

Relationship between seeding rate and first production year herbage yield of three varieties of alfalfa at Elora, Ontario, 1991

The GLIMMIX Procedure

Model Information	
Data Set	WORK.SEEDS
Response Variable	yield
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix	Not blocked
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
block	3	1 2 3
variety	3	Legend OAC Minto Vernal
rate	4	6 12 18 24

Number of Observations Read	36
Number of Observations Used	36

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	1
Columns in X	28
Columns in Z	3
Subjects (Blocks in V)	1
Max Obs per Subject	36

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	1
Lower Boundaries	1
Upper Boundaries	0
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

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Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	117.27235276	.	2.66E-15

Convergence criterion (ABSGCONV=0.00001) satisfied.

Fit Statistics	
-2 Res Log Likelihood	117.27
AIC (smaller is better)	121.27
AICC (smaller is better)	121.84
BIC (smaller is better)	119.47
CAIC (smaller is better)	121.47
HQIC (smaller is better)	117.65
Generalized Chi-Square	13.02
Gener. Chi-Square / DF	0.54

Covariance Parameter Estimates		
Cov Parm	Estimate	Standard Error
block	0.2134	0.2590
Residual	0.5427	0.1636

Type I Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
variety	2	22	30.91	<.0001
x	1	22	4.39	0.0480
x*x	1	22	8.78	0.0072
x*rate	1	22	0.17	0.6823
x*variety	2	22	4.44	0.0240
x*x*variety	2	22	1.56	0.2321
x*variety*rate	2	22	1.92	0.1707