The GLIMMIX Procedure

Model Information	
Data Set	WORK.CALVES
Response Variable	calfweight
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	cowID(seasonyr)
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Between-Within

Number of Observations Read	708
Number of Observations Used	708

Dimensions	
R-side Cov. Parameters	21
Columns in X	56
Columns in Z per Subject	0
Subjects (Blocks in V)	118
Max Obs per Subject	6

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	21
Lower Boundaries	6
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	4737.122177	.	2.51E-12

Convergence criterion (ABSGCONV=0.00001) satisfied.

Fit Statistics	
-2 Res Log Likelihood	4737.12
AIC (smaller is better)	4779.12
AICC (smaller is better)	4780.54
BIC (smaller is better)	4837.31
CAIC (smaller is better)	4858.31
HQIC (smaller is better)	4802.75
Generalized Chi-Square	672.00
Gener. Chi-Square / DF	1.00

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
UN(1,1)	cowID(seasonyr)	15.3365	2.0494
UN(2,1)	cowID(seasonyr)	13.5756	5.5765
UN(2,2)	cowID(seasonyr)	215.08	28.7412
UN(3,1)	cowID(seasonyr)	17.7816	6.7368
UN(3,2)	cowID(seasonyr)	247.23	33.8029
UN(3,3)	cowID(seasonyr)	310.82	41.5347

Covariance Parameter Estimates

Cov Parm	Subject	Estimate	Standard Error
UN(4,1)	cowID(seasonyr)	21.7660	6.7300
UN(4,2)	cowID(seasonyr)	228.71	32.2940
UN(4,3)	cowID(seasonyr)	287.91	39.6521
UN(4,4)	cowID(seasonyr)	299.87	40.0724
UN(5,1)	cowID(seasonyr)	22.6631	7.0800
UN(5,2)	cowID(seasonyr)	222.20	32.8558
UN(5,3)	cowID(seasonyr)	284.64	40.5752
UN(5,4)	cowID(seasonyr)	303.37	41.3783
UN(5,5)	cowID(seasonyr)	332.58	44.4425
UN(6,1)	cowID(seasonyr)	37.1484	9.2720
UN(6,2)	cowID(seasonyr)	-65.0866	32.7212
UN(6,3)	cowID(seasonyr)	-36.8802	38.7911
UN(6,4)	cowID(seasonyr)	36.8902	38.1079
UN(6,5)	cowID(seasonyr)	95.4743	40.9694
UN(6,6)	cowID(seasonyr)	537.85	71.8728

Solutions for Fixed Effects

Effect	calfsex	cowagen	dayn	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept				155.30	14.3149	112	10.85	<.0001
dayn			0	-118.52	13.5075	112	-8.77	<.0001
dayn			30	-85.7123	18.3427	112	-4.67	<.0001
dayn			60	-74.4273	18.7467	112	-3.97	0.0001
dayn			90	-55.2032	17.0604	112	-3.24	0.0016
dayn			120	-28.5250	16.0896	112	-1.77	0.0790
dayn			200	0	.	.	.	.
calfsex	heifer			-9.5152	4.4266	112	-2.15	0.0337
calfsex	steer			0	.	.	.	.
calfsex*dayn	heifer		0	7.2246	4.1770	112	1.73	0.0865
calfsex*dayn	heifer		30	8.5424	5.6722	112	1.51	0.1349
calfsex*dayn	heifer		60	7.0623	5.7971	112	1.22	0.2257
calfsex*dayn	heifer		90	5.3703	5.2756	112	1.02	0.3109
calfsex*dayn	heifer		120	3.4170	4.9754	112	0.69	0.4936
calfsex*dayn	heifer		200	0	.	.	.	.
calfsex*dayn	steer		0	0	.	.	.	.
calfsex*dayn	steer		30	0	.	.	.	.
calfsex*dayn	steer		60	0	.	.	.	.
calfsex*dayn	steer		90	0	.	.	.	.
calfsex*dayn	steer		120	0	.	.	.	.
calfsex*dayn	steer		200	0	.	.	.	.
cowagen		4		0.3187	5.5741	112	0.06	0.9545
cowagen		5		4.3175	5.3031	112	0.81	0.4173
cowagen		6		0	.	.	.	.
cowagen*dayn		4	0	-1.8323	5.2597	112	-0.35	0.7282
cowagen*dayn		4	30	-8.2728	7.1424	112	-1.16	0.2492
cowagen*dayn		4	60	-6.3339	7.2997	112	-0.87	0.3874
cowagen*dayn		4	90	-6.4930	6.6431	112	-0.98	0.3305
cowagen*dayn		4	120	-7.5553	6.2651	112	-1.21	0.2304
cowagen*dayn		4	200	0	.	.	.	.
cowagen*dayn		5	0	-5.0439	5.0040	112	-1.01	0.3156
cowagen*dayn		5	30	-4.4618	6.7953	112	-0.66	0.5128
cowagen*dayn		5	60	-2.4363	6.9450	112	-0.35	0.7264
cowagen*dayn		5	90	-1.4418	6.3202	112	-0.23	0.8200

Solutions for Fixed Effects

Effect	calfsex	cowagen	dayn	Estimate	Standard Error	DF	t Value	Pr > |t|
cowagen*dayn		5	120	-1.0959	5.9606	112	-0.18	0.8545
cowagen*dayn		5	200	0	.	.	.	.
cowagen*dayn		6	0	0	.	.	.	.
cowagen*dayn		6	30	0	.	.	.	.
cowagen*dayn		6	60	0	.	.	.	.
cowagen*dayn		6	90	0	.	.	.	.
cowagen*dayn		6	120	0	.	.	.	.
cowagen*dayn		6	200	0	.	.	.	.
cdate				-0.7079	0.3257	112	-2.17	0.0319
cdate*dayn			0	0.8556	0.3074	112	2.78	0.0063
cdate*dayn			30	0.7491	0.4174	112	1.79	0.0754
cdate*dayn			60	0.7644	0.4266	112	1.79	0.0758
cdate*dayn			90	0.7338	0.3882	112	1.89	0.0613
cdate*dayn			120	0.8358	0.3661	112	2.28	0.0243
cdate*dayn			200	0	.	.	.	.
milkAUC				0.08432	0.01156	112	7.29	<.0001
milkAUC*dayn			0	-0.08645	0.01091	112	-7.93	<.0001
milkAUC*dayn			30	-0.07691	0.01481	112	-5.19	<.0001
milkAUC*dayn			60	-0.06681	0.01514	112	-4.41	<.0001
milkAUC*dayn			90	-0.05511	0.01378	112	-4.00	0.0001
milkAUC*dayn			120	-0.04496	0.01299	112	-3.46	0.0008
milkAUC*dayn			200	0	.	.	.	.

Type I Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
dayn	5	112	2946.19	<.0001
calfsex	1	112	2.48	0.1183
calfsex*dayn	5	112	2.46	0.0371
cowagen	2	112	1.85	0.1621
cowagen*dayn	10	112	1.34	0.2162
cdate	1	112	1.32	0.2525
cdate*dayn	5	112	8.41	<.0001
milkAUC	1	112	24.13	<.0001
milkAUC*dayn	5	112	16.01	<.0001

Type III Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
dayn	5	112	31.58	<.0001
calfsex	1	112	3.46	0.0654
calfsex*dayn	5	112	1.48	0.2022
cowagen	2	112	3.14	0.0470
cowagen*dayn	10	112	1.58	0.1219
cdate	1	112	0.09	0.7597
cdate*dayn	5	112	5.77	<.0001
milkAUC	1	112	24.13	<.0001
milkAUC*dayn	5	112	16.01	<.0001

calfsex*dayn Least Squares Means

calfsex	dayn	Estimate	Standard Error	DF	t Value	Pr > |t|
heifer	0	33.3717	0.5231	112	63.80	<.0001
heifer	30	74.0118	1.9588	112	37.78	<.0001
heifer	60	95.6841	2.3548	112	40.63	<.0001

calfsex*dayn Least Squares Means						
calfsex	dayn	Estimate	Standard Error	DF	t Value	Pr > |t|
heifer	90	125.11	2.3130	112	54.09	<.0001
heifer	120	161.26	2.4358	112	66.20	<.0001
heifer	200	225.05	3.0976	112	72.65	<.0001
steer	0	35.6623	0.5204	112	68.53	<.0001
steer	30	74.9846	1.9488	112	38.48	<.0001
steer	60	98.1370	2.3427	112	41.89	<.0001
steer	90	129.26	2.3011	112	56.17	<.0001
steer	120	167.36	2.4234	112	69.06	<.0001
steer	200	234.57	3.0818	112	76.12	<.0001

cowagen*dayn Least Squares Means						
cowagen	dayn	Estimate	Standard Error	DF	t Value	Pr > |t|
4	0	33.7500	0.6538	112	51.62	<.0001
4	30	69.2435	2.4482	112	28.28	<.0001
4	60	92.2733	2.9431	112	31.35	<.0001
4	90	122.11	2.8908	112	42.24	<.0001
4	120	158.41	3.0444	112	52.03	<.0001
4	200	228.59	3.8715	112	59.04	<.0001
5	0	34.5373	0.5805	112	59.50	<.0001
5	30	77.0534	2.1738	112	35.45	<.0001
5	60	100.17	2.6132	112	38.33	<.0001
5	90	131.16	2.5668	112	51.10	<.0001
5	120	168.87	2.7032	112	62.47	<.0001
5	200	232.58	3.4376	112	67.66	<.0001
6	0	35.2636	0.6757	112	52.19	<.0001
6	30	77.1976	2.5305	112	30.51	<.0001
6	60	98.2885	3.0420	112	32.31	<.0001
6	90	128.28	2.9879	112	42.93	<.0001
6	120	165.65	3.1466	112	52.64	<.0001
6	200	228.27	4.0016	112	57.04	<.0001

Simple Effect Comparisons of calfsex*dayn Least Squares Means By dayn							
Simple Effect Level	calfsex	_calfsex	Estimate	Standard Error	DF	t Value	Pr > |t|
dayn 0	heifer	steer	-2.2906	0.7475	112	-3.06	0.0027
dayn 30	heifer	steer	-0.9728	2.7993	112	-0.35	0.7289
dayn 60	heifer	steer	-2.4529	3.3651	112	-0.73	0.4676
dayn 90	heifer	steer	-4.1448	3.3053	112	-1.25	0.2125
dayn 120	heifer	steer	-6.0981	3.4809	112	-1.75	0.0825
dayn 200	heifer	steer	-9.5152	4.4266	112	-2.15	0.0337

Simple Effect Comparisons of cowagen*dayn Least Squares Means By dayn							
Simple Effect Level	cowagen	_cowagen	Estimate	Standard Error	DF	t Value	Pr > |t|
dayn 0	4	5	-0.7873	0.8845	112	-0.89	0.3753
dayn 0	4	6	-1.5136	0.9412	112	-1.61	0.1106
dayn 0	5	6	-0.7263	0.8955	112	-0.81	0.4190
dayn 30	4	5	-7.8099	3.3122	112	-2.36	0.0201
dayn 30	4	6	-7.9541	3.5249	112	-2.26	0.0260
dayn 30	5	6	-0.1443	3.3535	112	-0.04	0.9658
dayn 60	4	5	-7.8965	3.9817	112	-1.98	0.0498
dayn 60	4	6	-6.0152	4.2373	112	-1.42	0.1585
dayn 60	5	6	1.8812	4.0314	112	0.47	0.6417

Simple Effect Comparisons of cowagen*dayn Least Squares Means By dayn							
Simple Effect Level	cowagen	_cowagen	Estimate	Standard Error	DF	t Value	Pr > |t|
dayn 90	4	5	-9.0501	3.9110	112	-2.31	0.0225
dayn 90	4	6	-6.1743	4.1621	112	-1.48	0.1408
dayn 90	5	6	2.8758	3.9598	112	0.73	0.4692
dayn 120	4	5	-10.4583	4.1187	112	-2.54	0.0125
dayn 120	4	6	-7.2367	4.3832	112	-1.65	0.1015
dayn 120	5	6	3.2216	4.1701	112	0.77	0.4414
dayn 200	4	5	-3.9989	5.2378	112	-0.76	0.4468
dayn 200	4	6	0.3187	5.5741	112	0.06	0.9545
dayn 200	5	6	4.3175	5.3031	112	0.81	0.4173