

```

1 % Using RA
2 # % 1 = cellID
3 # % 2 = Comparison Technology ID
4 # % 3 = Base Technology ID
5 # % 4 = Mean Yield for Comp
6 # % 5 = Standard Deviation of Yield for Comp
7 # % 6 = CV of Yield for Comp
8 # % 7 = Maximum Yield for Comp
9 # % 8 = Minimum Yield for Comp
10 # % 9 = Probability of Crop Failure for Comp
11 # % 10 = Min Proportion for Comp to SOSD Base
12 # % 11 = Mean Yield for Base
13 # % 12 = Standard Deviation of Yield for Base
14 # % 13 = CV of Yield for Base
15 # % 14 = Maximum Yield for Base
16 # % 15 = Minimum Yield for Base
17 # % 16 = Probability of Crop Failure for Base
18 # % 17 = Min Proportion for Base to SOSD Comp
19 # % 18 = Difference in mean Comp - Base
20 # % 19 = Difference in standard deviation Comp - Base
21 # % 20 = Difference in CV Comp - Base
22 # % 21 = Difference in Prob of Crop Failure Comp - Base
23 # % 22 = Min Proportion for Comp to SOSD Base divided by average base yield
24 # % 23 = Min Proportion for Base to SOSD Comp divided by average base yield
25 # % 24 = Comp More Risky (-1)/less Risky (1)/ Indeterminant (0) compared to Base
26 # % 25 = Wheat Area
27
28 % Create DescriptiveStat
29 % Rows
30 % 1 = Weighted Mean UB
31 % 2 = Weighted S.D. UB
32 % 3 = Minimum UB
33 % 4 = 10th Percentile UB
34 % 5 = 25th Percentile UB
35 % 6 = Median UB
36 % 7 = 75th Percentile UB
37 % 8 = 90th Percentile UB
38 % 9 = Maximum UB
39 % 10 = Weighted Mean LB
40 % 11 = Weighted S.D. LB
41 % 12 = Minimum LB
42 % 13 = 10th Percentile LB
43 % 14 = 25th Percentile LB
44 % 15 = Median LB
45 % 16 = 75th Percentile LB
46 % 17 = 90th Percentile LB
47 % 18 = Maximum LB
48 % 19 = Proportion of Acres in Green
49 % 20 = Proportion of Acres in Yellow
50 % 21 = Proportion of Acres in Red
51 % 22 = Total Acres
52 % 23 = Number of Cells
53 % Columns
54 % Columns
55 % 1 = RC_01_01
56
57
58 % Define Scenarios of interest
59 scenarios = [ 1, 0];
60
61 ScenariosLEN = length(scenarios);
62 DescriptiveStat = -999999 * ones(23, 1);
63
64 for ind = 1
65
66     datatemp = RA;
67     CW = scenarios(ind, 1);
68
69     if (scenarios(ind, 1) == 1)
70         cellcond = (datatemp(:,2) ~= CW | datatemp(:,25) <= 0);
71     end
72
73     if (scenarios(ind, 1) == 0 )
74         cellcond = (datatemp(:,2) ~= CW | datatemp(:,25) <= 0);
75     end
76
77     datatemp(cellcond,:) = [];
78
79     if CW == 1
80         COL = 1;
81     elseif CW == 0
82         COL = 2;
83
84     else
85         error('Something is wrong');

```

end

```
SampleN = size(datatemp, 1);
```

```
totalacres = sum(datatemp(:, 25));
```

```
wsumacresxLB = 0;
```

```
wsumacresxUB = 0;
```

```
wsumacresxLB2 = 0;
```

```
wsumacresxUB2 = 0;
```

```
percentilesLB = -99999999 * ones(2, SampleN);
```

```
percentilesUB = -99999999 * ones(2, SampleN);
```

```
propred = 0;
```

```
propgreen = 0;
```

```
for statind = 1:SampleN
```

```
    acres = datatemp(statind, 25);
```

```
    wtpLB = -1 * datatemp(statind, 17) / 1000;
```

```
    wtpUB = -1 * datatemp(statind, 10) / 1000;
```

```
    wsumacresxLB = wsumacresxLB + wtpLB * (acres/totalacres);
```

```
    wsumacresxUB = wsumacresxUB + wtpUB * (acres/totalacres);
```

```
    wsumacresxLB2 = wsumacresxLB2 + (wtpLB ^ 2) * (acres/totalacres);
```

```
    wsumacresxUB2 = wsumacresxUB2 + (wtpUB ^ 2) * (acres/totalacres);
```

```
    percentilesLB(statind, 1) = wtpLB;
```

```
    percentilesLB(statind, 2) = acres/totalacres;
```

```
    percentilesUB(statind, 1) = wtpUB;
```

```
    percentilesUB(statind, 2) = acres/totalacres;
```

```
    if datatemp(statind, 24) == -1
```

```
        propred = propred + acres/totalacres;
```

```
    elseif datatemp(statind, 24) == 1
```

```
        propgreen = propgreen + acres/totalacres;
```

```
    end
```

```
    clear acres wtpLB wtpUB;
```

```
end
```

```
percentilesLB = sortrows(percentilesLB);
```

```
percentilesUB = sortrows(percentilesUB);
```

```
cumLB = 0;
```

```
cumUB = 0;
```

```
for perind = 1:SampleN
```

```
    cumLBLast = cumLB;
```

```
    cumUBLast = cumUB;
```

```
    intervalLB = percentilesLB(perind, 2);
```

```
    intervalUB = percentilesUB(perind, 2);
```

```
    cumLB = cumLB + intervalLB;
```

```
    cumUB = cumUB + intervalUB;
```

```
    if cumLBLast <= 0.1 && cumLB >= 0.1
```

```
        DescriptiveStat( 4, COL) = ((0.1 - cumLBLast) / intervalLB) * percentilesLB(perind - 1, 1) + ((cumLB - 0.1) / intervalLB) * percentilesLB(perind, 1) ;
```

```
    end
```

```
    if cumUBLast <= 0.1 && cumUB >= 0.1
```

```
        DescriptiveStat(13, COL) = ((0.1 - cumUBLast) / intervalUB) * percentilesUB(perind - 1, 1) + ((cumUB - 0.1) / intervalUB) * percentilesUB(perind, 1) ;
```

```
    end
```

```
    if cumLBLast <= 0.25 && cumLB >= 0.25
```

```
        DescriptiveStat( 5, COL) = ((0.25 - cumLBLast) / intervalLB) * percentilesLB(perind - 1, 1) + ((cumLB - 0.25) / intervalLB) * percentilesLB(perind, 1) ;
```

```
    end
```

```
    if cumUBLast <= 0.25 && cumUB >= 0.25
```

```
        DescriptiveStat(14, COL) = ((0.25 - cumUBLast) / intervalUB) * percentilesUB(perind - 1, 1) + ((cumUB - 0.25) / intervalUB) * percentilesUB(perind, 1) ;
```

```
    end
```

```
    if cumLBLast <= 0.5 && cumLB >= 0.5
```

```
        DescriptiveStat( 6, COL) = ((0.5 - cumLBLast) / intervalLB) * percentilesLB(perind - 1, 1) + ((cumLB - 0.5) / intervalLB) * percentilesLB(perind, 1) ;
```

```
    end
```

```
    if cumUBLast <= 0.5 && cumUB >= 0.5
```

```
        DescriptiveStat(15, COL) = ((0.5 - cumUBLast) / intervalUB) * percentilesUB(perind - 1, 1) + ((cumUB - 0.5) / intervalUB) * percentilesUB(perind, 1) ;
```

```
    end
```

```
    if cumLBLast <= 0.75 && cumLB >= 0.75
```

```
        DescriptiveStat( 7, COL) = ((0.75 - cumLBLast) / intervalLB) * percentilesLB(perind - 1, 1) + ((cumLB - 0.75) / intervalLB) * percentilesLB(perind, 1) ;
```

```
    end
```

```
    if cumUBLast <= 0.75 && cumUB >= 0.75
```

```

164         DescriptiveStat(16, COL) = ((0.75 - cumUBLast) / intervalUB) * percentilesUB(perind - 1, 1) +
165         ((cumUB - 0.75) / intervalUB) * percentilesUB(perind, 1) ;
166     end
167     if cumLBLast <= 0.9 && cumLB >= 0.9
168         DescriptiveStat( 8, COL) = ((0.9 - cumLBLast) / intervalLB) * percentilesLB(perind - 1, 1) + ((cumLB
169         - 0.9) / intervalLB) * percentilesLB(perind, 1) ;
170     end
171     if cumUBLast <= 0.9 && cumUB >= 0.9
172         DescriptiveStat(17, COL) = ((0.9 - cumUBLast) / intervalUB) * percentilesUB(perind - 1, 1) + ((cumUB
173         - 0.9) / intervalUB) * percentilesUB(perind, 1) ;
174     end
175     clear cumLBLast cumUBLast intervalLB intervalUB;
176 end
177 DescriptiveStat( 1, COL) = wsumacresxLB;
178 DescriptiveStat( 2, COL) = sqrt(wsumacresxLB2 - wsumacresxLB ^ 2);
179 DescriptiveStat( 3, COL) = percentilesLB(1, 1);
180
181 DescriptiveStat( 9, COL) = percentilesLB(SampleN, 1);
182
183 DescriptiveStat(10, COL) = wsumacresxUB;
184 DescriptiveStat(11, COL) = sqrt(wsumacresxUB2 - wsumacresxUB ^ 2);
185 DescriptiveStat(12, COL) = percentilesUB(1, 1);
186
187 DescriptiveStat(18, COL) = percentilesUB(SampleN, 1);
188 DescriptiveStat(19, COL) = propgreen;
189 DescriptiveStat(20, COL) = 1 - propred - propgreen;
190 DescriptiveStat(21, COL) = propred;
191 DescriptiveStat(22, COL) = totalacres;
192 DescriptiveStat(23, COL) = SampleN;
193
194 clear datatemp CW cellcond COL SampleN totalacres ...
195     wsumacresxLB wsumacresxUB wsumacresxUB2 wsumacresxLB2 ...
196     percentilesLB percentilesUB propgreen propred perind cumLB cumUB statind;
197
198 end
199
200
201 clear scenarios ScenariosLEN yearseq ind;

```