

The Mixed Procedure

Model Information	
Data Set	WORK.TURNIP
Dependent Variable	calcium
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
leaf	4	1 2 3 4

Dimensions	
Covariance Parameters	2
Columns in X	1
Columns in Z	4
Subjects	1
Max Obs Per Subject	16

Number of Observations	
Number of Observations Read	16
Number of Observations Used	16
Number of Observations Not Used	0

Iteration History			
Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	4.22584731	
1	1	-18.55463752	0.00000000

Convergence criteria met.

The Mixed Procedure

Estimated V Correlation Matrix for Subject 1														
Row	Col1	Col2	Col3	Col4	Col5	Col6	Col7	Col8	Col9	Col10	Col11	Col12	Col13	Col14
1	1.0000	0.9164	0.9164	0.9164										
2	0.9164	1.0000	0.9164	0.9164										
3	0.9164	0.9164	1.0000	0.9164										
4	0.9164	0.9164	0.9164	1.0000										
5					1.0000	0.9164	0.9164	0.9164						
6					0.9164	1.0000	0.9164	0.9164						
7					0.9164	0.9164	1.0000	0.9164						
8					0.9164	0.9164	0.9164	1.0000						
9									1.0000	0.9164	0.9164	0.9164		
10									0.9164	1.0000	0.9164	0.9164		
11									0.9164	0.9164	1.0000	0.9164		
12									0.9164	0.9164	0.9164	1.0000		
13													1.0000	0.9164
14													0.9164	1.0000
15													0.9164	0.9164
16													0.9164	0.9164

The Mixed Procedure

Estimated V Correlation Matrix for Subject 1		
Row	Col15	Col16
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13	0.9164	0.9164
14	0.9164	0.9164
15	1.0000	0.9164
16	0.9164	1.0000

Covariance Parameter Estimates					
Cov Parm	Ratio	Estimate	Alpha	Lower	Upper
leaf	10.9632	0.07238	0.05	0.02281	1.1078
Residual	1.0000	0.006602	0.05	0.003395	0.01799

Fit Statistics	
-2 Res Log Likelihood	-18.6
AIC (smaller is better)	-14.6
AICC (smaller is better)	-13.6
BIC (smaller is better)	-15.8

***PROC GLM can give the right results in this simple mixed model,
but not in general***

The GLM Procedure

Class Level Information		
Class	Levels	Values
leaf	4	1 2 3 4

Number of Observations Read	16
Number of Observations Used	16

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but not in general***

The GLM Procedure

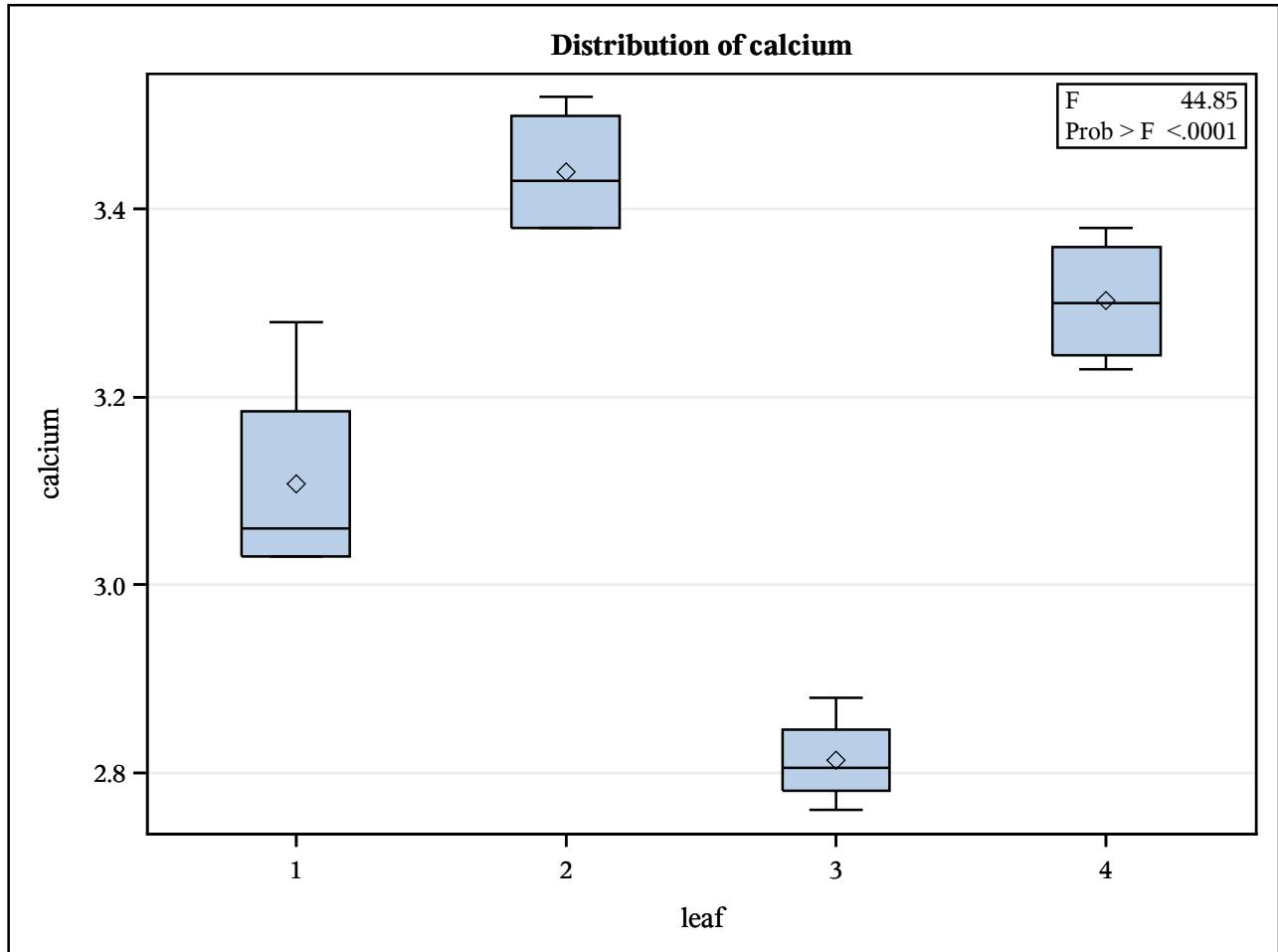
Dependent Variable: calcium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	0.88836875	0.29612292	44.85	<.0001
Error	12	0.07922500	0.00660208		
Corrected Total	15	0.96759375			

R-Square	Coeff Var	Root MSE	calcium Mean
0.918122	2.566735	0.081253	3.165625

Source	DF	Type I SS	Mean Square	F Value	Pr > F
leaf	3	0.88836875	0.29612292	44.85	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
leaf	3	0.88836875	0.29612292	44.85	<.0001



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The GLM Procedure

Source	Type III Expected Mean Square
leaf	$\text{Var}(\text{Error}) + 4 \text{Var}(\text{leaf})$

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but not in general***

Obs	chi2_025	chi2_975	F_025	F_975
1	23.3367	4.40379	4.47418	0.069752