

**The Mixed Procedure**

Model Information	
Data Set	WORK.ALFALFA
Dependent Variable	yield
Covariance Structure	Variance Components
Estimation Method	Type 3
Residual Variance Method	Factor
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Satterthwaite

Class Level Information		
Class	Levels	Values
block	6	1 2 3 4 5 6
variety	3	1 2 3
date	4	1 2 3 4

Dimensions	
Covariance Parameters	3
Columns in X	20
Columns in Z	24
Subjects	1
Max Obs Per Subject	72

Number of Observations	
Number of Observations Read	72
Number of Observations Used	72
Number of Observations Not Used	0

## The Mixed Procedure

Type 3 Analysis of Variance								
Source	DF	Sum of Squares	Mean Square	Expected Mean Square	Error Term	Error DF	F Value	Pr > F
variety	2	0.178019	0.089010	Var(Residual) + 4 Var(block*variety) + Q(variety,variety*date)	MS(block*variety)	10	0.65	0.5412
date	3	1.962471	0.654157	Var(Residual) + Q(date,variety*date)	MS(Residual)	45	23.39	<.0001
variety*date	6	0.210558	0.035093	Var(Residual) + Q(variety*date)	MS(Residual)	45	1.25	0.2973
block	5	4.149824	0.829965	Var(Residual) + 4 Var(block*variety) + 12 Var(block)	MS(block*variety)	10	6.09	0.0077
block*variety	10	1.362347	0.136235	Var(Residual) + 4 Var(block*variety)	MS(Residual)	45	4.87	<.0001
Residual	45	1.258546	0.027968	Var(Residual)	.	.	.	.

Covariance Parameter Estimates	
Cov Parm	Estimate
block	0.05781
block*variety	0.02707
Residual	0.02797

Fit Statistics	
-2 Res Log Likelihood	10.0
AIC (smaller is better)	16.0
AICC (smaller is better)	16.4
BIC (smaller is better)	15.3

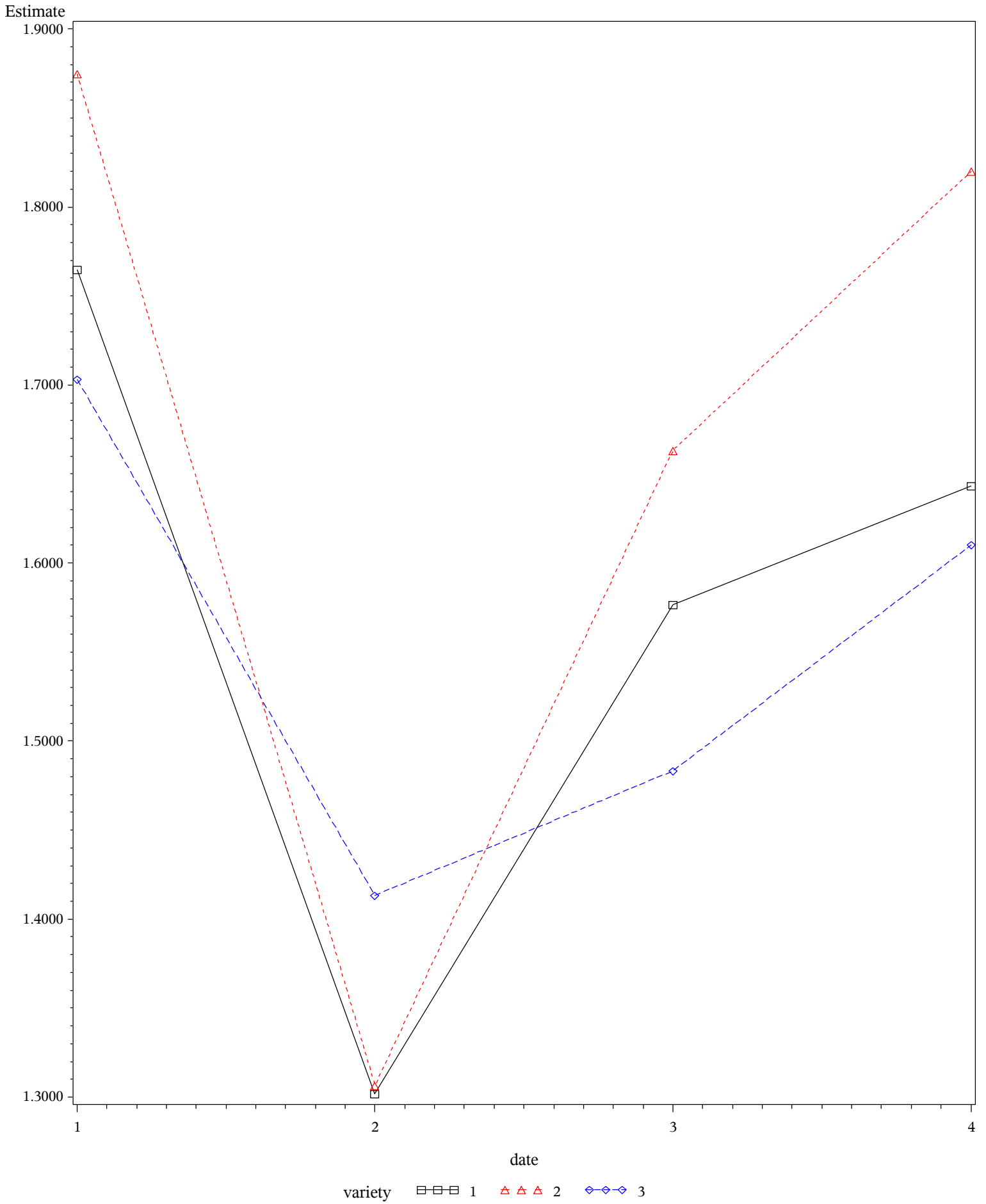
Type 3 Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
variety	2	10	0.65	0.5412
date	3	45	23.39	<.0001
variety*date	6	45	1.25	0.2973

Contrasts				
Label	Num DF	Den DF	F Value	Pr > F
control vs. cuts	1	45	29.15	<.0001

*The Mixed Procedure*

Least Squares Means							
Effect	variety	date	Estimate	Standard Error	DF	t Value	Pr >  t
variety	1		1.5717	0.1237	8.37	12.70	<.0001
variety	2		1.6663	0.1237	8.37	13.47	<.0001
variety	3		1.5525	0.1237	8.37	12.55	<.0001
date		1	1.7811	0.1127	6.06	15.81	<.0001
date		2	1.3406	0.1127	6.06	11.90	<.0001
date		3	1.5744	0.1127	6.06	13.98	<.0001
date		4	1.6911	0.1127	6.06	15.01	<.0001
variety*date	1	1	1.7650	0.1371	12.5	12.87	<.0001
variety*date	1	2	1.3017	0.1371	12.5	9.49	<.0001
variety*date	1	3	1.5767	0.1371	12.5	11.50	<.0001
variety*date	1	4	1.6433	0.1371	12.5	11.98	<.0001
variety*date	2	1	1.8750	0.1371	12.5	13.67	<.0001
variety*date	2	2	1.3067	0.1371	12.5	9.53	<.0001
variety*date	2	3	1.6633	0.1371	12.5	12.13	<.0001
variety*date	2	4	1.8200	0.1371	12.5	13.27	<.0001
variety*date	3	1	1.7033	0.1371	12.5	12.42	<.0001
variety*date	3	2	1.4133	0.1371	12.5	10.31	<.0001
variety*date	3	3	1.4833	0.1371	12.5	10.82	<.0001
variety*date	3	4	1.6100	0.1371	12.5	11.74	<.0001

### Profile plot of estimated joint treatment means



## Profile plot of estimated joint treatment means

