The GLM Procedure

Class Level Information		
Class	Levels	Values
SOWING	4	1 2 3 4
VARIETY	3	1 2 3

Number of Observations Read	60
Number of Observations Used	60

The GLM Procedure

Dependent Variable: YIELD

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	883.6058333	80.3278030	324.12	<.0001
Error	48	11.8960000	0.2478333		
Corrected Total	59	895.5018333			

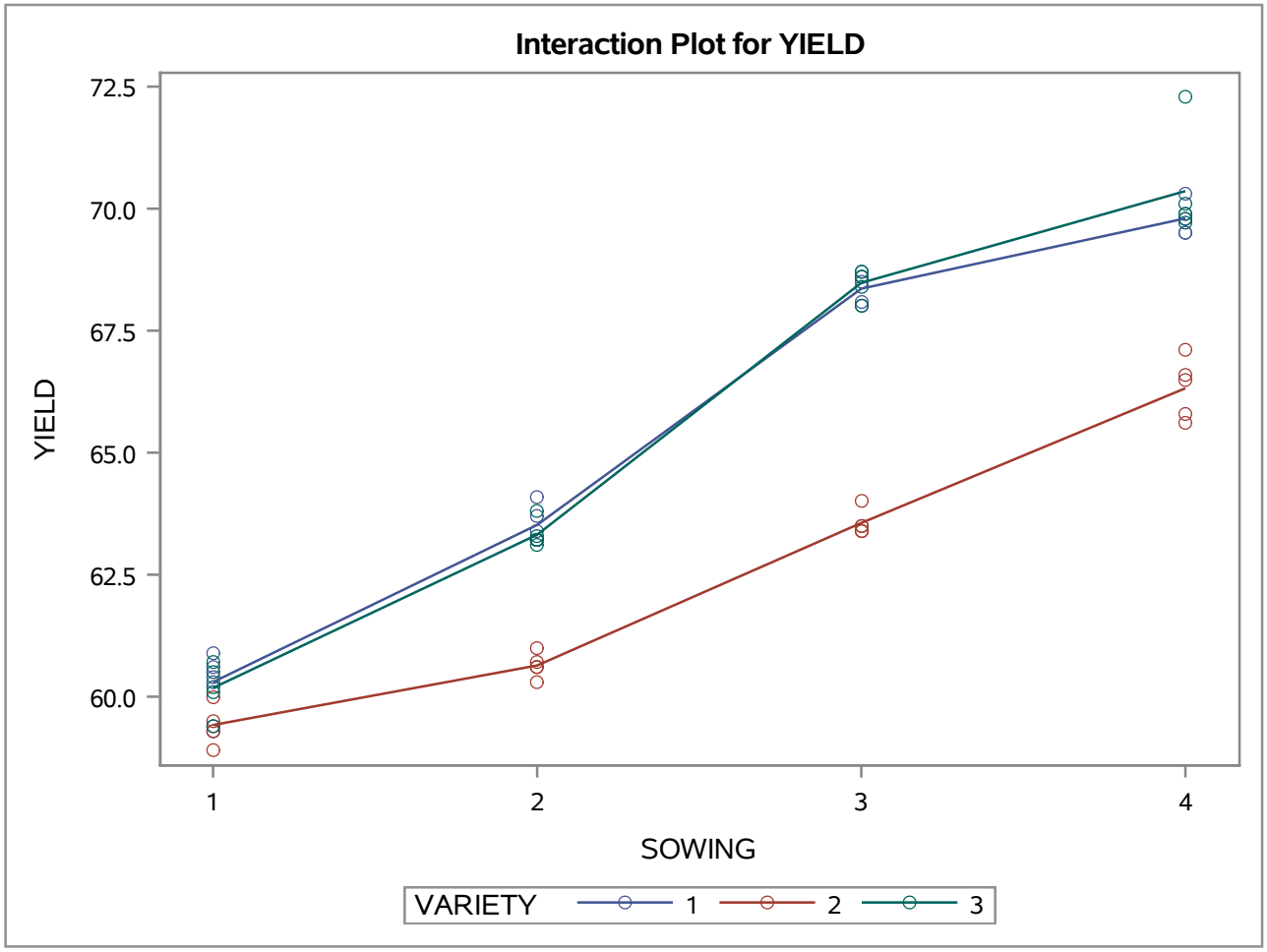
R-Square	Coeff Var	Root MSE	YIELD Mean
0.986716	0.771568	0.497829	64.52167

Source	DF	Type I SS	Mean Square	F Value	Pr > F
SOWING	3	728.7898333	242.9299444	980.21	<.0001
VARIETY	2	124.5213333	62.2606667	251.22	<.0001
SOWING*VARIETY	6	30.2946667	5.0491111	20.37	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
SOWING	3	728.7898333	242.9299444	980.21	<.0001
VARIETY	2	124.5213333	62.2606667	251.22	<.0001
SOWING*VARIETY	6	30.2946667	5.0491111	20.37	<.0001

The GLM Procedure

Dependent Variable: YIELD



The GLM Procedure

Dependent Variable: SLA

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	203.6733333	18.5157576	61.70	<.0001
Error	48	14.4040000	0.3000833		
Corrected Total	59	218.0773333			

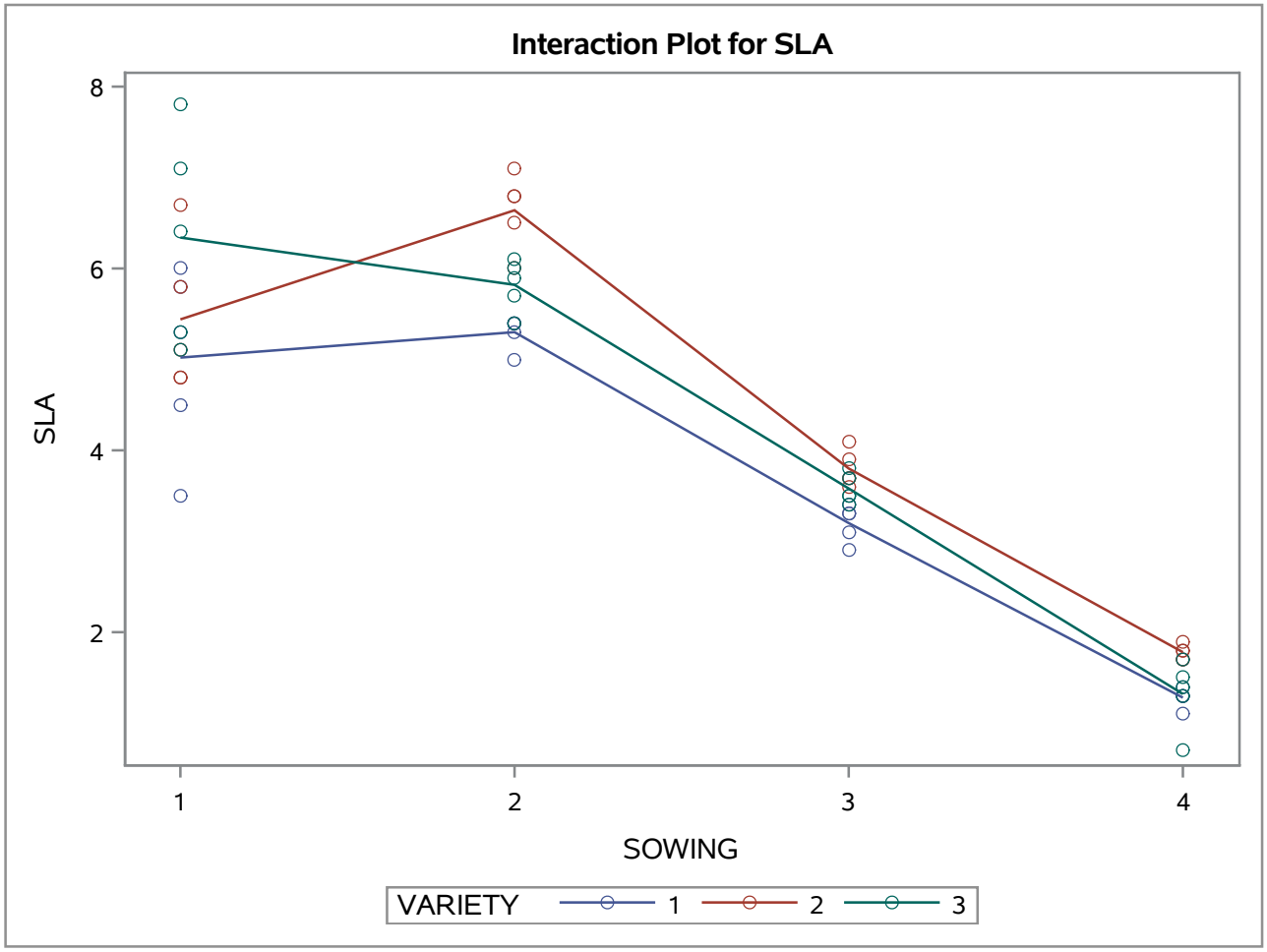
R-Square	Coeff Var	Root MSE	SLA Mean
0.933950	13.27460	0.547799	4.126667

Source	DF	Type I SS	Mean Square	F Value	Pr > F
SOWING	3	192.8680000	64.2893333	214.24	<.0001
VARIETY	2	5.6863333	2.8431667	9.47	0.0003
SOWING*VARIETY	6	5.1190000	0.8531667	2.84	0.0189

Source	DF	Type III SS	Mean Square	F Value	Pr > F
SOWING	3	192.8680000	64.2893333	214.24	<.0001
VARIETY	2	5.6863333	2.8431667	9.47	0.0003
SOWING*VARIETY	6	5.1190000	0.8531667	2.84	0.0189

The GLM Procedure

Dependent Variable: SLA



The GLM Procedure

Dependent Variable: TOTALYIELD

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	762.0458333	69.2768939	243.50	<.0001
Error	48	13.6560000	0.2845000		
Corrected Total	59	775.7018333			

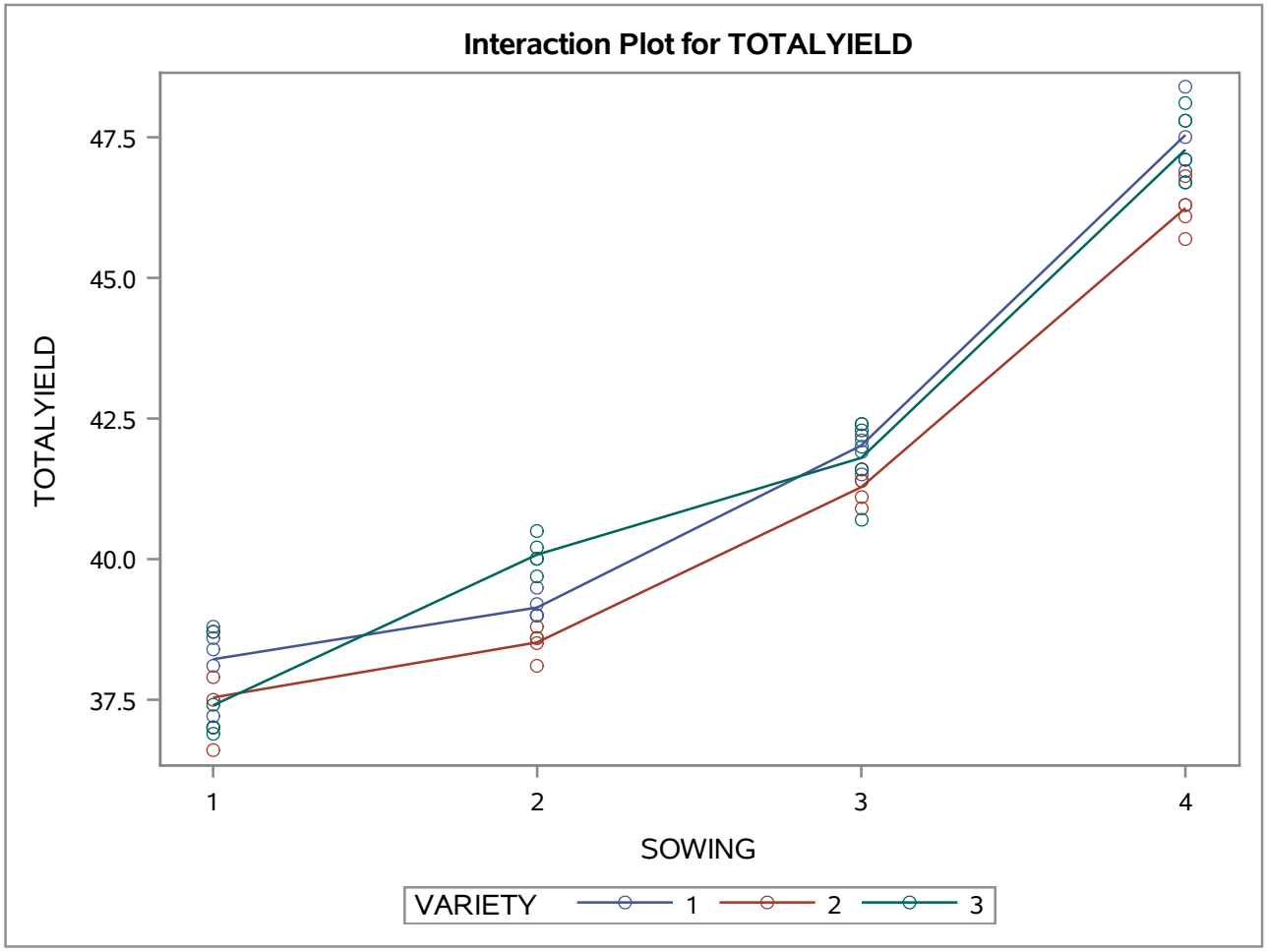
R-Square	Coeff Var	Root MSE	TOTALYIELD Mean
0.982395	1.287697	0.533385	41.42167

Source	DF	Type I SS	Mean Square	F Value	Pr > F
SOWING	3	747.7765000	249.2588333	876.13	<.0001
VARIETY	2	8.4023333	4.2011667	14.77	<.0001
SOWING*VARIETY	6	5.8670000	0.9778333	3.44	0.0066

Source	DF	Type III SS	Mean Square	F Value	Pr > F
SOWING	3	747.7765000	249.2588333	876.13	<.0001
VARIETY	2	8.4023333	4.2011667	14.77	<.0001
SOWING*VARIETY	6	5.8670000	0.9778333	3.44	0.0066

The GLM Procedure

Dependent Variable: TOTALYIELD



The GLM Procedure

Dependent Variable: AVGSLA

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	43545.38333	3958.67121	26.23	<.0001
Error	48	7245.60000	150.95000		
Corrected Total	59	50790.98333			

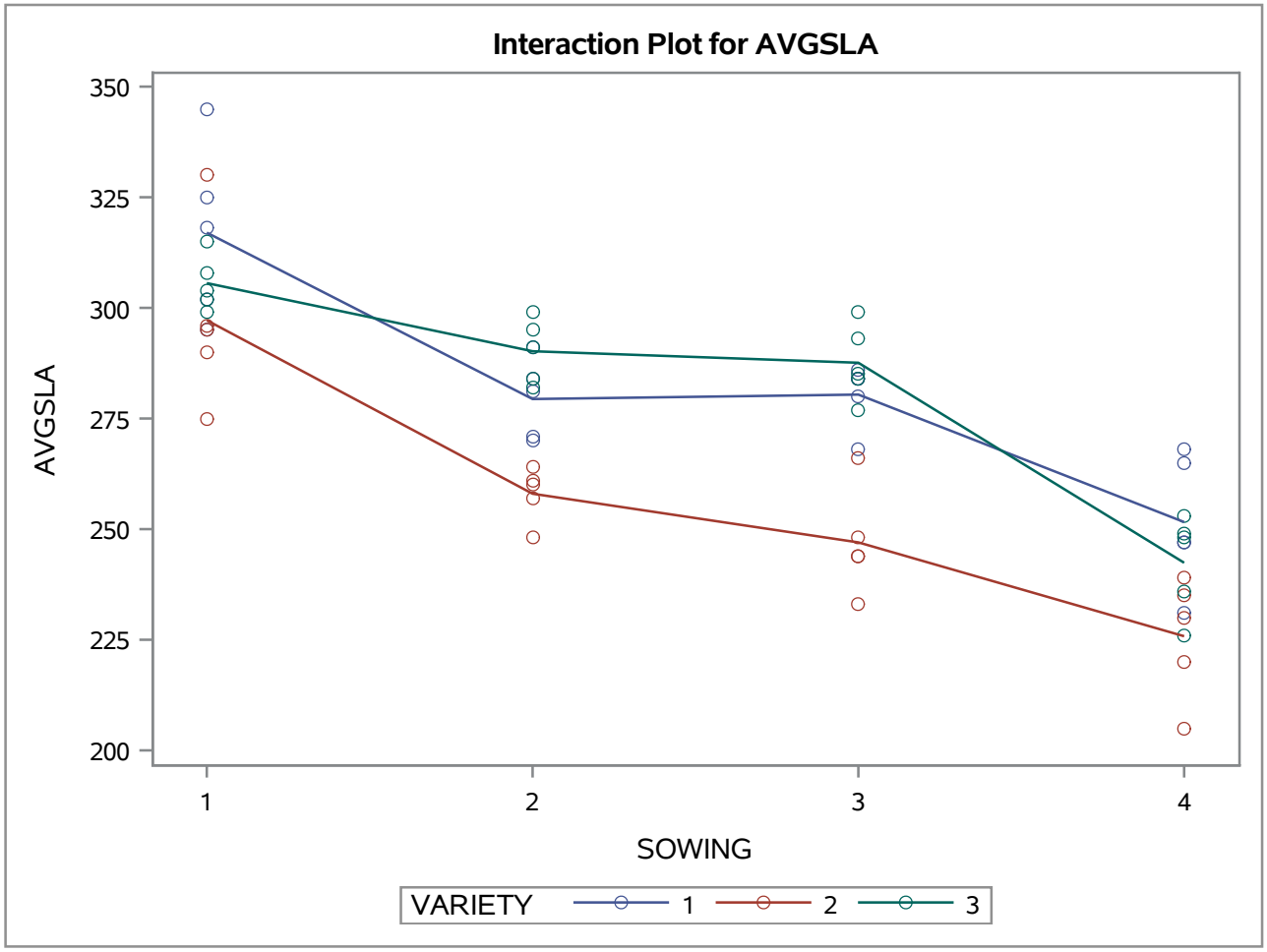
R-Square	Coeff Var	Root MSE	AVGSLA Mean
0.857345	4.491928	12.28617	273.5167

Source	DF	Type I SS	Mean Square	F Value	Pr > F
SOWING	3	33469.38333	11156.46111	73.91	<.0001
VARIETY	2	8188.23333	4094.11667	27.12	<.0001
SOWING*VARIETY	6	1887.76667	314.62778	2.08	0.0725

Source	DF	Type III SS	Mean Square	F Value	Pr > F
SOWING	3	33469.38333	11156.46111	73.91	<.0001
VARIETY	2	8188.23333	4094.11667	27.12	<.0001
SOWING*VARIETY	6	1887.76667	314.62778	2.08	0.0725

The GLM Procedure

Dependent Variable: AVGSLA



The GLM Procedure
Multivariate Analysis of Variance

E = Error SSCP Matrix				
	YIELD	SLA	TOTALYIELD	AVGSLA
YIELD	11.896	0.054	-0.108	45.62
SLA	0.054	14.404	-1.982	8.98
TOTALYIELD	-0.108	-1.982	13.656	41.02
AVGSLA	45.62	8.98	41.02	7245.6

Partial Correlation Coefficients from the Error SSCP Matrix / Prob > |r|				
DF = 48	YIELD	SLA	TOTALYIELD	AVGSLA
YIELD	1.000000	0.004125 0.9776	-0.008473 0.9539	0.155388 0.2864
SLA	0.004125 0.9776	1.000000	-0.141319 0.3328	0.027797 0.8496
TOTALYIELD	-0.008473 0.9539	-0.141319 0.3328	1.000000	0.130406 0.3718
AVGSLA	0.155388 0.2864	0.027797 0.8496	0.130406 0.3718	1.000000

The GLM Procedure
Multivariate Analysis of Variance

H = Type III SSCP Matrix for SOWING				
	YIELD	SLA	TOTALYIELD	AVGSLA
YIELD	728.78983333	-347.9326667	690.11516667	-4563.785
SLA	-347.9326667	192.868	-366.7526667	2154.34
TOTALYIELD	690.11516667	-366.7526667	747.7765	-4741.505
AVGSLA	-4563.785	2154.34	-4741.505	33469.383333

Characteristic Roots and Vectors of: E Inverse * H, where H = Type III SSCP Matrix for SOWING E = Error SSCP Matrix					
Characteristic Root	Percent	Characteristic Vector V'EV=1			
		YIELD	SLA	TOTALYIELD	AVGSLA
137.167756	96.39	0.20895364	-0.05317724	0.17493015	-0.00429399
3.797594	2.67	0.20381979	0.03225226	-0.18268462	0.00041321
1.338884	0.94	0.00249767	0.22000934	0.06040410	-0.00715466
0.000000	0.00	0.03174010	0.13684557	0.09255895	0.00863212

MANOVA Tests for the Hypothesis of No Overall SOWING Effect H = Type III SSCP Matrix for SOWING E = Error SSCP Matrix S=3 M=0 N=21.5		
Statistic	Value	P-Value
Wilks' Lambda	0.00064500	<.0001
Pillai's Trace	2.35677028	<.0001
Hotelling-Lawley Trace	142.30423395	<.0001
Roy's Greatest Root	137.16775571	<.0001

H = Type III SSCP Matrix for VARIETY				
	YIELD	SLA	TOTALYIELD	AVGSLA
YIELD	124.52133333	-17.10866667	32.098333333	1008.5833333
SLA	-17.10866667	5.6863333333	-5.064166667	-146.5416667
TOTALYIELD	32.098333333	-5.064166667	8.4023333333	261.54833333
AVGSLA	1008.5833333	-146.5416667	261.54833333	8188.2333333

The GLM Procedure
Multivariate Analysis of Variance

Characteristic Roots and Vectors of: E Inverse * H, where H = Type III SSCP Matrix for VARIETY E = Error SSCP Matrix

Characteristic Root	Percent	Characteristic Vector V'EV=1			
		YIELD	SLA	TOTALYIELD	AVGSLA
11.4446645	98.03	0.27131451	-0.02672873	0.05558050	0.00170062
0.2305606	1.97	0.04764849	0.25922941	-0.00289635	-0.00127369
0.0000000	0.00	-0.06102154	0.05209185	0.26644983	-0.00006235
0.0000000	0.00	-0.08131562	0.01926074	-0.04579244	0.01182343

MANOVA Tests for the Hypothesis of No Overall VARIETY Effect H = Type III SSCP Matrix for VARIETY E = Error SSCP Matrix

S=2 M=0.5 N=21.5

Statistic	Value	P-Value
Wilks' Lambda	0.06530009	<.0001
Pillai's Trace	1.10700655	<.0001
Hotelling-Lawley Trace	11.67522513	<.0001
Roy's Greatest Root	11.44466449	<.0001

H = Type III SSCP Matrix for SOWING*VARIETY

	YIELD	SLA	TOTALYIELD	AVGSLA
YIELD	30.294666667	-5.387333333	2.9563333333	130.71
SLA	-5.387333333	5.119	-3.095833333	-40.805
TOTALYIELD	2.9563333333	-3.095833333	5.867	59.665
AVGSLA	130.71	-40.805	59.665	1887.7666667

Characteristic Roots and Vectors of: E Inverse * H, where H = Type III SSCP Matrix for SOWING*VARIETY E = Error SSCP Matrix

Characteristic Root	Percent	Characteristic Vector V'EV=1			
		YIELD	SLA	TOTALYIELD	AVGSLA
2.64879665	76.77	0.28266108	-0.04609473	0.02654888	0.00025815
0.49541872	14.36	-0.06546287	-0.11341882	0.20091054	0.00350205
0.18714322	5.42	0.01442954	0.22830254	0.11108401	0.00406465
0.11910523	3.45	-0.04274242	-0.06235581	-0.15093210	0.01074521

The GLM Procedure
Multivariate Analysis of Variance

MANOVA Tests for the Hypothesis of No Overall SOWING*VARIETY Effect
H = Type III SSCP Matrix for SOWING*VARIETY
E = Error SSCP Matrix

S=4 M=0.5 N=21.5

Statistic	Value	P-Value
Wilks' Lambda	0.13794739	<.0001
Pillai's Trace	1.32129866	<.0001
Hotelling-Lawley Trace	3.45046384	<.0001
Roy's Greatest Root	2.64879665	<.0001