The GLIMMIX Procedure

Model Information	
Data Set	WORK.PLANTCOVERAGE_YEAR3
Response Variable	Total_Bees
Response Distribution	Negative Binomial
Link Function	Log
Variance Function	Default
Variance Matrix	Not blocked
Estimation Technique	Residual PL
Degrees of Freedom Method	Satterthwaite

Class Level Information		
Class	**Levels**	**Values**
Sampling_Day	5	1 2 3 4 5
Site	8	Bowman Cretsinger Kaldenberg McClellan Peckumn Plunkett Sheller Sloan

Number of Observations Read	40
Number of Observations Used	40

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	1
Columns in X	12
Columns in Z	8
Subjects (Blocks in V)	1
Max Obs per Subject	40

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	2
Lower Boundaries	2
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

The GLIMMIX Procedure

Iteration History					
Iteration	**Restarts**	**Subiterations**	**Objective Function**	**Change**	**Max Gradient**
0	**0**	8	164.88353637	2.00000000	2.167226
1	**0**	5	99.038477106	1.60943337	23.6902
2	**0**	6	112.70375012	0.45920124	14.92388
3	**0**	5	116.95296077	0.27772305	12.94888
4	**0**	2	117.33747635	0.11104994	12.74903
5	**0**	2	117.36325134	0.03846165	12.73356
6	**0**	1	117.37145521	0.01272176	12.72799
7	**0**	1	117.37397779	0.00414405	12.72637
8	**0**	1	117.37480785	0.00134314	12.72582
9	**0**	1	117.37507326	0.00043461	12.72565
10	**0**	1	117.37515957	0.00014056	12.7256
11	**0**	1	117.37518741	0.00004545	12.72558
12	**0**	1	117.37519643	0.00001473	12.72558
13	**0**	0	117.37519935	0.00000475	12.72558
14	**0**	0	117.3752003	0.00000153	12.72557
15	**0**	0	117.3752006	0.00000049	12.72557
16	**0**	0	117.3752007	0.00000016	12.72557
17	**0**	0	117.37520073	0.00000005	12.72557
18	**0**	0	117.37520074	0.00000002	12.72557
19	**0**	0	117.37520074	0.00000001	12.72557

Convergence criterion (PCONV=1.11022E-8) satisfied.

Estimated G matrix is not positive definite.

Fit Statistics	
-2 Res Log Pseudo-Likelihood	117.38
Generalized Chi-Square	29.95
Gener. Chi-Square / DF	1.00

Covariance Parameter Estimates		
Cov Parm	**Estimate**	**Standard Error**
Site	9.06E-20	.
Scale	0.7701	0.2045

The GLIMMIX Procedure

Solutions for Fixed Effects						
Effect	Sampling_Day	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept		2.5203	0.5140	30	4.90	<.0001
Average_Coverage		0.1130	0.03428	30	3.30	0.0025
Sampling_Day	1	1.0946	0.6443	30	1.70	0.0997
Sampling_Day	2	1.2554	0.6248	30	2.01	0.0536
Sampling_Day	3	1.1513	0.6773	30	1.70	0.0995
Sampling_Day	4	1.6438	0.6918	30	2.38	0.0241
Sampling_Day	5	0	.	.	.	.
Average_C*Sampling_D	1	-0.09398	0.07929	30	-1.19	0.2453
Average_C*Sampling_D	2	-0.00393	0.07929	29.25	-0.05	0.9608
Average_C*Sampling_D	3	-0.09723	0.06480	30	-1.50	0.1439
Average_C*Sampling_D	4	-0.07546	0.04644	29.83	-1.62	0.1147
Average_C*Sampling_D	5	0	.	.	.	.

Type III Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
Average_Coverage	1	29.66	5.63	0.0243
Sampling_Day	4	30	1.54	0.2157
Average_C*Sampling_D	4	29.72	1.08	0.3843

Sampling_Day Least Squares Means								
Sampling_Day	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
1	3.7425	0.4033	30	9.28	<.0001	0.05	2.9188	4.5661
2	4.5057	0.4431	28.97	10.17	<.0001	0.05	3.5994	5.4119
3	3.7774	0.3204	30	11.79	<.0001	0.05	3.1230	4.4319
4	4.4155	0.3393	29.36	13.02	<.0001	0.05	3.7220	5.1090
5	3.2765	0.3621	30	9.05	<.0001	0.05	2.5370	4.0160

Differences of Sampling_Day Least Squares Means									
Sampling_Day	Sampling_Day	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
1	2	-0.7632	0.5991	29.46	-1.27	0.2127	0.05	-1.9878	0.4614
1	3	-0.03495	0.5151	30	-0.07	0.9463	0.05	-1.0869	1.0170
1	4	-0.6730	0.5270	29.77	-1.28	0.2115	0.05	-1.7497	0.4036
1	5	0.4659	0.5420	30	0.86	0.3968	0.05	-0.6410	1.5729

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Differences of Sampling_Day Least Squares Means									
Sampling_Day	Sampling_Day	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
2	3	0.7282	0.5468	29.34	1.33	0.1932	0.05	-0.3896	1.8460
2	4	0.09015	0.5581	29.11	0.16	0.8728	0.05	-1.0510	1.2313
2	5	1.2291	0.5722	30	2.15	0.0399	0.05	0.06048	2.3978
3	4	-0.6381	0.4667	29.69	-1.37	0.1818	0.05	-1.5916	0.3154
3	5	0.5009	0.4835	30	1.04	0.3085	0.05	-0.4866	1.4884
4	5	1.1390	0.4962	30	2.30	0.0289	0.05	0.1256	2.1524

Conditional Studentized Residuals