7624 10.2916 11.2439

9.3587 9.1370 11.4355 8.8927 8.8992

12.1639 10.1889 10.2779 11.2345 9.5372

9.4835 8.6400 10.1856 9.8530 12.7820

10.1713 11.3371 12.2369 10.6380 12.4659

11.2813 11.4499 13.1094 10.6483 10.1068

lcfaveperccomp =

0.8776 0.8319 0.8487 0.8272 0.8522

0.8255 0.8138 0.9277 0.8000 0.8321

0.8827 0.8000 0.8312 0.8332 0.8205

0.8548 0.8348 0.8000 0.8086 0.8319

0.9107 0.8508 0.8941 0.8255 0.8000

0.8625 0.8940 0.8524 0.8802 0.8000

0.8000 0.8770 0.8426 0.8000 0.8000

0.8881 0.8619 0.8600 0.8935 0.8000

0.8450 0.8253 0.8193 0.8588 0.8832

0.8348 0.8234 0.8000 0.8573 0.8436

lcfavetotprofit =

78.8364 72.5761 78.7362 89.3392 75.7748

82.0128 75.6311 68.5478 86.1047 88.3189

69.3323 76.5894 91.0747 85.4185 94.1947

84.1297 79.7385 84.3504 91.1569 86.9047

78.6579 73.5525 78.5722 81.6792 90.2738

74.1699 60.1840 86.4912 68.4519 77.9214

92.6402 75.0856 78.7646 91.4639 78.7959

61.4009 70.0400 78.6355 66.6834 86.2326

70.5567 86.3966 91.4661 71.8482 78.0097

85.1003 90.7059 92.3291 80.7674 79.6372

slsfavetotprofit =

84.1795 75.5404 81.8627 94.1303 76.5723

87.7297 77.8366 77.3436 86.1047 90.6571

74.8797 76.5894 95.2456 90.7017 97.8232

87.4204 81.3343 84.3504 94.1068 92.2800

85.7885 78.0492 85.8902 83.4217 90.2738

78.6929 67.4670 90.7513 74.1824 77.9214

92.6402 79.1679 80.6176 91.4639 78.7959

66.1709 75.4408 80.6693 76.9592 86.2326

75.2045 89.1761 91.0383 77.2770 84.2776

89.6224 93.0685 92.3291 84.6983 83.7058

returnedobjs =

354.0058 319.6711 343.2301 373.1940 332.0406

352.4979 343.6274 332.5801 360.4846 370.7652

336.0089 341.6532 374.1381 363.0320 376.6761

366.0205 357.6627 358.1968 365.5902 366.4179

364.7069 344.6388 347.5133 361.7354 365.9088

348.3336 306.0057 372.1745 344.4417 339.3546

357.9762 350.9556 358.6260 373.8541 346.3437

303.5347 356.1677 358.1015 340.7951 302.8618

331.1619 348.4440 369.7808 313.7125 335.2596

364.9453 377.4204 340.1131 368.9281 358.1664

slsfobjs =

355.3622 314.9726 321.7116 370.9729 315.0381

349.1904 337.2996 309.4960 360.4846 369.2406

333.0536 341.6532 370.6716 359.6708 381.1618

365.2113 344.7454 358.1968 364.7362 365.8331

345.5671 318.6777 309.8086 355.6658 365.9088

343.1841 300.0350 371.7211 333.0916 339.3546

357.9762 343.4255 339.4244 373.8541 346.3437

269.7892 349.7404 337.5488 329.3953 302.8618

318.7235 347.9634 349.1203 316.5164 324.2881

367.7568 381.2530 340.1131 360.1713 352.9707

lcfrejs =

0.7688 2.2632 1.1131 0.2539 1.8125

0.7674 1.4614 1.5734 0.4718 0.5005

1.3264 1.5586 0.2967 0.2371 0.1376

0.3807 0.6834 0.6216 0.3739 0.6632

0.0740 1.0380 0.8223 0.6877 0.8521

0.8816 2.8403 0.3730 0.5025 1.6505

1.4259 1.0699 0.4772 0.2550 1.3194

2.2262 0.1418 0.4002 0.8028 4.0559

1.3652 1.2717 0.3019 2.4816 1.7917

0.5210 0.1164 2.3069 0.0201 0.4559

slsfrejs

0.9271 3.2853 3.0279 0.6125 3.4483

1.5304 1.5223 2.9872 0.4718 0.7431

2.1080 1.5586 0.6785 0.6083 0.1579

0.5799 1.4417 0.6216 0.7384 0.9873

1.9244 2.5036 3.4787 1.1634 0.8521

1.3163 3.7538 0.5358 1.8614 1.6505

1.4259 1.9341 1.9425 0.2550 1.3194

5.3192 0.7148 1.8217 2.1439 4.0559

2.7207 1.4416 1.9099 2.6822 3.2371

0.4890 0.1358 2.3069 1.0374 1.0351

lcfunhap =

0.0471 0.2914 0.2466 0.0930 0.6555

0.0860 0.0142 0.0754 0.3629 0.0089

0.2867 0.0392 0.2036 0.1471 0.2496

0.1323 0.0516 0.1865 0.1166 0.0185

0.0289 0.1920 0.1877 0.0127 0.0830

0.0415 0.0651 0.0235 0.0575 0.1075

0.0537 0.1571 0.0990 0.1827 0.0891

0.3380 0.1481 0.1053 0.0689 0.4980

0.1326 0.2663 0.2035 0.4492 0.4480

0.0262 0.1494 0.2505 0.0186 0.1218

slsfunhap =

0.2077 0.0557 0.0966 0.1951 0.0774

0.1708 0.4872 0.8943 0.3629 0.0231

0.0253 0.0392 0.3708 0.3771 0.1318

0.3909 0.2985 0.1865 0.0847 0.0842

0.2155 0.7598 0.6137 0.1620 0.0830

0.3123 0.0285 0.1400 0.2369 0.1075

0.0537 0.0132 0.1644 0.1827 0.0891

0.1771 0.6305 0.2471 0.3257 0.4980

0.1665 0.2786 0.1364 0.3928 0.1476

0.2078 0.0779 0.2505 0.0333 0.1125

menusizes =

5.0000 4.6000 4.8500 4.9000 4.4000

4.8500 4.5500 4.3500 4.9500 4.8000

4.5000 4.3500 4.7500 4.8500 4.9500

4.9500 4.9000 5.0000 4.7000 4.8000

4.8000 4.2000 4.8000 4.7000 4.9000

4.7000 4.3000 4.4000 5.0000 4.9500

4.9000 4.6500 5.0000 4.8500 4.2500

4.6500 4.6500 4.9000 4.8500 4.8000

4.5500 5.0000 4.9000 4.5500 4.2000

4.9000 4.6500 4.5000 4.9500 5.0000

avepij =

0.1617 0.1501 0.1493 0.1681 0.1515

0.1512 0.1523 0.1362 0.1589 0.1636

0.1511 0.1492 0.1621 0.1563 0.1725

0.1664 0.1611 0.1610 0.1473 0.1764

0.1630 0.1358 0.1459 0.1644 0.1726

0.1575 0.1422 0.1517 0.1637 0.1554

0.1488 0.1712 0.1537 0.1667 0.1463

0.1377 0.1540 0.1599 0.1516 0.1208

0.1425 0.1769 0.1462 0.1346 0.1334

0.1614 0.1715 0.1303 0.1659 0.1595

pijover5 =

59 62 59 73 62

63 61 52 62 61

59 66 64 63 72

66 55 68 53 70

68 51 56 63 77

59 56 61 64 56

62 70 61 71 57

57 61 64 59 44

60 70 56 47 51

66 70 55 67 66

pijequal1 =

26 24 23 22 23

19 23 18 23 38

29 24 32 17 26

27 29 29 28 35

29 26 18 35 24

26 28 27 34 38

20 40 24 26 33

23 30 29 19 13

16 38 17 23 24

18 35 16 29 21

runtimes =

161.9693 135.5652 416.4356 250.0345 342.0449

327.7446 306.0758 260.3746 181.9774 119.1990

314.4418 249.6341 196.6414 238.6334 208.2321

139.3845 142.1555 136.6786 201.9611 140.2949

331.9453 236.1330 483.8226 176.6955 183.2684

143.8344 162.9960 127.3615 411.2093 135.3537

212.5562 318.5500 280.3700 200.3047 136.1764

420.6533 224.2835 284.5303 323.3942 217.1226

409.4299 137.6175 337.4034 412.3598 374.1674

196.5493 142.9463 379.3344 190.7015 161.6032

bestest =

363.1015 323.9867 345.4261 376.3248 336.1145

360.0159 346.9512 328.9010 364.8203 374.2144

344.8870 342.5527 375.6822 370.3557 381.1147

371.8684 359.7580 366.7768 370.0719 372.1703

366.2627 349.9676 354.3225 363.6579 368.6338

357.0637 308.2923 372.6587 343.2516 344.1741

359.6990 352.0430 363.4719 378.5852 350.3903

294.8323 359.5466 358.8154 351.3787 331.0222

338.3712 354.7534 363.3192 321.9307 338.3935

372.4250 380.6977 349.2007 369.1079 357.3795

guessbestiter =

4 7 2 1 3

4 3 4 0 7

6 0 3 5 7

3 4 0 3 5

6 2 6 5 0

3 1 3 6 0

0 5 5 0 0

6 7 7 6 0

7 1 3 1 3

4 3 0 4 5

estslsfobjs =

351.5754 305.4516 322.7073 362.5078 315.9419

348.2035 342.7873 319.5997 364.8203 369.2991

334.3621 342.5527 367.7249 362.2016 379.4219

367.7596 334.6451 366.7768 361.5479 363.1547

338.9825 330.4345 272.6460 352.1279 368.6338

343.3923 292.0272 370.5453 333.3247 344.1741

359.6990 342.9250 349.3428 378.5852 350.3903

270.8640 342.0444 337.9997 320.0403 331.0222

313.7283 351.5454 348.9881 313.5700 328.4370

363.6508 365.3073 349.2007 356.9557 341.9472

compportion80 =

0.6700 0.7609 0.7423 0.6735 0.7159

0.7113 0.6593 0.8276 0 0.6250

0.7000 0 0.7158 0.7732 0.7576

0.6465 0.6224 0 0.6596 0.6771

0.7813 0.7500 0.7396 0.6170 0

0.6170 0.8605 0.7045 0.6800 0

0 0.7634 0.7400 0 0

0.7957 0.7527 0.6939 0.7320 0

0.7363 0.6900 0.6122 0.6923 0.7619

0.8265 0.5806 0 0.7273 0.7400

compportionmin =

0.6700 0.7609 0.7423 0.6735 0.7159

0.7113 0.6593 0.8276 1.0000 0.6250

0.7000 1.0000 0.7158 0.7732 0.7576

0.6465 0.6224 1.0000 0.6596 0.6771

0.7813 0.7500 0.7396 0.6170 1.0000

0.6170 0.8605 0.7045 0.6800 1.0000

1.0000 0.7634 0.7400 1.0000 1.0000

0.7957 0.7527 0.6939 0.7320 1.0000

0.7363 0.6900 0.6122 0.6923 0.7619

0.8265 0.5806 1.0000 0.7273 0.7400

**122nd experiment, LCF gap b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05, same scen, =wt**

lcfiterbetter =

0.8400

lcfiterworse =

0.0200

avepercbetter =

0.0434

lcfrejbetter =

0.8600

lcfrejworse =

0

avepercrejbetter =

0.6078

lcfiterave =

350.3806

slsfave =

336.6435

averuntime =

238.4811

avelcfrejs =

0.7831

aveslsfrejs =

2.0349

avelcfunhap =

0.1271

aveslsfunhap =

0.2165

percbetter =

0.0728 0.0134 0.0312 0.0494 0.0391

0.0500 0 0.0019 -0.0022 0.0718

0.0574 0.0365 0.0749 0.0305 0.0480

0.0737 0.0795 0.1541 0.0301 0.0332

0.0128 0 0.0308 0.0481 0.0880

0.0314 0 0.0846 0.0154 0.0210

0.0810 0.0295 0 0.0388 0.0034

0 0.0212 0 0.0345 0.0438

0.0916 0.1588 0.0226 0.0291 0.0935

0.0210 0.0230 0 0.1394 0.0615

avelcfavecomp =

10.5459

aveslsfavecomp =

10.3680

avelcfaveperccomp =

0.8608

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

76.0694

aveslsfavetotprofit =

80.7729

avelcfpercposprofit =

1

returnedobjs =

356.2378 373.9429 351.6318 345.3459 358.0639

353.7063 364.2692 380.3480 375.0472 348.9389

350.5698 333.0103 342.7856 340.0904 351.8221

345.4640 339.4554 336.2339 362.8046 324.3908

377.0123 315.6435 345.0417 350.0017 362.7556

362.7697 360.9817 358.6080 344.5615 341.5809

308.9703 356.3427 382.1154 337.6463 365.2923

343.8286 369.6037 369.6671 352.7694 338.4453

339.8483 255.8500 353.3072 369.5241 337.6629

348.9679 345.4302 387.9006 352.7987 349.9454

slsfobjs =

332.0759 368.9815 340.9802 329.1011 344.5859

336.8661 364.2692 379.6195 375.8620 325.5615

331.5334 321.2726 318.8870 330.0159 335.7227

321.7540 314.4516 291.3475 352.1971 313.9521

372.2312 315.6435 334.7165 333.9531 333.4197

351.7372 360.9817 330.6223 339.3197 334.5598

285.8224 346.1480 382.1154 325.0201 364.0424

343.8286 361.9159 369.6671 341.0038 324.2564

311.3425 220.7942 345.4821 359.0872 308.7835

341.7748 337.6615 387.9006 309.6402 329.6650

slsfavecomp =

13.5868 11.4222 8.8676 8.5702 14.3737

9.7026 8.3561 11.5186 11.1939 9.2171

9.2074 10.0579 9.0518 10.1058 9.1341

11.3134 9.5877 7.1353 10.8011 11.3451

12.8891 9.5666 10.3172 11.7312 11.1995

9.3474 10.9113 10.6360 11.4136 8.8652

10.2290 9.5384 10.9474 8.9612 9.8647

10.6940 9.9666 9.2652 10.3184 9.7256

11.0159 10.5920 9.9340 10.8078 10.9385

10.4302 9.8250 12.2818 11.6284 10.0096

lcfavecomp =

13.2277 11.5375 9.2896 9.1273 14.1425

9.9192 8.3561 11.5270 11.3847 9.6101

9.4165 10.0251 9.1694 10.6607 9.4225

11.5903 9.7594 7.6355 10.8941 11.7115

13.0452 9.5666 10.6230 11.9852 10.8386

9.4278 10.9113 10.7512 11.5736 9.2335

10.1932 9.7622 10.9474 9.6874 10.0578

10.6940 10.0596 9.2652 10.6202 10.1948

11.2626 10.6837 10.3136 10.8867 11.2836

10.6813 10.1464 12.2818 11.4351 10.4760

lcfaveperccomp =

0.8343 0.8201 0.9396 0.9190 0.8652

0.8466 0.8000 0.8039 0.8514 0.9785

0.8948 0.8366 0.8764 0.9717 0.8850

0.8466 0.8497 0.9758 0.8402 0.8415

0.8441 0.8000 0.8417 0.9256 0.8562

0.8583 0.8000 0.8677 0.8543 0.8862

0.8366 0.8643 0.8000 1.0064 0.8530

0.8000 0.8239 0.8000 0.8659 0.8896

0.8445 0.8570 0.8804 0.8237 0.8516

0.8514 0.8409 0.8000 0.8677 0.8701

lcfavetotprofit =

88.3393 88.9365 66.4823 60.2794 93.6014

73.8979 77.8972 93.0805 87.0588 63.6929

67.3001 72.4991 67.7629 65.9011 69.5903

77.3492 70.7198 52.1505 81.9250 72.3594

94.1037 73.7901 77.0142 79.4163 80.2307

76.1649 86.0577 75.8758 80.6642 67.3515

68.0424 73.4912 91.3597 55.7675 79.8417

84.7905 81.4564 82.8410 74.8916 69.8278

77.6937 55.2736 72.8679 85.5363 73.6020

74.2388 73.8450 98.1008 77.5899 70.9201

slsfavetotprofit =

88.9454 91.8117 75.2319 73.9619 95.7172

79.0549 77.8972 93.6251 90.7532 73.5804

74.9344 74.3200 73.8290 79.2882 77.1108

83.6892 73.4972 59.7127 86.4480 80.6207

98.8494 73.7901 80.0080 88.9611 80.9951

78.7380 86.0577 80.0357 84.6591 74.6409

67.2008 78.9737 91.3597 73.2490 84.3314

84.7905 83.9823 82.8410 80.7384 77.9283

81.3874 56.6010 80.9279 88.3908 78.8663

81.3790 78.2478 98.1008 78.8118 79.7708

returnedobjs =

356.2378 373.9429 351.6318 345.3459 358.0639

353.7063 364.2692 380.3480 375.0472 348.9389

350.5698 333.0103 342.7856 340.0904 351.8221

345.4640 339.4554 336.2339 362.8046 324.3908

377.0123 315.6435 345.0417 350.0017 362.7556

362.7697 360.9817 358.6080 344.5615 341.5809

308.9703 356.3427 382.1154 337.6463 365.2923

343.8286 369.6037 369.6671 352.7694 338.4453

339.8483 255.8500 353.3072 369.5241 337.6629

348.9679 345.4302 387.9006 352.7987 349.9454

slsfobjs =

332.0759 368.9815 340.9802 329.1011 344.5859

336.8661 364.2692 379.6195 375.8620 325.5615

331.5334 321.2726 318.8870 330.0159 335.7227

321.7540 314.4516 291.3475 352.1971 313.9521

372.2312 315.6435 334.7165 333.9531 333.4197

351.7372 360.9817 330.6223 339.3197 334.5598

285.8224 346.1480 382.1154 325.0201 364.0424

343.8286 361.9159 369.6671 341.0038 324.2564

311.3425 220.7942 345.4821 359.0872 308.7835

341.7748 337.6615 387.9006 309.6402 329.6650

lcfrejs =

1.1599 0.1124 0.1606 0.2166 1.1225

0.3731 0.1079 0.0168 0.0340 0.1441

0.3067 1.9162 0.4046 0.4926 0.4467

0.8840 1.1643 0.1450 0.1631 2.1211

0.1624 2.8765 0.8606 0.7401 0.1835

0.0902 1.0654 0.2707 1.4039 1.0293

3.3834 0.2161 0.0165 0.1781 0.1738

1.5460 0.2000 0.0346 0.4185 0.9881

1.3844 5.6170 0.4272 0.0912 1.4221

0.8975 1.1451 0.0182 0.6458 0.1755

slsfrejs =

3.1267 0.6501 1.4383 2.1676 2.4373

1.7745 0.1079 0.1635 0.2291 2.5606

2.1476 3.0198 2.6557 2.4063 1.8847

2.6469 3.0808 3.9705 1.1420 3.3644

0.8000 2.8765 2.0447 2.1433 2.5626

1.1668 1.0654 2.6401 2.0930 1.6550

4.9723 1.4274 0.0165 2.1824 0.5087

1.5460 0.8670 0.0346 1.9118 2.2845

2.7535 8.0988 1.4554 0.8943 3.3712

1.9994 1.9192 0.0182 3.6506 1.8124

lcfunhap =

0.1343 0.0178 0.1295 0.0368 0.1958

0.1064 0.1728 0.0235 0.0072 0.1540

0.0397 0.0905 0.1568 0.3563 0.0654

0.2119 0.2301 0.1024 0.0685 0.2847

0.1128 0.6310 0.0769 0.3081 0.1101

0.0156 0.0328 0.1295 0.0223 0.0295

0.0401 0.0998 0.0110 0.0202 0.0051

0.1965 0.0306 0.0428 0.3559 0.3998

0.2020 0.1324 0.1426 0.0341 0.1883

0.0481 0.0247 0.0004 0.1797 0.1503

slsfunhap =

0.0945 0.0862 0.2416 0.1885 0.1817

0.1917 0.1728 0.0129 0.1510 0.1706

0.1934 0.0505 0.0422 0.1732 0.2022

0.5639 0.0984 0.0391 0.1910 0.2089

0.1765 0.6310 0.0779 0.7975 0.0647

0.0090 0.0328 0.0784 0.0601 0.3470

0.0325 0.0361 0.0110 0.5847 0.0481

0.1965 0.0320 0.0428 0.1658 0.4926

1.3497 0.3506 0.1764 0.2147 0.5834

0.0107 0.0525 0.0004 0.1666 0.7480

menusizes =

4.6000 4.6500 4.7500 5.0000 4.5500

4.6500 4.5500 4.7500 4.8500 4.3500

4.8500 4.4000 4.8500 4.9500 4.8000

4.8500 4.8500 4.6500 4.9500 4.5500

4.7500 4.2000 4.7000 5.0000 4.8000

4.2500 4.5000 4.7500 4.2000 4.6000

4.1500 4.5500 4.9500 4.7000 4.9500

5.0000 4.8500 4.8500 4.7500 4.7500

4.5000 3.7000 4.8500 4.9500 4.5000

4.6500 4.2500 4.8000 4.5500 4.6500

avepij =

0.1503 0.1627 0.1554 0.1767 0.1525

0.1556 0.1716 0.1799 0.1657 0.1538

0.1667 0.1470 0.1654 0.1502 0.1714

0.1495 0.1507 0.1622 0.1622 0.1510

0.1543 0.1214 0.1503 0.1598 0.1493

0.1560 0.1537 0.1503 0.1439 0.1565

0.1342 0.1573 0.1814 0.1645 0.1648

0.1434 0.1641 0.1699 0.1479 0.1486

0.1237 0.1041 0.1532 0.1747 0.1281

0.1617 0.1426 0.1809 0.1453 0.1376

pijover5 =

62 69 63 69 65

64 76 80 68 64

67 60 71 57 70

57 60 73 68 60

60 50 62 64 59

69 65 59 61 70

53 65 77 65 70

56 68 76 56 59

44 40 62 72 52

65 61 80 63 56

pijequal1 =

24 32 24 41 21

25 32 33 30 27

25 24 30 26 36

23 23 32 21 28

31 15 21 28 18

36 26 20 30 25

26 33 36 31 24

21 29 28 26 28

15 10 22 35 16

29 21 35 23 16

runtimes =

309.2795 127.7433 236.7608 114.4440 302.3005

134.3415 107.3606 111.2149 144.6347 165.6989

110.7818 304.7473 205.5410 129.2996 114.0587

202.0488 261.5604 225.0474 176.7104 251.6584

123.2260 306.6994 308.9849 291.2890 273.6721

163.8053 224.9928 290.4195 315.9545 183.9110

314.9544 241.1481 135.0761 310.0983 122.4662

260.3878 122.7723 122.8392 263.3459 297.1377

451.5308 446.1024 400.1981 351.2374 473.9694

280.0829 336.5105 154.4256 313.8498 307.7326

bestest =

357.3268 374.1215 353.5289 345.3788 354.3741

357.2194 364.2440 380.7928 375.7188 351.1886

351.5524 334.5234 342.7389 345.4187 349.7808

348.7393 342.0850 337.7886 364.6450 323.5162

380.1562 322.6295 346.4405 356.5466 367.8046

364.8632 361.8635 359.6872 346.5327 341.6221

313.7869 360.2627 381.7537 342.1675 367.2447

363.3549 374.6071 369.7231 358.7810 340.4827

346.4133 261.1316 353.5556 369.2565 344.3371

352.2080 345.6110 387.3351 352.0117 353.1768

guessbestiter =

4 1 6 3 4

4 0 2 5 4

4 6 3 6 5

3 3 7 6 5

7 0 7 7 5

3 0 7 1 3

3 4 0 7 6

0 3 0 4 6

5 5 5 2 3

4 7 0 2 5

estslsfobjs =

330.7744 370.4716 348.2562 323.7834 337.8332

335.8183 364.2440 380.6583 371.9599 325.5374

329.0620 321.4384 324.0571 331.6431 342.6637

325.0377 327.9268 291.3177 344.5055 315.1851

375.4999 322.6295 334.5990 345.7288 316.8109

353.8006 361.8635 333.5380 339.0495 338.0812

284.7973 339.5664 381.7537 325.2297 361.7512

363.3549 361.3355 369.7231 341.9540 322.6678

323.9882 227.6090 345.0226 354.3910 316.0614

344.8760 334.6860 387.3351 316.3949 325.1513

compportion80 =

0.6739 0.6774 0.6526 0.7300 0.7692

0.7419 0 0.6000 0.6804 0.6897

0.7526 0.7045 0.8247 0.7071 0.7813

0.6701 0.7732 0.7097 0.7071 0.7033

0.7158 0 0.6915 0.6800 0.7083

0.6706 0 0.7263 0.6310 0.6739

0.6988 0.7253 0 0.7447 0.7071

0 0.7113 0 0.7053 0.7263

0.6444 0.7703 0.8247 0.6869 0.7778

0.6989 0.7059 0 0.7143 0.6452

compportionmin =

0.6739 0.6774 0.6526 0.7300 0.7692

0.7419 1.0000 0.6000 0.6804 0.6897

0.7526 0.7045 0.8247 0.7071 0.7813

0.6701 0.7732 0.7097 0.7071 0.7033

0.7158 1.0000 0.6915 0.6800 0.7083

0.6706 1.0000 0.7263 0.6310 0.6739

0.6988 0.7253 1.0000 0.7447 0.7071

1.0000 0.7113 1.0000 0.7053 0.7263

0.6444 0.7703 0.8247 0.6869 0.7778

0.6989 0.7059 1.0000 0.7143 0.6452

**123rd experiment, LCF gap b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05, same scen, =wt**

lcfiterbetter =

0.8000

lcfiterworse =

0.0200

avepercbetter =

0.0377

lcfrejbetter =

0.8200

lcfrejworse =

0

avepercrejbetter =

0.5798

lcfiterave =

354.7789

slsfave =

342.4372

averuntime =

202.9755

avelcfrejs =

0.6527

aveslsfrejs =

1.7995

avelcfunhap =

0.1448

aveslsfunhap =

0.1984

percbetter =

0 0 0.1211 0.0225 0.0917

0.1096 0 0.0160 0 0.0346

0.0403 0.0819 0.0608 0 0.0180

0.0267 0.0138 0.0391 0.0531 0

0.0582 0.0211 0.0402 0.0917 0.0753

0.0325 0.0583 0.0864 0.0306 0.0705

0.0560 -0.0035 0.0173 0.0116 0.0945

0.0228 0.0063 0.0145 0 0.0177

0.0245 0.0411 0 0 0.0748

0.0891 0.0264 0.0252 0.0716 0.0034

avelcfavecomp =

10.8998

aveslsfavecomp =

10.7600

avelcfaveperccomp =

0.8567

aveslsfaveperccomp =

0.8000

avelcfavetotprofit =

78.8159

aveslsfavetotprofit =

83.2073

avelcfpercposprofit =

1

returnedobjs =

362.6085 362.3038 353.7246 369.7454 346.9163

353.8101 362.8856 357.0753 366.3020 337.1608

373.7978 361.2293 344.0595 365.6665 357.8721

361.9098 348.9192 347.3976 364.5297 375.9409

362.7574 350.6723 369.6898 290.8324 333.9589

369.3590 353.4192 341.2221 361.2786 356.4301

366.6413 348.9808 354.0030 351.1065 339.2145

338.5857 375.6537 375.3772 363.4171 328.3044

364.1194 361.1498 370.0298 363.6814 327.3072

344.0443 352.7539 366.1575 342.1400 342.8010

slsfobjs =

362.6085 362.3038 315.5129 361.6043 317.7893

318.8488 362.8856 351.4430 366.3020 325.8958

359.3208 333.8823 324.3462 365.6665 351.5536

352.4921 344.1587 334.3208 346.1512 375.9409

342.8208 343.4266 355.3957 266.3913 310.5669

357.7299 333.9610 314.0976 350.5416 332.9583

347.1969 350.1926 347.9921 347.0676 309.9161

331.0426 373.3064 370.0097 363.4171 322.5925

355.4160 346.8838 370.0298 363.6814 304.5261

315.9020 343.6974 357.1620 319.2789 341.6294

slsfavecomp =

10.1967 9.7579 11.9429 10.5409 9.2225

11.9486 10.0680 9.9834 10.8533 10.5284

11.4186 10.2852 10.5305 10.7744 11.9811

10.1338 10.0244 11.6843 12.0208 10.4606

11.9743 9.2140 12.3594 8.2661 11.7109

11.2445 11.2029 10.4670 10.9077 11.0492

11.6141 9.0715 8.8502 11.0508 9.9101

7.6768 11.6103 11.3188 11.0929 13.0747

10.6831 9.5285 9.3826 11.3226 9.7918

12.3032 11.3754 12.1145 13.8751 9.5993

lcfavecomp =

10.1967 9.7579 11.4747 10.5611 9.6648

11.7975 10.0680 10.2414 10.8533 10.6387

11.2961 10.4909 10.9519 10.7744 12.1710

10.3829 10.2970 11.5427 11.8873 10.4606

12.0974 9.5389 12.3861 8.7919 11.6562

11.3493 11.3041 10.6837 11.1253 11.2043

11.4979 9.2161 9.2673 11.2582 10.2898

8.0774 11.7186 11.4318 11.0929 13.6088

11.0135 9.7197 9.3826 11.3226 10.0315

12.6670 11.7939 12.2492 13.6734 10.0302

lcfaveperccomp =

0.8000 0.8000 0.8912 0.8682 0.9414

0.9561 0.8000 0.8535 0.8000 0.8757

0.8313 0.8676 0.8796 0.8000 0.8731

0.8682 0.8515 0.8573 0.8204 0.8000

0.8604 0.8876 0.8293 0.9072 0.8810

0.8412 0.8892 0.8366 0.8692 0.8640

0.8636 0.8624 0.8912 0.8440 0.8882

0.8798 0.8407 0.8250 0.8000 0.8775

0.8625 0.8768 0.8000 0.8000 0.8672

0.9128 0.9087 0.8141 0.8212 0.8997

lcfavetotprofit =

86.3156 83.1582 77.3649 81.9039 63.9419

73.8577 84.9226 78.4698 88.4964 75.1675

86.8658 75.6820 73.5635 88.1078 82.2669

76.0190 75.1293 80.8009 88.3518 87.7483

85.9781 70.6404 89.0809 52.0080 73.5534

84.6484 77.7413 75.4551 76.5345 76.9850

83.6361 72.3753 70.1411 79.9434 66.7092

62.3584 88.2384 89.1872 89.3051 77.2834

79.4989 74.7055 83.0277 90.5098 67.9237

75.2044 75.9232 89.2925 86.6005 68.1721

slsfavetotprofit =

86.3156 83.1582 79.7651 84.7105 71.6241

81.9490 84.9226 83.3429 88.4964 80.7854

87.9844 80.1369 79.6050 88.1078 89.1519

82.7841 81.0825 82.6751 88.8035 87.7483

90.6911 78.8692 91.1341 59.6550 77.9755

88.6576 82.6482 79.5260 84.7343 83.8487

86.8801 77.2339 77.2679 85.1912 74.3564

69.8928 91.7408 90.9481 89.3051 86.9211

85.7020 79.7635 83.0277 90.5098 73.5458

84.7886 85.8571 92.0890 86.2887 78.1663

returnedobjs =

362.6085 362.3038 353.7246 369.7454 346.9163

353.8101 362.8856 357.0753 366.3020 337.1608

373.7978 361.2293 344.0595 365.6665 357.8721

361.9098 348.9192 347.3976 364.5297 375.9409

362.7574 350.6723 369.6898 290.8324 333.9589

369.3590 353.4192 341.2221 361.2786 356.4301

366.6413 348.9808 354.0030 351.1065 339.2145

338.5857 375.6537 375.3772 363.4171 328.3044

364.1194 361.1498 370.0298 363.6814 327.3072

344.0443 352.7539 366.1575 342.1400 342.8010

slsfobjs =

362.6085 362.3038 315.5129 361.6043 317.7893

318.8488 362.8856 351.4430 366.3020 325.8958

359.3208 333.8823 324.3462 365.6665 351.5536

352.4921 344.1587 334.3208 346.1512 375.9409

342.8208 343.4266 355.3957 266.3913 310.5669

357.7299 333.9610 314.0976 350.5416 332.9583

347.1969 350.1926 347.9921 347.0676 309.9161

331.0426 373.3064 370.0097 363.4171 322.5925

355.4160 346.8838 370.0298 363.6814 304.5261

315.9020 343.6974 357.1620 319.2789 341.6294

lcfrejs =

0.6328 0.6453 0.4382 0.0562 0.1551

0.3748 0.4748 0.2773 0.5222 1.1313

0.0556 0.0722 1.0556 0.6178 0.5486

0.0801 0.7350 1.1366 0.3114 0.1174

0.2362 0.5290 0.2996 2.9038 1.4303

0.0475 0.6106 1.2329 0.0680 0.3562

0.4819 0.7804 0.3078 0.7024 1.1854

0.8808 0.0030 0.1577 0.8616 2.2074

0.1369 0.0240 0.1104 0.7208 1.5994

0.8565 0.4965 0.7131 2.3764 0.8803

slsfrejs =

0.6328 0.6453 3.6472 0.9857 2.7289

3.3566 0.4748 0.9094 0.5222 2.3592

1.2422 1.7838 2.6907 0.6178 1.7007

1.1078 1.6040 2.5552 2.0319 0.1174

1.6158 1.3924 1.4511 5.4932 3.6546

1.1011 2.3575 3.1684 1.4754 2.1275

1.9421 1.1826 1.0970 1.2261 3.5823

1.9047 0.4759 0.6250 0.8616 2.9780

1.0853 1.2322 0.1104 0.7208 3.0261

3.5465 1.9276 1.4698 3.8915 1.5394

lcfunhap =

0.1342 0.0391 0.2658 0.0632 0.1558

0.0289 0.3235 0.1788 0.2277 0.4313

0.0166 0.0562 0.0588 0.2429 0.1498

0.0152 0.1826 0.3728 0.5285 0.0356

0.1928 0.0406 0.1850 0.3495 0.3383

0.0253 0.1659 0.1667 0.0095 0.0981

0.0308 0.1766 0.0719 0.4387 0.0394

0.0112 0.0054 0.0332 0.1613 0.0921

0.1260 0.0240 0.0190 0.2178 0.2115

0.2953 0.0783 0.0250 0.0449 0.0604

slsfunhap =

0.1342 0.0391 0.0122 0.0495 0.2170

0.0625 0.3235 0.2612 0.2277 0.4111

0.0164 0.6885 0.3222 0.2429 0.1268

0.1686 0.1806 0.0316 0.0235 0.0356

0.4957 0.2748 0.1752 0.0150 0.1290

0.0852 0.1182 0.2826 0.0187 0.5785

0.0759 0.1034 0.2701 0.5641 0.0884

0.0216 0.0700 0.1022 0.1613 0.5300

0.2754 0.3372 0.0190 0.2178 0.5681

0.2210 0.2043 0.0536 0.0737 0.2175

menusizes =

4.9000 4.7000 4.7500 4.4500 4.9000

4.8000 4.8000 5.0000 3.9500 4.9000

4.5500 4.6000 4.5000 4.6000 4.9000

4.6500 4.8500 4.9500 4.6500 4.4000

4.9000 4.9500 4.3500 4.2000 4.6000

4.9500 4.8000 4.7500 4.8500 4.9500

4.8000 4.7500 4.7000 4.5000 4.2000

4.8000 4.8000 4.9000 4.9000 4.2500

4.9500 4.8500 4.4500 4.9000 4.6500

4.8500 4.8500 4.8500 4.0500 4.7000

avepij =

0.1628 0.1634 0.1472 0.1571 0.1475

0.1718 0.1461 0.1664 0.1286 0.1532

0.1636 0.1490 0.1435 0.1543 0.1577

0.1572 0.1496 0.1548 0.1752 0.1516

0.1670 0.1835 0.1535 0.1351 0.1326

0.1649 0.1466 0.1606 0.1622 0.1606

0.1643 0.1524 0.1653 0.1490 0.1436

0.1583 0.1858 0.1720 0.1585 0.1291

0.1606 0.1556 0.1534 0.1581 0.1410

0.1412 0.1616 0.1574 0.1297 0.1466

pijover5 =

67 65 59 65 57

70 64 69 56 58

71 64 58 63 65

69 58 64 77 70

69 73 74 52 51

71 62 63 68 68

67 56 73 63 60

64 79 75 63 54

65 65 60 64 58

58 67 64 55 59

pijequal1 =

30 32 19 28 21

35 18 25 21 26

26 19 23 24 20

25 22 22 33 26

30 45 24 26 13

25 18 34 28 17

31 25 25 20 20

31 44 27 25 16

24 23 35 28 22

19 25 26 17 25

runtimes =

112.5783 113.8358 313.2437 116.8631 274.4078

240.6396 196.4941 246.6361 124.8285 164.0991

151.5903 225.3851 320.4571 140.4302 248.6872

132.2460 191.1746 317.7675 231.5390 163.1138

313.1107 121.2655 145.1509 163.4123 291.5009

192.0742 321.2601 131.9552 219.5345 253.9247

190.9594 156.8577 176.0094 300.4744 264.4638

122.3944 127.9706 124.9970 126.6291 311.9224

263.5055 187.8351 118.3269 127.9302 219.5957

321.8412 233.0049 131.8530 326.1084 136.8881

bestest =

366.4047 361.3493 351.4969 369.7099 350.4912

354.0351 363.2697 363.1369 372.8956 342.5597

374.5405 360.0580 344.4175 368.1883 356.8708

363.9492 352.9246 357.5175 370.9139 375.3725

367.6695 359.0838 377.2848 293.2294 333.1177

370.3018 353.0070 345.2607 361.3996 360.0758

370.2733 354.3376 355.8829 358.5883 340.7852

343.1943 377.6746 375.2167 371.3345 332.6305

366.9087 358.8417 371.0384 370.8900 323.3488

343.2044 350.9196 371.1312 340.9805 345.8563

guessbestiter =

0 0 5 2 6

6 0 2 0 4

2 7 6 0 7

3 4 5 3 0

5 2 5 7 7

7 2 2 3 5

5 3 3 1 6

6 5 7 0 6

5 6 0 0 5

5 4 2 5 5

estslsfobjs =

366.4047 361.3493 322.9050 363.3936 321.2714

324.6488 363.2697 352.0550 372.8956 327.9851

357.5695 340.2469 324.8830 368.1883 349.7263

348.3320 345.0343 337.1797 342.0546 375.3725

347.5048 346.2612 359.8778 273.7898 299.5187

360.7429 331.2930 314.9945 348.6922 342.1623

342.8491 348.9315 351.7366 343.3029 313.6070

333.8782 370.9535 373.0785 371.3345 322.7461

347.6396 347.5191 371.0384 370.8900 292.3816

319.4499 336.4994 362.0953 315.0847 337.2365

compportion80 =

0 0 0.8316 0.6854 0.6939

0.7604 0 0.7000 0 0.6735

0.6154 0.6848 0.7444 0 0.6939

0.7419 0.7526 0.7576 0.6882 0

0.6735 0.8182 0.6667 0.8214 0.6739

0.6970 0.6771 0.7789 0.7732 0.7677

0.6771 0.7474 0.7340 0.7667 0.8095

0.6354 0.7292 0.6020 0 0.6588

0.6970 0.7216 0 0 0.7312

0.8041 0.7010 0.6907 0.5802 0.7766

compportionmin =

1.0000 1.0000 0.8316 0.6854 0.6939

0.7604 1.0000 0.7000 1.0000 0.6735

0.6154 0.6848 0.7444 1.0000 0.6939

0.7419 0.7526 0.7576 0.6882 1.0000

0.6735 0.8182 0.6667 0.8214 0.6739

0.6970 0.6771 0.7789 0.7732 0.7677

0.6771 0.7474 0.7340 0.7667 0.8095

0.6354 0.7292 0.6020 1.0000 0.6588

0.6970 0.7216 1.0000 1.0000 0.7312

0.8041 0.7010 0.6907 0.5802 0.7766

**124th experiment, LCF gap b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05, rand scen, =wt**

lcfiterbetter =

0.8800

lcfiterworse =

0

avepercbetter =

0.0473

lcfrejbetter =

0.8800

lcfrejworse =

0

avepercrejbetter =

0.6144

lcfiterave

354.4704

slsfave =

339.1756

averuntime =

208.9793

avelcfrejs =

0.6524

aveslsfrejs =

1.8752

avelcfunhap =

0.1525

aveslsfunhap =

0.2244

percbetter =

0.0577 0.0603 0.0649 0 0.0031

0.0580 0.0783 0.0031 0.0215 0.0998

0.0548 0.1283 0.0535 0.0460 0.0624

0.0893 0.0851 0.0139 0 0.0231

0.0143 0.1184 0.0675 0.0524 0.0351

0.0893 0.0101 0 0.1073 0

0 0.0486 0.0684 0.1369 0.0007

0.0270 0.0550 0.0274 0.0928 0.1039

0.0405 0.0403 0.0342 0.0070 0.0045

0.0261 0.0892 0.0646 0.0025 0

avelcfavecomp =

10.8345

aveslsfavecomp =

10.8216

avelcfaveperccomp =

0.8465

aveslsfaveperccomp =

0.8143

avelcfavetotprofit =

79.4169

aveslsfavetotprofit =

82.3325

avelcfpercposprofit =

1

returnedobjs =

361.3305 361.2923 302.6273 380.4965 328.1643

365.0531 366.1625 374.5223 368.5917 341.6471

357.7399 340.4950 346.8868 363.1930 352.1809

332.6986 347.4394 372.6166 375.6954 362.2006

370.1041 305.7445 352.2152 320.1456 356.8697

354.7642 374.6088 381.7149 350.1833 355.0199

366.3606 355.7143 356.4213 352.8222 371.9828

356.0995 360.3039 350.1323 350.0904 362.1383

366.1666 325.0082 351.6390 365.6872 325.9975

363.3961 347.2728 329.5432 367.6531 376.6846

slsfobjs =

341.6138 340.7584 284.1837 380.4965 327.1420

345.0281 339.5619 373.3576 360.8381 310.6418

339.1472 301.7777 329.2671 347.2066 331.4903

305.4379 320.1833 367.5183 375.6954 354.0265

364.8902 273.3781 329.9347 304.2039 344.7669

325.6767 370.8796 381.7149 316.2393 355.0199

366.3606 339.2194 333.5975 310.3239 371.7098

346.7542 341.5064 340.8068 320.3606 328.0677

351.9156 312.4289 340.0253 363.1435 324.5318

354.1420 318.8334 309.5586 366.7334 376.6846

slsfavecomp =

10.4375 10.4603 8.1820 13.0592 11.4630

10.4013 12.0574 11.0944 10.7250 10.5715

10.1680 11.3538 10.0500 10.6731 11.2694

10.3775 10.3425 11.0315 10.4090 12.3156

10.3909 8.5594 9.0660 11.6618 11.7140

12.9444 11.7736 12.2201 10.9863 9.6752

9.6842 10.1784 10.3168 10.3801 11.2404

13.1047 10.9607 9.8163 11.9618 11.2813

11.1517 10.0659 11.4654 10.2119 12.1622

9.5631 12.1038 9.3606 10.5772 10.0615

lcfavecomp =

10.3667 10.4571 8.3098 13.0592 11.5923

10.2618 11.9766 11.2338 10.7254 10.4954

10.2401 11.3945 10.1836 10.6613 11.5261

10.5654 10.3888 11.1680 10.4090 12.2290

10.4589 8.5114 9.2846 11.5625 11.8485

12.5405 11.7705 12.2201 11.2074 9.6752

9.6842 10.1476 10.3858 9.9861 11.3048

13.0409 10.9973 9.8323 11.7165 10.9414

11.2501 10.0820 11.3131 10.2513 12.2534

9.6875 12.2059 9.6607 10.5978 10.0615

lcfaveperccomp =

0.8522 0.8342 0.8485 0.8367 0.8136

0.8359 0.8626 0.8150 0.8271 0.8607

0.8339 0.8937 0.8360 0.8558 0.8590

0.8801 0.8339 0.8455 0.8041 0.8240

0.8319 0.8941 0.8503 0.8508 0.8380

0.8470 0.8255 0.8200 0.8894 0.8151

0.8043 0.8478 0.8521 0.8785 0.8235

0.8361 0.8336 0.8605 0.8604 0.8423

0.8399 0.8918 0.8363 0.8683 0.8428

0.8416 0.8527 0.9305 0.8655 0.8000

lcfavetotprofit =

80.2910 81.0536 58.7400 97.7368 79.9230

81.2655 84.7509 87.9278 83.7803 73.4860

78.6722 73.6332 71.9506 80.9404 77.9617

66.6051 74.9661 83.6559 87.5053 89.8120

83.3517 57.9497 71.4044 73.9275 82.4233

85.2603 91.4518 94.4477 73.7852 79.3845

83.8119 78.5585 75.3885 72.7792 88.7140

87.2014 81.4978 76.4031 80.1870 81.3168

82.3087 67.0800 82.6974 79.6110 79.6662

77.2074 80.0747 58.9011 82.9066 86.4929

slsfavetotprofit =

81.1636 82.1242 61.8808 97.7368 81.7332

82.5391 86.9259 90.3720 86.4355 75.3300

82.3627 78.8630 78.0396 82.6621 83.5976

74.1887 77.5667 87.7938 87.5053 91.3444

85.8726 60.5389 76.2308 80.3198 87.1071

88.3261 91.9266 94.4477 80.4458 79.3845

83.8119 80.6478 80.1205 74.3994 90.2656

90.9139 85.2187 78.7251 81.4919 81.0806

86.4614 72.6240 84.0231 81.4112 86.0912

79.5322 85.1586 69.9822 83.4100 86.4929

returnedobjs =

361.3305 361.2923 302.6273 380.4965 328.1643

365.0531 366.1625 374.5223 368.5917 341.6471

357.7399 340.4950 346.8868 363.1930 352.1809

332.6986 347.4394 372.6166 375.6954 362.2006

370.1041 305.7445 352.2152 320.1456 356.8697

354.7642 374.6088 381.7149 350.1833 355.0199

366.3606 355.7143 356.4213 352.8222 371.9828

356.0995 360.3039 350.1323 350.0904 362.1383

366.1666 325.0082 351.6390 365.6872 325.9975

363.3961 347.2728 329.5432 367.6531 376.6846

slsfobjs =

341.6138 340.7584 284.1837 380.4965 327.1420

345.0281 339.5619 373.3576 360.8381 310.6418

339.1472 301.7777 329.2671 347.2066 331.4903

305.4379 320.1833 367.5183 375.6954 354.0265

364.8902 273.3781 329.9347 304.2039 344.7669

325.6767 370.8796 381.7149 316.2393 355.0199

366.3606 339.2194 333.5975 310.3239 371.7098

346.7542 341.5064 340.8068 320.3606 328.0677

351.9156 312.4289 340.0253 363.1435 324.5318

354.1420 318.8334 309.5586 366.7334 376.6846

lcfrejs =

0.2472 0.1538 3.0424 0.2944 2.3790

0.1975 0.2493 0.0273 0.1699 0.9915

0.4855 0.8765 0.7205 0.2479 0.7226

1.1479 1.1057 0.0526 0.0924 0.6278

0.0673 2.3788 0.1147 1.7044 0.5784

0.7973 0.2959 0.1301 0.4666 1.0184

0.4463 0.3487 0.2548 0.1584 0.0670

0.9091 0.2880 0.3686 1.1617 0.2485

0.1120 1.6400 1.0780 0.0879 1.8416

0.1001 1.0860 0.8792 0.1176 0.0414

slsfrejs =

1.5699 1.5317 4.3834 0.2944 2.6007

1.6730 1.6313 0.2155 0.8510 3.5797

1.7428 3.5301 2.4673 1.1812 2.2301

3.7385 2.9880 0.6967 0.0924 1.4434

0.6092 4.7983 1.8236 3.4132 1.8541

3.3315 0.5325 0.1301 2.1810 1.0184

0.4463 1.5225 2.2230 3.4093 0.1719

2.1714 1.6214 1.4340 3.3436 2.8114

1.2968 2.9820 2.0676 0.4301 2.4490

0.8721 3.3557 2.7696 0.2055 0.0414

lcfunhap =

0.1528 0.1357 0.0328 0.1076 0.1534

0.0770 0.1850 0.0054 0.0544 0.4995

0.0482 0.3224 0.0854 0.0879 0.3299

0.0790 0.0943 0.0014 0.0701 0.1974

0.0204 0.2557 0.1247 0.9458 0.3594

0.2385 0.0216 0.0544 0.1499 0.0009

0.0290 0.1116 0.1159 0.1148 0.0453

0.1897 0.0612 0.3140 0.1305 0.2311

0.1162 0.1714 0.0558 0.0130 0.3617

0.0327 0.1837 0.3017 0.1256 0.0315

slsfunhap =

0.2050 0.3327 0.3568 0.1076 0.2272

0.1221 0.6291 0.1695 0.1351 0.1160

0.3399 0.6788 0.0240 0.4752 0.3760

0.1260 0.1174 0.0533 0.0701 0.1884

0.0198 0.3326 0.4095 0.7062 0.3085

0.0537 0.0507 0.0544 1.3302 0.0009

0.0290 0.2561 0.0856 0.0741 0.0713

0.0690 0.4376 0.0928 0.0821 0.1103

0.1699 0.1320 0.0687 0.1524 0.3214

0.1086 0.2887 0.4701 0.0514 0.0315

menusizes =

4.7500 5.0000 3.8500 4.9500 4.4000

4.8000 4.8500 4.8500 4.9500 4.2000

4.8500 4.7500 4.8000 4.8500 4.9000

3.8500 4.7000 4.7500 4.8500 4.6500

4.6500 4.2000 4.8500 4.6500 4.7000

4.9500 5.0000 4.7500 4.9500 4.4000

4.7500 4.9500 4.8000 4.8000 5.0000

4.5500 4.9500 4.9500 4.5000 4.8000

4.9000 4.5000 4.3500 4.6500 4.8500

4.7000 4.4000 4.9000 4.7500 4.6500

avepij =

0.1530 0.1562 0.1296 0.1779 0.1272

0.1618 0.1611 0.1598 0.1705 0.1291

0.1701 0.1403 0.1630 0.1728 0.1392

0.1389 0.1495 0.1635 0.1544 0.1486

0.1658 0.1295 0.1560 0.1305 0.1408

0.1613 0.1763 0.1506 0.1466 0.1604

0.1883 0.1530 0.1653 0.1573 0.1673

0.1488 0.1632 0.1617 0.1417 0.1567

0.1575 0.1411 0.1448 0.1587 0.1422

0.1599 0.1395 0.1488 0.1603 0.1602

pijover5 =

63 68 53 78 51

66 69 68 76 50

71 55 70 76 56

59 66 65 61 59

70 52 58 53 57

65 79 63 61 72

79 61 69 66 78

66 73 64 56 66

65 59 62 63 58

66 57 57 63 67

pijequal1 =

15 20 20 35 15

30 21 23 25 20

35 16 29 32 9

24 19 27 23 20

28 17 23 14 18

29 33 23 12 27

42 20 29 27 24

19 21 27 23 28

20 20 24 25 15

31 24 24 28 31

runtimes =

136.4962 187.7063 170.3225 137.1134 293.8985

206.6862 292.8233 146.0927 136.5463 305.7798

110.6282 322.3041 111.7004 234.1711 176.5880

305.3055 309.0209 134.6573 121.7835 209.4445

110.8446 285.8250 245.2897 325.9901 288.8764

322.9471 115.1156 116.3081 264.4398 109.6122

108.9026 156.5821 145.9125 286.0300 115.5623

313.5431 171.7738 133.5516 311.7830 302.7349

261.9839 294.8634 309.5081 217.5066 250.8579

135.4855 314.2875 137.5325 129.7940 116.4505

bestest =

363.3774 359.8856 303.0766 385.0337 336.4780

368.0526 367.3784 374.0247 371.0983 341.5076

360.5103 347.8291 348.5039 359.3836 359.0009

330.5987 348.4595 371.7755 375.6359 367.0186

371.3746 309.8867 353.5771 332.1476 364.8555

358.7286 379.6494 382.5432 349.0976 355.4516

371.6987 351.2541 359.0824 354.9964 371.9577

360.5700 359.0347 357.6594 352.4141 365.5683

364.6644 331.8199 351.9725 366.8203 336.1779

363.3970 360.8335 336.7000 369.3469 375.6717

guessbestiter =

3 5 7 0 1

5 7 7 7 4

4 5 5 7 5

7 4 5 0 2

1 3 7 7 7

5 1 0 5 0

0 3 6 6 1

6 3 5 3 4

3 7 5 4 7

2 1 3 4 0

estslsfobjs =

349.5529 349.2395 279.3926 385.0337 313.8505

346.2729 332.8880 355.5817 359.6234 309.9544

351.8301 308.1992 324.7656 346.9989 323.3055

311.8646 310.8727 366.8471 375.6359 354.8039

361.3260 276.1317 335.4950 310.4712 335.6846

323.0878 374.2389 382.5432 319.8477 355.4516

371.6987 338.3054 337.1102 313.3412 364.7555

330.9021 341.8633 347.8604 322.0335 331.9287

353.5515 314.6333 337.2477 352.5027 314.8330

348.6898 315.8943 316.2524 366.2367 375.6717

compportion80 =

0.6737 0.6700 0.7792 0 0.6364

0.6667 0.7526 0.7320 0.6667 0.6667

0.6289 0.7158 0.6146 0.6392 0.8163

0.6234 0.7766 0.7053 0 0.6989

0.6452 0.7262 0.7423 0.7957 0.6809

0.6768 0.7200 0 0.7374 0

0 0.7576 0.6771 0.6979 0.6400

0.5934 0.7172 0.6768 0.6222 0.5729

0.7041 0.7222 0.7126 0.7634 0.6907

0.6809 0.7045 0.8163 0.6316 0

compportionmin =

0.6737 0.6700 0.7792 1.0000 0.6364

0.6667 0.7526 0.7320 0.6667 0.6667

0.6289 0.7158 0.6146 0.6392 0.8163

0.6234 0.7766 0.7053 1.0000 0.6989

0.6452 0.7262 0.7423 0.7957 0.6809

0.6768 0.7200 1.0000 0.7374 1.0000

1.0000 0.7576 0.6771 0.6979 0.6400

0.5934 0.7172 0.6768 0.6222 0.5729

0.7041 0.7222 0.7126 0.7634 0.6907

0.6809 0.7045 0.8163 0.6316 1.0000

**125th experiment, slsfrand b=0.75, min 80 %, f=15) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05, rand scen, =wt**

randiterbetter =

0.0100

avepercbetter =

-0.0418

randrejbetter =

0.0100

avepercrejbetter =

-0.8723

aveslsftimes =

17.9748

averandtimes =

30.3726

slsfobjs =

Columns 1 through 15

345.0964 364.4759 351.4037 362.6758 347.8248 369.7285 377.5742 347.2341 358.1888 351.2047 363.6896 293.9457 217.3809 338.0539 337.4107

Columns 16 through 30

320.2293 335.1234 344.8855 332.5389 293.2307 330.2168 370.9149 361.8012 343.4018 333.4023 340.2918 368.3566 325.1016 331.2778 359.1547

Columns 31 through 45

350.2766 366.8868 308.7578 342.9867 352.7122 363.2809 342.4353 372.5992 339.3943 353.8579 359.0222 326.6133 375.7741 361.1670 334.7742

Columns 46 through 60

355.2020 362.6878 328.5263 326.2005 356.7752 314.0023 340.9573 353.6192 348.7120 308.4149 321.0273 350.2235 338.4979 347.1436 354.1120

Columns 61 through 75

338.3555 315.2487 334.4549 353.1904 357.3045 334.5406 365.2444 353.9001 296.6855 343.0355 340.4407 331.5407 346.8228 347.7788 319.1918

Columns 76 through 90

340.5478 359.5894 329.4297 331.7063 381.9008 336.1162 368.2145 372.5157 357.2750 322.3365 319.0260 328.2724 333.2207 308.4980 340.5350

Columns 91 through 100

337.7929 347.6308 368.4055 299.3089 330.4168 354.3627 334.3152 343.4293 353.4650 369.5728

slsfrandobjs =

Columns 1 through 15

337.3825 348.1882 348.3782 354.6241 314.9126 252.0822 360.2880 344.3376 356.2125 312.8243 361.0615 286.3232 196.0287 329.0296 347.8237

Columns 16 through 30

305.7249 309.4844 341.5512 330.5416 283.3380 320.5515 348.6131 370.4481 317.8152 329.7958 339.2975 351.7238 325.3673 333.7447 331.2147

Columns 31 through 45

343.2470 364.3577 281.8297 297.2413 336.9602 355.8671 325.5503 374.3373 335.1363 353.1952 315.1607 325.8480 376.7827 359.4071 309.6723

Columns 46 through 60

343.8719 358.0405 328.0832 326.5444 353.7229 318.1876 336.9929 348.1953 332.6446 246.6370 324.8395 336.9251 326.2117 347.4017 235.4164

Columns 61 through 75

299.5781 313.1857 301.3394 301.9140 308.4913 309.1835 352.1289 354.6854 271.1215 307.6484 333.2284 336.3003 333.0599 348.8321 308.8621

Columns 76 through 90

340.2284 323.7663 329.1559 333.5100 367.1210 326.9031 367.3296 373.0729 338.3719 329.8106 291.7873 324.8550 321.4604 321.6396 316.9828

Columns 91 through 100

334.2299 333.1118 353.4464 277.7847 317.4665 349.6276 302.7876 338.0342 333.0603 354.0676

slsftimes =

Columns 1 through 15

30.4337 2.1632 2.2743 30.3017 19.1370 4.0102 1.4333 1.6810 6.5098 30.2271 1.6195 30.2520 30.3140 27.7259 30.1987

Columns 16 through 30

2.8689 30.2416 30.2291 30.2923 30.4071 30.3185 12.1091 30.3307 4.4622 26.1072 30.3183 6.1866 30.2339 2.2183 21.3136

Columns 31 through 45

30.2797 4.9840 30.2574 13.8543 30.5597 1.7888 15.3975 2.0632 9.5481 11.6536 19.1061 2.1877 3.5676 1.6249 30.2507

Columns 46 through 60

3.7785 3.0452 11.0585 30.2916 30.3115 30.2377 5.5908 12.1294 1.8462 30.2921 30.2284 30.2917 30.2785 5.8871 30.2609

Columns 61 through 75

3.8150 30.2178 2.5205 30.2472 5.4297 7.3042 4.4950 16.6361 30.2916 15.6148 15.4127 2.0250 30.4478 2.3447 30.2727

Columns 76 through 90

30.3172 30.3316 30.2557 30.2795 6.6776 18.9600 11.8285 1.8455 30.4147 30.4344 30.2814 17.6301 30.3079 30.3435 30.3147

Columns 91 through 100

2.4136 4.9870 2.8477 18.0937 30.2635 5.1725 30.3034 10.7597 30.3433 16.4327

slsfrandtimes =

Columns 1 through 15

30.2465 30.3237 30.2675 30.3133 30.5488 30.2098 30.2255 2.7511 30.2954 30.2141 6.2856 30.1799 30.3008 30.2578 30.2180

Columns 16 through 30

30.3033 30.3520 30.2703 60.5296 30.2528 30.2107 30.2215 30.1664 30.2673 30.2296 30.2616 60.2711 30.1794 17.5759 30.2085

Columns 31 through 45

30.2239 30.2872 30.2114 30.4409 30.2827 30.2145 30.2133 2.7092 30.2874 29.9332 30.4709 22.2700 6.1342 12.2825 30.2972

Columns 46 through 60

30.3569 60.2905 30.2430 30.2134 30.2110 30.2268 30.2737 30.2632 30.2395 30.2769 30.1778 30.2379 30.3712 23.9124 30.4344

Columns 61 through 75

30.3992 30.2625 30.4407 30.2436 30.4147 30.2541 30.3117 30.3181 30.1798 30.4505 30.2189 30.5362 30.1941 31.1059 30.2830

Columns 76 through 90

30.3200 30.2361 30.2018 30.3840 30.3080 30.2703 30.3225 9.7333 30.3440 30.3195 30.5732 30.2746 30.3033 60.2635 30.2941

Columns 91 through 100

26.5511 30.2840 30.2834 30.3175 30.2921 30.3631 60.3170 30.2541 30.3740 60.5350

slsfrejs =

Columns 1 through 15

1.4495 0.9648 0.6583 0.4511 0.9689 0.2930 0.1155 1.1672 0.4096 1.2629 0.4288 4.4031 8.2409 1.7085 1.9789

Columns 16 through 30

2.3968 1.9915 2.0594 2.6191 3.5290 2.3583 0.0909 1.2374 1.1038 1.8578 1.6843 0.7092 2.7408 2.0581 0.7268

Columns 31 through 45

1.0638 1.0212 3.7739 1.3471 1.4923 0.9087 2.7005 0.4334 1.6056 0.8688 0.7901 2.4739 0.0493 0.2106 2.5555

Columns 46 through 60

0.8562 0.6498 1.8989 2.9545 1.2762 2.5459 1.8798 1.3143 1.1558 3.0771 2.4612 1.3998 1.6585 0.9671 1.2959

Columns 61 through 75

2.2421 3.3471 2.0077 0.7723 1.2844 1.9749 0.2353 1.5200 3.5656 1.2742 1.6261 2.0345 1.4871 1.4589 3.0536

Columns 76 through 90

1.2573 0.6863 2.1433 2.2873 0.2092 2.0248 0.4935 0.1949 1.3248 2.5659 3.3252 2.4874 1.7790 3.7548 2.1991

Columns 91 through 100

1.9222 1.1064 0.3825 3.9105 2.6129 1.0760 1.6235 1.6350 1.1485 0.5499

slsfrandrejs =

Columns 1 through 15

1.5623 1.9930 0.7462 1.1792 3.2747 6.9539 1.1206 1.3317 0.4968 2.9268 0.5306 3.3491 8.5002 1.8261 1.5044

Columns 16 through 30

3.3294 2.8687 2.1803 2.0122 3.8748 2.2347 1.0343 0.5444 2.7868 1.8374 1.5555 1.7831 2.2387 1.8514 1.9541

Columns 31 through 45

1.0735 1.0268 4.5053 2.9400 2.4720 1.2636 3.5028 0.3646 1.4336 0.8997 2.2076 2.5122 0.0044 0.3182 4.0543

Columns 46 through 60

1.6650 0.8275 1.8177 2.2151 1.4397 2.0698 1.7209 1.9469 2.0547 6.9816 1.7836 1.5895 1.6892 0.6779 8.1045

Columns 61 through 75

4.4334 2.7517 3.7212 2.6105 2.6770 3.7154 0.7182 1.0545 4.9171 2.1195 1.7670 1.7839 1.4488 1.3775 2.3192

Columns 76 through 90

1.1644 1.9898 1.6686 1.7612 1.0485 2.4433 0.3683 0.1369 2.0395 1.7487 2.8772 2.0476 2.6520 3.0510 3.6409

Columns 91 through 100

1.7168 2.1834 1.2359 4.0577 2.0298 1.0501 3.7262 1.5552 2.6487 1.4794

**126th experiment, LCF fval b=0.75, min 80 %, f=5) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05, rand scen, =wt**

lcfiterbetter =

0.8000

lcfiterworse =

0.0800

avepercbetter =

0.0218

lcfrejbetter =

0.8800

lcfrejworse =

0

avepercrejbetter =

0.4106

lcfiterave =

160.4804

slsfave =

157.1668

averuntime =

234.6351

avelcfrejs =

1.2308

aveslsfrejs =

1.9919

avelcfunhap =

0.1509

aveslsfunhap =

0.2126

percbetter =

0.0036 0.0765 0.0260 0.0227 0

0.0244 0.1017 0.0133 0.0605 0.0152

0.0261 0.0126 -0.0130 -0.0029 0.0489

0.0365 0.0248 0.0503 0.0094 0.0381

0 0.0044 0.0052 0 0.0630

0.0078 0.0239 0 0.0078 0.0310

0.0011 -0.0078 0.0145 0.0174 0.0089

0.0424 0.0128 0.0329 0.0337 0.0141

0 0 0.0594 0.0322 0.0049

0.0005 0.0012 0.0426 0.0621 -0.0003

avelcfavecomp

10.9029

aveslsfavecomp =

10.9060

avelcfaveperccomp =

0.8310

aveslsfaveperccomp =

0.8136

avelcfavetotprofit =

80.9740

aveslsfavetotprofit =

82.1405

avelcfpercposprofit =

1

returnedobjs =

160.0484 164.4695 159.7736 153.7434 127.7128

162.2643 160.9626 172.2182 165.1535 162.8670

141.9263 170.4162 144.6565 167.7319 153.8610

142.3723 162.7424 156.1268 166.9210 184.9681

160.9715 159.8748 166.2798 176.4916 149.7153

170.2045 163.4991 163.6732 165.8710 162.5787

178.3990 161.2030 148.9441 157.9378 163.4185

151.1633 172.4378 158.3472 156.6094 158.9068

168.5486 121.5794 154.7117 164.9822 168.9135

162.9623 169.3932 139.1394 165.1018 181.2234

slsfobjs =

159.4817 152.7837 155.7173 150.3263 127.7128

158.3957 146.1033 169.9616 155.7364 160.4306

138.3153 168.2914 146.5655 168.2207 146.6859

137.3542 158.7999 148.6554 165.3598 178.1780

160.9715 159.1694 165.4174 176.4916 140.8385

168.8944 159.6793 163.6732 164.5909 157.6869

178.1999 162.4753 146.8117 155.2426 161.9730

145.0212 170.2613 153.3089 151.5096 156.6967

168.5486 121.5794 146.0388 159.8382 168.0971

162.8799 169.1844 133.4504 155.4556 181.2775

slsfavecomp =

10.4076 12.7916 9.1402 11.9826 8.7790

12.5679 12.0627 11.6343 13.2391 11.6010

10.5442 12.1865 11.9971 10.1847 9.2386

10.2357 12.6628 10.1399 10.0429 13.9361

10.8271 9.7359 9.7971 12.1274 10.0071

10.7398 11.3607 12.8418 10.3516 10.7435

10.7515 11.8098 10.9476 9.4255 9.2876

10.0880 10.1881 9.3947 11.2462 9.3124

10.1636 11.9052 11.1698 10.0758 10.2315

11.1412 10.0982 10.6498 11.3722 12.1353

lcfavecomp =

10.4470 12.8874 9.1486 12.1430 8.7790

12.3584 11.8004 11.5855 13.0359 11.5598

10.5435 12.4254 12.0758 10.2371 9.3712

10.4461 12.3582 9.9625 10.1038 13.9254

10.8271 9.8833 9.7694 12.1274 10.1498

10.8337 10.9465 12.8418 10.2990 10.7482

10.7506 11.8268 10.9634 9.4335 9.3076

10.0488 10.1405 9.4952 11.2165 9.3622

10.1636 11.9052 11.1413 10.0755 10.3232

11.1827 10.1193 10.6871 11.2053 12.1785

lcfaveperccomp =

0.8378 0.8333 0.8277 0.8186 0.8156

0.8210 0.8224 0.8155 0.8225 0.8454

0.8358 0.8138 0.8375 0.8175 0.8585

0.8514 0.8512 0.8467 0.8330 0.8082

0.8016 0.8283 0.8211 0.8000 0.8533

0.8124 0.8103 0.8000 0.8744 0.8259

0.8016 0.8267 0.8149 0.8490 0.8450

0.8328 0.8339 0.8255 0.8484 0.8360

0.8393 0.8159 0.8513 0.8442 0.8430

0.8515 0.8578 0.8403 0.8329 0.8175

lcfavetotprofit =

80.9684 86.4188 74.2465 82.7777 68.3337

84.3432 84.9559 90.1388 88.2922 83.3929

71.8090 89.0127 79.0240 82.7470 70.7827

69.3624 84.5415 74.7929 81.1142 101.2401

86.0203 77.6814 80.1101 94.4901 71.7567

84.6311 85.8737 91.5791 78.7370 80.9459

89.6602 84.5230 78.2282 74.7778 76.7083

72.8821 83.8742 76.2723 77.0475 75.8064

83.7896 70.3683 75.8169 80.9995 81.8949

81.3530 80.5721 69.6611 81.4606 92.8830

slsfavetotprofit =

81.9838 90.2790 75.6240 85.3639 68.3337

84.0942 81.2364 90.8418 89.8126 84.4022

73.0737 91.3134 81.5293 84.3443 73.3649

73.4459 85.5742 74.2246 82.4240 102.3376

86.0203 81.5633 80.5219 94.4901 73.0324

86.5241 83.4528 91.5791 80.4336 81.8847

89.5959 86.1168 79.5957 76.6860 78.3941

74.0468 84.0785 78.1680 78.4574 77.8950

83.7896 70.3683 78.2195 81.6271 84.3417

83.0303 81.2786 73.0510 81.4687 93.7111

returnedobjs =

160.0484 164.4695 159.7736 153.7434 127.7128

162.2643 160.9626 172.2182 165.1535 162.8670

141.9263 170.4162 144.6565 167.7319 153.8610

142.3723 162.7424 156.1268 166.9210 184.9681

160.9715 159.8748 166.2798 176.4916 149.7153

170.2045 163.4991 163.6732 165.8710 162.5787

178.3990 161.2030 148.9441 157.9378 163.4185

151.1633 172.4378 158.3472 156.6094 158.9068

168.5486 121.5794 154.7117 164.9822 168.9135

162.9623 169.3932 139.1394 165.1018 181.2234

slsfobjs =

159.4817 152.7837 155.7173 150.3263 127.7128

158.3957 146.1033 169.9616 155.7364 160.4306

138.3153 168.2914 146.5655 168.2207 146.6859

137.3542 158.7999 148.6554 165.3598 178.1780

160.9715 159.1694 165.4174 176.4916 140.8385

168.8944 159.6793 163.6732 164.5909 157.6869

178.1999 162.4753 146.8117 155.2426 161.9730

145.0212 170.2613 153.3089 151.5096 156.6967

168.5486 121.5794 146.0388 159.8382 168.0971

162.8799 169.1844 133.4504 155.4556 181.2775

lcfrejs =

1.2158 1.2177 0.6737 2.2368 3.2206

2.1108 1.6061 0.5246 1.5746 1.2938

2.7118 1.3312 2.8135 0.4617 0.6434

2.4106 1.5742 1.1750 0.2034 0.2892

1.3785 0.3685 0.8484 0.9817 1.3537

0.3861 0.6088 2.0132 0.1785 1.2259

0.1434 1.3648 2.6630 0.8468 0.2102

1.6343 0.0062 0.7322 1.6360 0.5712

0.2495 5.8549 1.8926 0.1617 0.2276

1.2202 0.2505 2.4727 0.6714 0.0995

slsfrejs =

1.2490 2.4123 1.2723 2.6835 3.2206

2.9616 3.5318 0.9130 2.9930 1.8064

4.0159 1.4836 3.2079 0.7892 2.5627

3.5589 2.9422 3.1785 0.7009 0.9613

1.3785 0.9095 1.0824 0.9817 3.3151

0.6173 2.3744 2.0132 1.0585 1.9237

0.1683 1.8150 3.3391 1.5281 0.8114

3.3399 0.2818 1.3189 2.9751 1.1731

0.2495 5.8549 3.6125 0.7103 0.5865

1.3698 0.4756 4.6063 2.8935 0.3844

lcfunhap =

0.1325 0.2948 0.1054 0.4676 0.3625

0.1306 0.0899 0.0784 0.0539 0.0788

0.2147 0.0643 0.5252 0.1408 0.2424

0.2638 0.1759 0.1752 0.1221 0.1103

0.2637 0.1532 0.0327 0.1122 0.0801

0.1569 0.3062 0.1558 0.0490 0.0659

0.0277 0.4150 0.2229 0.1180 0.0750

0.1594 0.0101 0.0971 0.1082 0.0188

0.1488 0.2676 0.0762 0.0305 0.0049

0.0818 0.0976 0.3157 0.0521 0.0132

slsfunhap =

0.2811 0.7781 0.2603 0.5391 0.3625

0.1320 0.3015 0.1821 0.2515 0.1840

0.0709 0.2372 0.5676 0.1111 0.2690

0.3406 0.1232 0.0339 0.1683 0.4417

0.2637 0.3739 0.0673 0.1122 0.2339

0.3018 0.0288 0.1558 0.0134 0.1775

0.0483 0.2453 0.1588 0.2258 0.0680

0.0593 0.1962 0.4432 0.0944 0.0355

0.1488 0.2676 0.2152 0.3723 0.0542

0.1470 0.1028 0.2352 0.0523 0.0937

menusizes =

4.9500 4.7500 4.8000 4.1000 4.3000

4.2000 4.5500 4.9000 4.7000 4.5500

4.3500 4.6500 4.4000 4.6500 4.7500

4.1500 4.5500 4.5500 4.6000 4.9500

4.6500 4.6500 4.8000 4.7500 4.2500

4.1500 5.0000 4.6000 4.5500 4.5500

4.8500 4.8000 4.6500 4.4000 4.7500

4.6000 4.5000 4.8000 4.6000 4.6500

4.4000 4.0000 4.6500 4.9500 4.9500

4.6000 4.9000 4.5000 4.6500 4.9000

avepij =

0.1523 0.1374 0.1484 0.1263 0.1177

0.1370 0.1430 0.1627 0.1353 0.1361

0.1332 0.1444 0.1254 0.1499 0.1508

0.1224 0.1377 0.1456 0.1512 0.1547

0.1367 0.1544 0.1759 0.1694 0.1357

0.1388 0.1617 0.1284 0.1601 0.1573

0.1794 0.1377 0.1455 0.1487 0.1590

0.1327 0.1684 0.1467 0.1410 0.1572

0.1562 0.1088 0.1449 0.1750 0.1756

0.1437 0.1701 0.1453 0.1682 0.1825

pijover5 =

60 57 58 52 44

60 56 68 53 53

51 58 55 64 60

47 54 58 64 63

53 65 79 70 52

63 67 51 68 62

78 57 56 60 63

49 72 66 57 66

66 41 55 74 69

59 75 60 75 79

pijequal1 =

20 16 25 15 19

18 24 26 15 21

21 19 14 22 20

17 17 33 20 21

18 24 38 37 26

18 22 15 26 33

39 18 25 26 27

19 36 13 18 26

31 15 20 34 39

24 32 25 28 35

runtimes =

139.5143 321.0504 224.9378 276.0809 192.0204

313.9491 332.5785 163.9822 328.0843 255.6541

319.9166 335.9069 287.4716 170.8962 272.9749

335.1281 247.8276 294.9903 167.7166 221.8166

249.4962 247.1474 143.0171 126.6997 322.4010

128.7910 258.1072 169.3248 162.2626 262.7330

129.3132 222.5984 151.7572 134.1970 132.5429

323.7919 158.9423 259.3319 271.9748 186.2016

158.3242 433.2474 341.6183 175.1638 152.7054

346.8402 156.4844 245.7468 321.6515 156.8427

bestest =

164.2060 164.1283 159.3509 156.2755 130.4366

164.2692 163.4852 173.6013 167.1431 162.7734

144.7177 170.5538 148.7052 169.5196 157.3249

146.7171 163.8737 157.2498 167.6665 187.9518

165.9503 163.7776 166.8415 179.5598 151.0891

173.9601 170.2148 167.7436 166.7661 163.9719

179.4450 168.9821 151.4833 161.0902 164.7766

150.7470 172.8739 160.3736 159.5955 160.5459

171.2192 125.5567 158.1540 164.3634 169.7181

162.6447 170.7357 139.8379 166.2613 182.7222

guessbestiter =

1 5 4 2 0

7 4 2 4 3

7 3 1 1 7

7 7 6 6 6

0 3 6 0 7

1 2 0 4 3

5 2 1 2 5

5 6 2 6 6

0 0 7 6 5

1 3 5 3 4

estslsfobjs =

158.8431 162.3453 158.3274 147.4965 130.4366

155.6824 147.1774 165.4653 156.4028 161.7619

138.4285 164.2153 142.7389 169.1086 147.8339

141.5650 159.5588 147.7324 166.7997 179.2126

165.9503 161.6747 164.6845 179.5598 143.0750

169.8968 157.2200 167.7436 160.7199 158.4624

178.2248 153.1315 146.5001 154.1402 160.3693

143.6044 172.6027 156.0595 151.0415 157.9271

171.2192 125.5567 148.0135 162.0966 168.6520

160.7878 170.6339 127.2369 158.0435 180.3895

compportion80 =

0.6667 0.7684 0.7083 0.7683 0

0.5952 0.6813 0.7245 0.7340 0.7033

0.7701 0.6237 0.6932 0.5806 0.7158

0.8193 0.6484 0.6374 0.6848 0.6364

0 0.5914 0.6771 0 0.6706

0.6747 0.6100 0 0.6813 0.6264

0.5979 0.7604 0.6452 0.6932 0.7263

0.8370 0.7000 0.6563 0.7935 0.6989

0 0 0.7097 0.7677 0.7273

0.6848 0.6122 0.7333 0.6667 0.7041

compportionmin =

0.6667 0.7684 0.7083 0.7683 1.0000

0.5952 0.6813 0.7245 0.7340 0.7033

0.7701 0.6237 0.6932 0.5806 0.7158

0.8193 0.6484 0.6374 0.6848 0.6364

1.0000 0.5914 0.6771 1.0000 0.6706

0.6747 0.6100 1.0000 0.6813 0.6264

0.5979 0.7604 0.6452 0.6932 0.7263

0.8370 0.7000 0.6563 0.7935 0.6989

1.0000 1.0000 0.7097 0.7677 0.7273

0.6848 0.6122 0.7333 0.6667 0.7041

**127th experiment, LCF fval b=0.75, min 80 %, f=0) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05, rand scen, =wt**

lcfiterbetter =

0.3200

lcfiterworse =

0.3000

avepercbetter

0.0033

lcfrejbetter =

0.4800

lcfrejworse =

0.1400

avepercrejbetter =

0.1120

lcfiterave =

70.9763

slsfave =

70.7577

averuntime =

199.9508

avelcfrejs =

1.5758

aveslsfrejs =

1.7692

avelcfunhap =

0.0738

aveslsfunhap =

0.0980

percbetter =

-0.0225 -0.0042 0.0111 0 0

0 0.0212 0 0.0083 0.0280

0 -0.0008 0 -0.0014 0

-0.0040 0.0180 0.0413 -0.0005 0

-0.0063 0.0393 -0.0057 0.0230 0

0.0037 0.0009 0.0489 0 -0.0022

-0.0087 0 0 -0.0092 0.0009

0 -0.0022 0.0151 0 -0.0109

0 0 0.0033 0 0

0 0.0031 0.0041 -0.0242 -0.0027

meanfare =

11.2102 13.1523 12.7672 10.6695 11.4253

15.3426 12.1139 13.1075 14.0420 13.6944

13.2343 14.0801 11.9209 13.6364 13.5815

17.1796 11.2305 9.9088 12.0668 12.5991

13.5960 11.8471 12.1037 15.0097 12.9108

13.2688 11.6672 14.0138 15.8352 14.6257

8.9190 11.2463 13.3953 13.1575 15.1094

12.7355 12.8967 13.3069 13.6718 15.0466

12.5278 11.3869 13.3759 12.6745 13.7714

12.5930 10.7388 11.9153 12.1276 13.7559

avelcfavecomp

10.8250

aveslsfavecomp =

10.8263

avelcfaveperccomp =

0.8121

aveslsfaveperccomp =

0.8078

avelcfavetotprofit =

82.7425

aveslsfavetotprofit =

82.8818

avelcfpercposprofit =

1

returnedobjs =

63.7123 70.9735 74.4546 57.8360 66.4681

76.6466 71.4886 76.2860 77.9187 73.8700

73.9848 78.6874 68.1755 71.8287 77.0263

90.7271 63.8060 60.5236 60.0267 68.1222

65.7781 61.5985 66.8021 78.4014 62.5141

74.8282 71.0019 73.9664 81.1659 78.6444

54.9234 68.7271 74.5922 73.0070 87.4798

69.9296 74.2253 68.9253 79.4380 77.4908

65.5749 69.0020 70.0928 70.1547 73.5831

70.2991 59.4796 64.1887 61.8210 78.6186

slsfobjs =

65.1784 71.2724 73.6387 57.8360 66.4681

76.6466 70.0021 76.2860 77.2767 71.8615

73.9848 78.7475 68.1755 71.9278 77.0263

91.0913 62.6764 58.1229 60.0587 68.1222

66.1930 59.2701 67.1833 76.6416 62.5141

74.5518 70.9365 70.5152 81.1659 78.8167

55.4033 68.7271 74.5922 73.6870 87.4035

69.9296 74.3904 67.8976 79.4380 78.3447

65.5749 69.0020 69.8644 70.1547 73.5831

70.2991 59.2943 63.9276 63.3524 78.8320

slsfavecomp =

9.3828 11.4359 10.5858 9.3946 9.5815

13.0129 10.0953 10.8500 11.4519 11.3310

11.1067 11.7642 10.1129 11.8351 11.1777

13.8893 9.2229 8.1368 10.5489 10.5134

11.7940 9.9793 10.0569 12.2650 10.9794

10.7578 9.3920 11.3520 13.2865 11.9650

7.4438 9.4724 11.3265 10.9350 12.7091

11.0018 10.7975 11.5777 11.0709 12.4848

10.3495 9.2983 11.6346 10.6334 11.7332

10.5553 9.5347 10.0159 10.3988 11.0822

lcfavecomp

9.3899 11.4180 10.6782 9.3946 9.5815

13.0129 10.1071 10.8500 11.3987 11.3428

11.1067 11.7832 10.1129 11.8559 11.1777

13.9502 9.2597 8.1607 10.5768 10.5134

11.4462 9.9176 10.1740 12.2778 10.9794

10.8204 9.3985 11.4998 13.2865 11.9105

7.5095 9.4724 11.3265 10.9967 12.6176

11.0018 10.8920 11.5704 11.0709 12.5015

10.3495 9.2983 11.6542 10.6334 11.7332

10.5553 9.4712 9.9054 10.1946 11.1145

lcfaveperccomp =

0.8088 0.8211 0.8076 0.8159 0.8516

0.8000 0.8116 0.8026 0.8125 0.8200

0.8061 0.8045 0.8098 0.8095 0.8098

0.8174 0.8127 0.8063 0.8142 0.8078

0.8120 0.8086 0.8067 0.8113 0.8217

0.8053 0.8085 0.8059 0.8133 0.8149

0.8118 0.8367 0.8069 0.8133 0.8051

0.8000 0.8180 0.8059 0.8070 0.8033

0.8043 0.8062 0.8180 0.8145 0.8109

0.8026 0.8268 0.8189 0.8295 0.8056

lcfavetotprofit =

77.2689 81.0158 82.6574 67.0078 76.2670

91.1336 80.6070 86.3871 90.4738 85.9444

84.9602 89.4296 77.4474 84.6103 88.8553

103.0256 75.3227 72.4739 74.3103 83.3204

85.0295 75.8671 76.6491 93.8131 79.5610

87.2115 82.5661 85.9585 94.1514 92.2178

67.1890 77.1478 85.0579 84.5687 93.9498

77.9977 82.9381 79.1128 90.0236 90.6136

81.4920 80.0024 81.9293 83.0258 83.4877

80.9700 68.6641 76.3436 76.8013 90.2644

slsfavetotprofit =

77.4376 81.8396 83.7873 67.0078 76.2670

91.1336 81.0622 86.3871 90.7802 86.5621

84.9602 89.3686 77.4474 85.0012 88.8553

103.5677 75.7773 72.8893 75.8995 83.3204

82.4113 75.2829 77.7632 94.3426 79.5610

88.0597 82.9152 86.0109 94.1514 92.6477

68.0248 77.1478 85.0579 85.3459 92.7069

77.9977 83.7526 79.2918 90.0236 91.1351

81.4920 80.0024 82.3995 83.0258 83.4877

80.9700 69.1098 74.4635 75.1332 91.0269

returnedobjs =

63.7123 70.9735 74.4546 57.8360 66.4681

76.6466 71.4886 76.2860 77.9187 73.8700

73.9848 78.6874 68.1755 71.8287 77.0263

90.7271 63.8060 60.5236 60.0267 68.1222

65.7781 61.5985 66.8021 78.4014 62.5141

74.8282 71.0019 73.9664 81.1659 78.6444

54.9234 68.7271 74.5922 73.0070 87.4798

69.9296 74.2253 68.9253 79.4380 77.4908

65.5749 69.0020 70.0928 70.1547 73.5831

70.2991 59.4796 64.1887 61.8210 78.6186

slsfobjs =

65.1784 71.2724 73.6387 57.8360 66.4681

76.6466 70.0021 76.2860 77.2767 71.8615

73.9848 78.7475 68.1755 71.9278 77.0263

91.0913 62.6764 58.1229 60.0587 68.1222

66.1930 59.2701 67.1833 76.6416 62.5141

74.5518 70.9365 70.5152 81.1659 78.8167

55.4033 68.7271 74.5922 73.6870 87.4035

69.9296 74.3904 67.8976 79.4380 78.3447

65.5749 69.0020 69.8644 70.1547 73.5831

70.2991 59.2943 63.9276 63.3524 78.8320

lcfrejs =

1.4989 2.6384 1.2453 3.9076 1.1730

2.1122 1.1168 1.1934 0.1599 1.1809

1.5454 1.2116 2.0505 2.0625 0.8582

0.2632 1.4921 1.0559 3.5398 1.7082

1.7664 2.5249 2.1254 0.6146 2.2932

0.7976 0.0278 1.2342 2.2469 0.3648

1.2728 1.0028 1.6203 1.3959 1.1163

2.8815 1.3753 3.3220 0.2338 1.4122

1.6725 0.8934 2.3274 1.2391 2.5480

2.0500 2.9913 1.5209 1.8433 0.0636

slsfrejs =

1.4420 2.7908 1.1909 3.9076 1.1730

2.1122 1.4213 1.1934 0.6428 1.2352

1.5454 1.1909 2.0505 2.0813 0.8582

0.2035 2.1063 1.1847 3.6230 1.7082

3.3577 3.2701 2.0366 0.8303 2.2932

0.7007 0.1471 1.4971 2.2469 1.1117

1.5723 1.0028 1.6203 1.5182 1.1579

2.8815 1.2922 3.7124 0.2338 1.5161

1.6725 0.8934 2.5836 1.2391 2.5480

2.0500 3.5077 2.9155 3.2636 0.1242

lcfunhap =

0.0987 0.0783 0.0560 0.0158 0.1077

0.0622 0.0303 0.0147 0.0589 0.0499

0.0739 0.0219 0.0751 0.0148 0.0487

0.0550 0.1068 0.0357 0.0970 0.0924

0.2662 0.1524 0.0142 0.2017 0.3452

0.0461 0.0007 0.0853 0.0600 0.0437

0.0769 0.0003 0.0834 0.0420 0.0078

0.0561 0.0037 0.0166 0.1690 0.2006

0.0920 0.0529 0.0137 0.0259 0.0385

0.0527 0.0127 0.0442 0.2803 0.0120

slsfunhap =

0.0371 0.2290 0.1687 0.0158 0.1077

0.0622 0.1732 0.0147 0.0835 0.1985

0.0739 0.0528 0.0751 0.0219 0.0487

0.0780 0.1872 0.1934 0.1179 0.0924

0.1037 0.1909 0.0355 0.3047 0.3452

0.1457 0.0076 0.4082 0.0600 0.0270

0.1251 0.0003 0.0834 0.0362 0.0304

0.0561 0.0361 0.0699 0.1690 0.1647

0.0920 0.0529 0.0227 0.0259 0.0385

0.0527 0.0856 0.0140 0.0286 0.0561

menusizes =

4.7000 3.9000 4.5500 3.7000 3.7500

4.3000 4.5500 4.6500 4.9500 4.8500

3.9500 4.5500 3.8500 4.2000 4.6000

4.9000 4.6000 4.1000 4.4500 4.7500

4.5000 4.6000 4.0500 4.8000 4.4000

4.6000 4.7000 4.6000 4.1000 4.7000

3.8000 4.5500 4.3500 4.7000 4.5000

3.8500 4.1500 3.9000 4.6000 4.3000

4.7500 4.7500 3.6000 4.5000 4.0500

4.5000 3.8500 4.4500 4.2500 4.9000

avepij =

0.1638 0.1294 0.1544 0.1220 0.1266

0.1284 0.1512 0.1641 0.1687 0.1500

0.1410 0.1622 0.1227 0.1465 0.1616

0.1588 0.1413 0.1385 0.1307 0.1460

0.1356 0.1454 0.1355 0.1595 0.1260

0.1530 0.1787 0.1494 0.1328 0.1584

0.1352 0.1687 0.1463 0.1611 0.1559

0.1224 0.1568 0.1273 0.1553 0.1359

0.1390 0.1491 0.1188 0.1527 0.1258

0.1362 0.1281 0.1369 0.1327 0.1755

pijover5 =

66 54 67 47 56

53 63 64 71 63

62 71 55 65 61

70 58 61 54 53

55 56 54 65 55

68 76 64 53 66

59 69 66 69 68

54 67 55 65 58

57 60 50 65 52

56 51 57 49 78

pijequal1 =

31 25 24 24 24

18 27 35 27 21

29 27 17 25 34

24 22 22 16 28

20 29 21 26 14

26 40 19 29 26

27 35 21 28 24

16 36 23 30 19

20 19 22 30 22

21 24 24 23 24

runtimes =

131.5136 141.6599 151.4506 310.5387 139.6540

322.9654 131.3053 124.5963 249.1558 318.3417

152.0024 140.7977 160.2402 171.0856 134.2784

144.0176 171.6110 136.4036 218.3638 155.3055

341.2803 193.3361 206.2144 150.7684 512.3708

148.2209 139.4309 180.6126 191.0365 186.6375

150.4847 137.3970 168.3787 150.5049 139.0317

264.1778 191.1068 271.4732 153.6082 268.9539

146.8734 193.1175 170.9700 166.5664 282.2160

205.9712 345.1864 208.4632 385.2689 142.5937

bestest =

65.3413 71.8249 74.6096 57.8487 67.3506

75.3742 71.6900 75.9478 79.0576 73.8498

75.3456 79.0197 69.0346 71.6031 77.2245

91.6049 64.2156 60.8092 61.5896 70.3722

69.1515 63.3431 66.9683 80.7984 67.2636

75.4917 71.1591 73.9529 82.8580 78.4402

56.1385 68.6573 74.6869 72.9502 87.7994

70.1449 74.3207 69.4398 79.5605 79.6139

66.3029 68.7918 70.0212 69.9398 73.9595

71.1131 59.5076 64.4315 62.7046 78.2248

guessbestiter =

2 3 7 0 0

0 6 0 2 2

0 2 0 1 0

2 2 3 2 0

5 4 5 1 0

5 3 6 0 5

1 0 0 3 2

0 2 2 0 1

0 0 1 0 0

0 4 3 4 4

estslsfobjs =

63.4614 70.3232 72.0297 57.8487 67.3506

75.3742 65.9461 75.9478 77.1868 65.4527

75.3456 78.4852 69.0346 71.5532 77.2245

90.5162 61.6965 59.9478 58.4008 70.3722

66.4980 56.3100 66.9206 76.9228 67.2636

74.1400 70.8679 73.4860 82.8580 77.7035

52.9782 68.6573 74.6869 72.8780 86.0160

70.1449 74.2365 67.1065 79.5605 77.2224

66.3029 68.7918 68.2694 69.9398 73.9595

71.1131 55.9461 64.0079 59.0996 78.0112

compportion80 =

0.5532 0.7308 0.6813 0 0

0 0.6484 0 0.6566 0.6082

0 0.6374 0 0.6310 0

0.6122 0.7717 0.6463 0.6517 0

0.6000 0.6848 0.6173 0.6042 0

0.6304 0.5745 0.6630 0 0.6064

0.6316 0 0 0.5745 0.6556

0 0.7229 0.6282 0 0.5930

0 0 0.7639 0 0

0 0.7013 0.7978 0.7294 0.6122

compportionmin =

0.5532 0.7308 0.6813 1.0000 1.0000

1.0000 0.6484 1.0000 0.6566 0.6082

1.0000 0.6374 1.0000 0.6310 1.0000

0.6122 0.7717 0.6463 0.6517 1.0000

0.6000 0.6848 0.6173 0.6042 1.0000

0.6304 0.5745 0.6630 1.0000 0.6064

0.6316 1.0000 1.0000 0.5745 0.6556

1.0000 0.7229 0.6282 1.0000 0.5930

1.0000 1.0000 0.7639 1.0000 1.0000

1.0000 0.7013 0.7978 0.7294 0.6122

**128th experiment, LCF fval b=0.75, min 80 %, f=10) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05, rand scen, =wt**

lcfiterbetter =

0.7400

lcfiterworse =

0.1400

avepercbetter =

0.0229

lcfrejbetter =

0.8800

lcfrejworse =

0

avepercrejbetter =

0.4974

lcfiterave =

261.4603

slsfave =

255.8139

averuntime =

206.7587

avelcfrejs =

0.6713

aveslsfrejs =

1.4505

avelcfunhap =

0.1372

aveslsfunhap =

0.1803

percbetter =

0.0597 0.0555 0.0230 0.0394 0.0377

0.0333 0.0157 0.0013 0.0270 0

0.0631 0.0205 0.0145 0.0219 0.0230

0.0605 -0.0011 0.0502 0.0550 -0.0020

0.0347 0.0730 0.0177 -0.0036 0.0073

0.0197 0.0162 0 0.0195 -0.0011

-0.0112 0.0034 0.0478 0.0330 0.0463

0.0338 0 0 0.0309 0.0137

0.0153 0 0.0327 0.0576 0.0370

-0.0007 0.0029 -0.0020 0.0237 0

meanfare =

11.7386 12.5551 13.6937 10.1039 12.8005

11.2767 14.4233 17.8818 12.2603 13.8475

15.0131 9.9484 10.0687 11.2678 13.2095

12.7363 14.8286 14.1589 15.3879 14.7822

9.4787 10.8780 13.1577 12.4762 13.2729

15.0400 15.5149 16.4477 14.0938 12.2785

12.0532 11.6645 13.3272 12.2133 12.542

12.2093 12.7509 13.4456 12.2598 15.59

11.4510 14.5273 11.0558 10.3764 14.187

10.6159 12.6931 12.8747 17.1058 12.7677

avelcfavecomp =

10.8147

aveslsfavecomp =

10.7884

avelcfaveperccomp =

0.8345

aveslsfaveperccomp =

0.8120

avelcfavetotprofit =

82.0464

aveslsfavetotprofit =

83.9913

avelcfpercposprofit =

1

returnedobjs =

246.6234 239.1344 268.8452 238.1767 256.0917

261.2931 276.2230 273.4504 264.4506 272.0641

272.2395 235.8911 250.4399 253.5163 260.2951

263.0330 281.7194 270.3762 273.9363 280.5851

223.1230 245.4026 265.0081 253.6583 270.6730

274.5186 278.8001 292.1333 274.6110 270.8244

232.0652 250.7348 267.2167 254.2258 246.0778

243.2530 261.3860 276.4613 253.5408 274.4636

254.3773 277.3405 235.0972 251.2040 269.3733

250.0969 271.2230 265.8583 279.9020 271.9827

slsfobjs =

232.7264 226.5526 262.8121 229.1465 246.7861

252.8717 271.9501 273.0824 257.5006 272.0641

256.0783 231.1537 246.8585 248.0917 254.4436

248.0198 282.0378 257.4519 259.6477 281.1406

215.6502 228.7017 260.3908 254.5678 268.7080

269.2140 274.3497 292.1333 269.3572 271.1319

234.6887 249.8966 255.0244 246.0933 235.1925

235.3071 261.3860 276.4613 245.9369 270.7592

250.5438 277.3405 227.6461 237.5197 259.7670

250.2809 270.4269 266.3991 273.4196 271.9827

slsfavecomp =

9.9658 10.9408 11.3553 8.5685 10.7838

9.0992 11.6974 14.9688 10.1117 11.3185

12.3678 8.5221 8.4433 9.4537 11.0290

10.8755 11.9518 11.8555 12.8272 11.8940

8.4571 9.2097 10.7748 10.4735 10.7955

12.3914 12.6579 13.1854 11.5737 9.8775

10.5639 9.6150 11.0913 10.2533 10.6845

10.4040 10.3696 10.9143 10.1666 12.7574

9.5295 11.7898 9.4219 8.4781 11.6571

8.7864 10.3590 10.5031 14.3509 10.2973

lcfavecomp =

9.9073 10.8762 11.2996 8.7897 10.7747

9.2875 11.8673 15.0225 10.0615 11.3185

12.3347 8.5347 8.5452 9.5269 10.9211

10.5725 11.9738 11.6223 12.6674 11.9194

8.6399 9.2155 10.9452 10.5058 10.8383

12.3808 12.5207 13.1854 11.5634 9.9350

10.6392 9.7951 11.0432 10.3442 10.9110

10.5193 10.3696 10.9143 10.2629 12.7725

9.5563 11.7898 9.5393 8.7542 11.7340

8.9248 10.3760 10.6137 14.0247 10.2973

lcfaveperccomp =

0.8325 0.8590 0.8372 0.8991 0.8602

0.8360 0.8312 0.8045 0.8177 0.8220

0.8244 0.8486 0.8784 0.8661 0.8068

0.8532 0.8039 0.8419 0.8447 0.8096

0.8798 0.8716 0.8195 0.8199 0.8344

0.8384 0.8073 0.8000 0.8275 0.8081

0.8429 0.8351 0.8399 0.8292 0.8863

0.8402 0.8008 0.8338 0.8189 0.8143

0.8100 0.8129 0.8322 0.8541 0.8246

0.8187 0.8465 0.8311 0.8360 0.8317

lcfavetotprofit =

73.5345 72.7356 85.9461 63.4632 79.0772

76.9073 88.3882 101.9602 81.3310 89.3281

90.4796 66.2041 68.4238 72.1426 85.4668

81.4242 94.5302 88.5683 91.8172 94.4930

58.3250 69.4682 81.7677 80.5875 86.2061

91.0798 96.4730 102.6081 88.1942 83.8834

72.5321 75.4267 83.1804 77.3131 71.4031

74.5850 85.3238 87.8856 77.9478 93.3301

77.3948 93.0975 69.5823 68.6089 87.0205

71.8507 83.3619 83.2548 99.7827 84.6229

slsfavetotprofit =

74.6817 76.3420 87.8059 68.0623 81.6331

77.8406 91.1351 103.2710 81.3035 89.3281

90.1441 67.9490 72.0875 76.6478 85.0868

82.2249 94.6585 89.0039 92.9788 95.1142

64.1373 71.7525 85.7818 81.5809 87.5253

93.5540 94.8507 102.6081 90.1400 85.0919

77.0388 78.5618 85.8450 80.7771 79.8177

78.5381 85.3238 87.8856 80.5357 95.9507

78.0048 93.0975 71.8500 73.2870 89.9619

74.2866 84.2630 85.8796 99.7179 84.6229

returnedobjs =

246.6234 239.1344 268.8452 238.1767 256.0917

261.2931 276.2230 273.4504 264.4506 272.0641

272.2395 235.8911 250.4399 253.5163 260.2951

263.0330 281.7194 270.3762 273.9363 280.5851

223.1230 245.4026 265.0081 253.6583 270.6730

274.5186 278.8001 292.1333 274.6110 270.8244

232.0652 250.7348 267.2167 254.2258 246.0778

243.2530 261.3860 276.4613 253.5408 274.4636

254.3773 277.3405 235.0972 251.2040 269.3733

250.0969 271.2230 265.8583 279.9020 271.9827

slsfobjs =

232.7264 226.5526 262.8121 229.1465 246.7861

252.8717 271.9501 273.0824 257.5006 272.0641

256.0783 231.1537 246.8585 248.0917 254.4436

248.0198 282.0378 257.4519 259.6477 281.1406

215.6502 228.7017 260.3908 254.5678 268.7080

269.2140 274.3497 292.1333 269.3572 271.1319

234.6887 249.8966 255.0244 246.0933 235.1925

235.3071 261.3860 276.4613 245.9369 270.7592

250.5438 277.3405 227.6461 237.5197 259.7670

250.2809 270.4269 266.3991 273.4196 271.9827

lcfrejs =

1.7091 1.5641 0.4364 0.7745 0.9883

0.1129 0.0903 1.3167 0.2889 0.3514

0.3142 1.6457 0.6318 0.4724 1.0221

0.4118 0.1068 0.2516 0.0983 0.1004

2.1992 0.7893 0.4574 1.2603 0.0802

0.1620 0.1274 0.0209 0.2529 0.0584

2.3236 0.9129 0.3144 1.0144 0.6926

1.5731 1.0309 0.1294 0.8682 0.4328

1.0565 0.2191 1.9568 0.3768 0.4154

1.1113 0.0803 0.3294 0.4607 0.1704

slsfrejs =

3.3147 3.7544 1.0223 2.3619 2.2716

0.7073 0.4707 1.3397 1.1684 0.3514

1.9332 2.4622 1.5189 1.5554 1.6171

1.9837 0.2231 1.5877 1.8022 0.1496

3.7173 3.0450 1.3548 1.2757 0.2613

0.8399 1.0196 0.0209 0.9926 0.1461

2.8788 1.1919 1.7788 1.8188 2.4813

2.4938 1.0309 0.1294 1.7945 0.9319

1.5900 0.2191 2.8560 2.0049 1.3647

1.4148 0.2543 0.4182 1.4315 0.1704

lcfunhap =

0.1828 0.3422 0.0997 0.3948 0.0711

0.0752 0.0923 0.2131 0.1259 0.1075

0.1451 0.6250 0.0730 0.1247 0.0314

0.0677 0.1518 0.0261 0.0709 0.0675

0.0289 0.1950 0.0495 0.0686 0.0524

0.1147 0.1988 0.0030 0.0492 0.0091

0.2843 0.0682 0.0206 0.0469 0.4116

0.3188 0.2021 0.0394 0.1129 0.0814

0.0248 0.1373 0.2602 0.1502 0.1555

0.1402 0.0471 0.0987 0.2829 0.1177

slsfunhap =

0.0517 0.0392 0.4278 0.2723 0.0645

0.4574 0.4545 0.2777 0.0557 0.1075

0.2655 0.4799 0.0193 0.1285 0.1114

0.1034 0.0703 0.1912 0.1508 0.0889

0.0324 0.0880 0.0568 0.0922 0.2495

0.3820 0.0092 0.0030 0.1146 0.0355

0.1924 0.1932 0.0528 0.3670 0.3607

0.6212 0.2021 0.0394 0.1907 0.1443

0.0658 0.1373 0.3762 0.2439 0.4438

0.1084 0.0275 0.1544 0.0958 0.1177

menusizes =

4.4500 4.4000 4.5500 4.5500 4.8500

4.7500 4.6000 4.5500 4.6000 4.9000

4.8000 4.5000 4.7500 4.8000 4.6500

4.9500 4.3000 5.0000 4.7000 4.6000

4.1500 4.7500 4.6000 4.6500 4.9500

4.8000 4.6000 4.7500 4.8000 4.9500

4.6500 4.5000 4.8000 4.8500 4.7500

4.4000 4.5000 4.9000 4.7500 4.7500

4.4500 4.8000 4.4000 4.8000 4.8500

4.5000 4.9000 4.6500 4.9000 4.7000

avepij =

0.1419 0.1336 0.1661 0.1403 0.1763

0.1595 0.1662 0.1499 0.1509 0.1608

0.1556 0.1336 0.1563 0.1625 0.1517

0.1600 0.1518 0.1645 0.1634 0.1695

0.1449 0.1542 0.1515 0.1551 0.1711

0.1640 0.1660 0.1718 0.1731 0.1683

0.1373 0.1502 0.1585 0.1560 0.1540

0.1366 0.1472 0.1714 0.1425 0.1499

0.1517 0.1563 0.1370 0.1587 0.1408

0.1420 0.1685 0.1525 0.1613 0.1569

pijover5 =

58 58 72 56 72

68 76 67 62 70

69 48 65 64 63

63 65 69 73 72

62 58 65 69 69

67 70 75 77 71

59 67 64 61 66

53 57 74 61 67

66 67 56 65 54

58 68 62 67 66

pijequal1 =

22 16 32 19 38

25 29 16 20 21

22 20 29 25 27

28 26 25 31 35

26 30 24 23 31

28 33 30 26 26

17 24 28 25 25

19 32 28 18 14

22 23 18 28 15

21 28 26 31 28

runtimes =

268.2677 333.4455 211.0461 165.1259 219.0801

165.6068 188.2589 337.3143 236.0905 137.5187

222.4691 301.4835 156.5644 184.2636 282.8826

226.9776 199.0517 223.3095 311.3760 141.2608

138.8059 323.0447 144.1360 162.8998 224.4478

145.4568 251.0706 128.6640 161.9241 145.6370

157.4637 298.2718 193.9631 132.8697 198.8968

331.1068 207.5903 130.2173 164.9085 169.0073

238.0978 167.1244 321.9861 225.7749 304.1238

125.8052 138.8667 162.7496 196.7714 134.8618

bestest =

247.8237 241.3484 268.2868 242.1446 256.0353

263.5264 276.9690 276.5439 264.8802 274.4352

275.5411 238.9292 254.7928 255.6639 261.1336

266.2523 284.5615 271.1985 274.7698 281.8351

223.9072 247.5192 264.3089 255.0879 271.4891

276.2459 282.1933 292.6077 276.2256 271.6527

243.9612 250.9741 269.1267 253.1792 250.6625

244.7492 270.4781 278.2726 259.7728 276.7731

254.7365 279.6006 239.0216 250.9825 273.4474

252.1020 271.8635 273.0818 286.7933 272.6843

guessbestiter =

2 4 4 4 6

7 2 1 3 0

4 2 3 6 6

4 3 6 5 6

3 7 7 1 5

7 7 0 4 1

3 4 4 3 6

1 0 0 1 7

3 0 4 3 4

1 3 2 2 0

estslsfobjs =

233.6100 227.7792 259.6849 230.1480 249.1861

246.1180 276.6163 264.8526 259.4212 274.4352

264.4886 234.1006 244.5058 240.9004 251.4622

253.7253 279.8832 263.4385 262.4597 279.9397

215.9687 233.5242 263.3902 244.8915 268.6729

274.7326 275.5187 292.6077 269.1972 266.7462

237.0930 239.6558 258.3554 249.1083 245.6349

237.0006 270.4781 278.2726 241.1584 273.2717

248.3319 279.6006 228.1400 234.3128 259.8865

246.0631 270.0074 263.6823 271.7400 272.6843

compportion80 =

0.6742 0.6818 0.7033 0.8132 0.7320

0.7474 0.6522 0.6374 0.8043 0

0.6458 0.7333 0.7579 0.7188 0.6237

0.6465 0.5581 0.6700 0.6383 0.6413

0.7349 0.7158 0.6522 0.5161 0.6364

0.7396 0.5761 0 0.6979 0.6263

0.6774 0.7444 0.6042 0.7216 0.7579

0.6818 0 0 0.7263 0.7158

0.7079 0 0.6818 0.6875 0.6907

0.6333 0.5918 0.8172 0.6531 0

compportionmin =

0.6742 0.6818 0.7033 0.8132 0.7320

0.7474 0.6522 0.6374 0.8043 1.0000

0.6458 0.7333 0.7579 0.7188 0.6237

0.6465 0.5581 0.6700 0.6383 0.6413

0.7349 0.7158 0.6522 0.5161 0.6364

0.7396 0.5761 1.0000 0.6979 0.6263

0.6774 0.7444 0.6042 0.7216 0.7579

0.6818 1.0000 1.0000 0.7263 0.7158

0.7079 1.0000 0.6818 0.6875 0.6907

0.6333 0.5918 0.8172 0.6531 1.0000

**129th experiment, LCF fval b=0.75, min 80 %, f=5) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05,mut scen, =wt**

lcfiterbetter =

0.7400

lcfiterworse =

0.1200

avepercbetter =

0.0175

lcfrejbetter =

0.8600

lcfrejworse =

0

avepercrejbetter =

0.3996

lcfiterave =

163.0422

slsfave =

160.3705

averuntime =

242.3277

avelcfrejs =

0.9458

aveslsfrejs =

1.6504

avelcfunhap =

0.1282

aveslsfunhap =

0.1432

percbetter =

0.0243 -0.0093 0.0284 0 0.0198

0.0005 -0.0031 0.0870 0 0

0.0120 0.0016 -0.0038 0 -0.0004

0.0020 0.0492 0.0489 0.0144 0.0253

0.0058 0.0138 0.0074 0.0038 0.0200

0.0244 0.0501 0 -0.0032 0.0134

0 0.0186 0.0353 0.0161 0.0057

0.0322 0.0190 0.0076 0.0433 0.0002

0 0.0016 0.0035 0.0725 0.0289

0.0210 0.0106 0.0228 -0.0002 0.1051

meanfare =

12.4042 10.9554 12.3393 12.1160 11.4810

13.3379 14.7422 11.8638 13.7886 11.5237

9.9824 11.7452 12.5950 11.9263 17.5215

13.0984 11.6544 12.8292 12.1065 13.5806

16.1570 9.3942 12.2043 11.2381 3.1001

12.0104 11.0136 13.1846 10.9610 .0701

13.3281 10.5608 14.0205 11.8744 110187

11.9265 10.5380 12.1755 14.5672 13.67

12.9248 11.3690 12.6415 11.1523 11.907

11.8387 11.6035 13.4385 14.1711 14.727

avelcfavecomp =

10.3873

aveslsfavecomp =

10.4176

avelcfaveperccomp =

0.8284

aveslsfaveperccomp =

0.8118

avelcfavetotprofit =

80.6113

aveslsfavetotprofit =

81.4630

avelcfpercposprofit =

1

returnedobjs =

161.3873 159.6262 153.2257 167.4290 144.7672

174.3919 179.7779 152.0493 157.4090 171.4247

149.9547 166.5635 171.6356 163.2425 175.6824

170.9879 157.9559 169.4921 164.3494 158.9680

183.1142 152.0854 167.4858 155.6080 164.3912

159.1687 153.9669 160.9368 165.2068 173.1981

166.6325 161.3602 168.5186 164.3830 154.5142

148.2298 153.1920 167.8472 167.6997 167.3889

166.2808 167.4054 159.5270 157.1043 164.7034

165.9326 168.2541 164.3907 151.8290 161.4364

slsfobjs =

157.5566 161.1225 148.9873 167.4290 141.9514

174.2979 180.3367 139.8803 157.4090 171.4247

148.1713 166.2919 172.2830 163.2425 175.7590

170.6445 150.5429 161.5833 162.0108 155.0508

182.0538 150.0111 166.2474 155.0128 161.1732

155.3732 146.6278 160.9368 165.7392 170.9055

166.6325 158.4166 162.7760 161.7719 153.6459

143.6023 150.3327 166.5749 160.7375 167.3615

166.2808 167.1365 158.9664 146.4794 160.0729

162.5265 166.4935 160.7215 151.8547 146.0828

slsfavecomp =

10.4225 8.9050 10.5069 10.1119 9.8920

10.7906 11.9834 10.2216 11.6608 9.3622

8.4728 9.6676 10.2082 9.7767 14.6709

10.7003 10.1486 10.9190 9.9469 11.4371

13.1839 7.6965 10.1121 9.2994 10.9649

10.0914 9.6158 11.0143 8.8751 11.6440

11.0111 8.7257 11.8234 9.9879 9.1687

10.0195 8.9780 10.1643 12.4573 11.1591

10.4834 9.2142 10.5635 9.1768 9.9648

9.7272 9.4389 11.3374 12.2704 12.9065

lcfavecomp =

10.4145 8.9614 10.4647 10.1119 9.8283

10.8291 12.0154 10.2196 11.6608 9.3622

8.4153 9.7362 10.2360 9.7767 14.6214

10.7235 9.8137 10.7562 9.8960 11.4685

13.1096 7.7404 10.0890 9.3813 10.8400

10.1201 9.4036 11.0143 8.9027 11.5733

11.0111 8.8113 11.8052 9.8637 9.2965

10.1274 9.0585 10.0909 12.2562 11.1808

10.4834 9.2687 10.5241 9.1550 9.8553

9.7694 9.5530 11.0976 12.2829 12.3900

lcfaveperccomp =

0.8289 0.8286 0.8311 0.8295 0.8354

0.8055 0.8265 0.8308 0.8188 0.8275

0.8370 0.8454 0.8296 0.8257 0.8409

0.8125 0.8244 0.8628 0.8171 0.8196

0.8058 0.8329 0.8417 0.8278 0.8274

0.8496 0.8356 0.8039 0.8093 0.8296

0.8307 0.8392 0.8202 0.8584 0.8186

0.8446 0.8338 0.8734 0.8355 0.8074

0.8036 0.8262 0.8073 0.8194 0.8380

0.8184 0.8413 0.8146 0.8392 0.8083

lcfavetotprofit =

80.2785 76.6764 78.6117 80.6312 72.3450

88.0196 92.7806 73.0581 82.4318 80.5075

68.7806 78.4961 84.5054 81.8974 100.3308

85.7941 77.2156 79.4165 81.3229 80.0230

98.9911 67.8328 79.6003 74.4690 83.3324

76.5278 72.8586 85.0739 78.3043 88.8173

85.3981 72.8033 86.6123 78.1264 74.4361

72.3635 70.9332 79.3698 86.5947 85.7043

86.4100 79.1683 81.3557 75.7038 77.8207

78.9527 78.4117 85.4512 79.7972 86.2214

slsfavetotprofit =

79.7757 77.7279 80.2616 80.6312 73.6378

88.9419 93.9459 74.8998 82.4318 80.5075

70.1567 80.6193 84.6430 81.8974 102.6641

86.8886 74.4604 81.4417 81.4436 81.8620

99.7660 68.7284 81.8584 75.9970 83.1778

79.3856 71.8471 85.0739 78.8595 89.9500

85.3981 75.1545 88.4534 78.8792 76.6580

74.9510 73.4688 81.1904 87.2629 86.1920

86.4100 80.5235 81.3596 71.2544 79.1735

81.1519 80.9468 84.4984 85.5672 81.1747

returnedobjs =

161.3873 159.6262 153.2257 167.4290 144.7672

174.3919 179.7779 152.0493 157.4090 171.4247

149.9547 166.5635 171.6356 163.2425 175.6824

170.9879 157.9559 169.4921 164.3494 158.9680

183.1142 152.0854 167.4858 155.6080 164.3912

159.1687 153.9669 160.9368 165.2068 173.1981

166.6325 161.3602 168.5186 164.3830 154.5142

148.2298 153.1920 167.8472 167.6997 167.3889

166.2808 167.4054 159.5270 157.1043 164.7034

165.9326 168.2541 164.3907 151.8290 161.4364

slsfobjs =

157.5566 161.1225 148.9873 167.4290 141.9514

174.2979 180.3367 139.8803 157.4090 171.4247

148.1713 166.2919 172.2830 163.2425 175.7590

170.6445 150.5429 161.5833 162.0108 155.0508

182.0538 150.0111 166.2474 155.0128 161.1732

155.3732 146.6278 160.9368 165.7392 170.9055

166.6325 158.4166 162.7760 161.7719 153.6459

143.6023 150.3327 166.5749 160.7375 167.3615

166.2808 167.1365 158.9664 146.4794 160.0729

162.5265 166.4935 160.7215 151.8547 146.0828

lcfrejs =

1.2344 0.3812 1.5860 1.0114 2.1130

0.6013 0.2061 2.1152 2.3553 0.1853

1.2465 0.3365 0.0202 0.5804 0.9396

0.6347 1.3491 0.1900 0.4345 1.8215

0.2749 1.1281 0.1321 1.2573 1.0116

0.9944 1.2354 1.8535 0.3258 0.5848

0.9394 0.3114 1.2561 0.5142 1.0923

2.0380 1.3280 0.3192 1.0974 1.3457

0.8428 0.1043 1.4291 0.3247 0.3077

0.2401 0.1686 1.0139 2.3131 2.1635

slsfrejs =

1.6140 0.4158 2.6361 1.0114 3.5659

0.6903 0.3038 3.1732 2.3553 0.1853

2.1154 0.9547 0.0321 0.5804 1.7688

0.8453 2.8668 1.7343 1.0708 2.6845

0.6650 1.5409 1.1450 1.5741 1.8774

2.0516 3.0150 1.8535 0.3457 1.2822

0.9394 1.2723 1.6776 1.1552 1.5880

3.4206 2.1292 1.0753 2.5367 1.3493

0.8428 0.3104 2.0319 3.0174 1.5641

1.1940 0.7246 2.2798 3.2909 4.1680

lcfunhap =

0.0370 0.2651 0.3071 0.0200 0.4263

0.0587 0.0541 0.0446 0.1861 0.1719

0.2736 0.0649 0.0128 0.1497 0.1687

0.0276 0.2997 0.0486 0.2223 0.1112

0.0379 0.1105 0.0616 0.1098 0.1176

0.1423 0.1933 0.1318 0.0468 0.0212

0.1276 0.0437 0.1328 0.0363 0.0341

0.1490 0.1108 0.0363 0.1566 0.0571

0.4046 0.0700 0.2423 0.2741 0.0754

0.0283 0.0137 0.2388 0.1816 0.0721

slsfunhap =

0.1644 0.1581 0.2846 0.0200 0.1523

0.0624 0.0463 0.6684 0.1861 0.1719

0.1179 0.0618 0.0361 0.1497 0.1699

0.0425 0.1194 0.1822 0.3022 0.1559

0.0990 0.2337 0.0266 0.1723 0.1259

0.2125 0.0787 0.1318 0.0522 0.0393

0.1276 0.0486 0.4622 0.1750 0.1157

0.1430 0.2465 0.0977 0.1082 0.1095

0.4046 0.0605 0.1123 0.0276 0.0474

0.1002 0.0512 0.0142 0.1654 0.1202

menusizes =

4.6000 4.9000 4.7000 4.1500 4.5000

4.9500 4.9000 3.9500 4.3500 4.1000

4.2500 4.9500 4.8000 4.8500 4.9500

4.7500 4.3500 4.8000 4.8000 4.1500

4.9000 4.4500 4.9500 4.3000 4.8000

4.9500 4.6500 4.5500 4.7500 4.9000

4.9000 3.5500 4.5500 4.7000 4.4000

4.2500 4.3000 4.3000 4.7500 4.7000

4.7000 4.9000 4.4000 4.4000 4.7500

4.8500 4.8500 4.8000 4.4500 4.4000

avepij =

0.1511 0.1729 0.1398 0.1596 0.1331

0.1738 0.1741 0.1345 0.1356 0.1374

0.1302 0.1616 0.1766 0.1624 0.1600

0.1652 0.1595 0.1605 0.1492 0.1281

0.1701 0.1460 0.1683 0.1371 0.1478

0.1564 0.1499 0.1424 0.1653 0.1770

0.1568 0.1284 0.1566 0.1640 0.1487

0.1354 0.1445 0.1594 0.1489 0.1396

0.1429 0.1702 0.1415 0.1422 0.1611

0.1691 0.1784 0.1477 0.1338 0.1349

pijover5 =

56 74 54 64 52

77 75 57 60 58

53 65 77 67 67

72 66 74 66 57

70 56 72 52 63

64 60 61 66 75

64 51 67 66 65

56 59 68 55 56

60 71 54 54 62

71 80 53 55 53

pijequal1 =

24 32 18 33 23

27 33 22 18 24

21 24 35 30 23

31 33 19 25 12

32 32 30 24 16

26 21 22 35 33

27 26 24 30 24

20 28 33 27 19

25 33 23 26 30

36 30 26 14 21

runtimes =

342.2959 264.2682 206.1608 287.2580 347.9719

148.5545 149.2188 331.0773 330.9982 245.5384

338.9249 149.5751 176.7834 147.7239 246.8177

145.8495 300.8871 169.9537 288.2382 339.7812

152.1752 303.6810 150.5249 163.3480 243.8363

152.5474 315.0186 304.5495 146.2416 156.2894

162.8804 189.0896 308.0652 196.3249 256.9680

355.0850 141.0838 213.1164 294.0852 349.9072

268.5730 165.8944 344.4871 349.0722 237.7941

183.6520 159.4168 285.6022 194.6639 414.5358

bestest =

162.5088 161.2380 158.1546 167.6816 152.4023

177.3995 181.3155 152.8449 160.1090 172.8606

153.3389 168.0674 171.8977 167.7579 182.1587

174.2466 159.3350 171.5637 166.2074 162.2896

184.8894 153.0565 167.2954 156.0969 164.9282

161.6797 154.6500 164.3739 165.6800 172.8400

167.5420 161.5401 170.4141 167.5861 154.6090

151.0338 154.2433 167.9257 168.6685 166.3057

169.7995 168.4927 165.1244 160.5310 166.6883

166.0696 168.9948 165.4266 153.3065 156.8690

guessbestiter =

2 1 3 0 3

1 1 5 0 0

6 1 5 0 2

4 7 5 2 1

5 3 6 1 4

5 7 0 1 3

0 5 7 7 6

5 7 6 6 1

0 2 2 4 4

3 6 2 6 5

estslsfobjs =

155.6962 158.8035 151.1462 167.6816 147.1940

175.6067 180.9918 146.4626 160.1090 172.8606

148.3741 161.0974 171.7469 167.7579 178.0252

169.5832 151.6476 153.1776 159.9040 153.9252

182.1382 143.5528 165.5512 153.5038 156.5816

157.7348 146.2290 164.3739 164.0930 169.9642

167.5420 157.3301 162.2963 162.7488 151.6949

145.4778 149.3947 167.1640 157.6361 166.0864

169.7995 166.7946 158.5733 147.0774 158.9489

163.5597 168.4104 163.0371 146.8672 156.0069

compportion80 =

0.6957 0.5918 0.7340 0 0.6222

0.6364 0.6939 0.7089 0 0

0.6941 0.6263 0.5938 0 0.5859

0.5895 0.6667 0.6771 0.6354 0.5542

0.5714 0.6180 0.6869 0.6512 0.6979

0.7475 0.7419 0 0.6632 0.6224

0 0.6761 0.6703 0.6383 0.6591

0.7647 0.7326 0.6395 0.7158 0.6383

0 0.6224 0.5909 0.6364 0.5895

0.7113 0.6907 0.7396 0.7079 0.6932

**130th experiment, LCF fval b=0.75, min 80 %, f=5) –10 fixed scens, 10 reg,--400 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05,rand scen, =wt**

lcfiterbetter =

0.7200

lcfiterworse =

0.1000

avepercbetter =

0.0195

lcfrejbetter =

0.8200

lcfrejworse =

0

avepercrejbetter =

0.4209

lcfiterave =

161.1214

slsfave =

158.1766

averuntime =

312.3528

avelcfrejs =

1.0518

aveslsfrejs =

1.8452

avelcfunhap =

0.1406

aveslsfunhap =

0.1686

percbetter =

0.0340 0.0536 -0.0025 0 0.0282

0.0546 0.0304 0.0535 0.0106 0.0670

0.0585 -0.0075 0 0.0061 0.0547

0 0.0246 0.0124 0.0009 0

0.0029 0.0077 0.0069 0.0533 -0.0043

0.0776 0.0073 0.0201 0.0154 0

0.0015 0 0.0108 0.0212 0.0210

-0.0021 0.0434 0.0171 0.0110 0

0.0205 0.0298 0 0.0313 0.0189

0.0251 0.0087 0.0528 0 -0.0001

meanfare =

11.4599 11.8976 8.9121 12.9899 13.0917

14.2524 12.2528 11.1030 14.5933 12.0994

11.3726 12.2487 13.1407 12.4752 11.9955

14.9962 12.0131 11.8869 13.9099 12.2371

9.5467 13.3359 13.8770 16.1637 12.0108

11.5171 13.7895 14.4897 12.6688 14.5031

11.6425 12.7834 10.8304 11.8089 9.3439

14.9754 12.4658 12.2260 12.2920 12.7912

10.9384 16.8189 13.9364 12.9617 10.7702

11.2602 13.4092 12.3238 14.5813 11.9339

avelcfavecomp =

10.5422

aveslsfavecomp =

10.5589

avelcfaveperccomp =

0.8306

aveslsfaveperccomp =

0.8134

avelcfavetotprofit =

80.2221

aveslsfavetotprofit =

81.1956

avelcfpercposprofit =

1

returnedobjs =

160.3955 142.1043 157.0844 175.5171 161.9379

157.7299 166.8275 144.5987 170.3154 155.4122

154.4300 145.9761 164.9165 154.2766 155.8713

162.1048 144.6963 157.6066 175.1933 167.1447

149.7477 167.1310 171.8784 176.1657 162.1904

157.5292 161.2302 172.5100 173.6482 180.5359

165.2980 157.9484 153.2123 149.3829 151.6895

176.1893 140.4903 166.4262 169.5389 170.7983

160.8577 180.0815 170.1690 152.4296 161.3377

153.7019 153.2052 154.6665 165.0762 156.8638

slsfobjs =

155.1226 134.8735 157.4702 175.5171 157.5022

149.5583 161.8988 137.2539 168.5364 145.6560

145.9010 147.0833 164.9165 153.3454 147.7878

162.1048 141.2183 155.6754 175.0442 167.1447

149.3176 165.8587 170.7074 167.2535 162.8967

146.1919 160.0645 169.1112 171.0135 180.5359

165.0536 157.9484 151.5727 146.2796 148.5757

176.5583 134.6508 163.6280 167.7002 170.7983

157.6297 174.8732 170.1690 147.8021 158.3458

149.9343 151.8842 146.9095 165.0762 156.8773

slsfavecomp =

9.4238 10.0025 7.3086 10.5091 10.9520

12.3655 10.0646 9.7169 12.1830 10.6207

9.8937 10.7037 10.8396 10.6308 10.3082

12.6824 10.4018 10.0780 11.3159 9.8767

7.8664 11.0488 11.2325 13.8725 9.8137

9.8248 11.6237 11.8363 10.2217 11.7571

9.6332 10.8471 9.2313 9.9714 7.6692

12.2604 10.6983 9.8968 9.9880 10.4052

9.0252 13.9401 11.7374 11.2188 9.0010

9.6389 11.1433 10.5587 12.0433 10.0619

lcfavecomp =

9.5579 9.9029 7.3889 10.5091 10.9727

12.0652 9.9427 9.5683 11.9311 10.3287

9.5954 10.7387 10.8396 10.7821 10.1598

12.6824 10.3159 10.0983 11.3751 9.8767

7.9715 11.0495 11.3002 13.5104 9.8965

9.6915 11.8489 11.9202 10.2717 11.7571

9.5418 10.8471 9.2362 10.0079 7.7547

12.2419 10.8038 10.0026 10.0778 10.4052

9.1239 13.8551 11.7374 11.2647 8.9786

9.4402 11.2205 10.5741 12.0433 10.1062

lcfaveperccomp =

0.8399 0.8223 0.8430 0.8152 0.8400

0.8250 0.8202 0.8562 0.8146 0.8428

0.8344 0.8426 0.8029 0.8486 0.8158

0.8000 0.8188 0.8500 0.8265 0.8014

0.8338 0.8623 0.8148 0.8161 0.8210

0.8329 0.8273 0.8140 0.8138 0.8180

0.8244 0.8227 0.8949 0.8288 0.8338

0.8242 0.8644 0.8189 0.8175 0.8365

0.8472 0.8203 0.8074 0.8783 0.8520

0.8304 0.8187 0.8292 0.8000 0.8639

lcfavetotprofit =

75.3697 69.8377 67.5937 87.0512 80.1660

84.1515 83.3101 69.0075 90.8602 75.0573

75.6317 74.4835 86.0115 75.1953 77.1205

90.2573 73.2234 76.1632 88.8664 84.2423

69.3043 83.4391 87.6187 95.4631 80.3020

73.9563 81.9948 89.2914 85.0027 92.4841

79.1953 81.3143 68.0500 75.2331 68.2202

93.1267 67.1933 81.1652 81.7138 84.5036

72.8844 99.2460 87.8865 76.2992 73.1387

73.5693 80.4174 77.0112 91.4974 76.9855

slsfavetotprofit =

77.0608 69.2449 69.6792 87.0512 83.6477

85.4553 82.2128 69.3738 89.3270 73.9427

73.4061 77.1340 86.0115 79.5486 75.8216

90.2573 73.9826 76.8279 90.3606 84.2423

71.3059 84.4697 88.7397 94.3502 82.4322

72.2318 86.3836 91.9060 86.1598 92.4841

80.0542 81.3143 70.9212 77.4712 70.1727

93.5611 70.8438 83.3029 83.4981 84.5036

74.6449 100.5318 87.8865 79.7137 74.6750

72.3957 80.6494 78.0864 91.4974 79.0051

returnedobjs =

160.3955 142.1043 157.0844 175.5171 161.9379

157.7299 166.8275 144.5987 170.3154 155.4122

154.4300 145.9761 164.9165 154.2766 155.8713

162.1048 144.6963 157.6066 175.1933 167.1447

149.7477 167.1310 171.8784 176.1657 162.1904

157.5292 161.2302 172.5100 173.6482 180.5359

165.2980 157.9484 153.2123 149.3829 151.6895

176.1893 140.4903 166.4262 169.5389 170.7983

160.8577 180.0815 170.1690 152.4296 161.3377

153.7019 153.2052 154.6665 165.0762 156.8638

slsfobjs =

155.1226 134.8735 157.4702 175.5171 157.5022

149.5583 161.8988 137.2539 168.5364 145.6560

145.9010 147.0833 164.9165 153.3454 147.7878

162.1048 141.2183 155.6754 175.0442 167.1447

149.3176 165.8587 170.7074 167.2535 162.8967

146.1919 160.0645 169.1112 171.0135 180.5359

165.0536 157.9484 151.5727 146.2796 148.5757

176.5583 134.6508 163.6280 167.7002 170.7983

157.6297 174.8732 170.1690 147.8021 158.3458

149.9343 151.8842 146.9095 165.0762 156.8773

lcfrejs =

0.6361 3.1688 0.0489 0.1029 0.6112

1.2387 0.0671 2.2349 0.5038 1.4298

1.1289 2.7319 1.7593 1.7604 1.4536

2.0234 2.4344 1.2773 0.1207 0.4597

0.7005 0.5272 0.5066 1.1231 0.4310

0.7837 1.6102 0.5659 0.0470 0.1468

0.3149 2.0672 1.1241 1.7113 0.5532

0.5531 2.5665 0.2662 0.0989 0.1587

0.1183 0.6430 1.2625 1.7036 0.1564

1.4866 1.8086 1.7722 1.3375 1.2536

slsfrejs =

1.4030 4.7198 0.4043 0.1029 1.9368

3.4898 1.0398 3.8421 1.7774 3.8244

3.1178 3.3804 1.7593 2.0356 3.1019

2.0234 3.5833 1.5144 0.3149 0.4597

0.9963 0.8001 0.6426 2.6039 0.8396

3.2429 2.3442 1.4244 0.3123 0.1468

0.9318 2.0672 1.8954 2.4379 1.5939

0.6636 4.4028 1.0811 0.7624 0.1587

1.2681 1.3346 1.2625 2.7106 1.2653

2.9940 2.7249 2.6757 1.3375 1.5101

lcfunhap =

0.1650 0.0381 0.0236 0.0836 0.0831

0.3377 0.1007 0.0855 0.5433 0.1594

0.0480 0.2393 0.0611 0.1630 0.0668

0.3515 0.1931 0.1315 0.0752 0.1062

0.1235 0.1299 0.1374 0.0528 0.1904

0.0983 0.0412 0.0611 0.0349 0.1175

0.0751 0.0784 0.0470 0.3461 0.2249

0.0517 0.1883 0.0788 0.0443 0.1898

0.0901 0.1311 0.0795 0.1588 0.0438

0.2761 0.1151 0.2864 0.4173 0.0658

slsfunhap =

0.5324 0.0153 0.0292 0.0836 0.2303

0.2672 0.1285 0.1421 0.1502 0.0143

0.0295 0.1274 0.0611 0.3805 0.0618

0.3515 0.1173 0.2359 0.1126 0.1062

0.2648 0.1857 0.2641 0.1108 0.1283

0.0947 0.1492 0.1318 0.1933 0.1175

0.0933 0.0784 0.0822 0.4516 0.1835

0.0587 0.1537 0.1743 0.0987 0.1898

0.1901 0.3990 0.0795 0.1961 0.0634

0.0184 0.1251 0.5174 0.4173 0.0444

menusizes =

4.8000 3.6500 4.6000 4.8500 4.7000

4.7000 4.9500 4.2000 4.8000 4.2000

4.4500 4.7000 4.9000 4.5000 4.7000

4.5000 4.4000 3.9000 5.0000 4.6500

4.6000 4.8000 4.6500 4.6000 4.8000

4.3500 4.6000 4.8000 4.6000 4.6000

4.8500 4.5500 4.0500 4.6000 4.4500

4.9500 4.2000 4.9500 4.7500 4.6500

4.5500 5.0000 3.7000 4.6000 3.9000

4.5500 4.3500 4.7500 5.0000 4.7500

avepij =

0.1472 0.1148 0.1661 0.1464 0.1466

0.1646 0.1643 0.1263 0.1492 0.1319

0.1446 0.1433 0.1523 0.1399 0.1515

0.1229 0.1351 0.1318 0.1707 0.1598

0.1490 0.1501 0.1505 0.1440 0.1546

0.1377 0.1437 0.1613 0.1573 0.1559

0.1601 0.1497 0.1457 0.1416 0.1454

0.1633 0.1165 0.1677 0.1781 0.1594

0.1532 0.1589 0.1226 0.1506 0.1550

0.1456 0.1366 0.1429 0.1500 0.1637

pijover5 =

57 41 69 56 61

68 69 49 60 49

58 59 61 58 66

49 55 57 70 61

60 62 65 65 64

59 52 70 68 67

68 63 59 53 59

69 42 68 76 71

65 65 57 58 65

57 59 53 62 69

pijequal1 =

19 24 38 20 17

32 29 17 20 20

18 25 23 22 17

10 19 20 31 34

26 23 19 18 26

14 22 26 25 23

28 23 34 21 26

24 12 32 39 27

24 21 16 26 38

22 16 20 24 35

runtimes =

319.7069 353.7989 189.9894 314.4955 302.8713

374.2361 240.1777 377.6681 815.2101 589.7606

564.2055 511.0338 437.7018 478.6041 381.2171

416.2546 359.8356 332.4891 211.4545 191.6643

229.3872 223.3094 196.4914 336.7182 299.5220

360.6237 264.9926 174.0814 189.3354 182.9076

314.0887 187.7381 234.1554 351.0790 238.6978

181.5151 399.7249 205.3014 183.9604 184.0425

283.7520 224.9653 249.6044 378.4705 224.6634

389.2121 403.1852 329.2709 230.4992 203.9705

bestest =

162.2117 142.0377 157.4618 176.3504 165.7244

157.9584 167.8670 144.0647 174.1415 153.8293

155.9630 146.8330 166.0780 156.8232 154.9740

167.5731 144.9269 158.8973 176.0957 169.4365

150.3762 168.7518 176.2766 176.2873 164.2688

156.9240 162.3780 173.2613 173.5807 181.7553

167.5635 160.2794 153.5803 152.2701 152.9580

177.6714 138.8164 167.1387 170.5164 172.8617

161.0609 182.7093 171.3936 153.8348 161.8967

155.6517 153.3047 155.9224 169.0740 158.1696

guessbestiter =

3 7 4 0 6

6 6 7 4 6

3 1 0 6 6

0 4 1 4 0

3 1 5 2 3

7 6 7 1 0

4 0 5 3 3

5 4 3 2 0

5 4 0 7 4

5 3 2 0 2

estslsfobjs =

154.1508 133.0240 156.9284 176.3504 159.6525

153.9587 156.9447 139.4096 168.8791 144.9981

146.3885 139.9205 166.0780 150.3920 148.7741

167.5731 142.3714 156.2338 174.8381 169.4365

148.2669 153.5609 172.1684 162.0674 159.6475

147.4821 157.6867 170.8139 170.1072 181.7553

165.4726 160.2794 151.8925 148.7622 149.2646

175.8684 128.8732 160.8065 169.4041 172.8617

157.9822 179.4099 171.3936 147.6703 157.8954

149.9733 153.1137 152.6272 169.0740 156.1934

compportion80 =

0.6979 0.7123 0.6957 0 0.7766

0.7234 0.5758 0.7024 0.7604 0.7619

0.6629 0.6702 0 0.7000 0.6702

0 0.7500 0.6410 0.6500 0

0.7609 0.6771 0.7742 0.6304 0.6771

0.7356 0.7283 0.7917 0.6957 0

0.7423 0 0.7160 0.6413 0.5955

0.7071 0.7738 0.6263 0.6632 0

0.7253 0.6300 0 0.7717 0.7179

0.6374 0.6897 0.6632 0 0.6842

compportionmin =

0.6979 0.7123 0.6957 1.0000 0.7766

0.7234 0.5758 0.7024 0.7604 0.7619

0.6629 0.6702 1.0000 0.7000 0.6702

1.0000 0.7500 0.6410 0.6500 1.0000

0.7609 0.6771 0.7742 0.6304 0.6771

0.7356 0.7283 0.7917 0.6957 1.0000

0.7423 1.0000 0.7160 0.6413 0.5955

0.7071 0.7738 0.6263 0.6632 1.0000

0.7253 0.6300 1.0000 0.7717 0.7179

0.6374 0.6897 0.6632 1.0000 0.6842

**131st experiment, LCF fval b=0.75, min 80 %, f=5) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05,rand scen, =wt**

lcfiterbetter =

0.7800

lcfiterworse =

0.0400

avepercbetter =

0.0195

lcfrejbetter =

0.8000

lcfrejworse =

0.0200

avepercrejbetter =

0.3755

lcfiterave =

160.5518

slsfave =

157.5917

averuntime =

315.4756

avelcfrejs =

1.3140

aveslsfrejs =

2.0844

avelcfunhap =

0.1542

aveslsfunhap =

0.1770

percbetter =

0.0085 0.0476 0.0043 0.0259 0.0183

0.0210 0.0035 0.0162 0.0225 -0.0070

0.0072 0.0295 0.0037 0 0.0218

0.0137 0.0431 0 0.0447 0.0657

0.0084 0 0.0424 0.0205 0.0232

-0.0238 0.0346 0.0405 0 0.0114

0.0100 0.0400 0.0117 0 0.0492

0.0240 0.0400 0.0186 0 0.0026

0.0156 0.0098 0.0241 0 0

0.0158 0.0696 0.0091 0.0884 0

meanfare =

13.0091 14.5922 12.9837 14.8127 10.7962

11.4492 15.1954 12.8822 13.8796 12.5535

16.7117 13.5299 13.8324 13.4866 14.5981

11.1921 11.3488 11.0902 12.5332 14.7880

14.4412 13.4080 13.1271 13.7453 11.7020

10.5491 13.5583 10.7095 16.0460 10.3028

12.1486 11.6754 11.1205 14.9237 12.2104

13.0241 11.6353 14.3985 14.4364 10.7101

12.5768 11.9950 13.3820 13.5999 13.5817

12.2749 12.3914 12.5437 14.4470 12.8098

avelcfavecomp =

10.9268

aveslsfavecomp =

10.9422

avelcfaveperccomp =

0.8292

aveslsfaveperccomp =

0.8116

avelcfavetotprofit =

80.7633

aveslsfavetotprofit =

81.7929

avelcfpercposprofit =

1

returnedobjs =

152.0789 153.5405 170.2651 164.1854 154.5308

156.4105 181.6872 149.4687 143.1020 152.7946

161.7334 168.4462 162.0291 180.3541 171.2558

166.2874 150.3627 162.5552 147.9333 159.6710

176.6530 157.6814 167.5829 171.5569 150.8536

153.1541 159.3061 152.9817 176.3948 143.2179

157.8639 150.6786 144.4036 166.3499 161.4940

170.6700 164.8652 142.2512 179.0757 157.7269

136.9826 163.2400 164.5507 170.1488 156.0419

169.3491 152.9442 169.0651 160.5295 171.2831

slsfobjs =

150.7922 146.5598 169.5433 160.0379 151.7544

153.1994 181.0563 147.0861 139.9590 153.8692

160.5787 163.6274 161.4362 180.3541 167.6099

164.0365 144.1494 162.5552 141.5996 149.8234

175.1865 157.6814 160.7676 168.1182 147.4373

156.8948 153.9725 147.0219 176.3948 141.6042

156.3038 144.8881 142.7317 166.3499 153.9212

166.6667 158.5289 139.6581 179.0757 157.3150

134.8797 161.6550 160.6749 170.1488 156.0419

166.7189 142.9909 167.5470 147.4977 171.2831

slsfavecomp =

10.7950 12.9182 10.5454 13.0214 9.1109

9.4303 12.3549 10.6301 12.5397 10.5610

14.4464 11.5107 11.6362 10.8561 12.4174

9.3067 9.6051 9.1952 11.3788 12.5281

11.7489 11.2687 11.4808 11.3825 9.7853

8.7755 11.4258 9.3591 13.4904 8.7364

10.2812 9.9249 9.7088 12.3506 10.1771

10.7349 9.5363 12.9292 11.6889 8.8815

11.2100 9.9890 10.9267 11.1709 11.3021

10.0304 10.4899 10.2917 12.8526 10.3900

lcfavecomp =

10.8632 12.8175 10.5603 12.8183 9.1813

9.4994 12.3886 10.7933 12.6134 10.6873

14.4982 11.3863 11.7124 10.8561 12.3181

9.3465 9.5908 9.1952 11.0672 12.3729

11.7406 11.2687 11.0391 11.3828 9.8615

8.7990 11.4167 9.1231 13.4904 8.8528

10.2997 9.9729 9.8086 12.3506 10.1086

10.7445 9.6747 12.9328 11.6889 8.8914

11.4292 10.0148 11.0389 11.1709 11.3021

9.9790 10.4425 10.2786 12.2787 10.3900

lcfaveperccomp =

0.8283 0.8199 0.8106 0.8343 0.8807

0.8271 0.8247 0.8281 0.8321 0.8447

0.8206 0.8379 0.8133 0.8113 0.8395

0.8565 0.8426 0.8038 0.8215 0.8197

0.8169 0.8083 0.8766 0.8350 0.8386

0.8290 0.8213 0.8336 0.8007 0.8110

0.8708 0.8252 0.8329 0.8000 0.8491

0.8371 0.8468 0.8384 0.8241 0.8111

0.8297 0.8231 0.8237 0.8412 0.8189

0.8196 0.8388 0.8344 0.8276 0.8000

lcfavetotprofit =

79.7888 83.3478 85.6480 86.5747 70.3668

75.4381 93.8186 76.5593 74.2441 74.6755

89.2806 82.6222 84.3748 89.8600 88.2297

74.6805 72.8740 77.3369 75.6356 85.5231

91.6241 82.9705 79.9676 86.0271 73.1680

73.4329 82.6498 73.1159 96.6110 65.8119

76.9948 73.6981 67.2321 90.4263 80.4110

83.5626 76.2427 74.1678 92.5673 74.7119

69.7640 79.4381 84.4442 87.2031 85.6718

82.8688 77.5935 83.1316 85.3694 86.4062

slsfavetotprofit =

81.0839 85.5601 86.1037 87.7031 73.6042

77.4961 94.9874 79.8345 76.9878 76.9234

91.4718 83.6246 86.2474 89.8600 87.6273

76.4669 73.1090 77.3369 74.8085 83.6632

92.1224 82.9705 80.2990 87.4135 75.3850

74.3654 84.0095 72.5812 96.6110 66.6559

79.7499 75.6157 69.4483 90.4263 81.5622

85.3454 79.4342 76.8727 92.5673 74.9981

72.9366 79.8345 86.2963 87.2031 85.6718

81.8731 79.2719 83.5495 83.6705 86.4062

returnedobjs =

152.0789 153.5405 170.2651 164.1854 154.5308

156.4105 181.6872 149.4687 143.1020 152.7946

161.7334 168.4462 162.0291 180.3541 171.2558

166.2874 150.3627 162.5552 147.9333 159.6710

176.6530 157.6814 167.5829 171.5569 150.8536

153.1541 159.3061 152.9817 176.3948 143.2179

157.8639 150.6786 144.4036 166.3499 161.4940

170.6700 164.8652 142.2512 179.0757 157.7269

136.9826 163.2400 164.5507 170.1488 156.0419

169.3491 152.9442 169.0651 160.5295 171.2831

slsfobjs =

150.7922 146.5598 169.5433 160.0379 151.7544

153.1994 181.0563 147.0861 139.9590 153.8692

160.5787 163.6274 161.4362 180.3541 167.6099

164.0365 144.1494 162.5552 141.5996 149.8234

175.1865 157.6814 160.7676 168.1182 147.4373

156.8948 153.9725 147.0219 176.3948 141.6042

156.3038 144.8881 142.7317 166.3499 153.9212

166.6667 158.5289 139.6581 179.0757 157.3150

134.8797 161.6550 160.6749 170.1488 156.0419

166.7189 142.9909 167.5470 147.4977 171.2831

lcfrejs =

2.1279 2.7786 0.2158 1.4988 0.5778

0.2923 0.1265 1.9194 3.7870 1.9778

2.7773 1.0590 1.4954 0.0121 1.0946

0.0533 1.3951 1.1288 3.0099 1.4184

0.2450 2.0618 0.1578 0.4733 1.2210

1.4427 1.3342 1.2318 1.5473 3.1321

0.7178 1.7914 2.7523 1.8255 0.5122

0.3284 0.0754 3.3961 0.1001 1.1068

3.8192 1.1326 0.6815 0.6281 1.6653

0.2169 1.2772 0.2080 1.3725 0.4981

slsfrejs =

2.4900 3.8107 0.4656 3.0609 1.5560

1.7159 0.3643 2.8457 4.9401 2.4058

3.5315 2.2749 2.0598 0.0121 2.0139

0.9403 2.9055 1.1288 4.2765 3.2848

0.5465 2.0618 2.2962 1.0650 2.4324

1.1148 2.3514 2.7234 1.5473 3.3890

1.5212 2.9982 3.6842 1.8255 1.3925

1.0607 1.2581 5.2418 0.1001 1.4426

4.6253 1.3110 1.1916 0.6281 1.6653

0.6668 2.9474 0.7063 3.8450 0.4981

lcfunhap =

0.4312 0.0763 0.1814 0.2614 0.1280

0.3703 0.0333 0.1997 0.1468 0.1023

0.1249 0.0170 0.2681 0.0084 0.0192

0.0037 0.1824 0.0241 0.0966 0.3465

0.1008 0.1784 0.0899 0.0838 0.1822

0.1158 0.2748 0.0163 0.0888 0.0008

0.1808 0.2019 0.0949 0.2657 0.1093

0.0705 0.0671 0.2950 0.0268 0.1671

0.0979 0.0344 0.2093 0.2951 0.5446

0.1685 0.2920 0.0659 0.2864 0.0814

slsfunhap =

0.4100 0.2002 0.1737 0.0486 0.2518

0.1678 0.0761 0.2260 0.0696 0.1344

0.0901 0.0017 0.2416 0.0084 0.0163

0.0344 0.0922 0.0241 0.0165 0.3455

0.1403 0.1784 0.0254 0.1501 0.2406

0.0790 0.2427 0.0638 0.0888 0.0763

0.2140 0.2424 0.0681 0.2657 0.2792

0.2084 0.3832 0.2040 0.0268 0.1401

0.2064 0.1773 0.4768 0.2951 0.5446

0.2252 0.5600 0.0748 0.2632 0.0814

menusizes =

4.4000 4.1000 4.7500 4.4000 4.5500

4.6500 4.9000 4.7000 3.7000 4.1500

4.2000 3.5500 4.6000 4.4500 4.5500

4.0500 4.6500 4.3500 4.3000 4.7000

5.0000 4.5000 4.3500 4.7000 4.6500

4.6500 4.5500 4.3000 4.2500 3.3000

4.8500 4.3000 4.1000 4.7500 5.0000

4.8500 4.5500 4.1000 4.8500 4.4000

3.6000 4.6500 4.7000 5.0000 4.6000

4.9500 4.6500 4.9500 4.5000 4.7500

avepij =

0.1220 0.1257 0.1527 0.1488 0.1554

0.1601 0.1651 0.1363 0.1155 0.1298

0.1236 0.1368 0.1445 0.1710 0.1556

0.1565 0.1394 0.1556 0.1287 0.1330

0.1754 0.1255 0.1531 0.1552 0.1463

0.1474 0.1367 0.1408 0.1414 0.1202

0.1626 0.1375 0.1257 0.1391 0.1638

0.1552 0.1583 0.1164 0.1683 0.1461

0.1135 0.1474 0.1539 0.1597 0.1371

0.1551 0.1414 0.1763 0.1349 0.1535

pijover5 =

45 56 62 68 62

65 70 49 46 56

48 58 56 72 67

68 53 66 50 53

80 48 66 68 64

60 57 54 62 53

69 55 51 57 65

67 65 49 70 65

45 62 69 63 57

67 54 71 53 64

pijequal1 =

25 17 22 23 33

29 23 16 14 16

20 25 15 36 30

30 24 30 20 10

28 16 28 23 16

23 17 28 24 27

28 19 11 19 31

21 25 8 34 20

22 23 24 27 21

18 22 41 16 24

runtimes =

367.0324 389.8285 282.3096 362.8271 243.6023

382.4211 210.5423 404.7024 404.1765 417.4178

401.2059 319.7237 391.5901 195.5593 333.4230

287.8710 377.9255 194.9000 385.4317 378.7269

243.5407 381.8288 283.1741 191.9379 350.4973

170.9414 390.6752 328.7031 351.8394 353.5123

197.3013 192.6523 375.4376 289.9505 207.1744

202.6584 233.0577 499.7898 189.3726 355.1954

389.1961 281.1607 326.7077 366.9706 382.8620

309.9959 356.0576 193.1349 371.1280 276.1080

bestest =

156.4648 156.1763 173.2257 166.4501 156.9800

160.7125 183.6074 155.9845 145.7041 153.6940

161.3586 167.4392 163.9129 179.2994 171.0480

166.3413 151.7292 162.4919 148.7322 165.5442

179.1326 159.7826 169.2054 173.0065 150.4204

157.1950 160.6071 152.9190 178.2788 143.5099

160.3624 155.3216 147.3753 172.9668 164.7046

170.2639 166.6922 148.1383 179.8825 160.2790

139.5193 163.5217 167.5810 174.9615 165.6430

171.8374 156.5067 170.0729 163.1980 171.4182

guessbestiter =

1 4 6 4 4

7 4 1 1 3

1 4 2 0 2

3 3 0 4 4

7 0 3 2 7

1 3 6 0 3

3 4 6 0 6

1 5 5 0 3

6 4 6 0 0

3 4 4 7 0

estslsfobjs =

151.8598 146.3403 169.9414 159.8589 148.6318

151.4819 180.0893 145.0000 140.0858 152.4311

157.7291 165.6622 163.6451 179.2994 168.2586

163.7026 135.8484 162.4919 142.2890 153.7361

175.0577 159.7826 159.9080 167.7166 145.6942

156.1137 150.9379 147.4044 178.2788 138.0352

157.9056 144.9838 142.6859 172.9668 159.8115

163.9751 160.4758 140.7339 179.8825 158.5844

134.7961 163.3876 162.6853 174.9615 165.6430

169.0950 151.8458 168.0935 147.9542 171.4182

compportion80 =

0.6932 0.7805 0.5684 0.6250 0.7253

0.6667 0.6122 0.7128 0.7568 0.7711

0.7500 0.6761 0.6522 0 0.6374

0.7037 0.7419 0 0.6628 0.6170

0.6500 0 0.6897 0.5638 0.6774

0.6237 0.7363 0.6163 0 0.6667

0.7216 0.6744 0.7195 0 0.7500

0.7113 0.7253 0.6951 0 0.6591

0.6528 0.6667 0.6915 0 0

0.6465 0.7634 0.7071 0.7444 0

compportionmin =

0.6932 0.7805 0.5684 0.6250 0.7253

0.6667 0.6122 0.7128 0.7568 0.7711

0.7500 0.6761 0.6522 1.0000 0.6374

0.7037 0.7419 1.0000 0.6628 0.6170

0.6500 1.0000 0.6897 0.5638 0.6774

0.6237 0.7363 0.6163 1.0000 0.6667

0.7216 0.6744 0.7195 1.0000 0.7500

0.7113 0.7253 0.6951 1.0000 0.6591

0.6528 0.6667 0.6915 1.0000 1.0000

0.6465 0.7634 0.7071 0.7444 1.0000

**132nd experiment, LCF fval b=0.75, min 80 %, f=10) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05,rand scen, =wt**

lcfiterbetter =

0.8200

lcfiterworse =

0.0200

avepercbetter =

0.0322

lcfrejbetter =

0.8400

lcfrejworse =

0

avepercrejbetter =

0.5248

lcfiterave =

259.7906

slsfave =

252.0261

averuntime =

280.8058

avelcfrejs =

0.7227

aveslsfrejs =

1.7232

avelcfunhap =

0.1730

aveslsfunhap =

0.1638

percbetter =

0.0186 0.0228 0.1251 0.0814 0.0509

0.0409 0.0048 0.0503 0.0192 0.0497

0.0007 0.0708 0.0131 0 0.0632

0.0321 0.0192 0 0.0853 0.0121

0.0424 -0.0006 0.0515 0 0.0164

0.0469 0.0271 0.0604 0.0662 0.0559

0.0219 0.0568 0.0475 0.0067 0

0 0 0.0375 0.0001 0.0005

0.0826 0.0268 0 0.0178 0.0081

0 0.0974 0.0279 0.0002 0.0520

avelcfavecomp =

10.8217

aveslsfavecomp =

10.8471

avelcfaveperccomp =

0.8337

aveslsfaveperccomp =

0.8095

avelcfavetotprofit =

81.7159

aveslsfavetotprofit =

83.3293

avelcfpercposprofit =

1

returnedobjs =

263.1614 258.1370 252.2569 257.8247 269.1133

246.7416 249.9699 243.9788 250.1122 251.0214

258.0201 237.7494 255.6653 278.2490 262.0668

265.5868 254.2862 259.2062 254.7887 260.8802

254.4122 284.6831 259.9505 256.7613 266.6487

256.4808 265.4962 253.0592 261.9333 274.4151

263.5070 256.8882 260.9700 266.5346 267.4625

268.4364 258.9180 239.9930 272.6238 258.2461

272.7486 262.6890 284.9478 267.0033 263.1552

262.1922 250.3905 247.8036 285.1393 217.2238

slsfobjs =

258.3454 252.3713 224.2000 238.4069 256.0824

237.0418 248.7852 232.2945 245.4088 239.1334

257.8319 222.0216 252.3472 278.2490 246.4917

257.3150 249.4948 259.2062 234.7616 257.7669

244.0637 284.8518 247.2084 256.7613 262.3555

244.9930 258.4816 238.6430 245.6751 259.8920

257.8592 243.0920 249.1442 264.7509 267.4625

268.4364 258.9180 231.3247 272.5853 258.1130

251.9417 255.8412 284.9478 262.3431 261.0381

262.1922 228.1655 241.0881 285.0844 206.4944

slsfavecomp =

11.1091 11.9308 12.1371 12.0893 11.4147

10.8749 10.8309 8.1151 10.3779 12.1093

9.5692 9.7292 11.2577 12.0923 11.0330

9.9182 9.7908 10.2418 8.6999 10.5978

11.3863 12.5149 11.0394 9.2285 10.9926

11.2562 9.8725 10.8341 10.6677 12.5134

9.6207 10.8711 10.4831 11.6035 12.1634

10.4929 10.4749 8.7434 11.1560 13.0870

10.6430 12.0580 12.2771 11.2627 9.5834

10.3926 11.6843 9.4172 11.9611 10.1553

lcfavecomp =

11.2121 12.1224 11.6375 11.6129 11.4226

10.8478 10.9931 7.9730 10.4688 11.8803

9.6725 9.5501 11.3540 12.0923 11.1717

10.0633 9.8270 10.2418 8.5444 10.6945

11.3394 12.5652 11.0276 9.2285 11.0015

11.1017 9.9213 10.5904 10.7392 12.3233

9.5602 10.7353 10.3915 11.6669 12.1634

10.4929 10.4749 8.8169 11.1690 13.1128

10.2923 12.1072 12.2771 11.2499 9.6514

10.3926 11.4572 9.5809 12.0126 10.2599

lcfaveperccomp =

0.8153 0.8698 0.8535 0.8406 0.8650

0.8422 0.8283 0.8578 0.8346 0.8110

0.8440 0.8618 0.8160 0.8087 0.8295

0.8187 0.8277 0.8168 0.8834 0.8175

0.8659 0.8047 0.8326 0.8044 0.8337

0.8310 0.8338 0.8788 0.8685 0.8264

0.8425 0.8236 0.8559 0.8178 0.8116

0.8018 0.8125 0.8877 0.8110 0.8169

0.8226 0.8358 0.8071 0.8322 0.8144

0.8168 0.8464 0.8539 0.8128 0.8375

lcfavetotprofit =

84.9982 80.8412 79.9650 83.1997 81.0324

78.3058 79.4784 66.8300 77.9325 87.6603

75.3997 70.1342 84.3729 94.8753 81.7738

80.1252 75.9778 84.1434 67.3679 82.8271

76.8249 97.0296 82.4466 78.1751 83.6573

81.8730 80.1122 77.0807 76.5126 92.7925

79.1129 82.7225 77.1240 86.5793 94.3192

87.0492 84.6546 65.1226 88.6181 89.3397

83.6048 88.4172 96.7454 86.4767 79.9063

84.5300 78.2832 70.3282 93.9732 65.1409

slsfavetotprofit =

86.9338 86.6978 78.4258 81.8839 85.3294

82.0749 84.1413 66.0526 80.4974 85.2233

78.8540 70.6140 86.9761 94.8753 85.7023

82.6917 77.5743 84.1434 67.4549 85.3409

82.1193 98.1335 85.0643 78.1751 85.0309

81.8862 81.5683 78.7503 81.8957 91.3034

79.9557 83.0634 80.0860 91.0100 94.3192

87.0492 84.6546 68.6421 90.1823 92.3718

80.7244 90.4362 96.7454 87.5212 81.7969

84.5300 78.8316 75.5517 95.0727 68.5059

returnedobjs =

263.1614 258.1370 252.2569 257.8247 269.1133

246.7416 249.9699 243.9788 250.1122 251.0214

258.0201 237.7494 255.6653 278.2490 262.0668

265.5868 254.2862 259.2062 254.7887 260.8802

254.4122 284.6831 259.9505 256.7613 266.6487

256.4808 265.4962 253.0592 261.9333 274.4151

263.5070 256.8882 260.9700 266.5346 267.4625

268.4364 258.9180 239.9930 272.6238 258.2461

272.7486 262.6890 284.9478 267.0033 263.1552

262.1922 250.3905 247.8036 285.1393 217.2238

slsfobjs =

258.3454 252.3713 224.2000 238.4069 256.0824

237.0418 248.7852 232.2945 245.4088 239.1334

257.8319 222.0216 252.3472 278.2490 246.4917

257.3150 249.4948 259.2062 234.7616 257.7669

244.0637 284.8518 247.2084 256.7613 262.3555

244.9930 258.4816 238.6430 245.6751 259.8920

257.8592 243.0920 249.1442 264.7509 267.4625

268.4364 258.9180 231.3247 272.5853 258.1130

251.9417 255.8412 284.9478 262.3431 261.0381

262.1922 228.1655 241.0881 285.0844 206.4944

lcfrejs =

0.5587 0.6358 1.3033 0.9789 0.0659

0.5874 1.2841 1.0726 1.1597 1.4388

0.3839 1.0559 1.1331 0.4116 0.4648

0.1431 1.1698 0.6841 0.2782 0.8066

0.8445 0.0933 0.8983 1.0231 0.3764

0.8833 0.1485 0.6170 0.2470 0.2196

0.0583 0.8000 0.1800 0.4592 0.6551

0.4254 1.1450 1.1692 0.1350 1.8868

0.1002 0.6840 0.1044 0.4907 0.3632

0.9787 1.3293 0.7528 0.0583 3.3932

slsfrejs =

1.2285 2.0717 4.2513 3.1047 1.8950

2.3800 2.0251 2.4645 2.0825 2.8425

1.1740 3.4533 1.5643 0.4116 1.7431

1.0481 1.7150 0.6841 2.4880 1.3829

2.5262 0.1853 2.1063 1.0231 1.0279

2.4521 0.7975 2.6284 1.6097 1.7021

0.8693 2.1596 1.9726 0.9213 0.6551

0.4254 1.1450 2.2420 0.4531 2.3812

2.0340 1.0691 0.1044 1.1201 0.7773

0.9787 3.6293 2.0987 0.1202 4.9327

lcfunhap =

0.3018 0.2135 0.1557 0.1300 0.0280

0.2468 0.2673 0.1176 0.3466 0.3829

0.2508 0.4725 0.1060 0.0301 0.1630

0.0465 0.0939 0.1374 0.0861 0.1677

0.2332 0.0275 0.1362 0.0264 0.3037

0.3125 0.0547 0.4544 0.0973 0.1765

0.0517 0.3884 0.1139 0.1224 0.3284

0.1450 0.1634 0.1510 0.1023 0.1021

0.0605 0.3104 0.0340 0.1129 0.0910

0.1431 0.1464 0.2112 0.0071 0.2986

slsfunhap =

0.2934 0.0800 0.1367 0.1197 0.1252

0.1533 0.2026 0.0044 0.1577 0.1294

0.1090 0.0580 0.1901 0.0301 0.4104

0.2589 0.3103 0.1374 0.1243 0.1957

0.1659 0.0546 0.2922 0.0264 0.2539

0.1049 0.4015 0.0510 0.4427 0.1440

0.1088 0.3060 0.0195 0.2574 0.3284

0.1450 0.1634 0.3246 0.0534 0.0328

0.0213 0.4164 0.0340 0.1290 0.1050

0.1431 0.1104 0.1520 0.0232 0.1522

menusizes =

4.7500 4.7500 4.3000 4.7000 4.6500

5.0000 4.6000 4.4000 4.5000 4.6500

4.6000 4.7000 4.9000 4.9000 4.9500

4.9500 4.4000 4.9000 4.6000 4.8500

4.4500 4.8000 5.0000 4.5000 4.9000

4.7000 4.7500 4.9500 4.8000 4.9000

4.8500 4.8500 4.6000 4.9000 4.8000

4.8000 4.9000 4.4500 4.9000 4.7000

4.9000 4.9000 4.4500 4.9000 4.8000

5.0000 4.5500 4.6500 4.7000 4.1500

avepij =

0.1504 0.1508 0.1314 0.1481 0.1628

0.1589 0.1501 0.1504 0.1462 0.1409

0.1457 0.1359 0.1537 0.1663 0.1524

0.1592 0.1521 0.1558 0.1464 0.1633

0.1416 0.1612 0.1655 0.1493 0.1557

0.1448 0.1627 0.1389 0.1476 0.1559

0.1646 0.1463 0.1535 0.1628 0.1451

0.1600 0.1550 0.1464 0.1667 0.1540

0.1452 0.1518 0.1568 0.1555 0.1618

0.1664 0.1396 0.1510 0.1777 0.1236

pijover5 =

67 61 50 62 71

62 66 60 60 52

60 55 60 69 65

69 68 60 60 68

58 72 69 65 62

63 69 55 56 66

66 57 64 68 60

68 61 61 68 65

59 62 74 60 71

69 63 61 76 46

pijequal1 =

20 24 19 23 22

24 24 30 23 19

25 17 27 30 17

23 21 28 19 29

23 27 28 22 25

15 29 15 19 20

30 20 26 22 22

26 31 28 33 29

25 24 27 26 30

28 16 25 34 17

runtimes =

317.5874 293.2271 344.6518 303.9085 341.4016

300.7242 189.5771 369.7235 365.1765 389.9762

255.9702 348.4474 192.7140 193.5700 287.3539

284.4279 276.0228 190.4277 325.0522 194.1271

387.2620 195.1927 183.1990 252.7863 238.1369

332.7022 198.6219 369.6671 229.5339 376.8312

236.8044 354.7811 377.3690 221.0618 292.4699

241.6152 251.3391 256.5453 212.6825 216.3269

345.6757 293.6262 192.3488 266.3577 261.1965

205.1988 399.1774 311.9951 190.0030 385.7168

bestest =

268.3495 259.1339 256.9630 258.5916 268.9545

249.3821 256.7301 244.3577 253.5297 255.9115

261.1494 242.0771 256.9620 281.3686 263.7285

262.0648 256.3181 266.0088 253.2581 267.6059

260.4948 285.5593 265.0563 257.2960 272.1571

261.9547 266.7536 249.7943 258.3647 279.5855

264.2451 260.4553 262.2907 268.6073 277.1292

269.8901 264.5305 241.2231 274.9038 263.5374

273.9756 269.3172 285.9785 271.9526 266.8894

266.7146 252.5871 250.5497 284.8552 225.5647

guessbestiter =

1 4 5 3 7

7 4 5 3 2

5 5 2 0 5

6 2 0 2 1

2 3 4 0 5

4 2 3 4 4

5 2 5 5 0

0 0 4 2 1

7 1 0 5 2

0 7 2 1 2

estslsfobjs =

243.6488 249.9646 224.4343 224.9305 257.4945

243.6834 242.9925 234.9943 245.0890 234.1627

260.0653 221.1090 249.3981 281.3686 249.9240

249.9050 248.0920 266.0088 235.4367 261.2394

243.8534 282.6696 249.4771 257.2960 261.5915

241.1716 259.2959 244.5983 248.5333 256.7681

258.9772 251.9154 249.8218 267.0725 277.1292

269.8901 264.5305 225.8934 272.3636 257.1507

250.8245 255.8407 285.9785 268.5486 263.9560

266.7146 226.8535 236.0382 283.6301 199.3983

compportion80 =

0.7474 0.7368 0.7558 0.6702 0.6452

0.6900 0.7717 0.6477 0.6556 0.7097

0.7065 0.6915 0.6735 0 0.6869

0.5859 0.6705 0 0.6630 0.6392

0.7528 0.5938 0.6700 0 0.5510

0.6489 0.6632 0.6970 0.6667 0.6633

0.6907 0.6082 0.7500 0.6224 0

0 0 0.7640 0.6939 0.5638

0.6837 0.6531 0 0.6633 0.6146

0 0.7582 0.7957 0.6702 0.6867

compportionmin =

0.7474 0.7368 0.7558 0.6702 0.6452

0.6900 0.7717 0.6477 0.6556 0.7097

0.7065 0.6915 0.6735 1.0000 0.6869

0.5859 0.6705 1.0000 0.6630 0.6392

0.7528 0.5938 0.6700 1.0000 0.5510

0.6489 0.6632 0.6970 0.6667 0.6633

0.6907 0.6082 0.7500 0.6224 1.0000

1.0000 1.0000 0.7640 0.6939 0.5638

0.6837 0.6531 1.0000 0.6633 0.6146

1.0000 0.7582 0.7957 0.6702 0.6867

**133rd experiment, LCF base model experiment b=0.75, min 80 %, f=20) –10 fixed scens, gp=.05,rand scen, =wt**



**134th experiment, LCF fval b=0.75, min 80 %, f=5) –5 fixed scens, 5 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05,rand scen, =wt**

lcfiterbetter =

0.6600

lcfiterworse =

0.1200

avepercbetter =

0.0143

lcfrejbetter =

0.7800

lcfrejworse =

0

avepercrejbetter =

0.3954

lcfiterave =

163.4097

slsfave =

161.1777

averuntime =

191.2931

avelcfrejs =

1.0255

aveslsfrejs =

1.6692

avelcfunhap =

0.1159

aveslsfunhap

0.1763

percbetter =

0.0202 0.0283 0.0176 0.0193 0.0279

0.0059 0.0599 0.0100 0 0

0 0.0060 0.0635 -0.0101 0.0077

0 0.0301 0 0.0154 0.0197

0.0832 0 -0.0055 0.0062 0.0346

0.0129 0.0429 0 0.0094 -0.0095

0.0102 0 0.0116 0.0222 0.0280

0.0033 0.0080 0.0050 -0.0029 0.0151

0.0274 0 0 -0.0054 -0.0025

0 0.0290 0.0090 0.0260 0.0378

meanfare =

12.5033 13.1158 15.3293 12.3275 15.7294

12.3011 13.2196 10.5586 11.5562 13.3618

12.8471 13.1801 13.1148 11.8211 10.8725

13.1908 11.2915 14.6930 13.9062 11.0686

13.7516 12.1936 11.7097 12.7438 12.3945

12.0816 11.9088 14.3653 14.4805 12.5221

12.7691 14.5886 10.8385 11.4208 14.0998

8.4637 12.6821 12.8156 13.3781 14.4656

12.4518 13.0239 14.3569 15.3698 15.1100

14.0652 16.4599 13.3774 10.9826 10.6001

avelcfavecomp =

10.7851

aveslsfavecomp =

10.7553

avelcfaveperccomp =

0.8278

aveslsfaveperccomp =

0.8110

avelcfavetotprofit =

81.4955

aveslsfavetotprofit =

82.9549

avelcfpercposprofit =

1

returnedobjs =

162.7506 165.7399 158.7852 172.4989 181.5257

152.6035 156.2527 153.1400 142.5704 168.3656

150.3705 161.2465 162.3485 156.0965 167.0382

166.3829 152.8563 173.7062 174.1146 159.4065

164.8878 172.9389 154.6436 172.2182 149.6599

162.4508 148.5501 182.1434 177.7100 159.2381

165.7489 174.2937 153.6806 165.4779 164.1060

147.9376 159.1178 166.3228 155.6162 164.5645

167.7946 170.4924 176.9470 177.0545 177.5215

157.8899 181.8195 164.1000 147.6997 150.0580

slsfobjs =

159.5256 161.1802 156.0352 169.2364 176.6018

151.7012 147.4168 151.6206 142.5704 168.3656

150.3705 160.2920 152.6480 157.6856 165.7649

166.3829 148.3910 173.7062 171.4740 156.3298

152.2223 172.9389 155.5036 171.1606 144.6600

160.3753 142.4340 182.1434 176.0528 160.7718

164.0750 174.2937 151.9250 161.8791 159.6418

147.4453 157.8615 165.5010 156.0622 162.1222

163.3160 170.4924 176.9470 178.0120 177.9734

157.8899 176.6992 162.6349 143.9536 144.5979

slsfavecomp =

10.4071 11.1317 13.3821 10.0284 12.8733

10.4022 11.0483 8.9221 10.0906 11.0454

10.9675 11.0033 11.3732 10.0366 8.8410

10.8974 9.6254 12.1952 11.4928 9.1614

11.8576 9.8734 9.5366 10.3350 10.4104

9.9726 10.2740 11.6261 11.6694 10.4470

10.5116 12.0484 8.8575 9.3272 11.9116

7.2597 10.6026 10.4509 11.0959 12.1575

10.1782 10.7034 11.7119 12.5318 12.2555

12.2798 13.4425 11.0490 9.3202 9.1416

lcfavecomp =

10.4553 10.9123 13.2474 10.0012 12.8130

10.5224 11.1198 8.9759 10.0906 11.0454

10.9675 11.0158 11.0095 10.0763 8.8711

10.8974 9.9549 12.1952 11.4594 9.2316

11.4845 9.8734 9.7370 10.4728 10.5105

9.9987 10.3375 11.6261 11.7423 10.5326

10.5438 12.0484 9.0027 9.3943 11.8046

7.1885 10.7918 10.5127 11.2994 12.3401

10.2208 10.7034 11.7119 12.6697 12.3221

12.2798 13.5434 11.2231 9.4800 8.9993

lcfaveperccomp =

0.8586 0.8235 0.8328 0.8121 0.8081

0.8383 0.8365 0.8412 0.8067 0.8054

0.8058 0.8222 0.8309 0.8458 0.8205

0.8064 0.8562 0.8000 0.8393 0.8372

0.8523 0.8146 0.8474 0.8218 0.8270

0.8277 0.8288 0.8231 0.8079 0.8315

0.8106 0.8194 0.8301 0.8312 0.8304

0.8868 0.8547 0.8284 0.8345 0.8155

0.8196 0.8194 0.8061 0.8334 0.8120

0.8001 0.8180 0.8179 0.8647 0.8500

lcfavetotprofit =

78.9114 81.2831 83.6307 83.5762 96.0879

74.6013 79.9466 71.1740 74.4228 86.8584

79.0970 81.1132 81.6156 76.1268 77.3147

85.0532 69.2677 91.7036 87.5426 75.1429

82.5227 83.9223 75.4357 82.6066 72.6872

79.9062 73.5141 92.5209 92.3374 78.3048

82.8076 91.9768 73.6490 77.2384 83.3723

63.1326 79.0394 82.4029 77.8909 87.1505

81.9571 85.9244 91.8982 92.6658 93.6575

83.2987 95.6041 81.2672 70.8623 70.7514

slsfavetotprofit =

81.9928 81.3576 83.3754 83.6031 96.3589

80.1365 84.1335 72.5471 74.4228 86.8584

79.0970 82.9603 79.5143 79.0879 78.1586

85.0532 74.0155 91.7036 88.3937 77.9743

81.2604 83.9223 78.8426 86.1059 73.9940

80.7205 77.1821 92.5209 94.0629 81.9170

83.0153 91.9768 76.2033 79.0001 84.1519

64.1294 82.1650 83.9199 81.8867 86.6407

83.9219 85.9244 91.8982 95.7210 95.9674

83.2987 97.8764 84.8745 72.8529 71.0458

returnedobjs =

162.7506 165.7399 158.7852 172.4989 181.5257

152.6035 156.2527 153.1400 142.5704 168.3656

150.3705 161.2465 162.3485 156.0965 167.0382

166.3829 152.8563 173.7062 174.1146 159.4065

164.8878 172.9389 154.6436 172.2182 149.6599

162.4508 148.5501 182.1434 177.7100 159.2381

165.7489 174.2937 153.6806 165.4779 164.1060

147.9376 159.1178 166.3228 155.6162 164.5645

167.7946 170.4924 176.9470 177.0545 177.5215

157.8899 181.8195 164.1000 147.6997 150.0580

slsfobjs =

159.5256 161.1802 156.0352 169.2364 176.6018

151.7012 147.4168 151.6206 142.5704 168.3656

150.3705 160.2920 152.6480 157.6856 165.7649

166.3829 148.3910 173.7062 171.4740 156.3298

152.2223 172.9389 155.5036 171.1606 144.6600

160.3753 142.4340 182.1434 176.0528 160.7718

164.0750 174.2937 151.9250 161.8791 159.6418

147.4453 157.8615 165.5010 156.0622 162.1222

163.3160 170.4924 176.9470 178.0120 177.9734

157.8899 176.6992 162.6349 143.9536 144.5979

lcfrejs =

0.3170 1.0869 2.1547 0.0536 0.3463

1.0757 0.8820 1.1525 3.6503 1.1640

3.1351 1.1259 0.9581 1.3660 0.1091

1.2188 1.5449 1.2588 0.4620 0.4727

0.7079 0.4070 0.5663 0.0691 2.6776

0.9440 2.1187 0.1496 0.1301 0.9153

1.2763 1.0498 0.5806 0.1607 1.1765

0.5858 1.1136 0.6455 1.3910 1.4099

0.4924 0.8323 0.5932 0.3933 0.3461

3.0288 0.2536 1.3058 1.2806 1.1401

slsfrejs =

1.2284 2.2737 3.5772 0.5109 0.9391

2.6792 1.9237 1.5740 3.6503 1.1640

3.1351 2.0875 3.2857 1.7887 0.3890

1.2188 2.2932 1.2588 1.1199 1.3621

3.2067 0.4070 0.7170 0.7830 3.7042

1.5474 2.4812 0.1496 0.4132 1.6237

1.4823 1.0498 1.6725 0.8778 2.5454

1.5766 1.6447 0.9703 2.1986 2.2861

1.1696 0.8323 0.5932 0.8520 0.5188

3.0288 1.4242 1.9740 1.9488 2.3199

lcfunhap =

0.0771 0.0312 0.1403 0.0261 0.1871

0.2204 0.1108 0.1337 0.1372 0.2388

0.0360 0.2934 0.1333 0.1171 0.0154

0.0816 0.0737 0.0406 0.0165 0.0436

0.2519 0.0264 0.2901 0.0046 0.0893

0.0275 0.1139 0.0627 0.0099 0.1069

0.1090 0.0782 0.2906 0.0927 0.1030

0.3815 0.1338 0.0938 0.2176 0.2760

0.1422 0.0275 0.0543 0.1157 0.1315

0.1217 0.0224 0.1027 0.0935 0.0725

slsfunhap =

0.2808 0.0786 0.0423 0.1571 0.2618

0.1393 0.5312 0.2800 0.1372 0.2388

0.0360 0.1364 0.0343 0.0917 0.0611

0.0816 0.3384 0.0406 0.0283 0.2062

0.1420 0.0264 0.7257 0.0295 0.1591

0.0504 0.7144 0.0627 0.1799 0.0641

0.2989 0.0782 0.2581 0.2773 0.0945

0.0924 0.2709 0.1782 0.2134 0.1828

0.2172 0.0275 0.0543 0.1150 0.1586

0.1217 0.1767 0.1349 0.3618 0.1457

menusizes =

4.8000 4.4500 4.4000 4.5500 4.7000

4.8500 5.0000 4.4500 4.4000 4.7500

4.3500 4.7500 4.7000 4.7500 4.7000

4.4500 4.2500 4.7000 4.8000 4.9500

4.4500 4.6500 4.7000 4.8000 3.9500

4.6500 3.9000 4.9000 5.0000 4.8000

4.6000 5.0000 4.7500 4.2500 4.6500

4.6000 4.8000 5.0000 4.3500 4.6000

4.9000 4.8000 4.8500 4.9500 4.9000

4.0500 4.5500 4.4500 4.5500 4.5500

avepij =

0.1578 0.1499 0.1406 0.1703 0.1601

0.1567 0.1552 0.1491 0.1373 0.1399

0.1305 0.1518 0.1522 0.1579 0.1623

0.1485 0.1392 0.1463 0.1691 0.1769

0.1374 0.1795 0.1481 0.1766 0.1221

0.1574 0.1288 0.1731 0.1746 0.1527

0.1558 0.1706 0.1582 0.1451 0.1435

0.1438 0.1514 0.1554 0.1389 0.1571

0.1593 0.1620 0.1619 0.1630 0.1601

0.1100 0.1578 0.1530 0.1508 0.1493

pijover5 =

63 67 62 76 73

63 68 65 52 55

48 63 66 69 65

64 60 64 69 76

56 74 62 74 50

67 58 73 72 65

64 76 71 68 57

57 67 60 64 69

69 66 74 71 65

48 69 68 63 60

pijequal1 =

19 24 21 35 22

26 18 21 27 22

22 20 20 22 31

30 18 21 33 37

23 44 21 36 18

29 17 29 37 25

27 29 25 19 19

26 23 19 17 26

24 29 25 23 28

10 24 26 24 30

runtimes =

186.1565 233.0261 320.1473 152.6236 140.0249

122.0889 212.0120 196.9812 315.6460 299.4983

132.5984 287.7577 315.4420 126.5305 114.2708

212.8148 251.6413 197.4353 121.4588 119.5578

312.1437 114.0256 181.3744 110.8418 312.1702

149.0341 268.0776 112.0655 124.0222 123.6346

159.7314 115.6575 203.0067 150.7289 239.4152

154.7877 109.6668 178.4003 301.6796 285.7263

115.1470 112.3599 129.7742 115.3998 205.6660

311.8130 178.6119 170.0157 298.1409 163.8242

bestest =

164.1244 166.3435 159.7074 172.1945 184.4111

155.8161 156.6058 153.7443 147.0834 168.0121

155.6243 161.0385 163.0966 158.5202 167.8744

169.0259 153.3781 173.6419 175.7623 160.9354

170.1412 173.8069 163.4856 172.0295 150.3323

161.1165 149.0390 182.9984 178.5522 160.5894

168.3572 173.4599 157.2179 166.3702 169.8808

151.3985 162.3451 166.5224 157.8713 166.3401

170.4518 171.0578 178.2490 183.7906 181.1459

159.7647 182.5219 166.7879 148.6613 150.6083

guessbestiter =

4 3 7 3 5

7 6 1 0 0

0 2 3 1 2

0 4 0 3 3

5 0 4 6 1

5 3 0 3 3

4 0 4 3 5

3 5 1 1 6

6 0 0 2 3

0 3 4 7 2

estslsfobjs =

162.6948 158.1574 151.4406 169.0888 176.4165

152.8303 134.5116 152.3439 147.0834 168.0121

155.6243 153.6313 151.3179 152.2480 165.9774

169.0259 146.3537 173.6419 172.8647 145.6876

150.2420 173.8069 145.9907 170.5117 146.7250

151.5730 146.1723 182.9984 176.7574 158.3263

159.8389 173.4599 154.9298 164.4008 161.8773

146.6676 154.5399 164.3524 153.2154 163.6942

158.8365 171.0578 178.2490 174.9713 180.1521

159.7647 178.6023 161.6614 136.3782 147.3505

compportion80 =

0.7396 0.6292 0.6818 0.7143 0.6702

0.6907 0.7500 0.6629 0 0

0 0.7263 0.6809 0.7053 0.6489

0 0.8000 0 0.6042 0.5758

0.7416 0 0.7234 0.5729 0.7089

0.5806 0.8077 0 0.6100 0.6875

0.7174 0 0.6947 0.6824 0.6774

0.7283 0.7188 0.6600 0.7471 0.7609

0.7041 0 0 0.6263 0.7245

0 0.6044 0.6292 0.7033 0.7363

compportionmin =

0.7396 0.6292 0.6818 0.7143 0.6702

0.6907 0.7500 0.6629 1.0000 1.0000

1.0000 0.7263 0.6809 0.7053 0.6489

1.0000 0.8000 1.0000 0.6042 0.5758

0.7416 1.0000 0.7234 0.5729 0.7089

0.5806 0.8077 1.0000 0.6100 0.6875

0.7174 1.0000 0.6947 0.6824 0.6774

0.7283 0.7188 0.6600 0.7471 0.7609

0.7041 1.0000 1.0000 0.6263 0.7245

1.0000 0.6044 0.6292 0.7033 0.7363

**135th experiment, LCF fval b=1, min 80 %, f=5) –5 fixed scens, 5 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05,rand scen, =wt**

lcfiterbetter =

0.6000

lcfiterworse =

0.1200

avepercbetter =

0.0091

lcfrejbetter =

0.7000

lcfrejworse =

0.0200

avepercrejbetter =

0.2547

lcfiterave =

166.1530

slsfave =

164.7162

averuntime =

194.8922

avelcfrejs =

0.9797

aveslsfrejs =

1.3688

avelcfunhap =

0.1572

aveslsfunhap =

0.1540

percbetter =

0.0274 0.0073 0.0142 0.0015 0.0073

0 0 0.0171 0.0002 -0.0071

0.0011 0.0154 0 -0.0040 0

0.0005 0.0305 0 -0.0053 0.0011

0.0185 0 0.0041 0.0112 0.0221

-0.0008 0.0318 0 0 -0.0034

0.0148 0 0.0287 0.0435 0

0.0469 0.0082 0 0 -0.0112

0.0080 0.0149 0.0178 0 0.0146

0.0153 0 0.0281 0.0331 0.0001

avelcfavecomp =

10.8910

aveslsfavecomp =

10.9248

avelcfaveperccomp =

0.8179

aveslsfaveperccomp =

0.8101

avelcfavetotprofit =

84.5362

aveslsfavetotprofit =

84.8251

avelcfpercposprofit =

1

returnedobjs =

163.8996 148.4745 182.2776 153.2076 162.1888

165.5601 160.6565 172.1340 167.6282 150.6354

162.9367 176.0749 159.8967 171.0026 167.4392

169.9380 153.1931 180.2379 172.2822 162.3633

168.2365 177.6405 181.5543 166.7352 166.8359

164.7041 151.4400 179.3757 160.7147 176.6057

160.1445 173.4707 170.2307 153.1478 176.3978

165.2420 156.7289 187.1615 165.4501 148.0442

166.1812 171.9733 166.3429 162.9097 163.0418

176.2421 168.6361 150.2067 156.6314 173.5986

slsfobjs =

159.5256 147.4051 179.7330 152.9843 161.0068

165.5601 160.6565 169.2389 167.5874 151.7190

162.7578 173.4055 159.8967 171.6848 167.4392

169.8465 148.6609 180.2379 173.2045 162.1902

165.1840 177.6405 180.8109 164.8938 163.2328

164.8302 146.7671 179.3757 160.7147 177.2058

157.8113 173.4707 165.4876 146.7619 176.3978

157.8435 155.4564 187.1615 165.4501 149.7138

164.8643 169.4482 163.4328 162.9097 160.6916

173.5784 168.6361 146.1028 151.6126 173.5811

slsfavecomp =

10.4071 11.4899 11.9126 10.0662 9.8800

10.9029 9.2156 11.8768 11.1510 10.1983

12.0234 12.5925 9.4449 10.9832 10.4402

9.7069 11.3784 12.4068 11.8636 11.4996

10.6434 12.1144 12.1037 12.2026 10.8876

9.3022 9.7836 11.4335 10.5289 12.1685

9.9299 9.7328 10.6903 11.9581 11.6485

10.6843 10.3966 13.4030 10.4002 11.6494

9.2203 9.7293 12.4313 9.6137 10.6739

10.8759 11.6030 10.1703 10.8909 9.9319

lcfavecomp =

10.3218 11.5178 11.7988 10.0917 9.8927

10.9029 9.2156 11.6784 11.2597 9.8727

11.9725 12.2704 9.4449 10.9661 10.4402

9.7119 11.2675 12.4068 11.9673 11.5410

10.5685 12.1144 12.1327 12.0313 10.7538

9.3405 9.5612 11.4335 10.5289 12.1385

9.9939 9.7328 10.7456 12.0579 11.648

10.3409 10.3863 13.4030 10.4002 11.6977

9.2766 9.7501 12.3556 9.6137 10.4637

10.8285 11.6030 10.2329 10.9519 9.9215

lcfaveperccomp =

0.8348 0.8180 0.8117 0.8285 0.8115

0.8000 0.8119 0.8297 0.8142 0.8221

0.8206 0.8318 0.8096 0.8278 0.8111

0.8207 0.8303 0.8000 0.8191 0.8145

0.8188 0.8277 0.8154 0.8101 0.8064

0.8548 0.8461 0.8324 0.8097 0.8162

0.8074 0.8252 0.8069 0.8186 0.8033

0.8183 0.8159 0.8067 0.8107 0.8183

0.8216 0.8052 0.8045 0.8406 0.8184

0.8045 0.8000 0.8343 0.8298 0.8005

lcfavetotprofit =

82.2348 81.3522 92.5235 75.3603 79.5536

85.3520 79.7343 87.1516 86.5588 78.4775

86.9422 92.6418 79.5980 86.2276 83.1309

82.3139 79.2510 96.4847 89.8895 86.7970

83.4571 92.9959 93.1670 87.8331 82.2015

77.1882 71.0198 90.8187 81.7395 92.9912

80.4709 83.0200 86.9009 81.3983 91.6243

81.8946 78.7401 101.5100 84.1588 78.3075

77.8377 82.2450 93.0924 79.5280 81.8734

88.9274 88.8666 75.5944 80.2936 85.5402

slsfavetotprofit =

81.9928 82.2017 91.4760 75.6599 79.7207

85.3520 79.7343 86.4918 88.7212 76.9155

87.6027 92.5703 79.5980 87.1686 83.1309

82.6825 79.2590 96.4847 91.3340 86.9234

82.7921 92.9959 94.4586 86.8621 81.2563

77.9558 70.7233 90.8187 81.7395 94.0315

81.1595 83.0200 87.8693 83.9626 91.6243

79.5089 80.3991 101.5100 84.1588 80.3916

78.9900 82.3056 92.9670 79.5280 81.3110

88.8706 88.8666 78.2335 82.3456 85.5807

returnedobjs =

163.8996 148.4745 182.2776 153.2076 162.1888

165.5601 160.6565 172.1340 167.6282 150.6354

162.9367 176.0749 159.8967 171.0026 167.4392

169.9380 153.1931 180.2379 172.2822 162.3633

168.2365 177.6405 181.5543 166.7352 166.8359

164.7041 151.4400 179.3757 160.7147 176.6057

160.1445 173.4707 170.2307 153.1478 176.3978

165.2420 156.7289 187.1615 165.4501 148.0442

166.1812 171.9733 166.3429 162.9097 163.0418

176.2421 168.6361 150.2067 156.6314 173.5986

slsfobjs =

159.5256 147.4051 179.7330 152.9843 161.0068

165.5601 160.6565 169.2389 167.5874 151.7190

162.7578 173.4055 159.8967 171.6848 167.4392

169.8465 148.6609 180.2379 173.2045 162.1902

165.1840 177.6405 180.8109 164.8938 163.2328

164.8302 146.7671 179.3757 160.7147 177.2058

157.8113 173.4707 165.4876 146.7619 176.3978

157.8435 155.4564 187.1615 165.4501 149.7138

164.8643 169.4482 163.4328 162.9097 160.6916

173.5784 168.6361 146.1028 151.6126 173.5811

lcfrejs =

0.6724 2.6059 0.0956 2.0730 1.1682

1.1863 0.9047 1.0702 0.8947 1.3528

1.5376 0.2992 1.1038 0.2995 1.0617

0.0620 2.0393 0.3091 0.8096 1.5318

1.0180 0.4144 0.2251 1.2933 1.3426

0.0846 1.5877 0.0425 1.3471 0.4247

0.9916 0.0964 0.5101 2.3858 0.4410

1.0624 1.5359 0.2224 0.8201 2.9096

0.2179 0.3692 1.1848 0.4475 1.1416

0.1974 1.1742 2.1340 1.8760 0.4086

slsfrejs =

1.2284 3.0277 0.5227 2.0937 1.2480

1.1863 0.9047 1.7441 0.9542 2.6683

2.0350 1.4940 1.1038 0.6876 1.0617

0.1012 3.8082 0.3091 0.7493 1.6784

1.5214 0.4144 0.6026 2.2503 2.1421

0.1407 3.2464 0.0425 1.3471 0.8674

1.3232 0.0964 0.5663 3.2332 0.4410

2.2805 2.2538 0.2224 0.8201 3.2978

0.8129 0.7665 1.5297 0.4475 2.1131

0.5451 1.1742 2.8559 1.9620 0.5191

lcfunhap =

0.1323 0.3790 0.0689 0.0821 0.1461

0.0733 0.0697 0.0626 0.0596 0.6439

0.1088 0.1908 0.2476 0.1643 0.0286

0.0802 0.3170 0.1231 0.2264 0.1504

0.0000 0.3130 0.0067 0.1456 0.0404

0.0998 0.1946 0.0507 0.2235 0.1831

0.2951 0.0054 0.0694 0.3424 0.1242

0.1654 0.0896 0.1102 0.2040 0.1461

0.0715 0.0388 0.5140 0.1293 0.2432

0.0350 0.1654 0.2604 0.2328 0.0037

slsfunhap =

0.2808 0.3567 0.1170 0.0857 0.2328

0.0733 0.0697 0.0449 0.1601 0.0332

0.0825 0.0566 0.2476 0.0513 0.0286

0.1130 0.0950 0.1231 0.4774 0.0596

0.0569 0.3130 0.0331 0.0673 0.0236

0.1690 0.0372 0.0507 0.2235 0.0322

0.4935 0.0054 0.3652 0.5639 0.1242

0.0940 0.0530 0.1102 0.2040 0.1218

0.0504 0.1114 0.3636 0.1293 0.0392

0.1126 0.1654 0.3289 0.4643 0.0034

menusizes =

4.6000 4.7000 4.7500 4.0500 4.5000

3.9500 4.9000 4.3000 4.6000 4.8000

4.7000 4.8500 4.8000 4.4000 4.2000

4.5000 4.3500 4.9000 4.7500 4.5000

4.6000 4.7000 4.8000 4.4000 3.7000

4.8000 4.2000 4.8000 4.3500 4.8500

4.5500 4.6500 4.4500 4.6000 4.4000

4.4000 4.6500 4.7000 4.7000 4.2500

4.4000 4.7000 4.9000 4.8000 4.4000

4.9500 4.5000 4.8000 4.6000 4.9500

avepij =

0.1463 0.1240 0.1717 0.1435 0.1437

0.1348 0.1756 0.1452 0.1573 0.1400

0.1586 0.1503 0.1388 0.1641 0.1491

0.1590 0.1272 0.1543 0.1506 0.1448

0.1613 0.1605 0.1727 0.1450 0.1356

0.1575 0.1311 0.1724 0.1417 0.1683

0.1435 0.1726 0.1574 0.1246 0.1458

0.1416 0.1490 0.1566 0.1529 0.1312

0.1621 0.1622 0.1433 0.1592 0.1575

0.1690 0.1466 0.1516 0.1446 0.1780

pijover5 =

57 46 81 60 56

56 69 56 62 53

62 61 50 72 65

76 52 62 67 58

66 69 80 67 62

66 55 74 63 73

58 74 71 52 64

57 61 67 72 53

68 72 56 68 64

73 62 59 57 73

pijequal1 =

17 14 24 29 25

27 43 28 33 19

29 27 20 37 29

24 21 19 20 23

34 30 30 20 25

27 15 29 16 24

23 32 30 12 25

20 24 21 20 21

32 26 19 24 33

30 25 33 23 30

runtimes =

184.5869 274.7758 109.2574 265.0268 296.5885

108.3682 101.9909 250.0113 194.8264 298.0787

246.1321 296.3290 231.5831 139.5901 156.1585

98.2245 298.9071 106.1913 262.6947 136.9845

245.2164 167.4493 101.3883 268.3861 262.2764

109.8325 301.0434 104.6678 268.4613 106.8919

301.5570 98.4435 234.1251 302.1981 145.5006

264.1595 104.3278 118.7469 160.5308 302.9119

100.7785 100.0455 230.7031 113.4068 235.8183

107.1654 257.1380 184.7573 289.2118 101.1667

bestest =

163.4780 155.7608 183.5134 153.7368 162.5562

166.7383 161.7651 171.4860 168.9545 160.4416

164.8366 177.1993 162.9258 173.4703 168.0675

170.7989 157.9545 182.6281 175.6862 162.9942

168.0558 178.8273 182.8297 167.7999 169.1462

165.1470 153.7054 180.1630 163.5500 180.3363

162.5841 173.3372 171.3604 153.9875 177.1984

170.7702 156.3986 189.5809 166.9676 148.9504

167.7843 172.7303 169.8414 165.0949 164.9231

177.7324 169.7549 150.8276 157.9380 174.8612

guessbestiter =

6 1 4 4 1

0 0 6 2 5

2 6 0 4 0

3 5 0 2 6

4 0 6 2 2

6 6 0 0 4

4 0 3 1 0

2 3 0 0 1

3 7 4 0 3

3 0 2 7 5

estslsfobjs =

162.6948 148.2319 178.2187 152.8844 160.2041

166.7383 161.7651 167.6857 167.7950 151.9782

161.0125 176.8627 162.9258 172.5678 168.0675

169.3965 150.4808 182.6281 165.8602 162.7471

164.9964 178.8273 181.1476 162.7670 163.2870

164.0509 146.7111 180.1630 163.5500 177.6062

153.2038 173.3372 170.5708 140.7824 177.1984

159.0887 153.2263 189.5809 166.9676 147.4222

164.4983 168.0090 163.1742 165.0949 159.8797

173.6301 169.7549 140.5123 156.0546 173.9130

compportion80 =

0.6413 0.5851 0.6000 0.6173 0.5778

0 0 0.6512 0.5870 0.5729

0.5957 0.5979 0 0.5909 0

0.5444 0.6207 0 0.5789 0.6778

0.5652 0 0.6354 0.6364 0.4730

0.6667 0.6667 0 0 0.5979

0.5165 0 0.5506 0.5870 0

0.5455 0.5806 0 0 0.6118

0.5455 0.5957 0.5306 0 0.4886

0.5253 0 0.5833 0.6304 0.5455

compportionmin =

0.6413 0.5851 0.6000 0.6173 0.5778

1.0000 1.0000 0.6512 0.5870 0.5729

0.5957 0.5979 1.0000 0.5909 1.0000

0.5444 0.6207 1.0000 0.5789 0.6778

0.5652 1.0000 0.6354 0.6364 0.4730

0.6667 0.6667 1.0000 1.0000 0.5979

0.5165 1.0000 0.5506 0.5870 1.0000

0.5455 0.5806 1.0000 1.0000 0.6118

0.5455 0.5957 0.5306 1.0000 0.4886

0.5253 1.0000 0.5833 0.6304 0.5455

**136th experiment, LCF fval b=1, min 80 %, f=5) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05,rand scen, =wt**

lcfiterbetter =

0.6600

lcfiterworse =

0.0800

avepercbetter =

0.0120

lcfrejbetter =

0.7400

lcfrejworse =

0

avepercrejbetter =

0.2445

lcfiterave =

162.3847

slsfave =

160.5850

averuntime =

208.8560

avelcfrejs =

1.3013

aveslsfrejs =

1.7064

avelcfunhap =

0.1558

aveslsfunhap =

0.1867

percbetter =

0.0032 0.0358 0.0227 0.0213 0.0060

0.0036 0.0101 0.0392 0.0035 0.0027

0.0149 0 0 0.0025 0

-0.0045 -0.0004 0.0086 0.0520 0.0068

0 0.0126 0.0045 0 0

0.0075 0 0.0069 0.0195 0

0.0513 0.0171 0 0.0639 0.0129

0 0.0390 0.0039 0.0301 -0.0018

-0.0009 0 0.0221 0.0380 0.0127

0 0.0212 0.0066 0.0064 0

avelcfavecomp =

10.7630

aveslsfavecomp = 10.7772

avelcfaveperccomp = 0.8200

aveslsfaveperccomp = 0.8119

avelcfavetotprofit

82.5106

aveslsfavetotprofit =

82.9557

avelcfpercposprofit =

1

returnedobjs =

146.9418 165.7574 146.5800 157.2240 171.0604

158.7829 141.9697 141.2504 165.2812 167.7600

164.8035 175.0644 165.1914 155.5333 181.5239

161.8848 183.1826 172.2480 148.0013 157.3046

173.0533 171.0479 165.9480 171.2437 172.5785

154.3260 151.4870 153.3245 164.0634 156.8626

160.5924 153.8673 163.2074 136.7173 163.8022

178.0869 149.1364 162.1642 160.2551 186.8527

178.4897 164.7645 166.0678 148.1132 175.7180

160.4836 158.1681 175.8134 166.2499 149.4068

slsfobjs =

146.4667 160.0304 143.3304 153.9425 170.0456

158.2127 140.5519 135.9235 164.7083 167.3133

162.3812 175.0644 165.1914 155.1500 181.5239

162.6168 183.2501 170.7749 140.6899 156.2389

173.0533 168.9218 165.2073 171.2437 172.5785

153.1819 151.4870 152.2729 160.9312 156.8626

152.7533 151.2804 163.2074 128.5011 161.7100

178.0869 143.5364 161.5358 155.5692 187.1951

178.6441 164.7645 162.4819 142.6962 173.5167

160.4836 154.8837 174.6536 165.1972 149.4068

slsfavecomp =

11.3553 13.8042 9.2583 10.5345 11.3197

9.3077 11.0712 10.0503 8.9004 10.3847

11.4665 11.1542 10.6644 10.1212 11.1884

10.8318 12.4311 11.9808 9.2405 10.0383

11.9711 10.9261 8.8195 10.3336 11.3737

9.6757 9.3140 11.2435 12.2243 11.5401

11.5709 9.6353 11.4250 9.8786 8.4163

11.5562 10.4082 10.7243 10.6288 14.4102

10.7209 11.3562 9.0685 11.0134 11.3893

10.8226 11.1952 10.8517 10.7444 10.5177

lcfavecomp =

11.4492 13.5203 9.1725 10.4832 11.2767

9.3458 11.1018 9.8991 8.9157 10.3449

11.5408 11.1542 10.6644 10.1298 11.1884

10.7900 12.4215 11.9889 9.1169 10.0288

11.9711 10.9103 8.8333 10.3336 11.3737

9.6260 9.3140 11.1870 12.1104 11.5401

11.6809 9.6704 11.4250 9.9630 8.3716

11.5562 10.3901 10.7268 10.4902 14.4890

10.7461 11.3562 9.1604 10.9301 11.2791

10.8226 11.1635 10.8709 10.8054 10.5177

lcfaveperccomp =

0.8121 0.8109 0.8629 0.8471 0.8141

0.8191 0.8457 0.8424 0.8276 0.8027

0.8115 0.8043 0.8083 0.8153 0.8000

0.8040 0.8061 0.8047 0.8327 0.8487

0.8000 0.8328 0.8209 0.8097 0.8000

0.8072 0.8347 0.8135 0.8181 0.8089

0.8321 0.8149 0.8002 0.8550 0.8388

0.8230 0.8275 0.8074 0.8124 0.8310

0.8028 0.8234 0.8141 0.8309 0.8201

0.8231 0.8540 0.8134 0.8100 0.8022

lcfavetotprofit =

76.5229 89.9583 68.2257 79.2420 88.4982

76.9446 74.3499 69.3403 75.8199 85.7393

85.4145 89.9575 85.0913 80.0683 91.7402

86.9696 96.8657 89.6309 71.4142 78.3232

90.4066 84.7337 76.5627 86.4144 88.8663

78.8353 75.0274 78.6907 89.2782 84.4831

81.0956 74.6609 87.0818 69.9972 73.4877

91.4252 74.8590 83.5888 80.6111 102.1257

88.3356 87.9021 76.8113 76.7774 89.4405

83.7544 77.3725 87.6836 84.4427 80.6637

slsfavetotprofit =

78.3511 88.1721 67.8153 81.5730 89.1702

77.3675 74.9704 69.1998 77.0004 86.1357

86.9603 89.9575 85.0913 80.2604 91.7402

86.9114 97.0658 90.0085 71.5926 78.6729

90.4066 86.0553 77.2268 86.4144 88.8663

78.1767 75.0274 79.1761 89.9501 84.4831

84.0085 76.2623 87.0818 68.3520 73.5537

91.4252 75.6406 84.0525 79.4240 105.0235

88.8520 87.9021 78.5027 77.2686 89.5793

83.7544 78.6042 88.3356 85.6980 80.6637

returnedobjs =

146.9418 165.7574 146.5800 157.2240 171.0604

158.7829 141.9697 141.2504 165.2812 167.7600

164.8035 175.0644 165.1914 155.5333 181.5239

161.8848 183.1826 172.2480 148.0013 157.3046

173.0533 171.0479 165.9480 171.2437 172.5785

154.3260 151.4870 153.3245 164.0634 156.8626

160.5924 153.8673 163.2074 136.7173 163.8022

178.0869 149.1364 162.1642 160.2551 186.8527

178.4897 164.7645 166.0678 148.1132 175.7180

160.4836 158.1681 175.8134 166.2499 149.4068

slsfobjs =

146.4667 160.0304 143.3304 153.9425 170.0456

158.2127 140.5519 135.9235 164.7083 167.3133

162.3812 175.0644 165.1914 155.1500 181.5239

162.6168 183.2501 170.7749 140.6899 156.2389

173.0533 168.9218 165.2073 171.2437 172.5785

153.1819 151.4870 152.2729 160.9312 156.8626

152.7533 151.2804 163.2074 128.5011 161.7100

178.0869 143.5364 161.5358 155.5692 187.1951

178.6441 164.7645 162.4819 142.6962 173.5167

160.4836 154.8837 174.6536 165.1972 149.4068

lcfrejs =

2.8775 2.3444 2.2640 0.9963 0.4165

1.0986 3.1796 2.6278 0.2092 0.6004

1.2924 0.6036 1.4675 1.7457 0.1171

0.7996 0.1841 1.2001 1.5961 1.0970

1.3011 0.2751 0.5858 0.2499 1.0499

1.1388 1.6482 2.8073 1.0852 2.2860

1.2322 2.0010 1.7867 2.8746 0.1860

0.3495 2.9716 1.2810 1.4114 0.3874

0.1234 1.1127 0.6224 2.6042 0.1113

1.4952 1.6075 0.3301 1.0015 2.4278

slsfrejs =

3.2821 3.4326 2.9874 1.7557 0.8477

1.2597 3.6152 4.1318 0.5658 0.7680

1.8031 0.6036 1.4675 1.8180 0.1171

0.9336 0.2814 1.4569 2.9123 1.1353

1.3011 0.9820 0.8519 0.2499 1.0499

1.6062 1.6482 3.1117 1.9653 2.2860

1.9883 2.5072 1.7867 4.4262 0.9152

0.3495 3.5822 1.5477 2.4282 0.6392

0.1932 1.1127 1.2210 3.1988 0.8768

1.4952 2.5678 0.5868 1.2400 2.4278

lcfunhap =

0.2695 0.2584 0.0267 0.1094 0.0678

0.0433 0.3430 0.2053 0.0226 0.1036

0.1519 0.0365 0.1247 0.2575 0.0340

0.2611 0.1014 0.0739 0.2963 0.3016

0.0362 0.1255 0.0006 0.0134 0.0650

0.2898 0.3259 0.0176 0.4261 0.2442

0.1155 0.0275 0.5103 0.3052 0.1417

0.1208 0.1030 0.2108 0.0307 0.0181

0.0386 0.2617 0.0591 0.1342 0.0089

0.4493 0.0545 0.0390 0.0590 0.4679

slsfunhap =

0.2699 0.0873 0.0546 0.2384 0.0358

0.0970 0.3461 0.0847 0.0393 0.1228

0.2971 0.0365 0.1247 0.4215 0.0340

0.2604 0.1662 0.1188 0.5579 0.2723

0.0362 0.0761 0.0023 0.0134 0.0650

0.3050 0.3259 0.0098 0.3326 0.2442

0.5157 0.1629 0.5103 0.3330 0.0054

0.1208 0.2642 0.1577 0.0263 0.0796

0.0647 0.2617 0.1949 0.3084 0.0396

0.4493 0.0179 0.0760 0.2048 0.4679

menusizes =

4.0500 4.2500 3.8000 4.7500 4.9500

4.5000 4.3500 3.8000 4.7000 4.9500

4.3000 4.9000 4.9000 4.8500 4.7000

4.5000 4.9000 4.4500 4.7000 4.3000

4.5000 4.5500 4.7500 4.6000 4.5500

4.6000 4.7000 4.3000 4.8500 4.5500

4.5500 4.5000 4.9000 4.4000 5.0000

4.8000 4.4500 4.8000 4.5500 4.7500

4.4500 4.8500 4.8500 4.3500 4.9500

4.8500 4.1500 4.9000 4.7500 4.7000

avepij =

0.1157 0.1252 0.1317 0.1448 0.1868

0.1435 0.1243 0.1183 0.1781 0.1691

0.1524 0.1593 0.1588 0.1296 0.1761

0.1428 0.1742 0.1501 0.1416 0.1383

0.1400 0.1531 0.1656 0.1640 0.1544

0.1458 0.1410 0.1309 0.1466 0.1339

0.1383 0.1394 0.1528 0.1263 0.1773

0.1592 0.1350 0.1418 0.1442 0.1655

0.1561 0.1571 0.1600 0.1257 0.1752

0.1451 0.1323 0.1742 0.1545 0.1311

pijover5 =

51 55 57 56 78

61 48 50 74 68

69 66 62 46 74

57 75 60 55 55

55 67 69 72 67

62 56 50 60 56

61 53 57 46 74

64 54 61 59 72

69 65 68 50 73

56 60 75 64 51

pijequal1 =

9 16 24 29 42

19 16 21 41 32

23 23 31 17 43

24 33 28 24 25

18 23 32 30 23

19 21 22 21 19

16 28 29 17 35

28 20 24 26 31

25 31 26 18 37

28 21 37 25 18

runtimes =

150.6541 316.2897 293.2690 248.8069 118.9986

176.3934 317.3653 315.0434 130.7772 121.2520

310.6183 113.4348 144.2079 312.3539 110.9642

121.7176 118.3461 171.7153 261.9821 195.0186

197.1456 148.5509 113.0476 131.3997 189.1906

120.1848 313.8764 302.0213 302.2132 297.3325

274.4393 119.8876 221.2369 318.3551 119.7060

158.2288 294.2219 180.8362 312.8611 221.6979

124.0788 121.5186 123.5806 316.4201 247.3705

319.4406 271.2404 130.9201 119.2719 283.3162

bestest =

147.0974 166.9528 147.7089 162.0842 173.9083

159.9497 144.9241 142.0587 165.4456 169.7409

167.4050 175.6828 167.1826 160.8723 182.0728

164.5520 185.5386 174.7331 149.7529 158.7648

173.6402 174.3402 166.5075 170.9848 172.8403

156.1866 156.1678 156.0896 167.7746 160.3156

163.3667 154.4500 168.8070 137.2691 162.9880

178.9667 151.4549 167.2603 160.5680 189.9401

179.2523 170.0358 166.9442 148.0735 176.2889

160.7150 158.7929 177.1983 170.0466 153.1534

guessbestiter =

7 4 2 2 3

4 1 3 4 4

5 0 0 3 0

5 2 2 3 3

0 3 1 0 0

4 0 1 5 0

6 3 0 7 7

0 1 1 5 1

1 0 1 3 2

0 3 3 2 0

estslsfobjs =

143.7570 162.1674 143.7289 152.6911 169.1011

158.7581 140.6115 139.1577 165.2423 168.6651

158.0471 175.6828 167.1826 157.0391 182.0728

158.6353 184.5962 170.8913 140.3598 156.7525

173.6402 168.3435 165.0395 170.9848 172.8403

152.7948 156.1678 151.1593 167.5332 160.3156

160.5887 153.3338 168.8070 130.2860 161.9906

178.9667 145.4706 160.4673 155.4176 180.5189

176.7430 170.0358 164.0571 141.6460 174.3654

160.7150 155.8380 172.9228 164.2946 153.1534

compportion80 =

0.5802 0.6353 0.7368 0.6526 0.5758

0.6111 0.6207 0.6579 0.7553 0.6465

0.5698 0 0 0.5464 0

0.5889 0.5918 0.5955 0.6277 0.6395

0 0.5714 0.5158 0 0

0.5870 0 0.6512 0.6495 0

0.6593 0.5778 0 0.7159 0.6500

0 0.6517 0.5521 0.6154 0.5684

0.5281 0 0.6495 0.5977 0.5859

0 0.5904 0.6735 0.4947 0

compportionmin =

0.5802 0.6353 0.7368 0.6526 0.5758

0.6111 0.6207 0.6579 0.7553 0.6465

0.5698 1.0000 1.0000 0.5464 1.0000

0.5889 0.5918 0.5955 0.6277 0.6395

1.0000 0.5714 0.5158 1.0000 1.0000

0.5870 1.0000 0.6512 0.6495 1.0000

0.6593 0.5778 1.0000 0.7159 0.6500

1.0000 0.6517 0.5521 0.6154 0.5684

0.5281 1.0000 0.6495 0.5977 0.5859

1.0000 0.5904 0.6735 0.4947 1.0000

**137th experiment, LCF fval b=0.75, min 80 %, f=5) –10 fixed scens, 10 reg,--200 scen test, with d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05,rand scen, =wt**

lcfiterbetter =

0.6600

lcfiterworse =

0.1400

avepercbetter =

0.0168

lcfrejbetter =

0.7600

lcfrejworse =

0.0400

avepercrejbetter =

0.3653

lcfiterave =

164.0089

slsfave =

161.4433

averuntime =

241.1658

avelcfrejs =

1.0188

aveslsfrejs =

1.7575

avelcfunhap =

0.1426

aveslsfunhap =

0.1259

percbetter =

0.0352 0 -0.0194 0.0319 0.0229

0.0023 -0.0026 0.0002 0.0070 -0.0064

0 0.0093 0.0057 0 -0.0008

0.0722 0.0163 0.0053 0.0337 0.0041

0.0118 0.0178 0.0181 0.0742 0.0211

0.0448 -0.0019 0 0.0302 0.0139

-0.0023 0.0158 0 0 0.0913

0 0 0.0816 0.0283 0.0408

0.0346 0.0277 -0.0045 0.0176 0.0051

0.0072 0 0.0272 0 0.0221

avelcfavecomp =

10.8053

aveslsfavecomp =

10.8597

avelcfaveperccomp =

0.8288

aveslsfaveperccomp =

0.8131

avelcfavetotprofit =

81.9859

aveslsfavetotprofit =

82.5956

avelcfpercposprofit =

1

returnedobjs =

149.3558 171.3342 176.1603 157.2172 161.8480

162.2220 156.4737 170.6083 186.6209 161.4851

182.4309 164.1685 160.1280 175.3489 157.2624

144.3012 173.8502 152.3208 169.4408 149.1836

193.3787 151.2527 143.7256 149.7383 165.4491

163.9971 149.4791 166.4454 173.4776 166.6132

173.7260 156.0460 158.5080 163.1298 166.1056

156.1786 177.8728 163.2416 176.1417 165.4018

155.6693 161.2493 167.2292 135.3937 157.9130

173.5794 182.0205 162.1513 166.1829 177.3875

slsfobjs =

144.2810 171.3342 179.6398 152.3528 158.2285

161.8473 156.8762 170.5788 185.3235 162.5173

182.4309 162.6612 159.2176 175.3489 157.3869

134.5865 171.0657 151.5212 163.9165 148.5790

191.1322 148.6092 141.1766 139.3913 162.0266

156.9590 149.7707 166.4454 168.3933 164.3285

174.1217 153.6187 158.5080 163.1298 152.2028

156.1786 177.8728 150.9263 171.2920 158.9230

150.4671 156.8964 167.9778 133.0539 157.1085

172.3396 182.0205 157.8591 166.1829 173.5581

slsfavecomp =

10.4376 11.6683 11.2382 9.0952 9.7328

9.1363 10.8504 11.7681 13.4613 10.7387

11.7005 9.0079 8.9889 12.2657 9.1055

10.3136 10.8987 11.0319 12.6750 9.5982

14.1075 9.1830 8.9600 10.4403 10.6119

11.1951 8.7954 12.1256 12.3425 15.1194

12.3507 8.8433 8.7001 9.4130 11.8514

7.9976 12.0211 11.5960 13.2259 10.1359

9.6082 11.3971 10.8704 10.2680 12.1974

10.8156 12.2311 12.0454 8.4402 12.3809

lcfavecomp =

10.2935 11.6683 11.3286 9.1724 9.7259

9.1963 10.8087 11.7793 13.4646 10.8331

11.7005 9.0240 9.0363 12.2657 9.1469

10.0248 10.7728 11.1940 12.3856 9.6414

14.0987 9.1153 8.9981 10.0552 10.7238

10.8537 8.9398 12.1256 12.1372 14.8378

12.3563 8.8907 8.7001 9.4130 11.5176

7.9976 12.0211 11.2155 12.8579 9.9809

9.3971 11.3628 10.8527 10.3434 12.1805

10.8109 12.2311 11.8889 8.4402 12.4579

lcfaveperccomp =

0.8257 0.8000 0.8045 0.8561 0.8999

0.8272 0.8183 0.8070 0.8048 0.8338

0.8042 0.8659 0.8153 0.8091 0.8187

0.8365 0.8409 0.8441 0.8294 0.8765

0.8071 0.8341 0.8243 0.8335 0.8220

0.8675 0.8260 0.8005 0.8563 0.8306

0.8266 0.8554 0.8035 0.8104 0.8381

0.8342 0.8032 0.8255 0.8183 0.8300

0.8799 0.8148 0.8275 0.8313 0.8160

0.8166 0.8156 0.8147 0.8314 0.8265

lcfavetotprofit =

73.0911 88.7284 90.7397 71.9431 72.2100

76.8651 80.2491 91.4834 101.6522 79.6888

94.1652 75.1055 76.2871 93.3045 74.0287

70.9152 85.3415 75.6563 87.0333 71.3399

104.0125 72.0194 70.6669 73.0239 81.4384

79.0611 71.2885 89.6748 88.0400 91.8157

92.0432 72.3614 75.5033 80.3284 85.2385

71.7522 94.6011 82.2034 91.6589 80.2191

72.1325 80.9367 84.0940 67.6454 81.1633

86.5561 95.5239 85.1510 76.0590 93.2519

slsfavetotprofit =

73.0641 88.7284 91.6209 75.4198 75.5660

78.4822 80.9141 92.2857 102.4365 82.2241

94.1652 76.0848 77.6524 93.3045 74.9864

70.9067 86.1566 77.8548 87.7658 72.6937

105.2641 71.7698 72.6105 70.6946 84.3586

79.7674 73.7214 89.6748 89.8688 91.8744

92.8340 73.8855 75.5033 80.3284 81.3243

71.7522 94.6011 78.0866 90.5457 80.2310

72.1811 80.4977 85.7101 69.7879 81.9403

87.7212 95.5239 85.6239 76.0590 93.7239

returnedobjs =

149.3558 171.3342 176.1603 157.2172 161.8480

162.2220 156.4737 170.6083 186.6209 161.4851

182.4309 164.1685 160.1280 175.3489 157.2624

144.3012 173.8502 152.3208 169.4408 149.1836

193.3787 151.2527 143.7256 149.7383 165.4491

163.9971 149.4791 166.4454 173.4776 166.6132

173.7260 156.0460 158.5080 163.1298 166.1056

156.1786 177.8728 163.2416 176.1417 165.4018

155.6693 161.2493 167.2292 135.3937 157.9130

173.5794 182.0205 162.1513 166.1829 177.3875

slsfobjs =

144.2810 171.3342 179.6398 152.3528 158.2285

161.8473 156.8762 170.5788 185.3235 162.5173

182.4309 162.6612 159.2176 175.3489 157.3869

134.5865 171.0657 151.5212 163.9165 148.5790

191.1322 148.6092 141.1766 139.3913 162.0266

156.9590 149.7707 166.4454 168.3933 164.3285

174.1217 153.6187 158.5080 163.1298 152.2028

156.1786 177.8728 150.9263 171.2920 158.9230

150.4671 156.8964 167.9778 133.0539 157.1085

172.3396 182.0205 157.8591 166.1829 173.5581

lcfrejs =

2.2695 1.2300 0.4596 0.4092 0.2678

0.2352 1.9899 0.5588 0.2009 1.1807

0.0636 0.0862 0.5827 0.9639 1.0665

2.4779 0.0050 2.3899 1.2736 2.0648

0.2547 1.1031 1.5371 1.6561 0.6031

0.3491 1.4331 1.4426 0.3258 2.1972

0.8860 0.5336 1.4182 0.5693 0.5477

0.6247 0.3362 1.1599 1.2470 0.5790

0.3878 1.9574 0.9149 3.9056 2.8445

0.3549 0.3179 1.3879 0.1386 0.1494

slsfrejs =

3.7129 1.2300 0.2678 2.0075 1.3847

0.7436 2.3185 0.8055 0.4270 1.6564

0.0636 0.2774 1.1284 0.9639 1.5457

4.2457 1.0019 2.6046 2.7113 2.2019

0.6270 2.2717 2.5379 4.3854 1.2400

2.4866 1.7353 1.4426 1.7801 3.7046

0.8778 1.0161 1.4182 0.5693 3.1722

0.6247 0.3362 3.6776 2.2365 1.8203

2.3630 2.7696 1.2783 4.4189 3.1318

0.8686 0.3179 2.6256 0.1386 0.7039

lcfunhap =

0.2222 0.0533 0.1188 0.1001 0.0358

0.2460 0.0818 0.1200 0.0402 0.0327

0.0628 0.0490 0.2141 0.1610 0.0185

0.1516 0.0071 0.0935 0.1452 0.0627

0.0010 0.0881 0.3604 0.3873 0.1912

0.1875 0.2061 0.4163 0.1248 0.3256

0.0391 0.3640 0.0483 0.1094 0.1699

0.1242 0.1359 0.2130 0.0686 0.0827

0.3387 0.0302 0.0925 0.2652 0.0326

0.0910 0.0696 0.4716 0.0063 0.0714

slsfunhap =

0.1001 0.0533 0.0440 0.0973 0.1165

0.2916 0.0526 0.1698 0.0895 0.0165

0.0628 0.0682 0.2478 0.1610 0.0381

0.2595 0.0150 0.2193 0.0417 0.1245

0.0482 0.0422 0.2469 0.0269 0.3600

0.0465 0.1773 0.4163 0.0417 0.0450

0.0526 0.4501 0.0483 0.1094 0.0730

0.1242 0.1359 0.0534 0.0739 0.1040

0.0557 0.0379 0.0327 0.3916 0.0527

0.0721 0.0696 0.2592 0.0063 0.3716

menusizes =

3.9000 4.5000 4.9000 4.7500 4.7500

4.6000 4.2000 4.9000 4.9500 4.3500

4.7500 4.5500 4.9500 4.6500 4.7000

4.2000 4.6500 4.1000 3.8000 4.7500

4.6500 4.0500 4.7000 3.9500 4.5000

4.7500 4.2000 4.3500 4.8000 3.9500

4.8000 4.7000 4.6500 4.8500 4.8500

4.7000 4.8500 4.5000 4.0500 4.7500

4.4500 4.5000 4.9500 4.3000 4.0500

4.9000 4.7000 4.3000 4.7500 5.0000

avepij =

0.1235 0.1453 0.1680 0.1629 0.1610

0.1676 0.1362 0.1602 0.1715 0.1521

0.1679 0.1640 0.1500 0.1595 0.1580

0.1391 0.1697 0.1404 0.1247 0.1466

0.1791 0.1390 0.1367 0.1235 0.1382

0.1490 0.1398 0.1400 0.1627 0.1202

0.1596 0.1540 0.1513 0.1547 0.1617

0.1652 0.1616 0.1437 0.1436 0.1558

0.1602 0.1436 0.1730 0.1195 0.1319

0.1796 0.1678 0.1319 0.1765 0.1638

pijover5 =

52 66 75 70 59

69 51 70 71 63

72 68 63 69 70

59 69 57 57 58

79 57 53 50 62

57 57 57 65 51

63 62 64 66 67

72 64 58 64 65

70 60 72 45 54

82 73 54 71 72

pijequal1 =

17 20 26 27 29

33 25 26 26 31

29 39 16 28 22

23 41 26 21 25

40 27 16 16 16

20 26 25 27 16

30 27 27 23 25

31 24 24 25 28

36 19 36 16 17

33 32 19 43 28

runtimes =

323.8336 296.7997 148.9389 140.4686 188.8739

238.4214 348.6170 215.3593 153.4029 130.5633

141.3321 135.8191 164.1523 159.4084 194.0190

310.2905 252.5811 316.3842 307.1567 189.3553

133.1647 327.8080 333.7031 324.8500 298.3194

287.4408 226.4613 341.7288 193.0784 348.6615

182.6610 337.1378 159.6837 226.9098 317.9583

145.2765 166.3019 343.6707 230.3581 290.2422

285.9066 344.2555 148.8620 344.6927 339.4333

152.8142 152.9642 334.4005 142.6959 241.0712

bestest =

150.1455 171.9406 178.6268 156.2515 164.0611

164.6904 162.4225 173.1592 186.8632 162.4840

183.3186 164.6970 166.7812 178.3896 157.7201

144.4776 174.2247 154.7047 171.3474 152.5817

194.0054 151.8940 146.1205 152.6914 166.2052

163.5202 152.6512 169.4703 175.6884 170.6053

176.5840 157.8286 167.1369 165.7969 167.4575

159.4823 181.5074 164.7964 175.6476 167.1481

157.5845 162.4390 169.6380 135.4462 160.3706

176.2176 184.1470 165.3085 166.6598 178.0910

guessbestiter =

4 0 2 4 3

7 3 2 2 7

0 4 7 0 6

7 3 2 3 2

4 4 7 4 6

2 3 0 7 2

1 7 0 0 5

0 0 6 3 4

5 7 5 1 2

3 0 3 0 5

estslsfobjs =

144.1454 171.9406 177.0797 148.6886 154.5341

163.1401 156.2481 168.3780 185.8893 161.2464

183.3186 162.4189 157.9700 178.3896 156.2866

126.1366 170.6367 150.5753 163.5038 144.5895

189.9858 144.4775 141.2460 143.8780 163.4144

157.0341 145.6620 169.4703 164.3202 164.9468

173.1714 151.9512 167.1369 165.7969 146.6841

159.4823 181.5074 151.7943 167.0318 160.5496

152.5012 153.7238 166.0727 131.6146 155.8483

172.6999 184.1470 153.8395 166.6598 163.1323

compportion80 =

0.6667 0 0.6837 0.7263 0.7263

0.5652 0.6071 0.5714 0.5960 0.7241

0 0.7363 0.7576 0 0.7447

0.7381 0.7742 0.7439 0.6184 0.6947

0.6022 0.7037 0.7234 0.7215 0.5778

0.7789 0.5833 0 0.6667 0.7342

0.6042 0.6596 0 0 0.5567

0 0 0.6556 0.5556 0.6000

0.6854 0.7222 0.6465 0.6860 0.5926

0.6939 0 0.7674 0 0.6900

compportionmin =

0.6667 1.0000 0.6837 0.7263 0.7263

0.5652 0.6071 0.5714 0.5960 0.7241

1.0000 0.7363 0.7576 1.0000 0.7447

0.7381 0.7742 0.7439 0.6184 0.6947

0.6022 0.7037 0.7234 0.7215 0.5778

0.7789 0.5833 1.0000 0.6667 0.7342

0.6042 0.6596 1.0000 1.0000 0.5567

1.0000 1.0000 0.6556 0.5556 0.6000

0.6854 0.7222 0.6465 0.6860 0.5926

0.6939 1.0000 0.7674 1.0000 0.6900

**138th experiment, LCF fval b=0.75, min 80 %, f=5) –10 fixed scens, 10 reg,--400 scen test, no d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05,rand scen, =wt**

lcfiterbetter =

0.8000

lcfiterworse =

0.1200

avepercbetter =

0.0176

lcfrejbetter =

0.9200

lcfrejworse =

0

avepercrejbetter =

0.4884

lcfiterave =

164.5357

slsfave =

161.7912

averuntime =

253.9119

avelcfrejs =

0.9025

aveslsfrejs =

1.7453

avelcfunhap =

0.1546

aveslsfunhap =

0.1599

percbetter =

0.0124 0.0212 0.0038 0.0107 0.0026

0 0.0140 0.0044 0.0334 0.0241

0.0143 -0.0046 0.0542 0.0473 0.0020

0.0404 0.0105 0.0486 0.0289 -0.0004

0 -0.0210 -0.0162 0.0239 0.0028

0.0037 0 0.0073 0.0043 0.0231

0.0228 0.0092 0.0353 0.0230 0

0.0435 0.0510 -0.0171 -0.0022 0.0171

0.0407 0.0867 0.0311 0.0132 0.0120

0.0253 0.0269 0.0129 0.0385 0.0165

avelcfavecomp =

11.0674

aveslsfavecomp =

11.0678

avelcfaveperccomp =

0.8326

aveslsfaveperccomp =

0.8124

avelcfavetotprofit =

82.7821

aveslsfavetotprofit =

84.1689

avelcfpercposprofit =

1

returnedobjs =

168.0092 145.0373 161.9026 172.6570 176.5342

169.3807 160.1360 178.9751 165.9025 166.7420

170.4197 174.4321 161.4978 173.2402 161.5913

163.0078 151.9002 144.0896 164.1737 162.9185

165.4981 149.7198 170.6200 170.5368 168.9867

156.6644 159.6347 168.2863 174.9498 159.8889

183.2922 134.2478 173.0247 167.8174 175.6684

167.5746 155.0550 162.3903 183.7010 160.0490

146.3803 156.5079 140.2383 177.2846 168.6725

167.2757 159.9960 170.5520 169.2462 170.4802

slsfobjs =

165.9520 142.0276 161.2925 170.8369 176.0721

169.3807 157.9202 178.1960 160.5441 162.8138

168.0214 175.2434 153.1991 165.4140 161.2645

156.6798 150.3151 137.4127 159.5658 162.9880

165.4981 152.9263 173.4340 166.5551 168.5224

156.0871 159.6347 167.0629 174.2024 156.2859

179.1998 133.0213 167.1244 164.0520 175.6684

160.5944 147.5340 165.2109 184.1065 157.3600

140.6606 144.0168 136.0027 174.9813 166.6727

163.1428 155.8015 168.3773 162.9665 167.7165

slsfavecomp =

10.4119 10.2842 8.6213 12.7132 14.4363

9.1461 9.6762 11.9705 11.1004 10.6562

10.0956 11.6780 10.0567 13.2920 12.0356

10.1487 9.5532 10.9985 10.9388 10.2051

10.2301 10.9875 12.7542 11.9412 9.7763

8.1965 11.7484 12.8726 12.5284 10.1337

13.4488 8.3751 11.6105 10.2785 11.7368

10.5859 11.9917 11.3232 12.9254 10.2038

11.4936 12.4457 12.1941 11.4950 10.1500

9.6511 11.2548 10.3647 11.3204 11.3521

lcfavecomp =

10.4055 10.4624 8.7211 12.7257 14.5340

9.1461 9.6599 12.0132 10.9413 10.6556

10.1285 11.7244 9.6580 13.0224 12.2468

10.3036 9.6361 10.9629 10.9791 10.2461

10.2301 10.9981 12.8359 11.4941 9.7914

8.3887 11.7484 12.6820 12.5005 10.2554

13.5046 8.7134 11.3912 10.0683 11.7368

10.5296 12.0631 11.3065 13.0665 10.1255

11.5539 12.0661 12.3856 11.5463 10.2448

9.8093 11.2615 10.3499 11.3144 11.2374

lcfaveperccomp =

0.8463 0.9035 0.8653 0.8383 0.8082

0.8145 0.8455 0.8314 0.8393 0.8220

0.8060 0.8496 0.8800 0.8093 0.8408

0.8367 0.8377 0.8377 0.8278 0.8175

0.8090 0.8390 0.8125 0.8240 0.8215

0.8551 0.8013 0.8132 0.8092 0.8585

0.8281 0.8723 0.8110 0.8480 0.8555

0.8260 0.8359 0.8030 0.8118 0.8354

0.8225 0.8295 0.8454 0.8463 0.8231

0.8424 0.8095 0.8178 0.8335 0.8347

lcfavetotprofit =

82.1277 67.1391 71.9851 89.8197 98.3498

80.5407 77.8406 90.7893 80.7821 82.0832

85.2457 88.3940 74.9516 94.6768 83.1770

77.4180 73.0094 74.1999 84.0002 81.5379

82.4497 75.6908 93.4660 87.4375 81.7267

69.2766 88.4996 92.6271 94.5485 76.9464

97.8539 59.7856 86.1817 81.1287 89.6709

80.4551 80.5726 86.1117 96.4463 77.9220

82.0726 83.0229 71.3258 88.9083 81.5553

76.6165 81.9914 84.4277 83.9449 88.3726

slsfavetotprofit =

83.2314 73.1702 73.8517 92.1342 100.2319

80.5407 79.4015 93.0948 82.6273 82.6778

86.1501 90.3880 74.5819 90.9889 86.9666

79.6570 74.7729 74.7529 85.9948 83.0811

82.4497 80.1012 95.6289 86.0034 82.5692

72.8332 88.4996 91.8765 94.9807 80.3348

99.5526 64.9144 84.3364 80.7842 89.6709

80.8651 84.8397 86.3777 98.4879 79.8004

83.7499 81.0983 75.4041 89.4678 83.9351

80.6273 81.2100 85.0707 86.5883 88.0924

returnedobjs =

168.0092 145.0373 161.9026 172.6570 176.5342

169.3807 160.1360 178.9751 165.9025 166.7420

170.4197 174.4321 161.4978 173.2402 161.5913

163.0078 151.9002 144.0896 164.1737 162.9185

165.4981 149.7198 170.6200 170.5368 168.9867

156.6644 159.6347 168.2863 174.9498 159.8889

183.2922 134.2478 173.0247 167.8174 175.6684

167.5746 155.0550 162.3903 183.7010 160.0490

146.3803 156.5079 140.2383 177.2846 168.6725

167.2757 159.9960 170.5520 169.2462 170.4802

slsfobjs =

165.9520 142.0276 161.2925 170.8369 176.0721

169.3807 157.9202 178.1960 160.5441 162.8138

168.0214 175.2434 153.1991 165.4140 161.2645

156.6798 150.3151 137.4127 159.5658 162.9880

165.4981 152.9263 173.4340 166.5551 168.5224

156.0871 159.6347 167.0629 174.2024 156.2859

179.1998 133.0213 167.1244 164.0520 175.6684

160.5944 147.5340 165.2109 184.1065 157.3600

140.6606 144.0168 136.0027 174.9813 166.6727

163.1428 155.8015 168.3773 162.9665 167.7165

lcfrejs =

0.2496 1.7609 0.2275 1.1005 1.6614

0.1110 0.3430 0.2030 0.5178 0.9550

0.0996 0.1898 0.1131 0.7510 1.6463

0.3861 1.6309 1.9768 0.6532 0.8324

1.1813 1.5729 1.0583 0.2701 0.2358

0.1226 2.0141 1.1609 0.9494 0.5985

0.2519 2.4670 1.0698 0.3529 0.4164

0.2556 2.1810 1.5235 0.1981 0.8411

2.4738 1.4351 3.5793 0.1510 0.3128

0.1648 2.0409 0.2027 0.4583 0.1754

slsfrejs =

0.7597 3.5372 0.6419 1.7689 1.7758

0.1110 1.2724 0.3297 2.1528 1.8906

0.4494 0.3840 2.2549 2.4808 2.2612

1.9081 2.3573 4.2540 1.7906 1.2283

1.1813 2.9603 1.3702 2.0886 0.5089

0.9659 2.0141 2.1119 1.6230 1.5822

0.6932 3.2177 2.1610 1.3601 0.4164

2.0728 3.0991 1.5469 0.2135 1.9071

2.5776 4.1490 5.2536 0.3381 0.8301

1.2376 2.8483 0.8990 1.7608 0.6688

lcfunhap =

0.0566 0.1270 0.0865 0.0777 0.0553

0.0304 0.1770 0.0100 0.1526 0.0629

0.0268 0.1029 0.0397 0.3026 0.2516

0.0945 0.2585 0.4052 0.4314 0.1518

0.0542 0.3282 0.3362 0.1972 0.0398

0.1699 0.1995 0.4177 0.2780 0.1353

0.0972 0.3801 0.0723 0.0843 0.0284

0.1275 0.1744 0.1620 0.0306 0.1267

0.5272 0.0811 0.2203 0.0391 0.0634

0.0218 0.0928 0.0253 0.1752 0.1431

slsfunhap =

0.1280 0.1865 0.0507 0.0585 0.1805

0.0304 0.1201 0.1003 0.1246 0.0346

0.2047 0.0666 0.0372 0.0983 0.1464

0.1328 0.3141 0.1965 0.3789 0.1326

0.0542 0.0760 0.1780 0.0198 0.0423

0.2226 0.1995 0.1177 0.0336 0.3154

0.3519 0.5791 0.0721 0.0463 0.0284

0.0571 0.3154 0.0885 0.1616 0.0853

0.7143 0.0799 0.2661 0.2510 0.1192

0.0971 0.0525 0.0658 0.3778 0.2053

menusizes =

5.0000 4.7000 4.8500 4.6500 4.6500

4.8000 4.9000 4.9500 4.2500 4.2500

4.8000 4.7000 4.7000 4.5000 4.5500

4.7000 4.4500 4.5000 4.9500 4.8500

4.6000 4.7500 5.0000 4.5500 4.9500

4.6500 4.9000 4.5500 4.8000 4.8000

4.4000 4.1000 3.9000 4.7500 4.9500

4.7500 4.5000 4.5000 4.2000 4.7500

4.8000 4.3000 4.1000 4.8500 4.8000

4.8000 4.4000 4.8500 4.5500 4.4500

avepij =

0.1709 0.1372 0.1657 0.1480 0.1504

0.1611 0.1783 0.1665 0.1374 0.1506

0.1730 0.1782 0.1645 0.1426 0.1485

0.1541 0.1408 0.1388 0.1417 0.1672

0.1477 0.1448 0.1544 0.1442 0.1692

0.1513 0.1524 0.1355 0.1658 0.1559

0.1495 0.1334 0.1380 0.1633 0.1741

0.1507 0.1511 0.1437 0.1469 0.1511

0.1419 0.1329 0.1296 0.1701 0.1651

0.1682 0.1350 0.1876 0.1544 0.1480

pijover5 =

77 55 63 59 63

67 80 71 53 64

70 79 69 63 62

61 57 54 58 70

61 54 63 63 74

59 63 52 67 67

61 60 62 69 71

64 63 57 63 61

52 51 54 72 79

72 53 76 64 63

pijequal1 =

25 17 34 18 26

28 35 28 22 28

38 32 32 23 19

27 24 21 17 29

26 25 24 19 29

27 27 19 29 20

26 21 23 32 35

22 24 24 17 19

18 16 22 30 22

32 21 45 26 28

runtimes =

149.4174 226.2955 172.1049 333.2020 335.4592

152.2755 159.4564 158.4105 332.3287 251.2966

219.3262 159.9708 297.1457 356.0523 214.2694

257.6553 294.5813 349.1215 358.9995 180.7032

192.0600 248.6233 305.0739 268.0115 155.8963

234.9672 173.0384 359.4830 165.6510 319.9934

175.8955 365.8538 267.9013 275.5393 168.0802

258.2814 366.6669 357.6930 176.5758 272.0115

309.8484 371.3865 357.8851 172.0319 173.0829

165.5371 360.0917 176.0890 302.1514 242.1206

bestest =

168.2720 148.4859 163.6736 174.8424 179.2235

169.3103 161.0352 179.9996 169.8240 167.6552

170.5240 175.4535 162.2093 175.1559 167.5514

164.1348 153.4844 145.6574 165.0583 164.0675

166.4085 153.4455 175.4653 172.7353 168.7101

158.5480 164.1357 171.9434 178.4663 161.9800

184.2528 138.6422 173.1817 169.0500 174.8314

167.4249 152.1487 167.6898 186.2459 162.5685

150.5853 158.3827 142.3886 178.1326 169.0717

167.7444 160.9329 170.9404 168.7759 171.3864

guessbestiter =

6 5 4 1 5

0 2 3 2 5

1 4 4 5 6

5 7 4 4 5

0 3 4 5 1

7 0 2 3 7

6 4 4 7 0

5 6 1 6 7

3 7 4 2 2

7 3 7 7 3

estslsfobjs =

165.2008 130.1617 159.4311 172.8918 177.2214

169.3103 158.1984 170.8034 147.1183 162.0186

166.2522 171.6614 154.3290 167.3812 160.0684

156.0504 150.8354 142.7331 162.4979 163.5145

166.4085 151.0380 167.9187 164.1787 164.5507

157.5851 164.1357 164.9436 178.3919 153.5627

183.7116 133.1781 167.3887 163.7193 174.8314

161.8343 151.1216 165.6722 185.2246 158.7261

140.3792 141.5142 138.9918 174.1402 167.8330

165.3714 158.4757 169.7587 162.3412 167.6685

compportion80 =

0.7100 0.7872 0.6701 0.6559 0.6559

0 0.6122 0.6768 0.6824 0.7765

0.6771 0.7340 0.7340 0.5889 0.6374

0.6596 0.8202 0.6222 0.7273 0.7113

0 0.7053 0.7100 0.6593 0.4848

0.6452 0 0.7473 0.6354 0.7188

0.6591 0.8049 0.6667 0.7579 0

0.7368 0.6778 0.5778 0.6429 0.7474

0.6979 0.7209 0.6707 0.6495 0.5104

0.6875 0.6364 0.7010 0.7143 0.7303

compportionmin =

0.7100 0.7872 0.6701 0.6559 0.6559

1.0000 0.6122 0.6768 0.6824 0.7765

0.6771 0.7340 0.7340 0.5889 0.6374

0.6596 0.8202 0.6222 0.7273 0.7113

1.0000 0.7053 0.7100 0.6593 0.4848

0.6452 1.0000 0.7473 0.6354 0.7188

0.6591 0.8049 0.6667 0.7579 1.0000

0.7368 0.6778 0.5778 0.6429 0.7474

0.6979 0.7209 0.6707 0.6495 0.5104

0.6875 0.6364 0.7010 0.7143 0.7303

**139th experiment, LCF fval b=0.75, min 80 %, f=5) –10 fixed scens, 10 reg,--400 scen test, no d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05,rand scen, =wt**

lcfiterbetter =

0.8200

lcfiterworse =

0.0800

avepercbetter =

0.0215

lcfrejbetter =

0.9000

lcfrejworse =

0

avepercrejbetter =

0.4930

lcfiterave =

162.7729

slsfave =

159.4710

averuntime =

267.3826

avelcfrejs =

0.9821

aveslsfrejs =

1.8927

avelcfunhap =

0.1511

aveslsfunhap =

0.1537

percbetter =

0.0383 0.0641 0.0159 0.0131 0.0278

0.0335 0.0391 0 0.0564 0.0231

0.0223 0.0150 -0.0018 0 0.0168

0.0018 0.0370 0.0235 0.0315 -0.0030

0.0049 0 0.0403 0.0607 0

0.0136 0.0431 0.0079 -0.0041 0.0176

0.0243 0.0233 0.0061 0.0108 -0.0086

0.0291 0.0140 0.0677 0.0422 0.0055

0.0773 0.0363 0.0113 0.0273 0.0091

0 0.0107 0.0135 0.0204 0.0146

avelcfavecomp =

10.8139

aveslsfavecomp =

10.8556

avelcfaveperccomp =

0.8336

aveslsfaveperccomp =

0.8128

avelcfavetotprofit =

81.3498

aveslsfavetotprofit =

82.5260

avelcfpercposprofit =

1

returnedobjs =

147.5700 166.9189 168.4891 171.9465 172.0504

167.3577 163.5977 167.1842 156.0864 173.2833

180.9254 147.7653 174.8566 145.6374 138.4059

175.6415 169.6060 180.3276 161.3984 154.5807

157.3429 155.4200 162.8933 151.6307 172.3154

172.4324 153.9895 165.1053 168.4608 175.6124

152.0769 162.4678 158.9272 174.9185 159.1527

158.0439 174.0202 130.7517 153.6373 165.8085

167.0683 143.8285 161.6945 150.1019 164.8920

174.1697 175.2772 156.4841 172.7029 163.7893

slsfobjs =

142.1214 156.8608 165.8475 169.7228 167.3925

161.9399 157.4400 167.1842 147.7581 169.3730

176.9844 145.5805 175.1747 145.6374 136.1210

175.3311 163.5564 176.1819 156.4721 155.0519

156.5694 155.4200 156.5764 142.9471 172.3154

170.1243 147.6220 163.8051 169.1608 172.5694

148.4652 158.7616 157.9713 173.0535 160.5379

153.5730 171.6101 122.4597 147.4228 164.8965

155.0797 138.7917 159.8933 146.1111 163.4087

174.1697 173.4172 154.3962 169.2482 161.4392

slsfavecomp =

10.4914 9.2832 12.2053 10.5450 9.7674

11.2820 12.3867 10.4004 11.7524 11.8156

11.8979 10.1346 12.5623 10.0152 10.1234

11.4785 10.5849 13.4584 10.2681 8.6421

9.9909 9.8862 10.1951 9.5301 12.1122

12.5491 11.4689 10.5551 12.3334 12.5604

10.4466 9.9494 9.7769 11.3101 10.8496

11.5565 10.2765 10.6882 10.7186 11.4267

11.8699 9.2933 9.5783 10.5059 10.4291

10.7924 11.2793 10.4871 12.0475 9.2195

lcfavecomp =

10.3672 9.1829 12.1748 10.5484 9.7883

11.3351 12.4343 10.4004 11.5555 11.5910

11.8281 10.0596 12.6141 10.0152 10.1716

11.4928 10.3338 13.3999 10.1878 8.7265

10.0487 9.8862 9.9774 9.4256 12.1122

12.4018 11.3558 10.3878 12.3220 12.5721

10.2636 9.9354 9.8537 11.4088 10.9375

11.5283 10.2691 10.6929 10.7637 11.4942

11.4567 9.2000 9.5789 10.3884 10.4350

10.7924 11.2930 10.5314 11.9474 9.2285

lcfaveperccomp =

0.8553 0.8326 0.8171 0.8150 0.8059

0.8147 0.8107 0.8253 0.8577 0.8350

0.8379 0.8280 0.8061 0.8002 0.8831

0.8338 0.8429 0.8125 0.8459 0.8357

0.8679 0.8166 0.8373 0.8391 0.8098

0.8067 0.8372 0.8492 0.8178 0.8482

0.8332 0.8371 0.8564 0.8302 0.8436

0.8338 0.8161 0.8381 0.8628 0.8200

0.8432 0.8712 0.8369 0.8265 0.8476

0.8621 0.8182 0.8329 0.8323 0.8146

lcfavetotprofit =

71.3852 76.3453 90.2951 85.4110 83.3266

87.0172 88.6910 84.1493 76.5501 88.2978

89.7441 74.5065 91.6623 72.3809 64.3455

89.3794 83.6202 98.3668 78.1760 71.1962

75.6205 79.8860 79.8447 71.6790 91.0959

94.1570 77.1696 80.4003 89.6362 91.4453

77.0281 77.0983 75.9150 87.4289 80.4158

78.9656 84.3196 64.8370 78.8205 84.2990

84.8252 66.3012 78.0440 74.9333 80.9387

84.7512 89.5168 76.9746 86.5714 79.7234

slsfavetotprofit =

72.4819 75.5732 90.1649 86.5902 82.1625

89.5524 90.7991 84.1493 78.9753 88.7819

89.8319 76.3212 92.2905 72.3809 70.9579

90.3104 83.0750 99.6959 80.5327 71.9475

76.9064 79.8860 79.5025 71.5446 91.0959

93.7867 77.7973 81.2517 92.7608 94.3673

76.9508 79.3484 78.3793 89.1729 85.1797

81.6053 85.0346 66.6911 80.7897 86.7380

82.4828 67.8286 79.5584 75.0790 82.9109

84.7512 90.0351 78.4699 89.3286 80.4943

returnedobjs =

147.5700 166.9189 168.4891 171.9465 172.0504

167.3577 163.5977 167.1842 156.0864 173.2833

180.9254 147.7653 174.8566 145.6374 138.4059

175.6415 169.6060 180.3276 161.3984 154.5807

157.3429 155.4200 162.8933 151.6307 172.3154

172.4324 153.9895 165.1053 168.4608 175.6124

152.0769 162.4678 158.9272 174.9185 159.1527

158.0439 174.0202 130.7517 153.6373 165.8085

167.0683 143.8285 161.6945 150.1019 164.8920

174.1697 175.2772 156.4841 172.7029 163.7893

slsfobjs =

142.1214 156.8608 165.8475 169.7228 167.3925

161.9399 157.4400 167.1842 147.7581 169.3730

176.9844 145.5805 175.1747 145.6374 136.1210

175.3311 163.5564 176.1819 156.4721 155.0519

156.5694 155.4200 156.5764 142.9471 172.3154

170.1243 147.6220 163.8051 169.1608 172.5694

148.4652 158.7616 157.9713 173.0535 160.5379

153.5730 171.6101 122.4597 147.4228 164.8965

155.0797 138.7917 159.8933 146.1111 163.4087

174.1697 173.4172 154.3962 169.2482 161.4392

lcfrejs =

2.2132 0.2373 0.5993 0.3162 0.2012

0.4040 1.6324 0.7716 1.5586 0.2446

0.1318 2.0862 1.0959 3.1535 2.6046

0.3440 0.0633 0.3752 0.7843 1.1032

1.1963 1.3078 0.5306 1.4980 1.0807

0.6112 2.4523 0.7128 0.5841 0.3083

1.2280 0.4294 0.7380 0.1410 0.4900

1.6868 0.1644 3.6251 1.1075 1.1925

0.3779 2.0817 0.2627 2.0917 0.3749

0.1506 0.1159 1.9477 0.3845 0.3125

slsfrejs =

3.9936 2.2285 1.6499 0.9048 0.6495

1.1943 2.2699 0.7716 4.0357 1.2939

0.7825 3.1253 1.1708 3.1535 4.5358

0.5085 1.2174 1.0607 1.8471 1.2699

1.4533 1.3078 2.3044 3.3401 1.0807

1.3704 3.7549 1.4360 1.5976 0.9262

3.1860 1.9319 1.2039 0.5199 1.0654

3.3595 0.7314 6.2049 1.7145 1.5685

2.8891 3.4666 0.7640 3.5535 0.7529

0.1506 0.5083 2.5135 1.6175 0.7010

lcfunhap =

0.1324 0.0901 0.3490 0.0759 0.0315

0.1386 0.1376 0.0808 0.1622 0.1864

0.0526 0.2810 0.0643 0.0563 0.2203

0.0307 0.0336 0.0629 0.1146 0.1078

0.0161 0.2517 0.1617 0.1502 0.0330

0.1580 0.0537 0.1021 0.2661 0.2645

0.5117 0.2234 0.2059 0.0871 0.3775

0.1647 0.0224 0.2374 0.1706 0.0148

0.2930 0.0808 0.0637 0.4314 0.2127

0.0258 0.0554 0.0765 0.1661 0.2675

slsfunhap =

0.0717 0.0368 0.2132 0.1000 0.2267

0.3118 0.4417 0.0808 0.1091 0.2342

0.1016 0.2576 0.0880 0.0563 0.0971

0.0371 0.0958 0.2037 0.1923 0.1636

0.0571 0.2517 0.0687 0.1078 0.0330

0.0751 0.0693 0.0206 0.1821 0.3877

0.0589 0.0468 0.2775 0.2424 0.3229

0.0579 0.0204 0.0705 0.4327 0.0908

0.1014 0.1310 0.1777 0.1390 0.3421

0.0258 0.0713 0.0768 0.1902 0.4347

menusizes =

4.3500 4.7500 5.0000 4.8500 4.7500

4.9000 4.7000 4.5000 4.1000 4.7500

4.5500 4.6000 4.5000 3.7500 4.7000

5.0000 4.8000 5.0000 4.7000 4.3000

4.6500 4.8500 4.9500 4.5000 4.7000

4.8500 4.1500 4.5000 4.7500 4.3500

4.6500 4.5500 4.9000 4.9500 5.0000

4.6000 4.8000 3.8500 4.8500 3.9500

4.9500 3.5000 4.7500 4.3000 4.5000

4.8500 4.6500 3.8000 4.6500 4.9500

avepij =

0.1381 0.1707 0.1405 0.1769 0.1570

0.1752 0.1482 0.1536 0.1349 0.1562

0.1529 0.1403 0.1509 0.1176 0.1452

0.1724 0.1637 0.1626 0.1468 0.1532

0.1662 0.1357 0.1581 0.1365 0.1543

0.1502 0.1350 0.1535 0.1464 0.1526

0.1423 0.1522 0.1505 0.1760 0.1540

0.1625 0.1680 0.1030 0.1349 0.1377

0.1552 0.1209 0.1595 0.1304 0.1458

0.1674 0.1562 0.1279 0.1469 0.1669

pijover5 =

56 70 60 71 64

80 63 63 55 68

65 53 64 49 56

72 68 69 64 66

67 54 57 55 65

60 57 60 60 65

61 61 58 76 70

71 73 38 49 56

59 51 68 55 54

76 67 56 64 65

pijequal1 =

20 31 11 43 24

30 17 35 15 21

25 23 24 15 24

31 31 24 22 25

37 23 28 14 26

19 17 34 17 25

19 28 24 33 15

31 30 9 17 26

18 19 32 15 31

29 28 21 17 29

runtimes =

349.9982 204.2088 364.4160 228.5108 171.1393

203.8819 272.3344 200.6635 366.7693 258.8565

175.2410 173.1238 213.8057 341.3532 207.5578

176.4062 302.0472 222.1588 189.2197 297.8149

167.2152 356.3194 319.5526 382.0138 210.2427

361.4423 369.7071 197.7689 380.0031 264.6881

359.7796 224.6931 242.2494 255.5456 222.4456

253.2497 182.0843 433.2317 243.5745 228.1941

378.2589 367.5542 183.1950 373.4800 212.7247

184.7225 196.7838 342.6942 345.6112 210.5977

bestest =

146.9577 168.0355 173.6025 172.0525 173.2126

168.6209 165.8296 168.1957 157.6727 175.8668

180.8671 153.2375 175.8539 146.3782 142.9023

175.9582 170.1675 181.3601 161.3758 155.6195

157.1026 158.3737 165.2650 152.8716 173.1183

172.3316 156.7365 165.4713 175.2686 178.8187

153.5075 162.5667 162.2108 176.5049 166.0423

159.4991 174.5829 133.4716 156.3208 166.2128

168.2699 144.1512 163.6644 154.3378 166.7725

174.4153 175.9327 156.8941 172.4787 167.8683

guessbestiter =

7 7 4 4 5

7 6 0 4 2

7 6 2 0 4

1 5 5 5 6

3 0 7 7 0

2 3 7 3 6

4 6 2 7 6

4 4 6 2 3

3 6 7 4 2

0 1 1 7 5

estslsfobjs =

142.4587 154.8640 166.9807 171.5728 169.7459

159.8067 158.0225 168.1957 155.1637 167.3947

175.7758 142.6789 173.8432 146.3782 141.1292

175.6109 164.4105 178.3751 158.0895 155.2197

156.9871 158.3737 157.6619 136.3533 173.1183

170.2898 143.9378 164.0809 169.2209 171.5314

148.9107 159.4664 161.1324 175.3120 159.5944

155.2425 172.4012 121.5363 150.9717 165.5438

153.9078 139.9357 161.8406 146.8310 163.4451

174.4153 170.2752 155.6154 171.5243 163.5096

compportion80 =

0.7126 0.6737 0.7500 0.5258 0.6421

0.5510 0.7128 0 0.7683 0.5474

0.6703 0.7826 0.6556 0 0.7766

0.6600 0.6667 0.7600 0.7021 0.7326

0.6559 0 0.6162 0.7222 0

0.7113 0.7470 0.7556 0.7579 0.6437

0.6989 0.6593 0.7245 0.6566 0.7300

0.6522 0.6250 0.7532 0.6804 0.6835

0.6869 0.6857 0.6632 0.6860 0.7000

0 0.6452 0.6316 0.6452 0.6566

compportionmin =

0.7126 0.6737 0.7500 0.5258 0.6421

0.5510 0.7128 1.0000 0.7683 0.5474

0.6703 0.7826 0.6556 1.0000 0.7766

0.6600 0.6667 0.7600 0.7021 0.7326

0.6559 1.0000 0.6162 0.7222 1.0000

0.7113 0.7470 0.7556 0.7579 0.6437

0.6989 0.6593 0.7245 0.6566 0.7300

0.6522 0.6250 0.7532 0.6804 0.6835

0.6869 0.6857 0.6632 0.6860 0.7000

1.0000 0.6452 0.6316 0.6452 0.6566

**140th experiment, LCF fval b=0.75, min 80 %, f=5) –10 fixed scens, 10 reg,--400 scen test, no d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05,rand scen, =wt, w/ slsf mini**

lcfiterbetter =

0.8400

lcfiterworse =

0.1000

avepercbetter =

0.0177

lcfrejbetter =

0.9200

lcfrejworse =

0.0200

avepercrejbetter =

0.3999

lcfiterave =

162.7952

slsfave =

160.1053

averuntime =--might not be accurate

220.0491

avelcfrejs =

1.0364

aveslsfrejs =

1.7454

avelcfunhap =

0.1245

aveslsfunhap =

0.1606

percbetter =

0.0121 0.0097 0.0358 0.0017 0.0017

0.0251 0.0229 0.0386 0.0054 0.0195

0.0016 -0.0101 0.0016 -0.0036 0.0297

0.0134 0.0232 0.0415 0.0029 0.0480

0.0100 0.0403 0.0157 0.0388 0.0581

0.0080 0.0375 0.0195 0.0161 0.0048

0.0584 0.0167 0.0026 0.0073 0.0947

0.0189 0.0646 0 0.0076 -0.0074

0.0249 0 0.0082 0.0026 -0.0024

0.0240 0 0.0034 0.0037 -0.0106

meanfare =

12.6903 9.5870 12.9007 13.6517 17.4637

12.4682 12.4042 11.9693 9.5886 12.3337

14.0487 14.1127 12.5062 11.4228 11.2818

11.9097 10.0064 15.0289 14.8587 14.2394

12.3720 14.4043 12.3147 10.9961 12.7079

13.9569 10.1537 11.2241 14.4340 13.0433

12.6059 12.7935 12.2005 15.1479 11.6099

11.8166 13.2203 14.4618 11.6646 14.4492

12.7523 11.8039 11.8644 13.6227 12.6626

10.7856 13.8555 13.4653 12.6603 12.6268

avelcfavecomp =

10.5969

aveslsfavecomp =

10.5935

avelcfaveperccomp =

0.8269

aveslsfaveperccomp =

0.8104

avelcfavetotprofit =

80.8343

aveslsfavetotprofit =

82.0852

avelcfpercposprofit =

1

returnedobjs =

133.7152 150.5713 158.6158 177.4580 183.8169

162.8736 164.3032 159.0408 146.1744 155.8874

151.0592 154.0443 169.8463 168.7184 151.0385

161.5531 155.1398 169.7957 179.3408 169.0122

160.5032 164.5862 166.2453 160.9629 152.9645

160.8785 144.2445 149.9938 179.0641 164.5444

142.5508 168.3251 163.9418 178.3914 160.1502

153.2243 150.0330 179.8236 167.5488 171.4917

167.4757 162.1985 167.8370 165.7090 167.9926

163.0504 181.0012 170.3931 158.7154 173.9153

slsfobjs =

132.1110 149.1220 153.1352 177.1510 183.5022

158.8852 160.6256 153.1331 145.3850 152.9034

150.8115 155.6230 169.5671 169.3249 146.6767

159.4200 151.6240 163.0301 178.8265 161.2737

158.9215 158.2144 163.6686 154.9557 144.5708

159.6006 139.0341 147.1289 176.2218 163.7523

134.6794 165.5616 163.5129 177.1021 146.2936

150.3789 140.9327 179.8236 166.2810 172.7696

163.4067 162.1985 166.4721 165.2831 168.3957

159.2312 181.0012 169.8227 158.1326 175.7854

slsfavecomp =

11.2714 8.0236 10.9278 11.1114 14.2419

10.3762 10.2994 10.3107 8.0959 10.5511

11.7761 12.0519 10.1875 9.3212 9.4237

9.8154 8.2855 12.4008 12.0380 12.1418

10.3137 12.3975 10.0679 9.0921 10.9003

11.8109 8.7554 9.4602 11.8276 10.9243

10.8082 10.5742 10.1643 12.3581 9.7800

9.8290 11.4176 11.7377 9.5135 11.9018

10.3460 9.5580 9.5617 11.3979 10.4098

8.9861 11.1480 11.0462 10.7088 10.2245

lcfavecomp =

11.0291 8.1194 10.8964 11.1225 14.2692

10.5108 10.2873 10.2734 8.2601 10.5076

11.8615 12.0885 10.2423 9.3690 9.4222

9.8567 8.3726 12.4908 12.0532 11.8392

10.3236 11.9198 10.1041 9.0577 10.7642

11.7666 8.6939 9.5788 11.7947 10.8547

10.9900 10.5334 10.0807 12.3963 9.7152

10.1220 11.3617 11.7377 9.5464 11.8568

10.4495 9.5580 9.5640 11.3622 10.4590

8.9986 11.1480 11.1901 10.8331 10.2106

lcfaveperccomp =

0.8514 0.8452 0.8225 0.8185 0.8313

0.8231 0.8318 0.8723 0.8454 0.8368

0.8149 0.8323 0.8071 0.8326 0.8034

0.8153 0.8346 0.8157 0.8057 0.8422

0.8234 0.8121 0.8504 0.8196 0.8046

0.8110 0.8340 0.8314 0.8255 0.8223

0.8436 0.8326 0.8617 0.8277 0.8209

0.8254 0.8163 0.8215 0.8259 0.8180

0.8115 0.8229 0.8122 0.8333 0.8097

0.8725 0.8026 0.8344 0.8254 0.8116

lcfavetotprofit =

73.5768 67.0110 80.4287 89.1455 102.4487

79.8335 80.3101 73.7254 65.5672 76.5557

79.6858 80.7713 83.3008 78.1002 74.3502

79.0400 69.8060 89.5565 93.5532 85.9512

78.5116 88.5491 79.4548 76.0157 79.1279

83.4649 68.0067 70.3870 91.3044 81.9511

70.9645 82.8566 80.0429 93.4218 76.1136

74.2328 78.3945 92.4117 80.0928 90.7148

83.8607 78.9256 82.2945 83.7122 83.0243

73.2086 91.4758 83.3390 77.6802 85.4585

slsfavetotprofit =

72.7987 68.7637 81.7362 89.1394 103.8623

80.5858 82.3273 75.8352 68.8423 78.4363

82.3615 84.6257 84.8738 79.3869 73.6546

81.2016 72.5782 91.7738 94.1108 86.6441

80.0909 85.2313 81.7083 76.1169 75.4650

84.7037 67.6833 72.9890 92.1824 84.5381

75.1806 84.4254 81.0021 94.7487 76.1713

78.1876 79.1364 92.4117 81.0153 91.1156

85.9080 78.9256 82.1061 85.1282 83.8854

74.7172 91.4758 86.5901 81.9065 85.9740

returnedobjs =

133.7152 150.5713 158.6158 177.4580 183.8169

162.8736 164.3032 159.0408 146.1744 155.8874

151.0592 154.0443 169.8463 168.7184 151.0385

161.5531 155.1398 169.7957 179.3408 169.0122

160.5032 164.5862 166.2453 160.9629 152.9645

160.8785 144.2445 149.9938 179.0641 164.5444

142.5508 168.3251 163.9418 178.3914 160.1502

153.2243 150.0330 179.8236 167.5488 171.4917

167.4757 162.1985 167.8370 165.7090 167.9926

163.0504 181.0012 170.3931 158.7154 173.9153

slsfobjs =

132.1110 149.1220 153.1352 177.1510 183.5022

158.8852 160.6256 153.1331 145.3850 152.9034

150.8115 155.6230 169.5671 169.3249 146.6767

159.4200 151.6240 163.0301 178.8265 161.2737

158.9215 158.2144 163.6686 154.9557 144.5708

159.6006 139.0341 147.1289 176.2218 163.7523

134.6794 165.5616 163.5129 177.1021 146.2936

150.3789 140.9327 179.8236 166.2810 172.7696

163.4067 162.1985 166.4721 165.2831 168.3957

159.2312 181.0012 169.8227 158.1326 175.7854

lcfrejs =

2.0195 1.0640 1.4613 0.3352 0.1604

1.3155 0.4555 1.0784 1.3712 1.5535

3.0266 1.9448 0.6373 0.1255 2.0645

1.1555 0.7716 1.2897 0.6710 0.6041

1.3813 1.3377 0.2426 0.3620 2.2988

2.1007 2.1450 1.6199 0.3036 1.0809

2.2754 0.4533 0.2199 0.2971 1.2355

1.7137 2.3951 0.3294 0.1619 0.8532

0.3717 0.9227 0.1496 1.1363 1.0631

0.0675 0.1097 0.3748 1.6597 0.0536

slsfrejs =

5.0231 1.4379 2.3455 0.3719 0.3533

1.8541 1.9928 2.5401 2.0330 2.4977

3.4978 2.7129 0.8652 0.4187 2.6470

1.4008 1.8494 1.9565 0.9258 2.2928

2.2035 3.0931 0.5398 1.7858 3.5702

2.2843 3.3815 2.4587 0.8770 1.4594

4.5711 1.1069 1.1290 0.4467 2.4827

2.3387 3.6135 0.3294 0.6264 1.1419

0.7672 0.9227 0.3582 1.2815 1.0516

1.1039 0.1097 0.8301 2.2969 0.0919

lcfunhap =

0.6910 0.0425 0.1210 0.0409 0.0474

0.0491 0.2597 0.1220 0.0547 0.0464

0.0631 0.2062 0.0136 0.0425 0.0690

0.0837 0.0572 0.1016 0.0126 0.1356

0.0794 0.4288 0.1524 0.3034 0.0610

0.1271 0.2520 0.1263 0.0609 0.0901

0.1431 0.1596 0.2502 0.0228 0.1395

0.0978 0.2112 0.0549 0.0441 0.1359

0.2417 0.2053 0.1827 0.0764 0.0218

0.0511 0.0297 0.0620 0.0930 0.0605

slsfunhap =

0.1632 0.1475 0.2283 0.0464 0.1097

0.2399 0.0941 0.0886 0.0855 0.0906

0.0900 0.1518 0.0609 0.0709 0.1097

0.1910 0.1552 0.3889 0.0111 0.1848

0.0276 0.0739 0.4330 0.2180 0.0960

0.2224 0.1546 0.2268 0.0994 0.1576

0.1513 0.1445 0.0415 0.1516 0.5561

0.4807 0.3502 0.0549 0.0447 0.0334

0.5003 0.2053 0.1709 0.1097 0.0365

0.2314 0.0297 0.1900 0.1258 0.0029

menusizes =

4.6000 4.3500 4.7000 4.9500 4.5500

4.6500 4.8500 4.4500 4.3000 4.7000

4.0000 4.4500 4.3500 4.5000 4.2000

4.9500 4.9500 4.4500 4.6500 4.7500

4.9500 4.9000 4.6500 4.7500 3.9500

4.1500 4.2500 4.4500 4.8000 4.3500

4.5500 4.8000 4.9000 4.4500 4.3500

4.3000 4.3500 4.8000 4.8500 5.0000

5.0000 4.6500 4.8500 4.5500 4.5500

4.7500 4.9500 4.1000 4.6000 4.4000

avepij =

0.1369 0.1375 0.1429 0.1705 0.1534

0.1453 0.1595 0.1383 0.1532 0.1402

0.1229 0.1326 0.1641 0.1609 0.1361

0.1575 0.1598 0.1384 0.1652 0.1462

0.1658 0.1586 0.1576 0.1449 0.1208

0.1396 0.1366 0.1387 0.1705 0.1479

0.1441 0.1707 0.1735 0.1529 0.1478

0.1312 0.1267 0.1640 0.1644 0.1549

0.1620 0.1374 0.1610 0.1445 0.1501

0.1654 0.1744 0.1367 0.1580 0.1529

pijover5 =

52 58 57 74 69

56 61 58 62 52

51 56 69 67 58

57 65 58 73 60

69 63 65 54 52

62 54 54 71 64

59 74 69 61 62

58 51 72 71 68

72 58 63 61 64

73 79 62 68 69

pijequal1 =

21 23 19 29 20

21 32 20 32 21

19 14 39 30 22

33 28 17 30 15

31 23 28 17 19

22 25 21 36 23

16 26 36 22 22

17 16 23 29 18

23 17 31 21 23

29 29 20 29 21

runtimes =

337.9994 273.6732 172.9743 127.5568 138.9968

156.5122 137.1086 329.0067 146.4390 177.6402

321.0195 289.8537 123.2723 124.5606 242.8528

212.8283 128.1088 238.8849 130.8545 336.1736

131.4322 328.5721 267.7616 328.9511 331.0011

336.8812 328.1897 147.9125 146.0729 233.2720

197.4354 154.1046 220.7119 177.5992 181.6150

337.9963 335.5465 133.0101 138.0753 262.3931

143.8477 321.5022 178.9570 273.0558 312.5221

193.9288 135.5868 286.2320 143.1495 148.8227

bestest =

144.9651 151.3114 160.9736 178.3348 184.7364

164.9683 165.8429 160.5756 148.4271 157.6620

156.5321 160.3845 169.9899 169.7950 151.9483

164.2409 157.5503 171.2364 180.8216 172.0399

162.9103 168.5636 168.4022 158.9206 154.7413

162.9105 145.4653 150.2637 180.9864 166.3923

144.2278 170.4584 167.2041 179.0338 161.3158

155.3728 155.0025 181.0436 168.5900 174.2712

170.7686 167.7848 169.4929 165.6012 168.3649

163.7157 181.6243 172.2666 161.6099 174.7293

guessbestiter =

7.0000 1.0000 4.5000 1.5000 1.0000

4.5000 3.5000 4.0000 6.0000 4.5000

4.0000 4.0000 1.5000 7.0000 2.5000

6.0000 3.0000 3.0000 1.5000 4.5000

5.5000 3.5000 4.0000 4.0000 3.5000

5.0000 1.5000 6.0000 6.5000 7.0000

5.5000 6.5000 3.0000 6.5000 2.0000

5.0000 6.5000 0 4.5000 1.5000

4.0000 0 3.0000 4.5000 7.0000

4.0000 0 1.0000 5.5000 1.5000

estslsfobjs =

135.1474 149.7625 154.0388 177.7699 184.2809

156.7636 159.4679 155.8922 140.9388 153.0154

151.4703 160.1736 169.8737 169.3736 146.7290

160.2710 153.8526 168.3232 178.8314 162.5980

158.6746 157.4022 159.3501 154.3946 145.3107

162.3349 138.3056 142.1717 177.5545 163.9063

138.3876 159.1812 164.7429 176.9886 147.3584

153.4442 145.2218 181.0436 168.4414 170.9556

167.6485 167.7848 167.3580 163.2842 168.0040

160.8203 181.6243 169.6381 156.0641 174.5929

compportion80 =

0.7609 0.7931 0.6064 0.4747 0.6813

0.6452 0.6392 0.6966 0.7674 0.6383

0.5625 0.7191 0.5402 0.6000 0.5595

0.7475 0.7475 0.6629 0.4731 0.5684

0.6667 0.5918 0.6989 0.6000 0.6329

0.7349 0.5529 0.6180 0.5833 0.6782

0.6813 0.6458 0.6531 0.6180 0.6322

0.7791 0.6207 0 0.6598 0.5200

0.6900 0 0.6186 0.4835 0.6374

0.7053 0 0.6585 0.6087 0.4318

compportionmin =

0.7609 0.7931 0.6064 0.4747 0.6813

0.6452 0.6392 0.6966 0.7674 0.6383

0.5625 0.7191 0.5402 0.6000 0.5595

0.7475 0.7475 0.6629 0.4731 0.5684

0.6667 0.5918 0.6989 0.6000 0.6329

0.7349 0.5529 0.6180 0.5833 0.6782

0.6813 0.6458 0.6531 0.6180 0.6322

0.7791 0.6207 1.0000 0.6598 0.5200

0.6900 1.0000 0.6186 0.4835 0.6374

0.7053 1.0000 0.6585 0.6087 0.4318

**141st experiment, LCF fval b=0.75, min 80 %, f=5) –10 fixed scens, 10 reg,--400 scen test, no d test, mutated scens equal wt, mini=obj, lcftime=200, gp=.05,rand scen, =wt, w/ itr1 perf**

lcfiterbetter =

0.8200

lcfiterbetter1 =

0.7200

lcfiterworse =

0.0800

lcfiterworse1 =

0.2800

avepercbetter =

0.0237

avepercbetter1 =

0.0061

lcfrejbetter =

0.9000

lcfrejbetter1 =

0.9800

lcfrejworse =

0

lcfrejworse1 =

0.0200

avepercrejbetter =

0.4912

avepercrejbetter1 =

0.3016

lcfiterave =

164.5692

slsfave =

160.9485

averuntime =

264.9870

avelcfrejs =

0.8673

aveslsfrejs =

1.7245

avelcfunhap =

0.1372

avelcfunhap1 =

0.1762

aveslsfunhap =

0.1714

percbetter =

0.0564 0.0668 0 0 0.0886

0.0230 0.0221 0.0220 0.0190 0.0072

0.0797 0.0657 0.0166 0.0159 0

0.0276 0.0329 0.0710 0.0125 0.0190

0.0141 0.0571 -0.0019 0.0223 0.0070

0.0135 0.0383 0.0211 0.0310 0.0051

0.0645 0.0379 -0.0026 0 0.0240

0.0321 0.0367 0.0537 0.0004 -0.0009

0.0221 0.0137 0.0081 -0.0002 0

0.0050 0.0276 0.0057 0.0024 0.0039

avelcfavecomp =

10.8691

aveslsfavecomp =

10.9108

avelcfaveperccomp =

0.8329

aveslsfaveperccomp =

0.8131

avelcfavetotprofit =

81.9727

avelcfavetotprofit1 =

81.3522

aveslsfavetotprofit =

83.2127

avelcfpercposprofit =

1

returnedobjs =

155.0447 150.5582 163.2191 179.1593 175.5392

156.2984 168.3014 170.5186 176.0053 144.8174

151.0059 155.3008 179.7998 169.0870 164.5123

154.1734 142.0105 138.3023 166.6375 159.4820

161.3514 160.7694 181.2203 167.4218 169.0152

176.2218 155.2101 160.9006 168.9808 178.3598

151.2454 158.4485 162.1973 159.7151 176.3924

160.1513 168.4931 163.8952 176.7311 180.6995

160.4782 159.8982 166.4840 185.7667 149.4856

185.6701 158.4361 168.4459 169.3678 167.2359

slsfobjs =

146.7723 141.1362 163.2191 179.1593 161.2467

152.7907 164.6631 166.8559 172.7162 143.7806

139.8583 145.7315 176.8658 166.4404 164.5123

150.0349 137.4843 129.1287 164.5830 156.5128

159.1062 152.0911 181.5715 163.7752 167.8474

173.8732 149.4828 157.5710 163.8936 177.4547

142.0813 152.6665 162.6240 159.7151 172.2570

155.1678 162.5264 155.5437 176.6607 180.8599

157.0127 157.7424 165.1533 185.7988 149.4856

184.7372 154.1794 167.4921 168.9685 166.5915

slsfavecomp =

10.5849 9.6455 10.8077 11.2353 11.7564

9.9773 11.3064 11.8563 11.1443 10.1118

10.2149 9.6862 11.7613 11.1466 9.9569

8.1571 9.0212 13.2460 10.5121 9.1585

9.9264 11.7323 12.0213 10.2942 12.1644

10.8736 9.7479 13.1703 11.4807 14.9022

11.8864 13.0964 9.0612 10.5035 11.4599

10.1707 11.5298 10.1940 10.7872 12.0063

11.5487 9.6039 11.0635 11.9691 7.9837

12.9247 10.0057 10.1595 10.6517 11.3366

lcfavecomp =

10.4381 9.6456 10.8077 11.2353 11.7238

9.9438 11.2851 11.8792 11.2213 10.1136

9.8772 9.3041 11.8145 10.9882 9.9569

8.2253 8.9772 13.2069 10.4600 9.2344

9.8446 11.6683 12.0452 10.1382 12.0742

10.8886 9.8628 12.9317 11.3228 14.7172

11.7726 12.9543 9.0711 10.5035 11.4529

9.9827 11.4394 10.2098 10.8641 12.1005

11.4460 9.7349 11.1239 11.9983 7.9837

12.9034 10.0104 10.1227 10.5869 11.3633

lcfaveperccomp =

0.8351 0.8646 0.8149 0.8029 0.8274

0.8305 0.8241 0.8087 0.8167 0.8669

0.8968 0.8963 0.8053 0.8337 0.8000

0.8608 0.8330 0.8567 0.8189 0.8576

0.8201 0.8339 0.8028 0.8425 0.8121

0.8063 0.8294 0.8320 0.8359 0.8286

0.8609 0.8267 0.8207 0.8089 0.8182

0.8172 0.8485 0.8367 0.8185 0.8181

0.8435 0.8380 0.8281 0.8154 0.8277

0.8113 0.8306 0.8763 0.8642 0.8417

lcfavetotprofit =

77.1280 70.6461 83.1054 91.5915 88.9170

78.8725 84.1467 88.0756 88.5657 69.8083

71.2595 69.9212 93.1729 84.9951 83.6569

68.5968 67.2735 74.9913 82.6125 71.8845

79.5051 82.2040 94.8128 80.9537 88.7897

88.7590 73.0265 86.4661 85.3356 98.7539

77.8515 82.4857 75.1387 81.8764 89.1031

78.4846 85.2878 78.0785 86.5069 93.2179

80.3986 74.8516 82.7666 93.8680 67.3048

97.2738 79.4805 79.8929 81.5741 85.3667

slsfavetotprofit =

76.7065 72.8545 83.1054 91.5915 90.9842

79.5111 86.3860 88.5992 90.0479 72.0833

71.9785 69.9110 93.3424 85.4715 83.6569

70.1766 68.7237 78.4982 82.0914 74.4966

79.7181 85.3947 95.4538 80.9410 90.6009

89.5500 75.9331 87.6045 85.4123 99.8319

82.0104 83.8118 75.8251 81.8764 89.8226

77.8036 87.0139 80.9555 88.0348 94.5818

82.3355 78.5127 86.2187 94.4629 67.3048

98.3256 80.7563 80.0875 82.6880 87.5521

returnedobjs =

155.0447 150.5582 163.2191 179.1593 175.5392

156.2984 168.3014 170.5186 176.0053 144.8174

151.0059 155.3008 179.7998 169.0870 164.5123

154.1734 142.0105 138.3023 166.6375 159.4820

161.3514 160.7694 181.2203 167.4218 169.0152

176.2218 155.2101 160.9006 168.9808 178.3598

151.2454 158.4485 162.1973 159.7151 176.3924

160.1513 168.4931 163.8952 176.7311 180.6995

160.4782 159.8982 166.4840 185.7667 149.4856

185.6701 158.4361 168.4459 169.3678 167.2359

slsfobjs =

146.7723 141.1362 163.2191 179.1593 161.2467

152.7907 164.6631 166.8559 172.7162 143.7806

139.8583 145.7315 176.8658 166.4404 164.5123

150.0349 137.4843 129.1287 164.5830 156.5128

159.1062 152.0911 181.5715 163.7752 167.8474

173.8732 149.4828 157.5710 163.8936 177.4547

142.0813 152.6665 162.6240 159.7151 172.2570

155.1678 162.5264 155.5437 176.6607 180.8599

157.0127 157.7424 165.1533 185.7988 149.4856

184.7372 154.1794 167.4921 168.9685 166.5915

lcfrejs =

1.2530 1.4997 1.2881 0.3792 0.2885

0.5901 0.7413 1.1362 0.1896 2.2460

0.9347 0.3592 0.2236 0.6401 0.4920

0.1932 2.2653 3.5098 1.0693 0.8203

0.5285 0.6961 0.3701 0.4643 0.8777

0.1397 1.3361 1.9682 0.3156 1.2033

1.7522 2.5264 1.0344 1.5705 0.1907

1.1527 0.7241 0.7682 0.1161 0.1379

1.1789 0.2585 0.7024 0.0809 1.5451

0.3036 0.5661 0.0206 0.1346 0.5818

slsfrejs =

3.0999 2.6870 1.2881 0.3792 0.8494

1.8551 1.9392 1.4404 0.3870 2.9721

3.5867 2.9407 0.7740 1.5850 0.4920

1.4246 3.3709 5.8310 1.6457 1.9737

1.5023 2.5215 0.4194 1.1982 1.8026

0.6969 2.6148 3.3522 1.4077 1.9632

3.3214 4.0461 1.0590 1.5705 0.6118

2.4298 1.7105 1.8091 0.2065 0.2244

2.4807 1.3869 1.6933 0.1425 1.5451

0.6496 1.3895 0.2879 0.7184 0.9424

lcfunhap =

0.2324 0.1280 0.0746 0.0632 0.0683

0.2158 0.1348 0.0993 0.1237 0.0936

0.1474 0.2011 0.0722 0.2648 0.2738

0.0999 0.1011 0.3987 0.0997 0.0326

0.2752 0.1844 0.0244 0.1173 0.2053

0.0024 0.0992 0.2077 0.1907 0.2083

0.2821 0.1406 0.0130 0.4528 0.0788

0.1539 0.1033 0.1348 0.0276 0.0538

0.1097 0.1186 0.1204 0.0211 0.0505

0.0257 0.2417 0.0189 0.0600 0.2126

slsfunhap =

0.0993 0.5049 0.0746 0.0632 0.8930

0.2366 0.0579 0.2075 0.3461 0.0780

0.1211 0.0066 0.1362 0.0646 0.2738

0.3007 0.1371 0.3637 0.0423 0.0912

0.0998 0.3216 0.0243 0.0571 0.0945

0.0022 0.1370 0.0914 0.1271 0.0965

0.6322 0.0910 0.0156 0.4528 0.3111

0.1748 0.2164 0.2804 0.1118 0.1239

0.0244 0.1223 0.1061 0.0338 0.0505

0.0363 0.4041 0.0204 0.0287 0.1843

menusizes =

4.1000 4.6500 4.6000 4.7500 4.4000

4.9500 4.8500 4.5000 4.9500 4.4500

4.7000 4.7500 4.8500 4.8000 4.5500

4.7500 4.4500 4.5500 4.5500 4.6000

4.8500 4.7500 4.9000 4.7500 4.2000

4.7500 4.6500 4.5500 4.8500 4.3500

4.4500 4.4500 4.5000 4.6000 4.6500

4.5500 4.9000 4.6500 4.7000 4.8500

4.4000 4.9000 5.0000 4.0000 4.0500

4.8000 4.9000 4.9500 4.8000 4.8000

avepij =

0.1396 0.1562 0.1496 0.1753 0.1536

0.1540 0.1610 0.1534 0.1543 0.1523

0.1410 0.1494 0.1646 0.1466 0.1445

0.1618 0.1369 0.1333 0.1659 0.1640

0.1550 0.1453 0.1754 0.1525 0.1473

0.1720 0.1498 0.1401 0.1492 0.1426

0.1371 0.1313 0.1668 0.1429 0.1517

0.1473 0.1632 0.1535 0.1686 0.1707

0.1411 0.1564 0.1627 0.1456 0.1297

0.1773 0.1545 0.1720 0.1684 0.1512

pijover5 =

59 59 61 74 70

64 67 77 64 62

57 58 69 62 63

66 52 51 72 70

62 60 75 67 56

75 67 58 68 62

57 55 72 60 65

63 61 58 70 76

60 64 64 61 58

79 64 63 75 63

pijequal1 =

28 25 24 32 17

23 27 20 23 34

17 24 27 23 16

28 19 17 32 27

24 19 36 19 29

31 24 19 16 20

22 11 33 23 20

25 31 31 34 30

19 24 28 26 15

31 22 41 27 22

runtimes =

303.9505 206.8127 151.3733 147.0686 279.4192

217.9590 195.1881 197.8555 275.8392 174.7400

388.2965 381.8205 191.9540 307.6865 163.6510

319.2433 313.8067 407.2034 326.0253 177.9079

277.2052 330.2854 161.5553 367.6215 202.8198

152.2363 174.2294 407.2842 273.2965 350.0249

455.4740 475.2539 214.8577 426.9560 227.4571

360.7057 235.5732 187.1109 176.5526 174.1866

457.3050 198.3903 176.3331 166.2439 192.7915

173.8945 426.7432 292.5787 193.6497 212.9350

bestest =

157.4183 152.5916 164.9518 181.0796 176.4872

158.6146 169.6759 172.9098 176.1764 146.1908

153.3243 155.6850 181.2670 171.0907 169.1818

154.9075 143.2449 139.9819 167.9500 160.3455

165.8557 161.8418 183.4920 169.4722 170.5404

176.7597 154.5615 164.6768 172.1060 180.2600

150.9492 159.6738 163.2207 161.4204 178.1439

162.2776 171.1680 166.0422 177.3296 182.5365

160.2280 161.6754 170.5224 186.4243 152.4954

186.3496 162.1350 168.9494 169.8545 169.2894

guessbestiter =

4 9 0 0 5

10 9 5 2 4

3 9 5 2 0

9 7 9 3 8

3 10 1 2 5

2 10 4 3 2

7 8 4 0 5

7 6 9 1 3

9 5 8 1 0

6 6 3 9 2

estslsfobjs =

143.4027 142.3533 164.9518 181.0796 163.9624

155.6259 165.7259 170.2149 174.2108 143.2649

138.8284 146.0553 173.5130 166.6905 169.1818

149.4393 137.6165 129.4855 163.5294 158.6672

160.7362 159.6451 179.7725 160.3588 167.2676

175.3035 154.3240 160.4026 161.8499 174.3793

145.5208 150.3966 162.3469 161.4204 172.7674

156.9382 166.6233 149.0046 176.3556 178.1250

158.6397 152.2785 159.8699 185.6976 152.4954

185.6472 157.5543 168.2857 168.1579 166.5365

compportion80 =

0.5976 0.6667 0 0 0.6364

0.7071 0.6804 0.6444 0.6061 0.7079

0.6489 0.8000 0.6082 0.6667 0

0.7895 0.6404 0.7033 0.7033 0.6739

0.6495 0.7368 0.6633 0.7053 0.6190

0.6000 0.7742 0.5934 0.7423 0.5977

0.7865 0.7191 0.7333 0 0.6667

0.6484 0.6735 0.7312 0.6383 0.7010

0.7045 0.8265 0.6800 0.6500 0

0.7708 0.6531 0.6263 0.7813 0.6458

compportionmin =

0.5976 0.6667 1.0000 1.0000 0.6364

0.7071 0.6804 0.6444 0.6061 0.7079

0.6489 0.8000 0.6082 0.6667 1.0000

0.7895 0.6404 0.7033 0.7033 0.6739

0.6495 0.7368 0.6633 0.7053 0.6190

0.6000 0.7742 0.5934 0.7423 0.5977

0.7865 0.7191 0.7333 1.0000 0.6667

0.6484 0.6735 0.7312 0.6383 0.7010

0.7045 0.8265 0.6800 0.6500 1.0000

0.7708 0.6531 0.6263 0.7813 0.6458