

*Performance
of Soybean
Varieties in
Alabama,
2003*

*Agronomy and Soils Departmental Series No. 258
Alabama Agricultural Experiment Station
John Jensen, Interim Director
Auburn University, Auburn, Alabama,
February 2003*

*Printed in cooperation with the Alabama Cooperative Extension System
(Alabama A&M University and Auburn University)*

TABLE OF CONTENTS

Introduction	2
Experimental procedures	2
Seasonal conditions	2
Comparing varieties	2
Acknowledgements	3
Locations of experiments	
Table 1. Performance of Group IV Soybean Varieties at Belle Mina, Alabama, 2003	4
Table 2. Performance of Soybean Varieties in Northern Alabama, 2003	5
Table 3. Performance of Soybean Varieties in Northern Alabama, Three-year Summary, 2001 - 2003	6
Table 4. Performance of Soybean Varieties at Prattville, Alabama, 2003	7
Table 5. Performance of Soybean Varieties at Prattville, Alabama, 2001-2003	8
Table 6. Performance of Soybean Varieties at Shorter, Alabama, 2003	9
Table 7. Performance of Soybean Varieties at Shorter, Alabama, Three-year Summary, 2001 - 2003	10
Table 8. Performance of Soybean Varieties on Sumter Soil, Marion Junction, Alabama, 2003	11
Table 9. Performance of Soybean Varieties on Vaiden Soil, Marion Junction, Alabama, 2003	12
Table 10. Performance of Early Soybean Varieties at Brewton, Alabama, 2003	13
Table 11. Performance of Soybean Varieties at Brewton, Alabama, 2003	14
Table 12. Performance of Soybean Varieties at Brewton, Alabama, Three-year Summary, 2001 - 2003	15
Table 13. Performance of Soybean Varieties at Fairhope, Alabama, 2003	16
Table 14. Performance of Soybean Varieties at Fairhope, Alabama, Three-year Summary, 2001 - 2003	17
Table 15. Cultural Practices for Soybean Variety Tests in 2003	18
Table 16. Soil Types for Soybean Tests, 2003	18
Table 17. Rainfall at Test Locations During Growing Season, 2003	19
Table 18. Entries and Sources of Seed for Soybean Tests, 2003	20

Information contained herein is available to all persons regardless of race, color, sex, or national origin.

Issued in furtherance of Cooperative Extension work in agriculture and home economic, Acts of May 8, and June 30, 1914, and other related acts, in cooperation with the U.S. department of Agriculture. The Alabama Cooperative Extension System (Alabama A&M University and Auburn University) offers educational programs, materials, and equal opportunity employment to all people without regard to race, color, national origin, religion, sex, age, veteran status, or disability

PERFORMANCE OF SOYBEAN VARIETIES IN ALABAMA, 2003

K. M. Glass, C. D. Monks, D.P. Delaney, and Edzard van Santen

Agricultural Program Associate, Associate Professor and Extension Cotton & Soybean Specialist,
Extension Specialist, and Professor

INTRODUCTION

Soybean variety tests are conducted annually by the Alabama Agricultural Experiment Station. The 7 locations used represent the major soil and climatic regions of Alabama. These locations are divided into logical soybean growing regions. The regions and locations are:

<u>Region</u>	<u>Location</u>
Northern	Belle Mina, Crossville
Central	Prattville, Shorter
Southern	Brewton
Black Belt	Marion Junction (2 soils)
Gulf Coast	Fairhope

EXPERIMENTAL PROCEDURES

The standard tests were conducted as a randomized complete block design with four replications. Standard plot size was four 30- to 38-inch rows by 20 feet long. Fifteen feet of the middle two rows were harvested for yield. Seeding rate was 10 viable seeds per foot of row. The Group IV test was drilled with seven 7-inch rows. Seeding rate was five viable seeds per foot of row. The Early Planted test at Brewton was arranged in an incomplete lattice square design with four replications.

Data were collected on seed yield, moisture, lodging, shattering, plant height, and maturity date. Plot yields were adjusted to 13 percent moisture and converted to bushels (60 pounds) per acre. Lodging was scored on a scale of 1 to 5 as follows:

- 1 - almost all plants erect.
- 2 - either all plants leaning slightly (less than 45%) or a few plants down.
- 3 - either all plants leaning moderately (approximately 45%) or 25 to 50 percent of the plants down.
- 4 - either all plants leaning more than 45% or 50 to 80 percent of the plants down.
- 5 - more than 80 percent of the plants down.

Shattering was rated on a scale of 1 to 5 based on performance of the border rows 14 days after maturity. A rating of 1 indicates no shattering, a rating of 3 indicates a 4 to 8 percent shattering, and a rating of 5 is 20 percent or more shattering. Plant height was determined by measuring from the ground to the top of the plant at maturity. Maturity date was the day 95 percent of the pods achieved mature pod color. Harvest was approximately 7 to 10 days later.

SEASONAL CONDITIONS

Rainfall for 2003 is shown in Table 17. The normal planting dates for the standard tests are the first week in May, May 15-25, and May 25 to June 5 for northern, central, and southern Alabama locations, respectively. The Vaiden Soil test at Marion Junction was not harvested due to excessive moisture during the growing season

COMPARING VARIETIES

To aid in determining real yield differences, a statistical analysis of variance was performed on the data from each location. The L.S.D. (least significant difference) and C.V. (coefficient of variation) are reported for each location's 2003 test, and for the location's or region's 2- and 3-year averages. The difference in yield of two varieties must exceed the L.S.D. value for one variety to be considered superior to others in yield in that particular test. The C.V. is a measure of the variability in an experiment. An increase in its value indicates an increase in the unexplained variability.

Since the performance of varieties varies with location and year, long-term averages from several locations are more reliable than 1-year performance. Three-year regional averages are considered a reliable evaluation of the relative performance of varieties. However varietal rankings may change among years and among locations. This change in rankings is measured by the significance of variety x location, variety x year, variety x location*year interaction. These interactions were significant in all cases. Thus, care should be exercised when extrapolating results from one location or year to another.

ACKNOWLEDGMENTS

Appreciation is expressed to the following station superintendents and their staffs. It is their quality work which makes this report a reliable source of information for farmers in their regions. Chet Norris and Ellis Burgess, Tennessee Valley Research and Extension Center; Tony Dawkins, Sand Mountain Research and Extension Center; Don Moore, Prattville Agricultural Research Unit; Bobby Durbin, E.V. Smith Research Center, Field Crops Research Unit; Jimmy Holliman, Black Belt Research and Extension Center; Randy Akridge, Brewton Agricultural Research Unit; Ronnie McDaniel and Malcomb Pegues, Gulf Coast Research and Extension Center.

TABLE 1. PERFORMANCE OF GROUP IV SOYBEAN VARIETIES AT BELLE MINA, ALABAMA, 2003

Variety	Yield	Lodging score	Shattering score	Plant height	Maturity date
	- bu/acre -			- inches -	
Maturity Group IV					
USG 7482nRR	50.9	1.0	1.0	33	9-1
Dyna-Gro 3443	50.0	1.0	1.0	33	9-2
Garst XR46Y02	45.4	1.0	1.5	30	9-1
USG 7440nRR	45.4	1.0	1.0	33	9-2
Pioneer 94B54	44.5	1.0	2.5	34	9-3
Pioneer 94M70	43.0	1.0	1.0	33	9-1
Dyna-Gro 3463	41.4	1.0	1.0	36	9-3
SS RT 4930	40.6	1.0	1.0	35	9-12
Pioneer 94B13	40.6	1.0	2.5	30	9-1
Pioneer 94B74	39.8	1.0	1.0	33	9-3
SS RT 5001N	37.9	1.0	1.0	38	9-12
SS RT 4980	37.9	1.0	1.0	34	9-3
SS RT 4810	37.4	1.0	1.0	33	9-4
Garst 4888RR	37.1	1.0	1.0	33	9-3
USG 7489RR	36.9	1.0	1.0	33	9-3
SS RT 4502	33.7	1.0	1.5	36	9-5
Trial mean	41.4	1.0	1.3	33.4	9-3
LSD(0.10)	11				
CV (%)	16				

TABLE 2. PERFORMANCE OF SOYBEAN VARIETIES IN NORTHERN ALABAMA, 2003

Variety	Belle Mina	Cross- ville	Regional Average				Maturity date
			Yield	Lodging score	Shattering score	Plant height	
----- bu/acre -----			- inches -				
Maturity Group IV							
Delta King 4763RR	41.0	79.0	62.7	1.0	1.0	32	9-22
Delta King XTJ 447	41.0	73.7	59.7	1.0	1.1	32	9-23
Delta King 4967RR	37.0	71.4	56.7	1.0	1.3	31	9-22
SS RT 5001N	31.9	64.9	50.7	1.0	1.3	40	9-28
Maturity Group V							
Delta King 5967RR	39.6	70.2	57.1	1.0	1.0	36	10-14
SS RT 5930N	43.4	67.4	57.1	1.0	1.0	38	10-15
Pioneer 95B42	34.1	72.9	56.3	1.0	1.6	38	10-2
Delta King 5161	34.7	72.2	56.2	1.0	1.4	33	10-2
Garst 5412RR/STS/N	39.1	68.4	55.9	1.0	1.4	34	10-4
Deltapine DP 5915RR	41.3	66.1	55.5	1.0	1.0	39	10-19
Dyna-Gro 38K57	39.8	64.8	54.1	1.0	1.1	39	10-14
SS RT 557N	37.5	66.3	54.0	1.0	1.0	41	10-5
USG 570nRR	39.2	64.9	53.9	1.0	1.1	41	10-14
USG 7582nRR	40.9	62.6	53.3	1.0	1.0	36	10-13
Garst 5812RR/N	41.7	61.5	53.0	1.0	1.0	41	10-11
Delta King 5366RR	39.8	62.9	53.0	1.0	1.1	39	10-9
Dyna-Gro 3583	32.9	68.1	53.0	1.0	1.0	38	10-14
Delta King 5668RR	40.6	61.5	52.6	1.0	1.0	35	10-13
Garst 5212RR/N	33.1	67.1	52.5	1.0	1.1	38	10-5
Deltapine DP 5414RR	30.4	68.7	52.3	1.0	1.4	40	10-5
SS RT-5999N	42.0	57.7	51.0	1.0	1.0	41	10-13
USG 5002T	27.7	67.3	50.3	1.0	1.3	29	9-25
USG 5601T	38.1	58.6	49.8	1.0	1.0	36	10-10
Deltapine DP 5634RR	34.5	60.7	49.5	1.0	1.3	41	10-10
SS RT 5302N	29.7	63.5	49.0	1.0	1.1	40	10-5
Hutcheson	33.7	58.4	47.8	1.0	1.1	32	10-5
Pioneer 95B43	27.5	62.2	47.3	1.0	1.3	37	10-3
USG 540NRR	25.7	63.0	47.0	1.0	1.0	35	10-6
Pioneer 95B96	32.8	53.7	44.8	1.0	1.0	38	10-10
Deltapine DP 5806 RR	33.2	52.0	43.9	1.0	1.1	41	10-15
Maturity Group VI							
SS RT 6202	42.4	68.4	57.3	1.0	1.3	41	10-13
USG 620NRR	39.6	62.9	52.9	1.0	1.1	42	10-16
Musen	25.8	52.1	40.8	1.0	1.0	36	10-18
Maturity Group VII							
Stonewall	38.0	52.3	47.6	1.0	1.3	40	10-23
USG 7732nRR	24.6	41.5	35.9	1.0	1.1	39	10-25
SS RT 7499N	26.2	32.8	31.5	1.0	1.0	41	10-22
Trial mean	35.6	62.8	51.3	1.0	1.1	37.6	10-9
LSD(0.10)	12	16	21				
CV (%)	21	15	25				

TABLE 3. PERFORMANCE OF SOYBEAN VARIETIES IN NORTHERN ALABAMA,
THREE-YEAR SUMMARY, 2001 - 2003

Variety	Yield			Lodging score	Shattering score	Plant height	Maturity date
	2003	2-yr avg	3-yr avg				
	----- bu/acre -----					-- inch --	
Maturity Group IV							
Delta King 4763RR	60	49	51	1.4	1.0	29	9-19
SS RT 5001N	48	40	43	2.0	1.4	39	9-25
Delta King XTJ 447	57	.	.	1.4	1.1	.	9-23
Delta King 4967RR	54	.	.	1.0	1.3	.	9-22
Maturity Group IV							
Deltapine DP 5915RR	54	41	47	1.3	1.0	34	10-11
USG 570nRR	52	42	46	1.4	1.1	38	10-7
Delta King 5668RR	51	40	46	1.6	1.1	32	10-4
Delta King 5366RR	51	40	45	1.6	1.1	34	10-3
Deltapine DP 5414RR	50	41	44	1.5	1.2	38	9-28
USG 540NRR	44	37	44	1.2	1.0	32	10-1
SS RT-5999N	50	38	43	1.4	1.0	39	10-5
Hutcheson	46	37	42	1.4	1.0	34	9-30
Deltapine DP 5806 RR	43	35	40	1.9	1.1	36	10-9
Pioneer 95B96	43	36	40	1.3	1.1	35	10-4
Pioneer 95B42	54	44	.	1.4	1.3	.	9-26
SS RT 557N	52	42	.	1.7	1.1	.	9-30
USG 7582nRR	52	41	.	1.3	1.0	.	10-4
SS RT 5302N	47	39	.	1.1	1.1	.	9-30
Pioneer 95B43	45	38	.	1.3	1.3	.	9-27
SS RT 5930N	55	.	.	1.3	1.0	.	10-15
Delta King 5967RR	55	.	.	1.3	1.0	.	10-14
Garst 5412RR/STS/N	54	.	.	1.4	1.4	.	10-4
Delta King 5161	53	.	.	1.6	1.4	.	10-2
Dyna-Gro 38K57	52	.	.	2.0	1.1	.	10-14
Garst 5812RR/N	52	.	.	1.3	1.0	.	10-11
Dyna-Gro 3583	50	.	.	1.4	1.0	.	10-14
Garst 5212RR/N	50	.	.	1.0	1.1	.	10-5
USG 5601T	48	.	.	1.1	1.0	.	10-10
Deltapine DP 5634RR	48	.	.	1.4	1.3	.	10-10
USG 5002T	48	.	.	1.1	1.3	.	9-25
Maturity Group IV							
USG 620NRR	51	39	44	1.6	1.1	38	10-10
Musen	39	34	38	1.5	1.0	33	10-27
SS RT 6202	55	41	.	1.3	1.1	.	10-9
Maturity Group VII							
Stonewall	44	.	.	2.0	1.3	.	10-23
USG 7732nRR	32	.	.	1.6	1.1	.	10-25
SS RT 7499N	28	.	.	1.4	1.0	.	10-22
Trial mean	102	40	44	1.4	1.1	35.1	10-6
LSD(0.10)	11	6	5				
CV (%)	6	9	7				

TABLE 4. PERFORMANCE OF SOYBEAN VARIETIES AT PRATTVILLE, ALABAMA, 2003

Variety	Yield	Lodging score	Shattering score	Plant height	Maturity date
	- bu/acre -			- inches -	
Maturity Group IV					
Delta King 4967RR	52.5	1.0	1.0	30	9-13
Delta King 4763RR	51.5	1.0	1.0	30	9-14
Delta King XTJ 447	48.6	1.0	1.0	30	9-15
Maturity Group V					
Deltapine DP 5634RR	70.8	1.0	1.0	32	9-28
Hutcheson	68.9	1.0	1.0	26	9-25
Deltapine DP 5915RR	67.5	1.0	1.0	29	10-2
Garst 5812RR/N	66.2	1.0	1.0	31	9-26
Delta King 5161	63.8	1.0	1.0	26	9-24
Delta King 5366RR	63.2	1.0	1.0	30	9-25
Delta King 5668RR	62.9	1.0	1.0	26	9-28
Delta King 5967RR	62.9	1.0	1.0	29	9-29
Deltapine DP 5806 RR	62.4	1.0	1.0	32	9-26
Pioneer 95B97	61.2	1.0	1.0	26	9-23
Deltapine DP 5414RR	59.9	1.0	1.0	28	9-30
Pioneer 95B96	59.8	1.0	1.0	31	9-24
Maturity Group VI					
Pioneer 96B21	63.7	1.0	1.0	33	10-1
GARST 6112RR/N	62.2	1.0	1.0	33	9-30
Deltapine DP 6880 RR	61.0	1.0	1.0	31	10-5
Musen	51.0	1.0	1.0	32	10-7
Maturity Group VI					
Deltapine DPX 7870RR	65.1	1.0	1.0	36	10-7
Stonewall	60.3	1.0	1.0	30	10-4
Pioneer 97B52	52.8	1.0	1.0	31	10-6
Deltapine DP 7220RR	51.9	1.0	1.0	32	10-3
Trial mean	60.4	1.0	1.0	30.0	9-28
LSD(0.10)	13				
CV (%)	13				

TABLE 5. PERFORMANCE OF SOYBEAN VARIETIES AT PRATTVILLE, ALABAMA,
THREE-YEAR SUMMARY, 2001-2003

Variety	Yield		Lodging score	Shattering score	Plant height	Maturity date
	2003	2-yr avg†				
	----- bu/acre -----			-- inch --		
Maturity Group IV						
Delta King 4763RR	52	50	1.0	1.0	26	9-18
Delta King 4967RR	52	.	1.3	1.0	.	9-14
Delta King XTJ 447	49	.	1.0	1.0	.	9-16
Maturity Group V						
Hutcheson	69	60	1.0	1.3	22	10-5
Delta King 5668RR	63	59	1.0	1.1	23	10-1
Delta King 5366RR	63	58	1.0	1.0	23	9-28
Pioneer 95B96	60	54	1.0	1.0	23	9-30
Deltapine DP 5634RR	71	.	1.0	1.0	.	9-29
Deltapine DP 5915RR	68	.	1.0	1.0	.	10-3
Garst 5812RR/N	66	.	1.0	1.0	.	9-27
Delta King 5161	64	.	1.0	1.0	.	9-25
Delta King 5967RR	63	.	1.0	1.0	.	9-30
Deltapine DP 5806 RR	62	.	1.0	1.0	.	9-27
Pioneer 95B97	61	.	1.0	1.0	.	9-24
Deltapine DP 5414RR	60	.	1.0	1.0	.	10-1
Maturity Group VI						
Pioneer 96B21	64	56	1.0	1.0	28	10-3
Musen	51	52	1.0	1.2	29	10-14
GARST 6112RR/N	62	.	1.0	1.0	.	10-1
Deltapine DP 6880 RR	61	.	1.0	1.0	.	10-6
Maturity Group VII						
Stonewall	60	55	1.0	1.1	29	10-13
Pioneer 97B52	53	52	1.0	1.0	36	10-9
Deltapine DPX 7870RR	65	.	1.0	1.0	.	10-8
Deltapine DP 7220RR	52	.	1.0	1.0	.	10-4
Trial mean	60	55	1.0	1.0	26	9-30
LSD(0.10)	13					
CV (%)	13					

† 2-yr average based on 2001 and 2003 data.

TABLE 6. PERFORMANCE OF SOYBEAN VARIETIES AT SHORTER, ALABAMA, 2003

Variety	Yield	Lodging score	Shattering score	Plant height	Maturity date
	- bu/acre -			- inches -	
Maturity Group V					
Pioneer 95B97	67.5	1.0	0.0	29	9-29
Delta King 5161	66.2	1.0	0.0	30	9-24
Deltapine DP 5634RR	63.6	1.0	0.0	33	9-24
Hutcheson	63.3	1.0	0.0	28	9-28
Delta King 5668RR	62.7	1.0	0.0	28	9-29
Delta King 5366RR	60.2	1.0	0.0	30	9-29
Garst 5812RR/N	58.9	1.0	0.0	32	10-3
Deltapine DP 5915RR	58.0	1.0	0.0	28	10-4
Deltapine DP 5806 RR	57.4	1.0	0.0	30	10-4
Deltapine DP 5414RR	56.1	1.0	0.0	30	9-26
Delta King 5967RR	55.6	1.0	0.0	32	9-27
Pioneer 95B96	54.1	1.0	0.0	29	10-1
Maturity Group VI					
GARST 6112RR/N	65.4	1.0	0.0	30	10-8
Deltapine DP 6880 RR	61.3	1.0	0.0	33	10-15
Musen	57.9	1.0	0.0	28	10-17
Pioneer 96B21	56.0	1.0	0.0	31	10-1
Maturity Group VII					
Deltapine DPX 7870RR	67.9	1.0	0.0	35	10-17
Stonewall	63.1	1.0	0.0	31	10-16
Deltapine DP 7220RR	56.2	1.0	0.0	32	10-17
Pioneer 97B52	54.7	1.0	0.0	32	10-17
Trial mean	60.3	1.0	0.0	30.4	10-5
LSD(0.10)	12				
CV (%)	12				

TABLE 7. PERFORMANCE OF SOYBEAN VARIETIES AT SHORTER, ALABAMA,
THREE-YEAR SUMMARY, 2001-2003

Variety	Yield			Lodging score	Shattering score	Plant height	Maturity date
	2003	2-yr avg	3-yr avg				
	----- bu/acre -----						
Maturity Group V							
Hutcheson	63	45	47	0.8	0.0	34	9-19
Delta King 5668RR	63	43	44	1.3	0.0	33	9-20
Delta King 5366RR	60	41	42	1.0	0.0	35	9-20
Pioneer 95B96	54	39	40	0.6	0.0	35	9-21
Pioneer 95B97	68	47	.	1.6	0.0	.	9-18
Delta King 5161	66	.	.	0.8	0.0	.	9-25
Deltapine DP 5634RR	64	.	.	1.0	0.0	.	9-25
Garst 5812RR/N	59	.	.	0.5	0.0	.	10-4
Deltapine DP 5915RR	58	.	.	0.3	0.0	.	10-5
Deltapine DP 5806 RR	57	.	.	1.5	0.0	.	10-5
Deltapine DP 5414RR	56	.	.	1.0	0.0	.	9-27
Delta King 5967RR	56	.	.	0.5	0.0	.	9-28
Maturity Group VI							
Pioneer 96B21	56	45	43	0.6	0.0	40	9-24
Musen	58	36	36	0.8	0.0	38	10-16
GARST 6112RR/N	65	.	.	0.5	0.0	.	10-9
Deltapine DP 6880 RR	61	.	.	1.3	0.0	.	10-16
Maturity Group VII							
Stonewall	63	39	38	1.2	0.0	36	10-12
Pioneer 97B52	55	35	34	1.4	0.0	39	10-21
Deltapine DPX 7870RR	68	.	.	1.5	0.0	.	10-18
Deltapine DP 7220RR	56	.	.	1.3	0.0	.	10-18
Trial mean	60	41	41	1.0	0.0	36	10-2
LSD(0.10)	12	7	5				
CV (%)	12	10	7				

TABLE 8. PERFORMANCE OF SOYBEAN VARIETIES ON SUMTER SOIL,
MARION JUNCTION, ALABAMA, 2003

Brand-Variety	Yield - bu/acre -	Lodging score	Shattering score	Plant height - inches -	Iron Chlorosis	Maturity date
Maturity Group V						
ESXVT-17RR	9.0	1.0	2.0	21		9-30
Maturity Group V						
ESXVT-41RR	22.6	1.0	2.3	26	†	10-8
Deltapine DP 5414RR	21.1	1.0	2.0	26		9-27
ESXVT-19RR	19.6	1.0	1.3	21		9-28
ESXVT-46RR	19.2	1.0	1.0	21		10-5
Deltapine DP 5634RR	17.6	1.0	1.0	22		9-27
Garst 5812RR/N	15.7	1.0	2.3	21		9-28
Garst 5212RR/N	15.1	1.0	2.3	20		9-27
Garst 5412RR/STS/N	14.1	1.0	1.8	16		9-25
Deltapine DP 5806 RR	12.8	1.0	1.0	19		10-9
Pioneer 95B97	12.8	1.0	1.0	15		9-28
Deltapine DP 5915RR	11.1	1.0	1.3	16		10-11
Hutcheson	9.5	1.0	2.0	16		9-25
Pioneer 95B96	8.7	1.0	1.0	17		10-6
Maturity Group VI						
Garst 6612RR/N	23.9	1.0	1.0	25		10-16
Deltapine DP 6880 RR	18.9	1.0	1.0	25		10-16
Pioneer 96B21	18.6	1.0	1.0	21		9-30
GARST 6112RR/N	18.2	1.0	2.0	23		9-30
Musen	12.3	1.0	1.0	16		10-14
Dyna-Gro SX03164	10.5	1.0	1.3	16		10-9
Maturity Group VII						
Stonewall	26.0	1.0	1.0	20		10-13
Dyna-Gro SX03176	25.7	1.0	1.0	28		10-16
Pioneer 97B52	24.7	1.0	1.0	27		10-16
Deltapine DPX 7870RR	22.2	1.0	1.0	27		10-20
Dyna-Gro 34J71	21.8	1.0	1.0	24		10-14
Dyna-Gro 33Z74	19.8	1.0	1.0	29		10-20
Deltapine DP 7220RR	15.7	1.0	1.0	20		10-25
Maturity Group VIII						
Pritchard RR	21.1	1.0	1.3	21		10-24
Kuell	16.8	1.0	1.0	24		10-18
Trial mean	17.4	1.0	1.3	21.4		10-8
LSD(0.10)	9					
CV (%)	31					

† no iron chlorosis was noted during this cropping year

**TABLE 9. PERFORMANCE OF SOYBEAN VARIETIES ON VAIDEN SOIL,
MARION JUNCTION, ALABAMA, 2003**

TWO PLANTINGS WERE ATTEMPTED AND BOTH LOST DUE TO EXCESSIVE MOISTURE.

TABLE 10. PERFORMANCE OF EARLY SOYBEAN VARIETIES AT BREWTON, ALABAMA, 2003

Variety	Yield	Lodging score	Shattering score	Plant height	Maturity date
	- bu/acre -			- inches -	
Maturity Group V					
Deltapine DP 5634RR	35.9	1.0	0.0	18	9-22
Deltapine DP 5806 RR	32.7	1.0	0.0	17	10-5
USG 7582nRR	32.4	1.0	0.0	18	10-6
Deltapine DP 5915RR	31.5	1.0	0.0	18	10-6
Deltapine DP 5414RR	31.1	1.0	0.0	18	9-23
USG 570nRR	30.3	1.0	0.0	19	10-1
Hutcheson	26.3	1.0	0.0	15	9-29
USG 5601T	20.3	1.0	0.0	15	9-23
USG 540NRR	20.1	1.0	0.0	16	9-25
USG 5002T	15.2	1.0	0.0	14	10-8
Maturity Group VI					
USG 620NRR	42.7	1.0	0.0	20	10-7
Musen	41.4	1.0	0.0	17	10-13
Deltapine DP 6880 RR	39.3	1.0	0.0	16	10-10
Maturity Group VII					
USG 7732nRR	46.9	1.0	0.0	21	10-16
Deltapine DPX 7870RR	43.1	1.0	0.0	19	10-13
Deltapine DP 7220RR	41.4	1.0	0.0	19	10-13
Stonewall	31.8	1.0	0.0	14	10-7
Trial mean	33.1	1.0	0.0	17	10-4
LSD(0.10)	8				
CV (%)	14				

TABLE 11. PERFORMANCE OF SOYBEAN VARIETIES AT BREWTON, ALABAMA, 2003

Variety	Yield	Lodging score	Shattering score	Plant height	Maturity date
	- bu/acre -			- inches -	
Maturity Group V					
SS RT 5930N	49.0	1.0	0.0	21	10-8
Pioneer 95B97	48.0	1.0	0.0	20	10-6
Deltapine DP 5806 RR	47.4	1.0	0.0	25	10-6
SS RT-5999N	45.6	1.0	0.0	24	10-3
Deltapine DP 5915RR	41.7	1.0	0.0	22	10-8
Pioneer 95B96	41.4	1.0	0.0	21	10-4
Garst 5812RR/N	41.3	1.0	0.0	25	10-2
Deltapine DP 5634RR	39.6	1.0	0.0	21	10-3
Deltapine DP 5414RR	38.9	1.0	0.5	23	9-28
Hutcheson	28.6	1.0	0.0	19	10-3
Maturity Group VI					
Musen	49.6	1.0	0.0	23	10-11
GARST 6112RR/N	49.6	1.0	0.0	25	10-10
SS RT 6202	48.3	1.0	0.0	26	10-9
Deltapine DP 6880 RR	47.7	1.0	0.0	24	10-14
Garst 6612RR/N	46.1	1.0	0.0	27	10-14
Pioneer 96B21	41.9	1.0	0.0	24	10-7
Maturity Group VII					
Deltapine DP 7220RR	59.2	1.0	0.0	26	10-17
Stonewall	52.4	1.0	0.0	22	10-17
SS RT 7499N	50.8	1.0	0.0	29	10-21
Deltapine DPX 7870RR	50.4	1.0	0.0	28	10-18
G02-G176376	48.6	1.0	0.0	23	10-16
Pioneer 97B52	48.3	1.0	0.0	27	10-17
Maturity Group VIII					
Kuell	58.0	1.0	0.0	29	10-23
Pritchard RR	56.8	1.0	0.0	30	10-24
G02-G42164	51.9	1.0	0.0	30	10-22
Trial mean	47.2	1.0	0.0	24	10-11
LSD(0.10)	7				
CV (%)	9				

TABLE 12. PERFORMANCE OF SOYBEAN VARIETIES AT BREWTON, ALABAMA,
THREE-YEAR SUMMARY, 2001-2003

Variety	Yield			Lodging score	Shattering score	Plant height	Maturity date
	2003	2-yr avg	3-yr avg				
	----- bu/acre -----					-- inch --	
Maturity Group V							
Deltapine DP 5806 RR	47	44	44	1.4	0.0	27	9-26
Pioneer 95B96	41	42	43	1.0	0.0	23	9-29
Deltapine DP 5915RR	42	40	40	1.1	0.0	23	9-24
Hutcheson	29	34	39	1.1	0.0	20	9-21
SS RT-5999N	46	38	39	1.3	2.8	29	9-23
Pioneer 95B97	48	46	.	1.5	0.0	.	9-28
SS RT 5930N	49	.	.	1.0	0.0	.	10-8
Garst 5812RR/N	41	.	.	1.0	0.0	.	10-2
Deltapine DP 5634RR	40	.	.	1.0	0.0	.	10-3
Deltapine DP 5414RR	39	.	.	1.0	0.3	28	9-29
Maturity Group VI							
Musen	50	49	49	1.3	0.0	24	10-5
Deltapine DP 6880 RR	48	42	42	1.2	0.0	27	10-4
Pioneer 96B21	42	38	39	1.3	0.0	27	9-30
SS RT 6202	48	44	.	1.4	0.0	.	10-4
GARST 6112RR/N	50	.	.	1.0	0.0	.	10-10
Garst 6612RR/N	46	.	.	1.0	0.0	.	10-14
Maturity Group VII							
Deltapine DP 7220RR	59	49	50	1.2	0.0	27	10-6
SS RT 7499N	51	44	44	1.1	0.0	27	10-9
Pioneer 97B52	48	43	44	1.3	0.0	28	10-9
Stonewall	52	43	43	1.2	0.0	24	10-6
Deltapine DPX 7870RR	50	.	.	1.0	0.0	.	10-18
G02-G176376	49	.	.	1.0	0.0	.	10-16
Maturity Group VIII							
Pritchard RR	57	54	54	1.3	0.0	32	10-19
Kuell	58	54	52	1.4	0.0	32	10-12
G02-G42164	52	.	.	1.0	0.0	.	10-22
Trial mean	47	44	45	1	0	27	10-5
LSD(0.10)	7	5	4				
CV (%)	9	6	5				

TABLE 13. PERFORMANCE OF SOYBEAN VARIETIES AT FAIRHOPE, ALABAMA, 2003

Variety	Yield	Lodging score	Shattering score	Plant height	Maturity date
	- bu/acre -			- inches -	
Maturity Group V					
Pioneer 95B97	63.4	1.0	1.0	28	10-11
Deltapine DP 5915RR	59.3	1.0	1.0	31	10-13
Hutcheson	58.7	1.0	1.0	28	10-3
Deltapine DP 5806 RR	58.1	1.0	1.0	35	10-13
Deltapine DP 5414RR	56.9	1.0	1.0	38	10-10
Deltapine DP 5634RR	55.7	1.0	1.0	34	10-10
Garst 5412RR/STS/N	55.6	1.0	1.0	30	10-8
Garst 5812RR/N	54.8	1.0	1.0	36	10-9
Pioneer 95B96	52.6	1.0	1.0	31	10-7
Garst 5212RR/N	47.6	1.0	1.0	33	10-7
Maturity Group VI					
Musen	61.2	1.0	1.0	28	10-18
GARST 6112RR/N	60.1	1.0	1.0	38	10-14
Garst 6612RR/N	57.3	1.0	1.0	36	10-17
Dyna-Gro SX03164	55.5	1.0	1.0	32	10-11
Pioneer 96B21	55.4	1.0	1.0	36	10-16
Deltapine DP 6880 RR	54.9	1.0	1.0	35	10-16
Maturity Group VII					
Deltapine DPX 7870RR	63.9	1.0	1.0	39	10-20
Dyna-Gro 34J71	61.3	1.0	1.0	26	10-21
Dyna-Gro SX03176	59.7	1.0	1.0	38	10-21
Stonewall	57.7	1.0	1.0	34	10-20
G02-G176376	54.4	1.0	1.0	34	10-15
Dyna-Gro 33Z74	54.0	1.0	1.0	39	10-20
Deltapine DP 7220RR	53.7	1.0	1.0	37	10-21
Pioneer 97B52	53.7	1.0	1.0	38	10-19
Maturity Group VIII					
Kuell	62.6	1.0	1.0	36	10-25
G02-G42164	54.0	1.0	1.0	38	10-24
Pritchard RR	48.7	1.0	1.0	40	10-27
Trial mean	56.7	1.0	1.0	34.3	10-15
LSD(0.10)	7				
CV (%)	8				

TABLE 14. PERFORMANCE OF SOYBEAN VARIETIES AT FAIRHOPE, ALABAMA,
THREE-YEAR SUMMARY, 2001-2003

Variety	Yield		Lodging score	Shattering score	Plant height	Maturity date	
	2003	2-yr avg					3-yr avg
	----- bu/acre -----			-- inch --			
Maturity Group V							
Deltapine DP 5915RR	59	53	55	1.8	1.5	32	10-8
Deltapine DP 5806 RR	58	47	51	2.3	1.8	33	10-9
Hutcheson	59	45	51	1.3	2.5	29	9-30
Pioneer 95B96	53	44	48	1.9	1.7	33	10-7
Pioneer 95B97	63	51	.	1.0	1.9	.	10-9
Deltapine DP 5414RR	57	.	.	2.5	1.8	37	10-7
Deltapine DP 5634RR	56	.	.	1.5	1.0	.	10-8
Garst 5412RR/STS/N	56	.	.	1.0	1.0	.	10-8
Garst 5812RR/N	55	.	.	1.5	1.0	.	10-9
Garst 5212RR/N	48	.	.	1.5	1.0	.	10-7
Maturity Group VI							
Deltapine DP 6880 RR	55	48	51	1.9	1.3	33	10-15
Pioneer 96B21	55	48	50	2.3	1.5	35	10-10
Musen	61	47	50	1.8	1.6	28	10-18
GARST 6112RR/N	60	50	.	2.3	1.9	.	10-9
Garst 6612RR/N	57	48	.	1.0	1.6	.	10-14
Dyna-Gro SX03164	55	.	.	1.3	1.0	.	10-11
Maturity Group VII							
Deltapine DP 7220RR	54	47	52	1.8	1.4	35	10-19
Stonewall	58	48	50	1.6	1.5	30	10-18
Pioneer 97B52	54	47	50	2.4	1.4	33	10-17
Deltapine DPX 7870RR	64	.	.	1.5	1.0	.	10-20
Dyna-Gro 34J71	61	.	.	1.3	1.0	.	10-21
Dyna-Gro SX03176	60	.	.	2.3	1.0	.	10-21
G02-G176376	54	.	.	1.0	1.0	.	10-15
Dyna-Gro 33Z74	54	.	.	2.0	1.0	.	10-20
Maturity Group VIII							
Kuell	63	58	58	2.7	1.6	35	10-25
Pritchard RR	49	41	45	2.9	1.5	40	10-25
G02-G42164	54	.	.	1.8	1.0	.	10-24
Trial mean	57	48	51	1.8	1.4	33	10-14
LSD(0.10)	7	5	4				
CV (%)	8	6	4				

TABLE 15. CULTURAL PRACTICES FOR SOYBEAN VARIETY TESTS IN 2003

Location	Type of test	Date planted	Row width - inches -	Herbicide used	Fertilizer applied
Belle Mina	Group IV	April 28	7	Treflan	none recommended
	Standard	May 14	30	Treflan	none recommended
Crossville	Standard	May 28	30	Dual, Scepter	none recommended
Prattville	Standard	May 13	30	Prowl	none recommended
Shorter	Standard	May 30	30	Dual	none recommended
Marion Junction	Standard (Sumter)	May 2	36	Scepter	none recommended
	Standard (Vaiden)	June 2 *	36	Scepter	Not harvested
Brewton	Early	May 6	36	Dual	none recommended
	Standard	June 5	36	Dual	none recommended
Fairhope	Standard	June 16	38	Dual	185 lb. 0-21-21/acre

† This trial was lost due to excess moisture. It was replanted on June 24 and lost again due to excess moisture.

TABLE 16. SOIL TYPES FOR SOYBEAN TESTS, 2003

Location	Soil Type
Belle Mina	Emory silt loam
Crossville	Wynnvilleville fine sandy loam
Prattville	Lucedale fine sandy loam
Shorter	Cowarts loamy sand
Marion Junction	Vaiden clay
Marion Junction	Sumter clay (high pH soil)
Brewton	Benndale fine sandy loam
Fairhope	Malbis fine sandy loam

TABLE 17. RAINFALL AT TEST LOCATIONS DURING GROWING SEASON, 2003

Month	Days	Belle	Crossville	Shorter	Prattville	Marion	Brewton	Fairhope
		Mina				Junction		
----- inches -----								
May	1-5	0.09	0.59	0.50	0.52	1.50	1.73	0.14
	6-10	5.55	5.27	0.00	0.01	0.00	0.00	0.00
	11-15	1.27	1.13	1.32	1.68	1.80	0.60	0.41
	16-20	1.93	3.13	2.41	1.36	2.40	3.39	3.49
	21-25	0.91	2.02	1.27	1.15	1.85	2.42	1.75
	26-31	0.00	0.42	0.54	0.05	0.13	1.30	0.05
June	1-5	0.67	0.99	0.97	1.05	2.55	0.52	0.21
	6-10	0.91	0.74	2.16	0.69	0.60	4.03	4.19
	11-15	1.65	0.46	1.07	3.86	3.74	0.45	1.04
	16-20	0.52	1.64	1.64	1.13	1.93	1.48	1.01
	21-25	0.00	0.00	0.00	0.00	0.00	0.00	1.54
	26-31	1.21	0.18	0.78	0.63	0.35	1.57	1.55
July	1-5	1.72	2.36	3.65	3.55	3.66	5.39	6.73
	6-10	0.73	0.00	0.32	0.92	0.38	1.03	1.21
	11-15	0.74	1.35	2.19	1.17	2.43	0.92	1.35
	16-20	0.11	0.00	0.78	0.41	0.02	0.81	1.35
	21-25	1.26	1.04	0.86	0.56	0.55	2.65	5.03
	26-31	0.00	0.00	0.00	0.14	0.86	0.74	2.77
August	1-5	1.19	0.05	2.57	1.03	0.02	1.72	0.92
	6-10	1.29	1.87	1.05	2.01	3.67	0.10	0.28
	11-15	0.33	2.49	1.08	2.43	2.04	7.16	1.15
	16-20	0.05	0.88	1.99	2.20	0.90	2.18	1.65
	21-25	0.09	0.00	0.11	0.35	0.00	1.06	0.78
	26-31	0.06	0.56	0.09	0.00	0.50	0.93	0.42
September	1-5	2.11	0.75	0.96	0.13	0.16	0.67	1.03
	6-10	0.00	0.00	0.86	1.32	0.88	0.05	0.01
	11-15	1.05	0.00	0.05	0.00	0.04	2.64	0.30
	16-20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	21-25	5.21	3.18	2.65	0.79	0.98	2.33	2.32
	26-31	0.18	0.00	0.00	0.00	0.00	0.26	0.00
October	1-5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6-10	0.06	0.25	0.10	0.02	0.08	0.18	0.34
	11-15	0.18	0.11	1.01	0.60	1.11	1.10	1.42
	16-20	0.40	0.29	0.01	0.00	0.00	0.00	0.00
	21-25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	26-31	0.44	0.01	0.11	0.11	0.14	1.00	0.92

TABLE 18. ENTRIES AND SOURCES OF SEED FOR SOYBEAN TESTS, 2003

Source	Entry
AG South Genetics, LLC Dunwoody, Georgia	Pritchard RR
Alabama Crop Imp. Assoc. Auburn, Alabama	Hutcheson, Stonewall, Kuell
Delta and Pine Land Company Scott, Mississippi	Deltapine brand varieties
Delta King Seed Co. McCrary, Arkansas	Delta King brand varieties
Eagle Seed Co. Weiner, Arkansas	ES brand varieties
Garst Seed Co. Memphis, Tennessee	Garst brand varieties
Pioneer, A DuPont Company Huntsville, Alabama	Pioneer brand varieties
South Carolina Foundation Seed Association Clemson, South Carolina	Musen
Southern States Coop. Richmond, Virginia	SS brand varieties
UniSouth Genetics, Inc. Nashville, Tennessee	USG brand varieties
United Agri-Products Madison, Alabama	Dyna-Gro brand varieties
University of Georgia Athens, Georgia	G02-G42164, G02-G176376,
