

# PERFORMANCE OF SOYBEAN VARIETIES IN TENNESSEE

2002

## EXPERIMENT STATION AND COUNTY STANDARD TESTS

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Variety test results are posted on UT's website at:

<http://taes.utk.edu/research/varietytrials/variety.html>

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Dr. Vince Pantalone, Assistant Professor and Soybean Breeder

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#### **Knoxville Experiment Station, Knoxville**

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Mr. Bobby McKee, Sr. Farm Crew Leader

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#### **Plateau Experiment Station**

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#### **Highland Rim Experiment Station, Springfield**

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#### **Milan Experiment Station, Milan**

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#### **Ames Plantation, Grand Junction**

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### **Chester**

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### **Hickman/Fulton**

Ben Mullins

### **Graves/McCracken**

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### General Information

**Experiment Station Tests:** All soybean variety trials were conducted in each of the physiographic regions of the state. Tests were conducted at the Ames Plantation (Grand Junction) and at the Highland Rim (Springfield), Knox (Knoxville), Middle TN (Spring Hill), Milan (Milan), and Plateau (Crossville) Agricultural Experiment Stations. Duplicate plantings of all four tests [Maturity Group 3 Roundup Ready (i.e., RR3), RR4, RR5, and Conventional 5] were made at the Milan and Middle Tennessee Experiment Stations for performance testing with and without irrigation. All four tests at Knoxville received approximately 1.5 inches of water per week via overhead sprinkler irrigation beginning at early flowering and continuing through early seed fill.

The plot size was two rows (except Milan, drilled plots), 30 feet in length. All varieties were planted at approximately 10 seeds per foot of row. Plots were replicated three times at each location in a randomized complete block design. Because of the large number of varieties in some tests and the field variation at each location, an incomplete block design was imposed *post facto* prior to data analysis in order to reduce the within-block field variability and the experimental error. Table 1 contains the dates of planting and harvesting, seeding rates and soil type for each test at each of the experiment station locations.

**County Standard Tests:** The County Standard Soybean Tests were conducted in several counties in Tennessee, and a few in West Kentucky. The number of counties depended on the test. The County Standard Tests were divided into RR3, RR4, early-RR5, full-RR5 tests. Each variety was evaluated in a large strip-plot at each location, thus each county test was considered as one replication of the test in calculating the overall average yield and in conducting the statistical analysis to determine significant differences. At each location, plots were planted, sprayed, fertilized, and harvested with the equipment used in the cooperating producer's farming operation. The width and length of strip-plots were different in each county; however, within a location in a county, the strips were trimmed on the ends so that the lengths were the same for each variety, or if the lengths were different then the harvested length was measured for each variety and appropriate harvested area adjustments were made to determine the yield per acre.

### Interpretation of Data

The tables on the following pages have been prepared with the entries listed in order of performance, the highest-yielding entry being listed first. **All yields presented have been adjusted to 13% moisture.** At the bottom of the tables, **LSD** values stand for **Least Significant Difference**. The mean yields of any two varieties being compared must differ by at least (minimum) the amount shown to be considered different in yielding ability at the 5% level of probability of significance. For example, given that the LSD for a test is 8.0 bu/a and the mean yield of Variety A was 30 bu/a and the mean yield of Variety B was 35 bu/a, then the two varieties are not statistically different in yield because the difference of 5 bu/a is less than the minimum of 8 bu/a required for them to be significant. Similarly, if the average yield of Variety C was 43 bu/a then it is significantly higher yielding than both Variety B ( $43 - 35 = 8$  bu/a = LSD of 8) and Variety A ( $43 - 30 = 13$  bu/a > LSD of 8).

Also, the **coefficient of variation (C.V.)** values are shown at the bottom of each table. This value is a measure of the error variability found within each experiment. It is the percentage that the square root of error mean square is of the overall test mean yield at that location. For example, a C.V. of 10% indicates that the size of the error variation is about 10% of the size of

the test mean. Similarly, a C.V. of 30% indicates that the size of the error variation is nearly one-third as large as the test mean. A goal in conducting each yield test is to keep the C.V. as low as possible, preferably below 20%.

### **Results**

***Yield and Agronomic Traits:*** During 2002, 179 soybean varieties were evaluated in experiment station performance tests, and 90 varieties were evaluated in county standard tests. For the first time, we had a Maturity Group (MG) 3 test on the experiment stations during 2002. In the **experiment station tests**, there were 15 varieties in the MG 3 Roundup Ready (RR3) test, 69 varieties in the RR4 test, 79 varieties in the RR5 test, and 13 MG 5 plus three MG 4 varieties in the conventional varieties test. In the **standard county tests** there were 17 RR3, 28 RR4, 20 RR5 early [i.e., relative maturity (RM) 5.0-5.5], 13 RR5 full-season (RM 5.6-5.9), and 12 MG 5 conventional varieties. The number of conventional soybean varieties available for testing continues to decline while the number of varieties with tolerance to glyphosate (e.g., Roundup, Touchdown, etc.) continues to increase. **Tables 2-27** contain data on yield performance and agronomic traits such as maturity, plant height, lodging, shattering, physical seed quality, and seed protein and oil content. **Tables 28-31** lists the names and descriptive characteristics of the varieties included in each of the tests in 2002.

***Disease Ratings:*** Ratings on variety reactions to natural frogeye leaf spot infestations at the Milan Experiment Station are presented in **Tables 3, 14 and 22**. Additional ratings on variety reaction to frogeye leaf spot, stem canker, and sudden death syndrome are presented in **Tables 32-37** (data provided by Dr. Melvin Newman, professor, Dept. of Entomology and Plant Pathology, UT).

***Reaction to *Dectes* Stem Borer:*** Ratings on reaction to *Dectes* stem borer for a select group of varieties are presented in **Table 38** (data provided by Dr. Gary Lentz, professor, Dept. of Entomology and Plant Pathology, UT).

***Weather Data:*** The 2002 rainfall and temperature data during the growing season for the different experiment stations are posted on the variety test web site.

**Table 1. Location information from experiment stations where the soybean variety tests were conducted in 2002.**

<b>Experiment Station</b>	<b>Location</b>	<b>Planting Date</b>	<b>Harvest Date</b>	<b>Seeding Rate</b>	<b>Soil Type</b>
<b>Roundup Ready Maturity Group III</b>					
Ames	Grand Junction	5/23/2002	9/12/2002	175000	Lexington Silt Loam
Highland Rim	Springfield	5/22/2002	10/17/2002	175000	Dickson Silt Loam
Knoxville	Knoxville	5/17/2002	9/13/2002	175000	Sequatchie Fine Sandy Loam
Milan (Irrigated)	Milan	5/15/2002	9/23/2002	209000	Loring, Henry Silt Loam
Milan (Non Irrigated)	" "	5/16/2002	9/23/2002	209000	Grenada, Routon Silt Loam
Middle TN (Irrigated)	Spring Hill	5/15/2002	10/14/2002	175000	Maury Silt Loam
Middle TN (Non Irrigated)	" "	5/15/2002	no harvest	175000	" " "

<b>Experiment Station</b>	<b>Location</b>	<b>Planting Date</b>	<b>Harvest Date</b>	<b>Seeding Rate</b>	<b>Soil Type</b>
<b>Roundup Ready Maturity Group IV</b>					
Ames	Grand Junction	5/23/2002	10/7/2002	175000	Lexington Silt Loam
Highland Rim	Springfield	5/22/2002	10/23/2002	175000	Dickson Silt Loam
Knoxville	Knoxville	5/17/2002	9/30/2002	175000	Sequatchie Fine Sandy Loam
Milan (Irrigated)	Milan	5/21/2002	10/2/2002	209000	Loring, Henry Silt Loam
Milan (Non Irrigated)	" "	5/16/2002	10/3/2002	209000	Grenada, Routon Silt Loam
Middle TN (Irrigated)	Spring Hill	5/15/2002	10/23/2002	175000	Maury Silt Loam
Middle TN (Non Irrigated)	" "	5/10/2002	10/18/2002	175000	" " "
Plateau	Crossville	5/9/2002	10/3/2002	175000	Lilly Loam

<b>Experiment Station</b>	<b>Location</b>	<b>Planting Date</b>	<b>Harvest Date</b>	<b>Seeding Rate</b>	<b>Soil Type</b>
<b>Roundup Ready Maturity Group V</b>					
Ames	Grand Junction	5/23/2002	10/23/2002	175000	Lexington Silt Loam
Highland Rim	Springfield	5/22/2002	11/2/2002	175000	Dickson Silt Loam
Knoxville	Knoxville	5/17/2002	10/24/2002	175000	Sequatchie Fine Sandy Loam
Milan (Irrigated)	Milan	5/21/2002	11/9/2002	209000	Loring, Henry Silt Loam
Milan (Non Irrigated)	" "	5/21/2002	10/17/2002	209000	Grenada, Routon Silt Loam
Middle TN (Irrigated)	Spring Hill	5/15/2002	11/8/2002	175000	Maury Silt Loam
Middle TN (Non Irrigated)	" "	5/15/2002	11/7/2002	175000	" " "

<b>Experiment Station</b>	<b>Location</b>	<b>Planting Date</b>	<b>Harvest Date</b>	<b>Seeding Rate</b>	<b>Soil Type</b>
<b>Conventional Maturity Group IV &amp; V</b>					
Ames	Grand Junction	5/23/2002	10/16/2002	175000	Lexington Silt Loam
Highland Rim	Springfield	5/22/2002	11/1/2002	175000	Dickson Silt Loam
Knoxville	Knoxville	5/6/2002	10/8/2002	175000	Etowah Silt Loam
Milan (Irrigated)	Milan	5/22/2002	10/8/2002	209000	Loring, Henry Silt Loam
Milan (Non Irrigated)	" "	5/23/2002	10/16/2002	209000	Grenada, Routon Silt Loam
Middle TN (Irrigated)	Spring Hill	5/15/2002	10/23/2002	175000	Maury Silt Loam
Middle TN (Non Irrigated)	" "	5/15/2002	11/7/2002	175000	" " "

**Table 2. Mean yields † of 15 Maturity Group III Roundup Ready soybean varieties evaluated at five locations (n=6) in Tennessee during 2002.**

Brand	Variety ‡	Avg. Yield ± Std Err. (n=6)	Milan			Spring Hill		Knoxville
			Ames	Irr.	Non-Irr.	Springfield	Irr.	
-----bu/a-----								
Delta King	DK 3862 RR	48 ± 1	55	74	42	48	34	38
Delta King	DK 3961 RR	48 ± 1	52	69	41	48	29	46
FFR	3975 RR	47 ± 1	58	61	40	50	28	43
D&PL	DPX 3761 RR	46 ± 1	52	66	38	49	28	43
Delta King	DK 3968 RR	46 ± 1	56	64	33	48	30	42
Terral	TVX 39R201 (RR)	45 ± 1	50	58	37	46	33	49
Garst	D399 RR/N	45 ± 1	54	60	34	49	31	41
D&PL	DPX 3819 RR	45 ± 1	58	58	40	42	31	38
Delta King	DK 3964 RR	44 ± 1	51	61	37	47	27	44
Pioneer	93B68 (RR)	44 ± 1	48	61	38	50	27	37
D&PL	DPX 3940 RR	43 ± 1	52	58	36	43	28	44
Delta King	DK XTJ033 RR	43 ± 1	56	56	38	47	27	34
Pioneer	93B67 (RR)	43 ± 1	50	61	34	44	27	39
Armor	39-E9 (RR)	42 ± 1	52	64	32	40	21	44
Hornbeck	HBK R3980 (RR)	41 ± 1	51	53	34	47	26	37
<b>Average (bu/a)</b>		<b>45</b>	<b>53</b>	<b>62</b>	<b>37</b>	<b>47</b>	<b>29</b>	<b>42</b>
<b>L.S.D.<sub>.05</sub> (bu/a)</b>		<b>3</b>	<b>8</b>	<b>11</b>	<b>7</b>	<b>7</b>	<b>6</b>	<b>4</b>
<b>C.V. (%)</b>		<b>9.5</b>	<b>8.7</b>	<b>10.2</b>	<b>10.3</b>	<b>8.9</b>	<b>11.8</b>	<b>5.3</b>

† All yields are adjusted to 13% moisture.

‡ If a RR appears inside parentheses (RR), then it is not part of the variety name.

**Table 3. Mean yields † and agronomic characteristics of 15 Maturity Group III Roundup Ready soybean varieties evaluated at five locations (n=6) in Tennessee during 2002.**

Brand	Variety ‡	Avg. Yield					Seed				
		± Std Err. (n=6)	Moisture (n=6)	Lodging (n=2)	Height (n=7)	Maturity (n=7)	Shattering (n=3)	Quality (n=5)	Protein (n=5)	Oil (n=5)	Frogeye (n=1)
		bu/a	%	Score	in.	DAP	-----Score-----	%	%	Score	
Delta King	DK 3862 RR	48 ± 1	14.5	1.6	33	114	1.5	2.8	42.5	23.7	3.0
Delta King	DK 3961 RR	48 ± 1	14.0	1.7	34	115	1.5	2.8	43.6	22.6	1.7
FFR	3975 RR	47 ± 1	14.3	2.2	34	114	1.7	2.8	43.1	23.4	1.0
D&PL	DPX 3761 RR	46 ± 1	14.0	1.9	30	112	1.6	2.6	42.2	22.9	1.0
Delta King	DK 3968 RR	46 ± 1	13.2	1.7	30	113	1.7	2.7	40.7	24.4	1.0
Terral	TVX 39R201 (RR)	45 ± 1	16.4	1.5	32	115	1.5	3.0	39.2	24.0	4.3
Garst	D399 RR/N	45 ± 1	13.6	1.7	35	112	1.5	2.5	41.8	23.6	1.0
D&PL	DPX 3819 RR	45 ± 1	13.8	2.1	36	114	1.5	2.9	42.1	23.5	3.7
Delta King	DK 3964 RR	44 ± 1	13.7	3.0	37	113	1.5	3.0	41.2	23.5	2.0
Pioneer	93B68 (RR)	44 ± 1	12.8	1.7	31	112	1.7	3.1	40.9	24.7	1.0
D&PL	DPX 3940 RR	43 ± 1	13.6	1.9	32	113	1.7	3.0	40.7	24.3	4.3
Delta King	DK XTJ033 RR	43 ± 1	13.3	2.4	29	108	1.8	2.6	41.5	23.0	3.0
Pioneer	93B67 (RR)	43 ± 1	12.8	1.8	33	108	2.0	2.7	41.6	22.9	1.0
Armor	39-E9 (RR)	42 ± 1	13.3	1.6	29	112	1.7	2.7	40.4	24.6	2.0
Hornbeck	HBK R3980 (RR)	41 ± 1	13.5	1.4	30	114	1.5	2.7	42.3	22.8	5.0

† All yields are adjusted to 13% moisture.

‡ If a RR appears inside parentheses (RR), then it is not part of the variety name.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting.

Shattering = 1 to 5 scale; where 1 = no shattering; 5 = 90+% of pods shattered.

Seed Quality = 1 to 5 scale; where 1 = < 5% of seeds showing disease or split seed coats; 5=95+% of seed are diseased or have split seed coats.

Protein & Oil on dry weight basis.

Frogeye = 1 to 5 scale; where 1 = < 5% of leaf surfaces containing spots; 5 = 95+% of leaf surfaces containing spots. Ratings from Milan Irrigated only.



**Table 4. Yields † of 17 Maturity Group III Roundup Ready soybean varieties in eight County Standard Tests in Tennessee during 2002.**

MS	Brand/Variety	Avg.	Moisture	Chester	Dyer	Dyer	Gibson	Henry	Lake	Milan	Weakley
		Yield			(Burchfiel)	(Underwood)				Exp. Sta.	
		bu/a	%	----- bu/a -----							
A	*Golden Harvest 3983	44.4	13.5	30.3	45.5	40.6	66.4	45.9	41.4	42.2	42.8
A	Dyna-Gro DG3373	44.1	13.7	35.1	54.4	38.8	52.4	48.5	39.6	43.0	41.3
AB	*NK Brand S39-Q4	42.9	13.8	27.5	47.9	35.8	56.2	49.1	40.0	45.1	41.9
AB	Vigoro V382	42.6	13.6	34.5	45.5	41.9	54.9	43.4	34.2	44.4	41.6
AB	Asgrow AG3902	42.4	13.5	32.1	46.2	38.1	53.0	46.4	37.3	42.4	43.5
ABC	Delta King 3862	41.6	13.5	32.3	48.3	41.7	50.8	45.9	30.2	42.0	41.7
ABC	Delta King 3968	41.2	13.5	29.3	41.1	38.6	57.6	47.2	33.8	41.4	40.6
ABC	*Asgrow AG3701	40.7	13.1	32.0	49.5	25.1	51.5	50.0	32.6	42.5	42.9
BCD	FFR 3975	39.9	13.7	26.2	37.9	38.2	54.4	45.3	34.5	41.2	41.6
BCD	Pioneer 93B72	39.5	13.6	33.5	49.5	31.0	49.0	41.8	39.8	35.7	36.0
BCD	Steyer 3811	39.5	13.6	27.7	44.3	41.1	44.6	46.9	30.4	42.8	38.5
BCD	Delta King 3964	39.4	13.7	24.6	41.8	37.5	43.8	43.9	41.3	42.5	40.0
BCD	Asgrow AG3703	39.4	14.0	31.8	44.7	38.5	49.7	43.0	30.3	37.4	39.5
CD	Adler 395	38.0	13.3	32.3	44.1	34.2	45.1	42.2	36.3	36.3	33.9
CD	Hornbeck 3980	37.7	13.5	28.6	42.4	35.9	50.2	41.5	31.9	37.3	33.9
D	Pioneer 93B67	36.3	13.4	36.0	45.1	20.8	43.5	43.9	32.4	32.9	36.1
D	Pioneer 93B68	36.2	12.9	29.8	50.7	15.3	48.5	35.7	36.1	37.6	36.2
<b>Average (bu/a)</b>		<b>40.3</b>		<b>30.8</b>	<b>45.8</b>	<b>34.9</b>	<b>51.3</b>	<b>44.7</b>	<b>35.4</b>	<b>40.4</b>	<b>39.5</b>

† Yields have been adjusted to 13% moisture. Each variety was evaluated in a large strip-plot at each location, thus each county test was considered as one replication of the test in calculating the average yield and in conducting the statistical analysis to determine significant differences (MS).

MS = Varieties that have any MS letter in common are not statistically different in yield at the 5% level of probability.

Varieties denoted with an asterisk (\*) were in the top performing group for two years.

Data provided by Robert C. Williams, Ext. Area Specialist, Grain Crops, and extension agents in counties shown above.

**Table 5 . Overall average yields and moistures of seven Maturity Group III Roundup Ready soybean varieties evaluated in County Standard Tests (n=8) and experiment stations (n=6) in Tennessee during 2002.**

Brand	Variety	County Standard Tests		Experiment Station Tests	
		Avg. Yield	Moisture	Avg. Yield	Moisture
		bu/a	%	bu/a	%
Delta King	DK 3862 RR	42	13.5	48	14.5
Delta King	DK 3968 RR	41	13.5	46	13.2
FFR	3975 RR	40	13.7	47	14.3
Delta King	DK 3964 RR	39	13.7	44	13.7
Hornbeck	HBK R3980 (RR)	38	13.5	41	13.5
Pioneer	93B67 (RR)	36	13.4	43	12.8
Pioneer	93B68 (RR)	36	12.9	44	12.8
<b>Average (bu/a)</b>		<b>39</b>		<b>45</b>	

**Table 6. Mean yields † of 69 Maturity Group IV Roundup Ready soybean varieties evaluated at six locations (n=8) in Tennessee during 2002.**

Brand	Variety	Avg. Yield ± Std Err. (n=8)	bu/a							
			Ames	Milan		Spring Hill		Springfield	Crossville	Knoxville
				Irr.	Non-Irr.	Irr.	Non-Irr.			
Morsoy	RT 4809 (RR)	52 ± 1	58	82	59	44	22	51	41	62
Delta King	DK 4868 RR	52 ± 1	56	81	54	40	25	59	45	57
Delta King	DK 4461 RR	51 ± 1	52	85	54	49	16	52	44	55
USG	7452nRR	50 ± 1	56	79	52	44	22	51	45	54
USG	7440nRR	50 ± 1	60	74	52	47	22	45	46	56
N.K. Brand	NK X248R (RR)	50 ± 1	56	78	50	44	25	53	40	56
Pioneer	94B73 (RR)	50 ± 1	50	73	50	41	26	63	41	54
Delta King	DK 4763 RR	50 ± 1	55	74	48	45	24	54	41	57
FFR	4891 RR	50 ± 1	56	66	57	45	30	48	43	55
Hornbeck	HBK R 4820 (RR)	50 ± 1	55	78	49	41	24	54	42	56
Delta Grow	DG 4950 RR	50 ± 1	55	73	52	42	30	46	41	59
USG	7489 RR	50 ± 1	49	71	55	44	30	53	41	53
D&PL	DP 4690 RR	49 ± 1	53	72	56	43	27	47	41	55
Armor	AXR-4699 (RR)	49 ± 1	59	72	45	42	26	50	42	57
Hornbeck	HBK R 4920 (RR)	49 ± 1	53	64	52	46	27	50	44	55
Croplan	RC 4444 (RR)	48 ± 1	55	79	51	43	18	50	37	54
Asgrow	AG 4603 (RR)	48 ± 1	51	65	53	40	26	60	38	54
Armor	47-G7 (RR)	48 ± 1	54	71	46	41	23	55	39	57
Armor	44-R4 (RR)	48 ± 1	60	72	48	35	19	57	41	53
Golden Harvest	H-4534 RR	48 ± 1	53	72	49	41	22	48	43	57
Dyna-Gro	3443N RR	48 ± 1	55	74	48	39	18	54	42	54
Asgrow	AG 4403 (RR)	48 ± 1	53	74	49	39	21	50	42	55
Stine	S4882-4 (RR)	48 ± 1	53	75	48	44	22	49	40	53
FFR	4455 RR	48 ± 1	54	66	49	45	24	53	39	54
Vigoro	V442NRR	48 ± 1	55	68	50	41	19	54	41	55
Pioneer	94B74 (RR)	47 ± 1	52	67	46	44	22	52	40	56
Delta King	DK 4965 RR	47 ± 1	52	74	46	37	25	46	45	52
Garst	4512 RR/N	47 ± 1	52	75	45	41	16	55	37	57
Golden Harvest	H-4772 RR	47 ± 1	51	68	49	41	26	49	36	58
Dyna-Gro	X419N RR	47 ± 1	52	62	45	47	21	49	41	59
Pioneer	9492 (RR)	47 ± 1	55	70	46	43	23	51	37	51
FFR	4712 RR	47 ± 1	52	59	50	43	29	48	39	54
Delta King	DK XTJ 041 RR	46 ± 1	49	83	49	30	13	52	42	53
D&PL	DPX 4727 RR	46 ± 1	55	70	45	41	23	48	36	54
Garst	4312 RR/STS/N	46 ± 1	54	78	47	34	13	53	41	50
Stine	S4442-4 (RR)	46 ± 1	49	78	49	33	15	58	40	48
Pioneer	94B13 (RR)	46 ± 1	50	69	40	39	19	61	42	51

Table 6. Cont.

Brand	Variety	Avg. Yield ± Std Err. (n=8)	Ames	Milan		Spring Hill		Springfield	Crossville	Knoxville
				Irr.	Non-Irr.	Irr.	Non-Irr.			
FFR	4922 RR	46 ± 1	51	67	45	42	27	48	39	52
Terral	TV 4890 RR	46 ± 1	50	69	48	39	26	52	40	46
Vigoro	V49N3RR	46 ± 1	55	65	48	40	28	47	35	51
Delta King	DK 4762 RR	46 ± 1	50	67	50	44	26	44	38	50
Terral	TV 4589 RR	46 ± 1	47	68	44	40	23	48	49	48
USG	7499nRR	46 ± 1	49	71	47	39	24	45	41	52
D&PL	SG 498 RR	46 ± 1	51	60	54	42	30	43	34	51
Croplan	RC 4432 (RR)	46 ± 1	52	63	48	45	19	50	35	55
Dyna-Gro	3484N RR	46 ± 1	51	69	44	39	20	53	35	54
USG	7449nRR	45 ± 1	50	65	52	37	19	47	44	49
Vigoro	V42N3RR	45 ± 1	51	72	47	32	16	55	41	50
Golden Harvest	H-4850 RR	45 ± 1	51	64	47	38	24	46	38	55
Dyna-Gro	3468N RR	45 ± 1	45	63	48	40	26	48	35	57
Garst	D 484 RR/N	45 ± 1	45	65	46	42	24	48	37	54
Terral	TV 4886 RR	45 ± 1	46	65	44	43	23	51	38	52
Hornbeck	HBK R 4622 (RR)	45 ± 1	49	66	51	33	16	51	43	50
Hartz	H 4554 RR	45 ± 1	49	66	48	38	22	44	38	53
Asgrow	AG 4902 (RR)	44 ± 1	49	66	42	39	25	46	42	47
Asgrow	AG 4201 (RR)	44 ± 1	53	62	44	35	20	47	43	52
D&PL	DPX 4933 RR	44 ± 1	46	62	41	41	27	45	38	55
Armor	4280 (RR)	44 ± 1	57	72	40	32	13	57	30	51
Croplan	RC 4992 (RR)	44 ± 1	48	62	43	41	29	44	33	52
Midwest Premium Genetics	MPV 457nRR	44 ± 1	46	58	50	38	21	46	41	51
Vigoro	V46N3RR	44 ± 1	48	71	43	34	14	51	41	47
D&PL	DP 4344 RR	43 ± 1	50	60	47	37	22	40	36	49
Croplan	RC 4772 (RR)	42 ± 1	44	54	53	39	24	35	39	51
Pioneer	94B23 (RR)	42 ± 1	51	66	39	29	15	45	37	52
Eagle	Prairie RR	42 ± 1	39	52	48	42	26	38	39	47
Delta King	DK XTJ 040 RR	42 ± 1	46	65	40	33	16	51	39	42
D&PL	DPX 4527 RR	41 ± 1	47	58	40	40	18	40	36	51
Midwest Premium Genetics	MPV 4802nRR	41 ± 1	39	55	46	37	26	44	33	49
Armor	42-L2 (RR)	41 ± 1	47	60	44	32	15	46	36	48
<b>Average (bu/a)</b>		<b>47</b>	<b>51</b>	<b>69</b>	<b>48</b>	<b>40</b>	<b>22</b>	<b>50</b>	<b>40</b>	<b>53</b>
<b>L.S.D.<sub>.05</sub> (bu/a)</b>		<b>2</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>5</b>	<b>6</b>	<b>9</b>	<b>7</b>	<b>5</b>
<b>C.V. (%)</b>		<b>8.8</b>	<b>8.7</b>	<b>6.6</b>	<b>8.8</b>	<b>7.0</b>	<b>14.9</b>	<b>10.9</b>	<b>10.8</b>	<b>6.0</b>

† All yields are adjusted to 13% moisture.

‡ If a RR appears inside parentheses (RR), then it is not part of the variety name.

**Table 7. Mean yields † and agronomic characteristics of 69 Maturity Group IV Roundup Ready soybean varieties evaluated at six locations (n=8) in Tennessee during 2002.**

Brand	Variety ‡	Avg. Yield	Moisture (n=8)	Lodging (n=5)	Height (n=8)	Maturity (n=8)	Shattering (n=2)	Seed	Protein (n=5)	Oil (n=5)
		± Std Err. (n=8)						Quality (n=6)		
		bu/a	%	Score	in.	DAP	----- Score -----	%	%	
Morsoy	RT 4809 (RR)	52 ± 1	16.7	1.4	35	127	1.1	3.3	41.7	23.6
Delta King	DK 4868 RR	52 ± 1	17.3	1.3	35	126	1.0	3.5	41.8	23.5
Delta King	DK 4461 RR	51 ± 1	15.7	1.3	34	125	1.3	2.7	40.2	24.7
USG	7452nRR	50 ± 1	15.9	1.4	36	123	1.2	2.6	40.2	24.7
USG	7440nRR	50 ± 1	16.0	1.4	36	123	1.3	2.7	40.5	24.8
N.K. Brand	NK X248R (RR)	50 ± 1	18.0	1.6	37	129	1.2	2.9	41.8	22.4
Pioneer	94B73 (RR)	50 ± 1	16.3	1.5	36	122	1.2	2.6	41.9	24.1
Delta King	DK 4763 RR	50 ± 1	16.2	1.5	34	124	1.1	2.8	42.5	22.6
FFR	4891 RR	50 ± 1	18.1	1.5	38	128	1.0	3.1	41.8	23.6
Hornbeck	HBK R 4820 (RR)	50 ± 1	16.5	1.3	34	125	1.1	3.2	41.4	23.6
Delta Grow	DG 4950 RR	50 ± 1	17.1	1.6	37	126	1.0	2.9	40.3	24.3
USG	7489 RR	50 ± 1	17.1	1.9	38	125	1.2	2.8	40.7	24.2
D&PL	DP 4690 RR	49 ± 1	16.8	1.5	37	127	1.3	2.9	41.0	23.9
Armor	AXR-4699 (RR)	49 ± 1	16.5	1.5	35	125	1.2	2.8	42.5	22.6
Hornbeck	HBK R 4920 (RR)	49 ± 1	17.3	2.1	39	127	1.0	2.8	41.1	24.1
Croplan	RC 4444 (RR)	48 ± 1	16.1	1.3	34	122	1.3	2.6	40.0	24.9
Asgrow	AG 4603 (RR)	48 ± 1	16.1	1.4	33	124	1.2	2.8	41.2	22.8
Armor	47-G7 (RR)	48 ± 1	16.6	1.6	34	125	1.1	2.9	42.3	22.7
Armor	44-R4 (RR)	48 ± 1	16.3	1.3	34	122	1.3	2.8	40.3	24.8
Golden Harvest	H-4534 RR	48 ± 1	15.9	1.4	35	122	1.3	2.8	40.2	24.9
Dyna-Gro	3443N RR	48 ± 1	15.6	1.2	34	122	1.3	2.7	39.9	24.9
Asgrow	AG 4403 (RR)	48 ± 1	16.5	1.3	35	122	1.2	2.5	40.5	24.6
Stine	S4882-4 (RR)	48 ± 1	15.8	1.8	34	123	1.3	2.3	42.7	23.3
FFR	4455 RR	48 ± 1	16.3	1.5	38	124	1.3	2.1	42.3	23.3
Vigoro	V442NRR	48 ± 1	15.6	1.4	35	122	1.3	2.6	39.4	25.1
Pioneer	94B74 (RR)	47 ± 1	16.4	1.7	38	123	1.2	2.8	41.9	23.7
Delta King	DK 4965 RR	47 ± 1	17.0	1.5	35	128	1.0	2.9	43.3	23.1
Garst	4512 RR/N	47 ± 1	15.8	1.3	34	122	1.5	2.8	40.7	24.4
Golden Harvest	H-4772 RR	47 ± 1	16.2	1.6	34	123	1.1	2.9	42.2	22.7
Dyna-Gro	X419N RR	47 ± 1	16.0	1.7	35	124	1.1	3.0	42.4	22.6
Pioneer	9492 (RR)	47 ± 1	16.1	1.3	35	124	1.2	2.2	41.9	23.3
FFR	4712 RR	47 ± 1	16.9	1.8	41	127	1.2	3.7	41.5	23.3
Delta King	DK XTJ 041 RR	46 ± 1	15.1	1.1	30	122	1.8	3.6	41.1	23.9
D&PL	DPX 4727 RR	46 ± 1	16.5	1.5	33	124	1.0	2.8	42.4	22.6
Garst	4312 RR/STS/N	46 ± 1	15.5	1.1	31	122	1.4	3.6	41.2	23.9
Stine	S4442-4 (RR)	46 ± 1	15.3	1.0	30	122	1.3	3.4	41.0	23.9
Pioneer	94B13 (RR)	46 ± 1	15.5	1.3	33	120	1.4	3.2	40.4	23.9
FFR	4922 RR	46 ± 1	17.9	2.1	38	127	1.1	2.4	42.4	22.9

**Table 7. Cont.**

Brand	Variety ‡	Avg. Yield	Moisture (n=8)	Lodging (n=5)	Height (n=8)	Maturity (n=8)	Shattering (n=2)	Seed	Protein (n=5)	Oil (n=5)
		± Std Err. (n=8)						Quality (n=6)		
		bu/a	%	Score	in.	DAP	-----	Score -----	%	%
Terral	TV 4890 RR	46 ± 1	16.6	1.5	40	122	1.2	2.5	43.0	22.8
Vigoro	V49N3RR	46 ± 1	15.9	1.7	35	124	1.2	2.4	42.7	23.3
Delta King	DK 4762 RR	46 ± 1	16.8	1.4	41	128	1.1	2.8	43.6	22.8
Terral	TV 4589 RR	46 ± 1	15.8	1.7	37	122	1.3	3.2	42.4	23.1
USG	7499nRR	46 ± 1	16.2	1.5	37	125	1.1	2.6	42.0	23.1
D&PL	SG 498 RR	46 ± 1	16.9	1.2	33	130	1.1	2.9	43.1	22.4
Croplan	RC 4432 (RR)	46 ± 1	15.7	1.3	37	123	1.3	1.9	41.6	23.6
Dyna-Gro	3484N RR	46 ± 1	16.2	1.6	38	125	1.2	2.8	41.9	23.1
USG	7449nRR	45 ± 1	15.8	2.3	36	122	1.3	3.6	41.8	24.1
Vigoro	V42N3RR	45 ± 1	15.9	1.1	31	122	1.5	3.5	41.2	23.9
Golden Harvest	H-4850 RR	45 ± 1	16.2	1.5	38	125	1.3	2.6	42.0	23.2
Dyna-Gro	3468N RR	45 ± 1	16.2	1.2	32	125	1.1	3.1	41.5	23.5
Garst	D 484 RR/N	45 ± 1	16.5	1.7	37	124	1.1	2.7	42.0	23.1
Terral	TV 4886 RR	45 ± 1	16.5	1.6	42	127	1.0	2.9	42.2	23.3
Hornbeck	HBK R 4622 (RR)	45 ± 1	15.5	1.1	31	123	1.2	3.3	42.2	23.8
Hartz	H 4554 RR	45 ± 1	16.4	1.7	36	122	1.2	3.1	42.2	23.5
Asgrow	AG 4902 (RR)	44 ± 1	16.2	1.4	33	126	1.1	2.8	43.8	21.9
Asgrow	AG 4201 (RR)	44 ± 1	15.4	2.0	32	121	1.3	3.0	41.7	23.4
D&PL	DPX 4933 RR	44 ± 1	17.5	1.7	38	127	1.2	2.4	42.1	23.1
Armor	4280 (RR)	44 ± 1	16.5	1.3	30	124	1.3	3.5	41.3	24.0
Croplan	RC 4992 (RR)	44 ± 1	17.1	1.6	38	127	1.2	2.4	42.1	23.1
Midwest Premium Genetics	MPV 457nRR	44 ± 1	15.8	1.5	36	122	1.3	3.1	42.0	23.2
Vigoro	V46N3RR	44 ± 1	15.5	1.1	31	123	1.3	3.3	41.7	23.9
D&PL	DP 4344 RR	43 ± 1	15.8	2.0	40	122	1.3	2.8	42.6	23.4
Croplan	RC 4772 (RR)	42 ± 1	16.9	1.6	40	125	1.1	3.7	41.3	23.3
Pioneer	94B23 (RR)	42 ± 1	14.9	1.7	34	120	1.7	3.6	41.9	24.1
Eagle	Prairie RR	42 ± 1	20.2	2.7	37	132	1.0	2.8	42.2	22.7
Delta King	DK XTJ 040 RR	42 ± 1	16.4	1.2	34	120	1.6	3.5	41.7	24.0
D&PL	DPX 4527 RR	41 ± 1	15.9	1.4	34	123	1.1	2.9	42.1	23.5
Midwest Premium Genetics	MPV 4802nRR	41 ± 1	16.6	1.6	34	126	1.0	2.5	43.9	22.0
Armor	42-L2 (RR)	41 ± 1	16.2	2.1	37	120	1.3	3.6	41.3	23.3

† All yields are adjusted to 13% moisture

‡ If a RR appears inside parentheses (RR), then it is not a part of the variety name.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting.

Shattering = 1 to 5 scale; where 1 = no shattering; 5 = 90+% of pods shattered.

Seed Quality = 1 to 5 scale; where 1 = < 5% of seeds showing disease or split seed coats; 5=95+% of seed are diseased or have split seed coats.

Protein & Oil on dry weight basis.

**Table 8. Mean yields † of 25 Maturity Group IV Roundup Ready soybean varieties evaluated at five locations (n=10) in Tennessee for two years 2001 - 2002.**

Brand	Variety ‡	Avg. Yield ± Std Err.	Ames	Milan	Springfield	Crossville	Knoxville
		(n=10)					
			-----bu/a-----				
Delta King	DK 4868 RR	49 ± 1	47	51	45	47	55
Dyna-Gro	3443N RR	48 ± 1	49	54	41	43	52
Hornbeck	HBK R 4820 (RR)	47 ± 1	44	50	42	49	52
Morsoy	RT 4809 (RR)	47 ± 1	48	53	38	44	53
Golden Harvest	H-4534 RR	47 ± 1	44	55	37	46	54
Pioneer	94B73 (RR)	47 ± 1	45	51	50	39	48
Asgrow	AG 4403 (RR)	46 ± 1	45	51	38	47	51
Delta King	DK 4965 RR	46 ± 1	46	49	37	44	52
Garst	4512 RR/N	45 ± 1	44	52	39	39	53
Delta Grow	DG 4950 RR	45 ± 1	49	49	37	40	51
Dyna-Gro	3484N RR	45 ± 1	45	46	39	41	54
USG	7489 RR	45 ± 1	42	50	39	45	48
Garst	D 484 RR/N	45 ± 1	47	45	39	41	51
Hornbeck	HBK R 4920 (RR)	45 ± 1	45	44	39	43	51
USG	7499nRR	45 ± 1	49	45	39	40	50
D&PL	DP 4690 RR	44 ± 1	44	51	36	40	50
Pioneer	9492 (RR)	44 ± 1	46	46	42	40	47
Golden Harvest	H-4850 RR	44 ± 1	43	47	38	42	52
Asgrow	AG 4902 (RR)	43 ± 1	44	46	39	39	48
Dyna-Gro	3468N RR	43 ± 1	42	47	37	39	51
D&PL	SG 498 RR	43 ± 1	43	50	37	38	46
Delta King	DK 4762 RR	42 ± 1	45	39	40	40	46
Pioneer	94B23 (RR)	42 ± 1	46	46	32	37	47
D&PL	DP 4344 RR	39 ± 1	42	45	33	34	42
Eagle	Prairie RR	37 ± 1	39	37	33	38	37
<b>Average (bu/a)</b>		<b>45</b>	<b>45</b>	<b>48</b>	<b>39</b>	<b>41</b>	<b>50</b>
<b>L.S.D.<sub>.05</sub> (bu/a)</b>		<b>3</b>	<b>9</b>	<b>6</b>	<b>7</b>	<b>9</b>	<b>6</b>
<b>C.V. (%)</b>		<b>11.8</b>	<b>13.8</b>	<b>9.6</b>	<b>12.8</b>	<b>14.7</b>	<b>8.3</b>

† All yields are adjusted to 13% moisture.

‡ If a RR appears inside parentheses (RR), then it is not a part of the variety name.

**Table 9. Mean yields † and agronomic characteristics of 25 Maturity Group IV Roundup Ready soybean varieties evaluated at five locations (n=10) in Tennessee for two years 2001 - 2002.**

Brand	Variety ‡	Avg. Yield	Moisture	Lodging	Height	Maturity	Seed Quality	Protein	Oil
		± Std Err. (n=10)	(n=10)	(n=6)	(n=10)	(n=10)	(n=10)	(n=9)	(n=9)
		bu/a	%	Score	in.	DAP	Score	%	%
Delta King	DK 4868 RR	49 ± 1	14.1	1.5	36	134	3.5	42.2	22.9
Dyna-Gro	3443N RR	48 ± 1	13.9	1.6	34	128	2.9	40.2	24.1
Hornbeck	HBK R 4820 (RR)	47 ± 1	13.8	1.7	34	132	3.3	42.0	22.9
Morsoy	RT 4809 (RR)	47 ± 1	14.0	1.7	36	133	3.5	41.9	22.9
Golden Harvest	H-4534 RR	47 ± 1	14.0	1.5	33	127	3.0	40.8	24.1
Pioneer	94B73 (RR)	47 ± 1	14.0	2.2	35	129	2.9	42.8	23.3
Asgrow	AG 4403 (RR)	46 ± 1	13.8	1.4	33	127	2.8	41.0	24.0
Delta King	DK 4965 RR	46 ± 1	14.0	2.0	34	135	2.9	43.7	22.7
Garst	4512 RR/N	45 ± 1	14.1	1.5	34	128	2.8	40.8	23.9
Delta Grow	DG 4950 RR	45 ± 1	14.1	2.2	37	133	3.1	41.2	23.4
Dyna-Gro	3484N RR	45 ± 1	13.9	1.8	37	132	2.8	42.2	22.7
USG	7489 RR	45 ± 1	14.4	2.3	36	132	3.0	41.3	23.3
Garst	D 484 RR/N	45 ± 1	13.9	1.9	37	132	2.8	42.4	22.4
Hornbeck	HBK R 4920 (RR)	45 ± 1	14.3	2.3	37	133	3.1	41.5	23.2
USG	7499nRR	45 ± 1	13.9	1.9	37	133	2.7	42.3	22.5
D&PL	DP 4690 RR	44 ± 1	14.3	1.7	36	133	3.2	41.4	23.2
Pioneer	9492 (RR)	44 ± 1	13.9	1.7	35	130	2.5	42.3	22.8
Golden Harvest	H-4850 RR	44 ± 1	13.9	2.0	37	132	2.8	42.5	22.7
Asgrow	AG 4902 (RR)	43 ± 1	13.5	1.7	33	134	3.0	43.9	21.7
Dyna-Gro	3468N RR	43 ± 1	14.1	1.2	31	130	3.1	41.9	23.3
D&PL	SG 498 RR	43 ± 1	14.2	1.4	32	136	2.9	43.2	21.8
Delta King	DK 4762 RR	42 ± 1	14.1	1.9	41	134	2.6	43.6	22.2
Pioneer	94B23 (RR)	42 ± 1	13.6	1.9	33	124	3.6	42.5	23.4
D&PL	DP 4344 RR	39 ± 1	13.8	2.7	39	128	3.1	42.9	22.7
Eagle	Prairie RR	37 ± 1	16.2	3.1	37	138	2.5	43.2	21.7

† All yields are adjusted to 13% moisture.

‡ If a RR appears inside parentheses (RR), then it is not a part of the variety name.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting.

Seed Quality = 1 to 5 scale; where 1 = < 5% of seeds showing disease or split seed coats; 5=95+% of seed are diseased or have split seed coats.

Protein & Oil on dry weight basis.



**Table 10. Mean yields † and agronomic characteristics of 16 Maturity Group IV Roundup Ready soybean varieties evaluated at five locations (n=15) in Tennessee for three years 2000 - 2002.**

Brand	Variety ‡	Avg. Yield	Moisture (n=15)	Lodging (n=9)	Height (n=13)	Locations				
		± Std Err. (n=15)				Ames	Milan	Springfield	Crossville	Knoxville
		bu/a	%	Score	in.	-----bu/a-----				
Delta King	DK 4868 RR	49 ± 1	13.3	1.4	34	46	52	38	50	57
Morsoy	RT 4809 (RR)	47 ± 1	13.5	1.5	34	46	52	34	47	56
Asgrow	AG 4403 (RR)	46 ± 1	13.3	1.3	32	43	52	34	48	52
D&PL	DP 4690 RR	45 ± 1	13.7	1.5	35	43	51	33	47	54
Delta King	DK 4965 RR	45 ± 1	13.4	1.7	33	43	47	34	47	55
USG	7489 RR	45 ± 1	13.6	1.9	35	40	49	33	50	51
Dyna-Gro	3484N RR	44 ± 1	13.5	1.5	36	43	44	34	44	54
Pioneer	9492 (RR)	44 ± 1	13.5	1.5	33	43	46	36	43	50
Garst	D 484 RR/N	44 ± 1	13.4	1.6	35	44	44	34	43	52
Asgrow	AG 4902 (RR)	43 ± 1	12.9	1.5	32	43	47	36	41	51
D&PL	SG 498 RR	43 ± 1	13.8	1.3	31	42	47	35	42	49
Dyna-Gro	3468N RR	43 ± 1	13.3	1.2	29	40	46	34	41	53
Hornbeck	HBK R 4920 (RR)	43 ± 1	13.8	1.9	35	40	45	33	47	50
USG	7499Nrr	42 ± 1	13.5	1.6	35	41	44	34	40	52
Delta King	DK 4762 RR	42 ± 1	13.8	1.6	39	42	38	36	46	49
D&PL	DP 4344 RR	39 ± 1	13.1	2.2	37	41	43	30	37	46
<b>Average (bu/a)</b>		<b>44</b>				<b>43</b>	<b>47</b>	<b>34</b>	<b>45</b>	<b>52</b>
<b>L.S.D.<sub>.05</sub> (bu/a)</b>		<b>3</b>				<b>8</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>5</b>
<b>C.V. (%)</b>		<b>11.5</b>				<b>13.7</b>	<b>9.6</b>	<b>13.3</b>	<b>13.5</b>	<b>7.7</b>

† All yields are adjusted to 13% moisture.

‡ If a RR appears inside parentheses (RR), then it is not a part of the variety name.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

**Table 11. Yields † of 28 Maturity Group IV Roundup Ready soybean varieties in nine County Standard Tests in Tennessee and Kentucky during 2002.**

MS	Brand/Variety	Avg.	Moisture	Carlisle (KY)	Chester	Coffee	Dyer	Gibson	Lake	Lauderdale	Obion	Weakley
		Yield										
		bu/a	%	-----								
A	Asgrow AG4603	48.7	14.8	59.3	30.2	42.8	38.3	63.1	49.2	54.9	45.7	55.3
AB	Horbeck 4820	48.1	14.9	66.2	25.5	43.5	32.1	56.6	51.6	62.9	41.8	52.8
AB	*Delta King 4461	47.7	15.1	53.9	27.2	44.9	46.4	57.9	47.5	59.5	42.3	50.0
ABC	*Asgrow AG4403	47.6	14.9	56.5	30.2	37.9	48.1	60.9	46.9	53.6	39.4	54.6
ABCD	*Delta King 4868	47.4	15.1	59.1	23.8	46.8	31.0	60.7	48.6	63.1	43.7	50.0
ABCD	USG 7440	47.3	14.5	56.7	27.7	39.1	41.0	57.9	49.4	61.5	40.8	51.3
ABCD	*USG BG4401	47.2	14.4	55.3	26.5	40.9	44.3	57.5	49.3	51.9	47.3	52.0
ABCD	Progeny 4858	47.1	14.7	63.5	22.8	46.2	41.3	59.7	44.1	53.6	44.9	47.8
ABCD	Adler 445	46.8	15.0	60.6	25.4	37.4	47.9	57.5	46.2	59.5	40.3	46.7
ABCD	Hartz 4454	46.8	14.5	52.6	26.3	42.7	44.0	58.7	53.3	53.9	38.7	50.7
ABCD	Dyna-Gro DG3443	46.6	14.9	59.5	19.7	42.5	43.2	56.1	46.8	59.9	40.8	51.3
ABCD	Delta King 4965	46.5	14.7	52.5	23.2	45.3	42.5	58.7	42.0	54.8	42.9	57.0
ABCD	USG 7499	46.4	14.7	53.8	21.2	44.2	47.2	62.6	46.8	48.1	43.7	49.5
ABCD	NK X248	46.3	14.7	48.5	24.4	48.0	39.3	59.5	51.4	54.7	37.4	53.7
ABCD	Pioneer 94B73	45.7	14.7	43.1	29.2	38.5	32.0	62.6	67.2	48.5	39.0	51.5
ABCD	Golden Harvest X14534	45.6	14.4	62.2	25.8	41.9	37.6	53.5	47.9	52.6	41.9	47.4
ABCDE	Pioneer 94B74	45.4	14.9	57.8	23.7	46.2	31.1	57.3	53.9	45.1	39.7	53.8
ABCDE	Pioneer 94B13	45.1	14.9	46.8	20.8	42.0	46.1	52.1	59.4	47.6	43.6	48.1
ABCDE	Garst 4512	44.9	14.8	41.9	25.5	41.8	40.3	58.0	47.2	58.3	36.7	54.5
ABCDE	Vigoro V46N3	44.8	14.4	40.2	25.7	45.3	43.5	53.8	50.4	46.3	37.5	45.5
ABCDE	Golden Harvest 4772	44.7	14.6	41.9	26.8	43.7	33.7	59.8	50.1	48.5	45.2	52.6
ABCDE	Asgrow AG4702	44.6	14.7	56.6	27.9	42.2	32.2	56.6	46.6	50.8	38.2	50.5
ABCDE	D&PL DP4690	44.6	15.0	49.8	25.4	45.1	35.4	60.3	44.5	48.2	45.7	46.8
BCDE	Steyer 4410	44.1	14.4	51.3	25.8	39.6	40.7	56.3	44.6	47.8	38.5	52.3
CDE	FFR 4891	43.3	14.7	43.1	26.9	44.5	36.0	61.8	38.9	50.8	39.9	48.2
DE	Dyna-Gro DG3484	43.2	14.7	51.1	24.3	43.2	28.0	61.3	42.8	52.3	39.1	46.5
DE	Vigoro V442	43.1	14.8	57.9	19.4	41.2	36.3	54.3	49.9	59.5	39.1	45.5
E	Croplan RC4848	41.2	14.7	37.1	19.9	44.2	28.2	62.1	45.7	46.5	35.6	51.1
<b>Average (bu/a)</b>		<b>45.7</b>		<b>52.8</b>	<b>25.0</b>	<b>42.9</b>	<b>38.8</b>	<b>58.5</b>	<b>48.7</b>	<b>53.4</b>	<b>41.1</b>	<b>50.6</b>

† Yields have been adjusted to 13% moisture. Each variety was evaluated in a large strip-plot at each location, thus each county test was considered as one replication of the test in calculating the average yield and in conducting the statistical analysis to determine significant differences (MS).

MS = Varieties that have any MS letter in common are not statistically different in yield at the 5% level of probability.

Varieties denoted with an asterisk (\*) were in the top-performing group for two years.

Data provided by Robert C. Williams, Ext. Area Specialist, Grain Crops, and extension agents in counties shown above.

**Table 12. Overall average yields and moistures of 20 Maturity Group IV Roundup Ready soybean varieties evaluated in County Standard Tests (n=9) and experiment stations (n=8) in Tennessee during 2002.**

Brand	Variety	County Standard Tests		Experiment Station Tests	
		Avg. Yield	Moisture	Avg. Yield	Moisture
		bu/a	%	bu/a	%
Asgrow	AG 4603 (RR)	49	14.8	48	16.1
Hornbeck	HBK R 4820 (RR)	48	14.9	50	16.5
Delta King	DK 4461 RR	48	15.1	51	15.7
Asgrow	AG 4403 (RR)	48	14.9	48	16.5
Delta King	DK 4868 RR	47	15.1	52	17.3
USG	7440nRR	47	14.5	50	16.0
Dyna-Gro	3443N RR	47	14.9	48	15.6
Delta King	DK 4965 RR	47	14.7	47	17.0
USG	7499nRR	46	14.7	46	16.2
N.K. Brand	NK X248R (RR)	46	14.7	50	18.0
Pioneer	94B73 (RR)	46	14.7	50	16.3
Pioneer	94B74 (RR)	45	14.9	47	16.4
Pioneer	94B13 (RR)	45	14.9	46	15.5
Garst	4512 RR/N	45	14.8	47	15.8
Vigoro	V46N3RR	45	14.4	44	15.5
Golden Harvest	H-4772 RR	45	14.6	47	16.2
D&PL	DP 4690 RR	45	15.0	49	16.8
FFR	4891 RR	43	14.7	50	18.1
Dyna-Gro	3484N RR	43	14.7	46	16.2
Vigoro	V442NRR	43	14.8	48	15.6
<b>Average (bu/a)</b>		<b>46</b>		<b>48</b>	

Table 13. Mean yields † of 79 Maturity Group V Roundup Ready soybean varieties evaluated at five locations (n=7) in Tennessee during 2002.

Brand	Variety ‡	Avg. Yield ± Std Err. (n=7)	Milan		Spring Hill		Springfield	Knoxville	
			Ames	Irr.	Irr.	Non-Irr.			
USG	7582nRR	54 ± 1	54	71	50	53	30	61	62
Terral	TV 56R11 (RR)	53 ± 1	53	69	59	51	28	60	54
Dyna-Gro	3583N RR	53 ± 1	58	72	48	45	29	58	63
Armor	56-J6 (RR)	53 ± 1	53	67	55	47	27	64	56
Asgrow	AG 5903 (RR)	52 ± 1	55	58	59	52	32	53	57
Asgrow	AG 5501 (RR)	52 ± 1	52	71	48	47	31	55	60
Terral	TV 59R98 (RR)	52 ± 1	60	57	50	55	30	51	60
Hartz	H 5887 RR	52 ± 1	52	63	50	49	33	57	60
Vigoro	V562NRR	52 ± 1	51	72	55	46	24	54	59
D&PL	DP 5915 RR	51 ± 1	53	62	50	55	31	57	51
Terral	TV 54R11 (RR)	51 ± 1	48	63	57	52	27	54	56
Terral	TV 59R85 (RR)	51 ± 1	56	59	50	52	35	50	55
USG	570nRR	51 ± 1	45	60	50	51	37	63	50
Delta King	DK 5366 RR	51 ± 1	55	58	53	47	29	57	55
Asgrow	AG 5701 (RR)	51 ± 1	52	63	57	47	29	51	56
Delta King	DK 5661 RR	51 ± 1	47	61	52	49	32	64	50
FFR	5542 RR	50 ± 1	55	62	49	47	33	55	52
Delta King	DK XTJ 057 RR	50 ± 1	50	63	50	49	30	57	54
Delta Grow	5630 RR	50 ± 1	45	69	53	49	28	57	52
Morsoy	RT 5442 (RR)	50 ± 1	50	63	51	50	35	42	62
Dyna-Gro	3562N RR	50 ± 1	57	62	53	49	26	48	56
Armor	54-Z4 (RR)	50 ± 1	49	66	54	47	27	53	54
Delta King	DK 5668 RR	50 ± 1	57	59	56	46	28	52	50
D&PL	DP 5806 RR	50 ± 1	48	71	46	50	34	47	52
Armor	53-K3 (RR)	49 ± 1	50	57	52	47	29	54	57
Garst	588 RR/N	49 ± 1	43	61	54	46	34	52	56
Morsoy	RT 5440 (RR)	49 ± 1	46	56	54	46	33	50	59
Eagle	ES Marshal RR	49 ± 1	54	61	43	49	36	49	51
Delta King	DK 5465 RR	49 ± 1	52	64	51	49	27	48	53
Hornbeck	HBK R 5620 (RR)	49 ± 1	46	64	48	46	28	56	55
Morsoy	RT 5252 (RR)	49 ± 1	50	61	51	42	32	50	56
Stine	S 5502-4 (RR)	49 ± 1	48	64	43	44	28	59	55
FFR	5225 RR	49 ± 1	53	57	48	47	28	52	56
Vigoro	V52N3RR	49 ± 1	51	65	47	48	25	51	52
N.K. Brand	S 52-U3 (RR)	49 ± 1	46	67	46	45	31	53	51
Delta King	DK 5961 RR	48 ± 1	52	59	42	48	34	50	55
USG	7522nRR	48 ± 1	55	61	44	40	31	50	57
Delta Grow	5450 RR	48 ± 1	44	59	55	47	26	52	55
Terral	TV 58R11 (RR)	48 ± 1	54	51	51	44	34	46	58
D&PL	DPX 5734 RR	48 ± 1	40	69	48	50	28	50	53
Eagle	ES Trooper RR	48 ± 1	51	50	48	50	30	50	57
USG	7562nRR	48 ± 1	47	53	52	46	29	56	54

Table 13. Cont.

Brand	Variety ‡	Avg. Yield ± Std Err. (n=7)	Milan				Spring Hill		Springfield	Knoxville
			Ames	Irr.	Non-Irr.	Irr.	Non-Irr.			
Garst	5512 RR/N	48 ± 1	49	61	48	45	29	48	56	
Terral	TV 52R42 (RR)	48 ± 1	47	58	55	44	27	53	50	
USG	540nRR	48 ± 1	51	54	52	42	26	51	58	
Croplan	RC 5454 (RR)	48 ± 1	43	63	53	42	28	51	53	
USG	510nRR	47 ± 1	50	54	48	42	29	55	55	
Va.	99VPI-67 (RR)	47 ± 1	47	57	48	45	27	50	58	
D&PL	DP 5414 RR	47 ± 1	42	62	46	48	37	48	48	
Morsoy	RT 5620 (RR)	47 ± 1	55	57	49	46	28	43	53	
Hartz	H 5223 RR	47 ± 1	49	51	47	47	32	47	56	
Pioneer	95B43 (RR)	47 ± 1	48	62	44	43	29	49	55	
Dyna-Gro	3518N RR	47 ± 1	45	57	48	51	26	46	56	
FFR	RT 517 (RR)	47 ± 1	50	55	49	46	27	51	50	
FFR	RT 557 (RR)	47 ± 1	57	55	46	45	23	48	53	
Pioneer	95B32 (RR)	47 ± 1	41	64	47	48	27	48	52	
Delta Grow	5350 RR	46 ± 1	42	60	48	44	27	52	50	
Croplan	RC 5252 (RR)	46 ± 1	46	56	46	45	27	46	56	
Asgrow	AG 5603 (RR)	46 ± 1	49	44	50	48	30	48	53	
USG	7547 RR	46 ± 1	50	54	39	45	29	51	52	
Hornbeck	HBK R 5422 (RR)	46 ± 1	45	63	41	43	25	49	54	
Asgrow	AG 5301 (RR)	46 ± 1	52	54	46	40	28	52	47	
Pioneer	95B42 (RR)	45 ± 1	41	58	46	49	22	48	52	
Midwest Premium Genetics	MPV 5302nRR	45 ± 1	39	49	40	49	28	52	58	
Dyna-Gro	3521N RR	45 ± 1	41	60	39	45	26	50	53	
Vigoro	V503RR	45 ± 1	46	57	46	42	27	43	51	
TN	TN01-278-RR	45 ± 1	39	57	46	49	22	46	52	
Va.	V99-3337 (RR)	44 ± 1	38	59	44	44	30	44	52	
Hartz	H 5444 RR	44 ± 1	41	53	46	43	25	45	58	
Va.	99VPI-120 (RR)	43 ± 1	37	55	42	41	26	50	52	
FFR	4900 RR	43 ± 1	49	53	40	44	27	37	54	
USG	7524nRR	43 ± 1	44	57	47	38	23	37	55	
Delta Grow	5250 RR	43 ± 1	43	49	40	46	30	39	53	
Golden Harvest	H-5422 RR	43 ± 1	43	63	37	38	22	45	52	
Eagle	ES Punch RR	42 ± 1	42	48	41	44	27	45	49	
Midwest Premium Genetics	MPV 5502nRR	42 ± 1	37	42	39	47	30	41	59	
Delta King	DK XTJ 051 RR	42 ± 1	46	43	50	40	19	38	54	
Eagle	ES Ranger RR	41 ± 1	51	48	42	37	24	37	49	
Armor	5135 (RR)	40 ± 1	38	51	42	38	20	43	50	
<b>Average (bu/a)</b>		<b>48</b>	<b>48</b>	<b>59</b>	<b>48</b>	<b>46</b>	<b>29</b>	<b>50</b>	<b>54</b>	
<b>L.S.D.<sub>.05</sub> (bu/a)</b>		<b>3</b>	<b>9</b>	<b>10</b>	<b>9</b>	<b>7</b>	<b>6</b>	<b>8</b>	<b>6</b>	
<b>C.V. (%)</b>		<b>10.2</b>	<b>11.2</b>	<b>10.3</b>	<b>11.8</b>	<b>9.5</b>	<b>13.2</b>	<b>9.8</b>	<b>6.6</b>	

† All yields are adjusted to 13% moisture.

‡ If a RR appears inside parentheses (RR), then it is not a part of the variety name.

**Table14. Mean yields † and agronomic characteristics of 79 Maturity Group V Roundup Ready soybean varieties evaluated at five locations (n=7) in Tennessee during 2002.**

Brand	Variety ‡	Avg. Yield	Moisture	Lodging	Height	Maturity	Shattering	Seed	Protein	Oil	Frogeye
		± Std Err.						Quality			
		(n=7)	(n=7)	(n=4)	(n=7)	(n=7)	(n=2)	(n=5)	(n=1)	(n=1)	(n=1)
		bu/a	%	Score	in.	DAP	----- Score -----		%	%	Score
USG	7582nRR	54 ± 1	19.3	2.2	40	140	1.0	2.5	39.7	24.0	1.5
Terral	TV 56R11 (RR)	53 ± 1	19.7	2.5	40	141	1.0	2.6	40.3	23.4	1.5
Dyna-Gro	3583N RR	53 ± 1	20.4	1.7	38	140	1.0	2.6	39.5	24.0	1.5
Armor	56-J6 (RR)	53 ± 1	19.8	2.2	40	141	1.0	2.5	39.9	23.8	1.3
Asgrow	AG 5903 (RR)	52 ± 1	19.0	3.0	40	139	1.1	2.5	37.4	25.2	1.7
Asgrow	AG 5501 (RR)	52 ± 1	18.3	1.7	38	135	1.0	2.8	40.3	23.7	2.3
Terral	TV 59R98 (RR)	52 ± 1	19.3	2.3	41	140	1.0	2.6	41.5	23.1	2.5
Hartz	H 5887 RR	52 ± 1	19.0	2.4	39	138	1.1	2.5	40.0	24.0	1.7
Vigoro	V562NRR	52 ± 1	20.1	2.3	40	140	1.1	2.6	39.7	23.5	1.7
D&PL	DP 5915 RR	51 ± 1	18.6	2.4	38	143	1.0	2.6	40.8	23.3	1.3
Terral	TV 54R11 (RR)	51 ± 1	17.9	1.4	37	132	1.3	2.6	40.4	23.2	3.7
Terral	TV 59R85 (RR)	51 ± 1	19.4	2.5	42	141	1.0	2.5	40.7	23.2	2.5
USG	570nRR	51 ± 1	18.8	2.4	39	141	1.0	2.4	40.3	23.6	1.3
Delta King	DK 5366 RR	51 ± 1	19.7	2.7	39	136	1.1	2.4	39.6	23.7	1.5
Asgrow	AG 5701 (RR)	51 ± 1	18.8	2.2	37	139	1.0	2.6	40.7	22.8	1.5
Delta King	DK 5661 RR	51 ± 1	18.7	1.6	38	138	1.0	2.5	41.4	23.6	1.8
FFR	5542 RR	50 ± 1	18.2	2.3	34	133	1.1	2.5	41.2	24.3	2.2
Delta King	DK XTJ 057 RR	50 ± 1	18.4	2.2	39	137	1.1	2.6	40.2	23.9	1.5
Delta Grow	5630 RR	50 ± 1	20.4	2.1	39	141	1.0	2.7	39.9	23.7	1.8
Morsoy	RT 5442 (RR)	50 ± 1	18.2	1.5	35	132	1.1	2.5	39.6	24.7	3.5
Dyna-Gro	3562N RR	50 ± 1	18.3	2.4	36	137	1.2	2.6	40.1	23.0	1.3
Armor	54-Z4 (RR)	50 ± 1	17.8	1.5	36	134	1.1	2.6	40.1	23.4	3.8
Delta King	DK 5668 RR	50 ± 1	18.8	2.6	35	136	1.0	2.6	40.6	23.1	1.0
D&PL	DP 5806 RR	50 ± 1	21.5	2.8	40	141	1.0	2.6	41.2	23.1	2.7
Armor	53-K3 (RR)	49 ± 1	18.7	1.4	34	134	1.1	2.5	39.8	24.9	3.7
Garst	588 RR/N	49 ± 1	18.5	2.1	39	140	1.0	2.6	41.0	23.3	1.2
Morsoy	RT 5440 (RR)	49 ± 1	17.3	1.4	36	131	1.1	2.6	40.6	23.0	3.7
Eagle	ES Marshal RR	49 ± 1	19.9	2.5	40	141	1.0	2.5	39.6	23.8	1.2
Delta King	DK 5465 RR	49 ± 1	17.2	1.3	36	132	1.1	2.7	41.2	23.2	3.8
Hornbeck	HBK R 5620 (RR)	49 ± 1	20.4	2.3	40	139	1.1	2.7	39.8	23.7	1.5
Morsoy	RT 5252 (RR)	49 ± 1	17.4	1.9	36	130	1.3	2.8	41.0	23.8	3.0
Stine	S 5502-4 (RR)	49 ± 1	17.1	1.0	35	130	1.1	2.6	41.0	23.6	3.2
FFR	5225 RR	49 ± 1	17.6	1.8	39	129	1.1	2.6	41.7	23.0	2.0
Vigoro	V52N3RR	49 ± 1	17.9	2.0	37	131	1.3	2.7	40.8	23.9	2.5
N.K. Brand	S 52-U3 (RR)	49 ± 1	18.5	2.3	36	132	1.2	2.5	39.2	24.0	2.3
Delta King	DK 5961 RR	48 ± 1	21.1	2.0	38	143	1.0	2.5	41.2	23.9	2.3
USG	7522nRR	48 ± 1	18.6	2.2	40	128	1.2	3.2	42.1	22.9	2.7
Delta Grow	5450 RR	48 ± 1	16.9	1.2	35	133	1.2	2.6	40.5	23.1	3.5
Terral	TV 58R11 (RR)	48 ± 1	19.6	3.0	38	140	1.0	2.5	40.9	23.6	1.2
D&PL	DPX 5734 RR	48 ± 1	17.5	2.1	40	134	1.0	2.5	40.0	23.7	1.2
Eagle	ES Trooper RR	48 ± 1	21.1	2.9	37	142	1.0	2.7	41.1	23.5	2.8
USG	7562nRR	48 ± 1	18.6	2.1	37	129	1.1	2.4	40.5	23.4	2.7
Garst	5512 RR/N	48 ± 1	17.2	1.3	36	134	1.0	2.6	40.8	22.9	4.0
Terral	TV 52R42 (RR)	48 ± 1	19.0	2.0	40	129	1.0	2.8	41.3	23.2	2.7

**Table 14. Cont.**

Brand	Variety ‡	Avg. Yield	Moisture (n=7)	Lodging (n=4)	Height (n=7)	Maturity (n=7)	Shattering (n=2)	Seed	Protein (n=1)	Oil (n=1)	Frogeye (n=1)
		± Std Err. (n=7)						Quality (n=5)			
		bu/a	%	Score	in.	DAP	----- Score -----	%	%	Score	
USG	540nRR	48 ± 1	16.8	1.5	38	132	1.3	2.6	41.0	23.0	4.3
Croplan	RC 5454 (RR)	48 ± 1	16.9	1.4	35	133	1.1	2.6	40.1	23.3	3.5
USG	510nRR	47 ± 1	18.5	1.6	38	134	1.1	3.4	40.9	23.1	4.2
Va.	99VPI-67 (RR)	47 ± 1	18.3	2.0	35	132	1.1	2.4	39.5	24.6	3.5
D&PL	DP 5414 RR	47 ± 1	17.6	2.5	42	131	1.2	2.5	42.5	22.3	1.2
Morsoy	RT 5620 (RR)	47 ± 1	18.5	2.5	36	136	1.1	2.5	40.7	22.9	1.5
Hartz	H 5223 RR	47 ± 1	18.3	1.7	33	134	1.1	2.6	39.2	24.6	4.2
Pioneer	95B43 (RR)	47 ± 1	18.3	2.3	38	132	1.1	2.5	37.7	24.7	3.0
Dyna-Gro	3518N RR	47 ± 1	19.1	1.6	37	128	1.1	3.1	41.1	23.3	3.0
FFR	RT 517 (RR)	47 ± 1	18.3	2.1	36	127	1.3	2.8	41.9	23.6	3.5
FFR	RT 557 (RR)	47 ± 1	18.3	2.8	40	132	1.1	2.6	41.0	23.6	3.7
Pioneer	95B32 (RR)	47 ± 1	17.7	1.5	33	129	1.3	2.4	40.6	23.6	3.2
Delta Grow	5350 RR	46 ± 1	17.5	1.4	39	130	1.3	2.5	41.3	23.0	1.3
Croplan	RC 5252 (RR)	46 ± 1	17.3	1.4	37	133	1.0	3.3	40.5	23.5	4.3
Asgrow	AG 5603 (RR)	46 ± 1	19.2	1.3	35	135	1.0	2.6	39.7	24.7	5.0
USG	7547 RR	46 ± 1	17.9	2.5	36	130	1.1	2.4	41.2	23.4	3.5
Hornbeck	HBK R 5422 (RR)	46 ± 1	17.6	1.6	39	130	1.3	2.5	41.8	22.9	1.7
Asgrow	AG 5301 (RR)	46 ± 1	18.6	1.6	37	131	1.1	2.9	39.7	24.2	3.3
Pioneer	95B42 (RR)	45 ± 1	16.8	1.8	38	131	1.2	2.6	40.2	24.1	2.2
Midwest Premium Genetics	MPV 5302nRR	45 ± 1	17.7	1.9	33	132	1.0	2.5	41.1	24.4	4.2
Dyna-Gro	3521N RR	45 ± 1	18.0	1.4	37	133	1.1	3.1	40.5	23.2	3.8
Vigoro	V503RR	45 ± 1	17.1	1.8	39	126	1.3	3.5	41.1	24.2	2.3
TN	TN01-278-RR	45 ± 1	17.8	2.1	35	137	1.1	2.6	39.6	24.7	2.8
Va.	V99-3337 (RR)	44 ± 1	18.4	2.0	35	134	1.0	2.4	40.2	24.1	3.5
Hartz	H 5444 RR	44 ± 1	17.8	1.4	36	132	1.1	2.6	40.8	23.0	4.7
Va.	99VPI-120 (RR)	43 ± 1	17.4	1.7	35	135	1.2	2.4	39.6	24.2	3.7
FFR	4900 RR	43 ± 1	17.8	2.2	38	130	1.2	3.0	42.1	23.2	2.7
USG	7524nRR	43 ± 1	17.6	2.4	44	127	1.3	2.7	40.9	23.4	3.2
Delta Grow	5250 RR	43 ± 1	17.9	1.4	37	134	1.0	3.1	40.2	23.6	4.5
Golden Harvest	H-5422 RR	43 ± 1	16.9	1.8	40	129	1.3	3.1	42.2	23.8	1.5
Eagle	ES Punch RR	42 ± 1	17.7	2.7	40	133	1.1	2.4	37.7	24.6	4.2
Midwest Premium Genetics	MPV 5502nRR	42 ± 1	17.3	1.9	35	135	1.0	2.4	38.7	24.6	3.8
Delta King	DK XTJ 051 RR	42 ± 1	18.7	1.5	38	133	1.1	3.2	40.7	23.2	4.7
Eagle	ES Ranger RR	41 ± 1	17.4	3.2	33	130	1.3	2.6	41.3	23.1	4.0
Armor	5135 (RR)	40 ± 1	16.0	1.9	39	130	1.5	3.4	41.2	23.8	3.8

† All yields are adjusted to 13% moisture.

‡ If a RR appears inside parentheses (RR), then it is not a part of the variety name.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting.

Shattering = 1 to 5 scale; where 1 = no shattering; 5 = 90+% of pods shattered.

Seed Quality = 1 to 5 scale; where 1 = < 5% of seeds showing disease or split seed coats; 5=95+% of seed are diseased or have split seed coats.

Protein & Oil on dry weight basis from Knoxville location only.

Frogeye = 1 to 5 scale; where 1 = < 5% of leaf surfaces containing spots; 5 = 95+% of leaf surfaces containing spots. Ratings from Milan Irrigated only.

**Table 15. Mean yields † of 31 Maturity Group V Roundup Ready soybean varieties evaluated at five locations (n=10) in Tennessee for two years 2001 - 2002.**

Brand	Variety ‡	Avg. Yield	Ames	Milan	Spring Hill	Springfield	Knoxville
		± Std Err. (n=10)					
		-----bu/a-----					
D&PL	DP 5915 RR	48 ± 1	45	48	48	43	57
Delta King	DK 5668 RR	48 ± 1	45	55	43	41	54
Delta King	DK 5366 RR	47 ± 1	43	52	46	45	51
Asgrow	AG 5701 (RR)	47 ± 1	43	53	43	39	59
Asgrow	AG 5501 (RR)	47 ± 1	42	47	44	42	60
USG	570nRR	47 ± 1	40	48	49	45	53
Delta King	DK 5661 RR	46 ± 1	41	49	46	46	51
Vigoro	V562NRR	46 ± 1	42	52	42	42	53
Dyna-Gro	3562N RR	46 ± 1	44	51	42	37	56
Delta King	DK 5465 RR	46 ± 1	39	49	48	38	56
USG	510nRR	45 ± 1	40	47	46	41	52
Garst	588 RR/N	45 ± 1	38	48	48	40	51
Garst	5512 RR/N	45 ± 1	39	48	46	38	55
D&PL	DP 5414 RR	45 ± 1	37	47	51	40	49
Delta Grow	5630 RR	45 ± 1	38	48	44	43	51
USG	7522nRR	44 ± 1	41	43	45	40	51
USG	540nRR	44 ± 1	39	48	42	39	53
D&PL	DP 5806 RR	44 ± 1	41	44	47	38	51
FFR	RT 557 (RR)	44 ± 1	43	42	43	39	52
N.K. Brand	S 52-U3 (RR)	44 ± 1	41	45	47	43	41
Delta King	DK 5961 RR	43 ± 1	38	39	45	39	54
Eagle	ES Trooper RR	43 ± 1	40	41	44	38	52
FFR	RT 517 (RR)	43 ± 1	38	44	46	41	44
USG	7547 RR	43 ± 1	41	40	45	40	47
Pioneer	95B32 (RR)	42 ± 1	37	45	47	39	44
Dyna-Gro	3518N RR	42 ± 1	38	44	42	39	50
Delta Grow	5250 RR	42 ± 1	37	43	47	34	51
Dyna-Gro	3521N RR	41 ± 1	33	40	44	39	50
Eagle	ES Marshal RR	41 ± 1	39	38	44	34	51
Eagle	ES Punch RR	40 ± 1	36	36	42	39	45
Eagle	ES Ranger RR	39 ± 1	41	40	39	32	43
<b>Average (bu/a)</b>		<b>44</b>	<b>40</b>	<b>46</b>	<b>45</b>	<b>40</b>	<b>51</b>
<b>L.S.D.<sub>.05</sub> (bu/a)</b>		<b>3</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>6</b>	<b>6</b>
<b>C.V. (%)</b>		<b>10.4</b>	<b>11.8</b>	<b>10.9</b>	<b>11.3</b>	<b>11.1</b>	<b>7.5</b>

† All yields are adjusted to 13% moisture.

‡ If a RR appears inside parentheses (RR), then it is not a part of the variety name.



**Table 16. Mean yields † and agronomic characteristics of 31 Maturity Group V Roundup Ready soybean varieties evaluated at five locations (n=10) in Tennessee for two years 2001 - 2002.**

Brand	Variety ‡	Avg. Yield	Moisture (n=10)	Lodging (n=7)	Height (n=10)	Maturity (n=10)	Shattering (n=2)	Seed	Protein (n=6)	Oil (n=6)	Frogeye (n=2)
		± Std Err. (n=10)						Quality (n=9)			
		bu/a	%	Score	in.	DAP	----- Score -----	%	%	Score	
D&PL	DP 5915 RR	48 ± 1	14.7	1.9	37	148	1.1	2.6	42.1	21.5	1.0
Delta King	DK 5668 RR	48 ± 1	14.5	3.1	35	142	1.1	2.6	41.7	21.6	1.0
Delta King	DK 5366 RR	47 ± 1	14.7	3.0	38	141	1.1	2.4	41.6	21.8	1.0
Asgrow	AG 5701 (RR)	47 ± 1	14.8	2.7	37	146	1.0	2.7	42.8	20.8	1.0
Asgrow	AG 5501 (RR)	47 ± 1	14.1	1.7	38	141	1.1	2.4	42.3	22.0	1.0
USG	570nRR	47 ± 1	14.7	2.6	38	145	1.1	2.4	41.7	21.7	1.0
Delta King	DK 5661 RR	46 ± 1	14.9	2.4	37	145	1.0	2.7	43.1	21.3	1.0
Vigoro	V562NRR	46 ± 1	15.5	2.5	39	145	1.1	2.4	41.3	21.7	1.0
Dyna-Gro	3562N RR	46 ± 1	14.4	3.2	35	143	1.2	2.5	41.8	21.4	1.0
Delta King	DK 5465 RR	46 ± 1	13.9	1.6	36	140	1.1	2.8	42.4	21.6	3.0
USG	510nRR	45 ± 1	14.3	1.8	37	139	1.1	2.9	42.3	21.4	1.0
Garst	588 RR/N	45 ± 1	14.6	2.3	40	146	1.0	2.7	43.3	21.2	1.0
Garst	5512 RR/N	45 ± 1	13.9	1.4	35	140	1.0	2.7	41.9	21.6	4.0
D&PL	DP 5414 RR	45 ± 1	14.3	2.6	41	139	1.2	2.5	43.8	20.6	1.0
Delta Grow	5630 RR	45 ± 1	15.7	2.7	38	147	1.1	2.7	41.5	21.6	1.0
USG	7522nRR	44 ± 1	14.6	2.5	38	134	1.1	2.8	43.4	21.2	2.0
USG	540nRR	44 ± 1	13.7	1.9	37	140	1.2	2.6	42.1	21.7	3.0
D&PL	DP 5806 RR	44 ± 1	16.3	3.1	40	147	1.0	2.5	42.8	20.7	3.0
FFR	RT 557 (RR)	44 ± 1	14.6	3.0	39	140	1.1	2.5	42.9	21.6	4.0
N.K. Brand	S 52-U3 (RR)	44 ± 1	14.7	2.7	35	137	1.1	2.6	40.8	22.0	2.0
Delta King	DK 5961 RR	43 ± 1	16.1	2.2	38	148	1.0	2.7	42.6	21.8	4.0
Eagle	ES Trooper RR	43 ± 1	16.1	3.2	36	147	1.0	2.6	42.7	21.1	3.0
FFR	RT 517 (RR)	43 ± 1	14.9	2.8	36	134	1.4	2.7	43.3	21.9	4.5
USG	7547 RR	43 ± 1	14.4	2.6	35	137	1.1	2.4	43.1	21.5	2.0
Pioneer	95B32 (RR)	42 ± 1	14.6	2.2	33	135	1.2	2.6	42.1	22.0	1.0
Dyna-Gro	3518N RR	42 ± 1	14.8	2.4	37	134	1.1	2.6	43.1	21.2	2.0
Delta Grow	5250 RR	42 ± 1	14.1	1.7	36	138	1.1	2.8	42.1	21.6	2.0
Dyna-Gro	3521N RR	41 ± 1	14.2	1.7	36	138	1.1	2.8	41.8	21.5	1.0
Eagle	ES Marshal RR	41 ± 1	15.1	2.8	40	147	1.0	2.6	41.7	21.8	1.0
Eagle	ES Punch RR	40 ± 1	14.5	2.6	39	140	1.1	2.4	39.6	22.4	4.0
Eagle	ES Ranger RR	39 ± 1	14.1	3.7	32	137	1.1	2.4	43.2	21.2	3.0

† All yields are adjusted to 13% moisture.

‡ If a RR appears inside parentheses (RR), then it is not a part of the variety name.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting.

Shattering = 1 to 5 scale; where 1 = no shattering; 5 = 90+% of pods shattered.

Seed Quality = 1 to 5 scale; where 1 = < 5% of seeds showing disease or split seed coats; 5=95+% of seed are diseased or have split seed coats.

Protein & Oil on dry weight basis.

Frogeye = 1 to 5 scale; where 1 = < 5% of leaf surfaces containing spots; 5 = 95+% of leaf surfaces containing spots. Ratings from Milan only.

**Table 17. Mean yields † and agronomic characteristics of 15 Maturity Group V Roundup Ready soybean varieties evaluated at five locations (n=15) in Tennessee for three years 2000 - 2002.**

Brand	Variety ‡	Avg. Yield					Spring				
		± Std Err. (n=15)	Moisture (n=15)	Lodging (n=9)	Height (n=15)	Ames	Milan	Hill	Springfield	Knoxville	
		bu/a	%	Score	in.	-----bu/a-----					
D&PL	DP 5915 RR	45 ± 1	13.4	2.1	36	37	46	47	40	53	
Asgrow	AG 5501 (RR)	44 ± 1	13.1	1.7	36	34	47	45	39	56	
Asgrow	AG 5701 (RR)	43 ± 1	13.7	2.7	36	35	50	41	36	52	
Delta Grow	5630 RR	43 ± 1	14.1	2.7	38	34	47	45	40	49	
Dyna-Gro	3562N RR	43 ± 1	13.4	3.2	35	37	47	41	36	52	
USG	510nRR	43 ± 1	13.0	1.9	36	33	47	44	39	50	
Delta King	DK 5661 RR	42 ± 1	13.5	2.5	36	34	47	43	43	45	
D&PL	DP 5806 RR	42 ± 1	14.6	3.2	39	34	43	46	38	46	
Garst	588 RR/N	42 ± 1	13.4	2.3	38	31	47	45	38	47	
USG	540nRR	41 ± 1	12.9	2.0	36	33	44	42	37	50	
FFR	RT 557 (RR)	41 ± 1	13.6	3.1	38	36	40	44	38	46	
Pioneer	95B32 (RR)	40 ± 1	13.5	2.2	32	31	44	47	38	43	
FFR	RT 517 (RR)	40 ± 1	13.6	2.8	35	31	41	45	40	41	
Dyna-Gro	3521N RR	40 ± 1	13.0	1.8	35	29	41	43	38	48	
USG	7547 RR	39 ± 1	13.4	2.6	34	33	38	45	38	44	
<b>Average (bu/a)</b>		<b>42</b>				<b>33</b>	<b>45</b>	<b>44</b>	<b>39</b>	<b>48</b>	
<b>L.S.D.<sub>.05</sub> (bu/a)</b>		<b>3</b>				<b>6</b>	<b>7</b>	<b>6</b>	<b>6</b>	<b>5</b>	
<b>C.V. (%)</b>		<b>11.1</b>				<b>13.3</b>	<b>12.1</b>	<b>10.9</b>	<b>10.9</b>	<b>8.4</b>	

† All yields are adjusted to 13% moisture.

‡ If a RR appears inside parentheses (RR), then it is not a part of the variety name.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

**Table 18. Yields † of 20 early Maturity Group V (5.0-5.5) Roundup Ready soybean varieties in 11 County Standard Tests in Tennessee and Kentucky during 2002.**

MS	Brand/Variety	Avg.		Fulton					McCracken					
		Yield	Moisture	Chester	Decatur	Dyer	(KY)	Gibson	Hardin	Haywood	Lauderdale	(KY)	Obion	Weakley
		bu/a	%	----- bu/a -----										
A	*Asgrow AG5501	38.0	14.2	21.9	47.6	39.1	34.3	34.8	27.2	33.6	38.5	48.5	43.1	49.2
AB	USG 7522nRR	37.2	13.9	20.6	46.2	36.4	37.2	36.3	26.3	34.9	39.6	42.2	45.2	44.5
AB	*D&PL DP5414	36.8	13.6	23.0	47.7	39.5	29.3	38.3	28.1	28.0	33.0	43.2	45.8	49.3
ABC	Hartz H5444RR	36.6	13.9	20.9	44.3	35.1	36.4	37.5	27.4	29.4	30.2	42.2	43.6	55.8
ABC	Asgrow AG5301	36.3	14.1	22.0	49.2	36.9	37.4	35.7	25.5	20.6	29.8	45.4	46.3	50.3
ABC	FFR 5485	36.2	13.9	19.8	43.8	40.6	35.4	40.2	22.3	37.4	25.9	43.3	46.0	43.3
ABC	*Delta King 5366	36.2	13.9	24.7	37.2	39.6	33.0	34.2	26.9	30.4	34.2	44.3	48.1	45.1
ABC	Dyna-Gro DG3518	36.1	14.0	20.6	50.6	34.5	32.3	33.0	27.0	30.5	36.6	39.0	45.8	47.4
ABC	*Pioneer 95B32	36.0	14.1	18.3	49.3	36.7	34.1	36.9	25.6	25.1	33.0	45.4	45.5	46.3
ABC	Pioneer 95B43	36.0	14.0	19.2	44.0	35.0	31.2	39.5	23.4	36.1	31.9	43.2	46.7	45.3
ABC	*NK S52-U3	36.0	13.8	18.1	43.6	35.1	34.3	34.7	23.4	37.1	36.1	37.9	47.5	47.6
ABC	*Delta King 5465	35.9	13.8	22.7	43.9	33.1	33.0	34.8	25.5	30.0	31.3	45.5	43.7	51.9
ABC	FFR 4900	35.7	14.1	20.5	51.0	34.2	34.7	33.3	25.1	30.8	29.5	38.7	47.7	47.2
ABC	USG 510nRR	35.7	13.7	18.7	39.4	33.9	35.4	36.0	25.0	29.4	32.9	44.3	47.2	50.4
ABC	Garst 5512	35.6	14.0	19.2	47.6	32.4	41.2	35.0	23.8	19.9	32.9	46.5	42.3	50.7
ABC	Croplan RC5252	35.4	13.5	18.1	37.1	32.9	34.4	37.6	24.8	27.7	37.6	46.4	42.7	50.6
ABC	Croplan RC5454	35.1	14.0	19.4	44.9	33.3	34.8	31.4	26.7	22.9	36.0	44.3	44.8	48.0
BC	Vigoro V543NRR	34.9	13.8	20.4	49.2	34.3	33.4	31.0	26.1	23.8	28.0	44.4	44.7	48.7
BC	Pioneer 95B42	34.8	13.8	25.2	27.8	36.2	34.5	32.9	28.1	29.1	31.3	44.3	46.1	47.0
C	USG 540nRR	33.9	13.9	18.7	28.3	37.4	31.3	38.1	23.4	30.6	29.3	42.2	42.4	50.9
<b>Average (bu/a)</b>		<b>35.9</b>		<b>20.6</b>	<b>43.6</b>	<b>35.8</b>	<b>34.4</b>	<b>35.6</b>	<b>25.6</b>	<b>29.4</b>	<b>32.9</b>	<b>43.6</b>	<b>45.3</b>	<b>48.5</b>

† Yields have been adjusted to 13% moisture. Each variety was evaluated in a large strip-plot at each location, thus each county test was considered as one replication of the test in calculating the average yield and in conducting the statistical analysis to determine significant differences (MS).

MS = Varieties that have any MS letter in common are not statistically different in yield at the 5% level of probability.

Varieties denoted with an asterisk (\*) were in the top performing group for two years.

Data provided by Robert C. Williams, Ext. Area Specialist, Grain Crops, and extension agents in counties shown above.

**Table 19. Yields † of 13 late Maturity Group V (5.6 –5.9) Roundup Ready soybean varieties in nine County Standard Tests in Tennessee and Kentucky during 2002.**

MS	Brand/Variety	Avg.		McCracken								
		Yield	Moisture	Decatur	Dyer	Gibson	Giles	Hardin	Lake	Lauderdale	(KY)	Weakley
		bu/a	%	----- bu/a -----								
A	Progeny 5660	43.9	14.0	51.2	41.8	54.5	37.2	29.8	52.8	39.4	49.4	39.0
AB	USG 570nRR	43.5	14.1	47.6	40.9	45.7	45.3	24.6	53.2	46.6	50.6	37.2
AB	Pioneer 95B96	42.3	14.0	49.2	34.5	47.2	45.5	24.1	48.2	40.4	51.5	40.0
ABC	Vigoro V562NRR	42.1	14.0	48.5	44.5	40.0	34.8	32.2	54.3	41.9	47.4	35.0
ABC	Hornbeck 5620	41.9	14.1	40.6	41.0	51.7	34.6	29.0	52.2	42.3	49.1	36.9
ABC	*Asgrow AG5701	41.7	13.9	38.3	41.9	48.0	43.0	23.8	52.7	42.8	45.4	39.5
ABC	*Delta King 5661	41.3	13.9	47.6	41.2	48.8	45.3	28.4	39.9	44.3	43.7	32.2
ABC	FFR 5542	41.2	14.0	34.4	35.1	52.9	39.7	38.1	44.8	38.9	51.3	35.8
ABC	Asgrow AG5603	41.1	14.1	47.6	33.9	47.0	43.3	30.5	49.3	39.5	47.1	32.1
ABC	FFR 557	39.7	14.1	49.2	34.2	46.9	40.5	24.1	43.9	33.7	52.6	32.5
ABC	Dyna-Gro DG3562	39.0	14.0	35.2	41.0	43.9	31.0	24.2	50.9	41.2	46.0	37.3
ABC	D&PL DP5644	38.8	13.9	30.0	43.0	45.5	39.8	23.8	44.5	39.8	45.7	37.4
ABC	Delta King 5668	38.8	14.0	38.7	39.9	38.9	36.3	29.0	49.1	32.2	51.3	33.9
<b>Average (bu/a)</b>		<b>41.2</b>		<b>42.9</b>	<b>39.5</b>	<b>47.0</b>	<b>39.7</b>	<b>27.8</b>	<b>48.9</b>	<b>40.2</b>	<b>48.5</b>	<b>36.1</b>

† Yields have been adjusted to 13% moisture. Each variety was evaluated in a large strip-plot at each location, thus each county test was considered as one replication of the test in calculating the average yield and in conducting the statistical analysis to determine significant differences (MS).

MS = Varieties that have any MS letter in common are not statistically different in yield at the 5% level of probability.

Varieties denoted with an asterisk (\*) were in the top performing group for two years.

Data provided by Robert C. Williams, Ext. Area Specialist, Grain Crops, and extension agents in counties shown above.

**Table 20. Overall average yields and moistures of 28 Maturity Group V Roundup Ready soybean varieties evaluated in County Standard Tests (n=11) or (n=9) and experiment stations (n=7) in Tennessee during 2002.**

Brand	Variety	County Standard Tests			Experiment Station Tests (n=7)	
		Avg. Yield	Moisture	No. of Loc.	Avg. Yield	Moisture
		bu/a	%		bu/a	%
USG	570nRR	44	14.1	n=9 †	51	18.8
Vigoro	V562NRR	42	14.0	n=9 †	52	20.1
Hornbeck	HBK R 5620 (RR)	42	14.1	n=9 †	49	20.4
Asgrow	AG 5701 (RR)	42	13.9	n=9 †	51	18.8
Delta King	DK 5661 RR	41	13.9	n=9 †	51	18.7
FFR	5542 RR	41	14.0	n=9 †	50	18.2
Asgrow	AG 5603 (RR)	41	14.1	n=9 †	46	19.2
FFR	RT 557 (RR)	40	14.1	n=9 †	47	18.3
Dyna-Gro	3562N RR	39	14.0	n=9 †	50	18.3
Delta King	DK 5668 RR	39	14.0	n=9 †	50	18.8
Asgrow	AG 5501 (RR)	38	14.2	n=11	52	18.3
USG	7522nRR	37	13.9	n=11	48	18.6
D&PL	DP 5414 RR	37	13.6	n=11	47	17.6
Hartz	H 5444 RR	37	13.9	n=11	44	17.8
Asgrow	AG 5301 (RR)	36	14.1	n=11	46	18.6
Delta King	DK 5366 RR	36	13.9	n=11	51	19.7
Dyna-Gro	3518N RR	36	14.0	n=11	47	19.1
N.K. Brand	S 52-U3 (RR)	36	13.8	n=11	49	18.5
Pioneer	95B32 (RR)	36	14.1	n=11	47	17.7
Pioneer	95B43 (RR)	36	14.0	n=11	47	18.3
Delta King	DK 5465 RR	36	13.8	n=11	49	17.2
USG	510nRR	36	13.7	n=11	47	18.5
FFR	4900 RR	36	14.1	n=11	43	17.8
Garst	5512 RR/N	36	14.0	n=11	48	17.2
Croplan	RC 5252 (RR)	35	13.5	n=11	46	17.3
Croplan	RC 5454 (RR)	35	14.0	n=11	48	16.9
Pioneer	95B42 (RR)	35	13.8	n=11	45	16.8
USG	540nRR	34	13.9	n=11	48	16.8
<b>Average (bu/a)</b>		<b>38</b>			<b>48</b>	

† Evaluated in the County Standard Late Maturity Group V test.

Table 21. Mean yields † of 13 Maturity Group V and three Maturity Group IV soybean varieties evaluated at five locations (n=7) in Tennessee during 2002.

Maturity Group	Brand	Variety	Avg. Yield ± Std Err. (n=7)	Milan		Spring Hill		Springfield	Knoxville	
				Ames	Irr.	Irr.	Non-Irr.			
				-----bu/a-----						
V	MO	Anand	50 ± 1	58	64	64	39	36	53	37
V	USG	5601T	50 ± 1	53	66	61	43	34	54	38
V	TN	TN 5002T	49 ± 1	49	67	65	40	28	54	40
V	VA	V96-0340	49 ± 1	57	63	62	40	31	53	38
V	D&PL	DP 5110 S	48 ± 1	57	59	61	42	31	48	36
V	Delta King	DK 5995	46 ± 1	56	48	61	42	29	55	30
V	NC	Holladay	46 ± 1	52	54	67	35	29	50	34
V	MO	Delsoy 5500	45 ± 1	48	49	58	36	35	55	36
V	VA	Hutcheson	45 ± 1	44	59	54	40	29	53	37
V	Delta King	DK 5850	44 ± 1	50	49	58	40	28	55	30
V	VA	V95-0016	43 ± 1	46	58	57	35	31	46	28
V	Armor	52-C2	42 ± 1	46	51	53	40	24	44	34
V	USG	550Nsts	39 ± 1	52	44	48	34	23	43	30
IV	Hornbeck	HBK 4944 CX	40 ± 1	46	34	53	38	25	45	42
IV	D&PL	DP 4748 S	40 ± 1	44	50	57	30	19	46	37
IV	MD	Manokin	39 ± 1	41	48	53	32	27	41	30
<b>Average (bu/a)</b>			<b>45</b>	<b>50</b>	<b>54</b>	<b>58</b>	<b>37</b>	<b>28</b>	<b>50</b>	<b>35</b>
<b>L.S.D.<sub>.05</sub> (bu/a)</b>			<b>3</b>	<b>13</b>	<b>12</b>	<b>9</b>	<b>8</b>	<b>6</b>	<b>8</b>	<b>8</b>
<b>C.V. (%)</b>			<b>12.6</b>	<b>15.5</b>	<b>13.8</b>	<b>9.2</b>	<b>12.3</b>	<b>11.7</b>	<b>9.5</b>	<b>13.8</b>

† All yields are adjusted to 13% moisture.

**Table 22. Mean yields † and agronomic characteristics of 13 Maturity Group V and three Maturity Group IV soybean varieties evaluated at five locations (n=7) in Tennessee during 2002.**

Maturity Group	Brand	Variety	Avg. Yield				Seed					
			± Std Err. (n=7)	Moisture (n=7)	Lodging (n=4)	Height (n=7)	Maturity (n=7)	Shattering (n=5)	Quality (n=5)	Protein (n=1)	Oil (n=1)	Frogeye (n=2)
			bu/a	%	Score	in.	DAP	----- Score -----	%	%	Score	
V	MO	Anand	50 ± 1	18.1	1.7	33	133	1.1	3.1	41.7	23.2	1.3
V	USG	5601T	50 ± 1	18.1	2.7	37	132	1.0	2.6	42.9	22.4	1.2
V	TN	TN 5002T	49 ± 1	17.4	2.3	34	129	1.0	3.0	41.9	24.0	1.1
V	VA	V96-0340	49 ± 1	19.1	2.4	35	130	1.1	2.7	41.7	23.4	3.2
V	D&PL	DP 5110 S	48 ± 1	17.1	2.3	44	127	1.1	3.0	43.2	23.0	2.3
V	Delta King	DK 5995	46 ± 1	22.7	2.6	37	137	1.0	3.0	41.9	22.6	1.2
V	NC	Holladay	46 ± 1	18.3	2.6	33	128	1.0	2.6	39.6	23.9	1.7
V	MO	Delsoy 5500	45 ± 1	17.6	2.1	34	131	1.0	2.7	42.4	23.2	3.3
V	VA	Hutcheson	45 ± 1	20.4	2.4	35	135	1.0	2.8	41.4	23.4	3.2
V	Delta King	DK 5850	44 ± 1	19.2	2.8	37	132	1.1	2.7	43.8	22.4	1.7
V	VA	V95-0016	43 ± 1	17.3	2.3	35	132	1.1	2.8	42.6	22.8	1.7
V	Armor	52-C2	42 ± 1	18.5	2.6	33	131	1.0	2.9	41.8	23.1	3.1
V	USG	550nSTS	39 ± 1	16.7	2.5	32	123	1.0	3.0	42.5	23.2	3.3
IV	Hornbeck	HBK 4944 CX	40 ± 1	17.5	2.8	41	123	1.0	4.1	42.2	23.4	3.8
IV	D&PL	DP 4748 S	40 ± 1	16.8	2.8	41	125	1.0	3.6	43.2	23.4	1.5
IV	MD	Manokin	39 ± 1	17.0	3.0	35	127	1.0	2.7	41.6	23.7	1.7

† All yields are adjusted to 13% moisture.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting.

Shattering = 1 to 5 scale; where 1 = no shattering; 5 = 90+% of pods shattered.

Seed Quality = 1 to 5 scale; where 1 = < 5% of seeds showing disease or split seed coats; 5=95+% of seed are diseased or have split seed coats.

Protein & Oil on dry weight basis from Ames only.

Frogeye = 1 to 5 scale; where 1 = < 5% of leaf surfaces containing spots; 5 = 95%+ of leaf surfaces containing spots. Ratings from Milan Irr. and Non Irr. only.

**Table 23. Mean yields † of nine Maturity Group V and two Maturity Group IV soybean varieties evaluated at five locations (n=10) in Tennessee for two years 2001 - 2002.**

Maturity Group	Brand	Variety	Avg. Yield	Spring				
			± Std Err. (n=10)	Ames	Milan	Hill	Springfield	Knoxville
			-----bu/a-----					
V	MO	Anand	49 ± 1	47	57	51	43	50
V	USG	5601T	48 ± 1	43	59	49	46	44
V	TN	TN 5002T	48 ± 1	42	63	47	42	48
V	D&PL	DP 5110 S	47 ± 1	44	56	47	41	47
V	Delta King	DK 5995	46 ± 1	45	55	43	42	44
V	MO	Delsoy 5500	45 ± 1	40	43	50	46	47
V	NC	Holladay	45 ± 1	43	53	46	40	44
V	Delta King	DK 5850	45 ± 1	42	56	42	41	41
V	VA	Hutcheson	43 ± 1	38	45	47	42	45
IV	D&PL	DP 4748 S	46 ± 1‡	39	60	.	40	44
IV	MD	Manokin	43 ± 1‡	40	55	.	38	37
<b>Average (bu/a)</b>			<b>46</b>	<b>42</b>	<b>55</b>	<b>47</b>	<b>42</b>	<b>45</b>
<b>L.S.D.<sub>.05</sub> (bu/a)</b>			<b>4</b>	<b>8</b>	<b>10</b>	<b>6</b>	<b>7</b>	<b>7</b>
<b>C.V. (%)</b>			<b>13.1</b>	<b>15.5</b>	<b>13.5</b>	<b>8.6</b>	<b>14.5</b>	<b>11.7</b>

† All yields are adjusted to 13% moisture.

‡ Average across eight environments (n=8).



**Table 24. Mean yields † and agronomic characteristics of nine Maturity Group V and two Maturity Group IV soybean varieties evaluated at five locations (n=10) in Tennessee for two years 2001 - 2002.**

Maturity Group	Brand	Variety	Avg. Yield				Seed				
			± Std Err. (n=10)	Moisture (n=10)	Lodging (n=7)	Height (n=10)	Maturity (n=10)	Quality (n=9)	Protein (n=6)	Oil (n=6)	Frogeye (n=2)
			bu/a	%	Score	in.	DAP	Score	%	%	Score
V	MO	Anand	49 ± 1	14.8	1.6	31	140	3.0	41.4	22.0	1.0
V	USG	5601T	48 ± 1	15.0	2.2	36	140	2.5	43.3	21.2	1.0
V	TN	TN 5002T	48 ± 1	14.8	2.9	32	136	2.9	42.0	22.5	1.0
V	D&PL	DP 5110 S	47 ± 1	14.3	2.3	43	133	2.9	43.5	21.7	1.6
V	Delta King	DK 5995	46 ± 1	17.0	3.0	37	147	2.9	42.8	20.9	1.1
V	MO	Delsoy 5500	45 ± 1	14.4	2.1	33	140	2.7	42.8	22.0	3.6
V	NC	Holladay	45 ± 1	15.5	2.5	30	135	2.5	39.9	22.5	1.0
V	Delta King	DK 5850	45 ± 1	15.7	3.2	37	141	2.7	43.7	21.1	1.0
V	VA	Hutcheson	43 ± 1	16.1	2.4	34	143	2.7	42.1	21.9	3.3
IV	D&PL	DP 4748 S	46 ± 1	14.9	2.7	40	129	3.5	42.3	22.9	1.0
IV	MD	Manokin	43 ± 1	15.4	2.9	33	133	2.9	41.5	22.9	1.1

† All yields are adjusted to 13% moisture.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting.

Seed Quality = 1 to 5 scale; where 1 = < 5% of seeds showing disease or split seed coats; 5=95+% of seed are diseased or have split seed coats.

Protein & Oil on dry weight basis.

Frogeye = 1 to 5 scale; where 1 = < 5% of leaf surfaces containing spots; 5 = 95%+ of leaf surfaces containing spots.

**Table 25. Mean yields † and agronomic characteristics of seven Maturity Group V and two Maturity Group IV soybean varieties evaluated at five locations (n=15) in Tennessee for three years 2000 - 2002.**

Maturity		Variety	Avg. Yield				Spring				
Group	Brand		± Std Err. (n=15)	Moisture (n=15)	Lodging (n=9)	Height (n=15)	Ames	Milan	Hill	Springfield	Knoxville
			bu/a	%	Score	in.	-----bu/a-----				
V	MO	Anand	45 ± 1	13.5	1.6	30	40	52	46	36	51
V	USG	5601T	44 ± 1	13.5	2.0	34	39	53	47	39	44
V	MO	Delsoy 5500	42 ± 1	13.3	2.0	32	38	42	48	37	46
V	Delta King	DK 5995	42 ± 1	14.9	2.8	36	39	51	41	36	45
V	Delta King	DK 5850	41 ± 1	14.0	3.1	36	39	51	41	34	41
V	NC	Holladay	41 ± 1	14.1	2.3	28	37	48	43	33	43
V	VA	Hutcheson	40 ± 1	14.3	2.2	32	34	44	45	35	42
IV	D&PL	DP 4748 S	43 ± 1	13.8	2.5	39	36	55	.	34	48
IV	MD	Manokin	41 ± 1	15.0	2.8	31	35	48	.	39	42
<b>Average (bu/a)</b>			<b>42</b>				<b>37</b>	<b>49</b>	<b>44</b>	<b>36</b>	<b>45</b>
<b>L.S.D.<sub>.05</sub> (bu/a)</b>			<b>3</b>				<b>6</b>	<b>8</b>	<b>5</b>	<b>7</b>	<b>6</b>
<b>C.V. (%)</b>			<b>13.6</b>				<b>14.2</b>	<b>14.1</b>	<b>8.3</b>	<b>21.6</b>	<b>10.1</b>

† All yields are adjusted to 13% moisture.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

**Table 26. Yields † of 12 Maturity Group V Conventional soybean varieties in seven County Standard Tests in Tennessee and Kentucky during 2002.**

MS	Brand/Variety	Avg.		Carlisle (KY)	Dyer	Gibson	Henry	Lake	Obion	Weakley
		Yield	Moisture							
		bu/a	%	-----			bu/a	-----		
A	*Anand	53.8	14.6	42.4	60.0	58.2	58.1	50.5	53.4	54.1
AB	*Asgrow A5959	53.3	15.2	52.2	59.2	54.2	63.3	48.0	48.4	47.7
ABC	USG 5601T	52.2	14.3	55.7	43.8	53.6	66.3	45.8	46.4	54.0
ABC	*Delta King 5995	52.0	14.4	52.7	57.5	53.7	60.4	42.9	49.1	48.1
ABC	FFR 5700	52.0	15.3	50.5	55.5	53.5	61.5	45.6	47.9	49.3
ABC	*Holladay	50.7	14.4	46.3	53.1	46.1	67.5	43.9	48.5	49.7
ABCD	Asgrow A5427	50.0	14.2	55.6	48.6	54.3	62.1	31.4	47.1	51.2
BCDE	D&PL DP5110S	49.0	14.3	50.5	49.2	48.7	59.7	42.2	44.6	48.0
CDE	Pioneer 95B33	47.6	14.4	50.0	33.2	47.1	64.9	45.7	44.3	48.2
DE	Hutcheson	46.0	15.0	44.2	42.6	50.8	53.8	41.1	44.0	45.4
E	Hornbeck 5991	45.1	14.9	48.6	42.6	50.5	47.5	32.7	48.3	45.7
E	Vigoro V521STS	44.5	14.1	42.4	44.4	43.5	52.9	38.9	42.7	46.7
<b>Average (bu/a)</b>		<b>49.7</b>		<b>49.3</b>	<b>49.1</b>	<b>51.2</b>	<b>59.8</b>	<b>42.4</b>	<b>47.1</b>	<b>49.0</b>

† Yields have been adjusted to 13% moisture. Each variety was evaluated in a large strip-plot at each location, thus each county test was considered as one replication of the test in calculating the average yield and in conducting the statistical analysis to determine significant differences (MS).

MS = Varieties that have any MS letter in common are not statistically different in yield at the 5% level of probability.

Varieties denoted with an asterisk (\*) were in the top performing group for two years.

Data provided by Robert C. Williams, Ext. Area Specialist, Grain Crops, and extension agents in counties shown above.

**Table 27. Overall average yields and moistures of six Maturity Group V Conventional soybean varieties evaluated in County Standard Tests (n=7) and experiment stations (n=7) in Tennessee during 2002.**

Brand	Variety	County Standard Tests		Experiment Station Tests	
		Avg. Yield	Avg. Moisture	Avg. Yield	Avg. Moisture
		bu/A	%	bu/A	%
MO	Anand	54	14.6	50	18.1
USG	5601T	52	14.3	50	18.1
D&PL	DP 5110 S	49	14.3	48	17.1
Delta King	DK 5995	52	14.4	46	22.7
NC	Holladay	51	14.4	46	18.3
VA	Hutcheson	46	15.0	45	20.4
<b>Average (bu/a)</b>		<b>50</b>		<b>48</b>	

**Table 28. Characteristics of Maturity Group III Roundup Ready soybean varieties evaluated in Tennessee during 2002.**

<b>Brand</b>	<b>Variety</b>	<b>Relative Maturity</b>	<b>Herbicide Tolerance</b>	<b>SCN Resistance</b>	<b>Stem Canker</b>	<b>SDS</b>	<b>Frogeye</b>	<b>Pubescence Color</b>	<b>Flower Color</b>	<b>Seed Size (Seed / lb.)</b>
Armor	39-E9	3.9	RR	-	-	-	-	G	W	3128
D&PL	DPX3761RR	3.7	RR	MR 3, 14	-	MR	-	G	P	2926
D&PL	DPX3819RR	3.8	RR	MR 3, 14	-	R	-	T	W	2945
D&PL	DPX3940RR	3.9	RR	R 3, MR 5, 14	-	MR	-	T	P	2700
Delta King	DK 3862 RR	3.8	RR	R 6	R	MR	MR	T	P	2926
Delta King	DK 3961 RR	3.9	RR	R5, MR 2, 3, 14	R	MR	MR	T	P	2889
Delta King	DK 3964 RR	3.9	RR	R3, MR 2, 5, 14	R	MR	MR	T	W	3024
Delta King	DK 3968 RR	3.9	RR	R3, MR 2, 5, 14	R	MS	MR	G	W	3335
Delta King	DK XTJ033 RR	3.3	RR	-	-	MR	-	G	P	2653
FFR	3975RR	3.9	RR	S	-	-	-	T	W	3436
Garst	D399 RR/N	3.9	RR	3, 14	-	-	-	T	P	3128
Hornbeck	HBK R3980	3.9	RR	-	R	MR	MR	T	W	2400
Pioneer	93B67	3.6	RR	3, 14	-	M	-	T	W	2945
Pioneer	93B68	3.6	RR	-	-	MR	-	G	W	3240
Terral	TVX39R201	3.9	RR	3	-	R	MS	G	W	3489

RR = contains a gene for tolerance to glyphosate herbicide.

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible.

T = Tawny, LT = Light Tawny, G = Gray, P = Purple, W = White

Most information supplied by companies.

**Table 29. Characteristics of Maturity Group IV Roundup Ready soybean varieties evaluated in Tennessee during 2002.**

<b>Brand</b>	<b>Variety</b>	<b>Relative Maturity</b>	<b>Herbicide Tolerance</b>	<b>SCN Resistance</b>	<b>Stem Canker</b>	<b>SDS</b>	<b>Frogeye</b>	<b>Pubescence Color</b>	<b>Flower Color</b>	<b>Seed Size Seed / lb.</b>
Armor	4280	4.2	RR	-	-	-	-	T	P	2818
Armor	42-L2	4.2	RR	-	-	-	-	T	W	2886
Armor	44-R4	4.4	RR	-	-	-	-	T	P	3331
Armor	47-G7	4.7	RR	-	-	-	-	T	W	2995
Armor	AXR-4699RR	4.6	RR	-	-	-	-	T	W	3154
Asgrow	AG4201	4.2	RR	R 3, MR 14	MR	MS	R	T	W	2737
Asgrow	AG4403	4.4	RR	MR 3	R	MS	MS	T	P	3378
Asgrow	AG4603	4.6	RR	R ?	MR	MS	MS	T	W	3014
Asgrow	AG4902	4.9	RR	R 3, MR 14	R	MR	MR	T	W	3262
Croplan	RC 4432	4.4	RR	MR 3, 14	-	R	-	T	W	3175
Croplan	RC 4444	4.4	RR	MR 3, 14	-	R	-	T	P	3113
Croplan	RC 4772	4.7	RR	R 3, MR 14	-	R	-	T	P	2869
Croplan	RC 4992	4.9	RR	R 3, MR 14	-	R	-	T	W	4252
D&PL	DP4344RR	4.3	RR	-	R	MR	MR	T	W	2785
D&PL	DP4690RR	4.6	RR	-	R	R	S	T	P	3154
D&PL	DPX4727RR	4.7	RR	R 3, MR 14	-	MR	-	T	W	3476
D&PL	DPX4527RR	4.5	RR	-	-	-	-	T	W	3262
D&PL	DPX4933RR	4.9	RR	R 3, MR 14	-	R	-	G	W	4369
D&PL	SG498RR	4.9	RR	-	R	MR	S	T	W	2995
Delta King	DK XTJ041RR	4.1	RR	-	-	-	-	T	P	2886
Delta Grow	4950RR	4.9	RR	-	MR	MR	MR	T	P	3218
Delta King	DK 4461RR	4.4	RR	R 5, MR 2	S	MR	MR	T	P	3175
Delta King	DK 4762RR	4.7	RR	R 3,5,14 MR 2	S	MS	MR	T	W	2785
Delta King	DK 4763RR	4.7	RR	R 3, MR 5	S	MS	MR	T	W	2940
Delta King	DK 4868RR	4.8	RR	R5	MS	R	MR	T	W	3014
Delta King	DK 4965RR	4.9	RR	R 3, MR 5, 14	R	MR	MS	T	W	2561
Delta King	DK XTJ040RR	4.0	RR	-	-	-	-	T	W	2358
Dyna-Gro	3443NRR	4.4	RR	R 3, 14	R	R	S	T	P	3331
Dyna-Gro	3468NRR	4.6	RR	R 3, 14	R	R	MS	T	P	2886
Dyna-Gro	3484NRR	4.8	RR	R 3, 14	R	MR	MR	T	P	3014
Dyna-Gro	X419NRR	4.1	RR	R 3, 14	R	MR	MR	T	P	3014
Eagle	ES Prairie RR	4.9	RR	-	R	-	-	G	W	3354
FFR	4455RR	4.4	RR	MR 3	-	R	R	T	W	3175
FFR	4712RR	4.7	RR	R 3, MR 14	-	R	MR	LT	P	2691
FFR	4891RR	4.8	RR	R 3	R	R	MS	LT	P	2818
FFR	4922RR	4.9	RR	R 3, MR 14	-	R	R	G	W	4178
Garst	4512 RR/N	4.5	RR	3, 14	R	R	R	LT	P	3175

Table 29. Cont.

Brand	Variety	Relative Maturity	Herbicide Tolerance	SCN Resistance	Stem Canker	SDS	Frogeye	Pubescence Color	Flower Color	Seed Size Seed / lb.
Garst	4312 RR/STS/N	4.3	RR/STS	3	R	R	R	T	P	2904
Garst	D484 RR/N	4.8	RR	3, 14	-	-	R	T	W	2886
Golden Harvest	H-4534RR	4.5	RR	MR 3, 14	-	-	-	LT,T	P	3780
Golden Harvest	H-4772RR	4.7	RR	R 3, MR 14	-	-	-	T	W	3034
Golden Harvest	H-4850RR	4.8	RR	R 3, MR 14	-	-	-	T	W	3113
Hartz	H4554RR	4.5	RR/STS	R 3	MS	MS	S	T	W	3014
Hornbeck	HBK R4622	4.6	RR	R 3, R 14	-	R	-	T	P	2358
Hornbeck	HBK R4820	4.8	RR	-	S	MR	MR	LT	W	3014
Hornbeck	HBK R4920	4.9	RR	-	R	R	MR	LT	P	3053
Midwest Premium Genetics	MPV 457nRR	4.5	RR	R 3, MR 14	-	R	-	T	W	2977
Midwest Premium Genetics	MPV 4802nRR	4.8	RR	3, 14	-	R	-	T	P	3331
Morsoy	RT4809	4.8	RR	-	S	R	S	LT	W	3113
Pioneer	9492	4.9	RR	3, 14	-	S	MR	T	W	3053
Pioneer	94B23	4.2	RR	3	-	MS	-	T	P	3502
Pioneer	94B73	4.7	RR	-	-	MS	-	G	P	3240
Pioneer	94B74	4.7	RR	3, 14	-	MR	-	G	P	2995
Pioneer	94B13	4.1	RR	3, 14	-	MR	-	T	W	3014
Stine	S4442-4	4.4	RR/STS	3, 14	-	-	-	T	P	2818
Stine	S4882-4	4.8	RR	3, 14	-	-	-	T	P	3331
Syngenta	NK X248R	4.8	RR	3, 14	R	MR	R	G	P	3354
Terral	TV4589RR	4.5	RR	3, 14	R	MR	MR	T	W	3240
Terral	TV4886RR	4.8	RR	3, 14	R	MR	-	T	P	3285
Terral	TV4890RR	4.8	RR	3, 14	R	-	MR	T	W	3426
USG	7440nRR	4.4	RR	R 3, MR 14	-	MR	MR	LT	P	3331
USG	7449nRR	4.4	RR	R 3, MR 14	-	R	MR	T	P	2430
USG	7452nRR	4.5	RR	-	-	-	-	G	P	3262
USG	7489RR	4.8	RR	-	-	MR	-	LT	P	3378
USG	7499nRR	4.9	RR	R 3, MR 14	R	MR	-	T	W	3307
Vigoro	V42N3RR	4.2	RR	R 3, MR 14	-	MR	R	T	P	2574
Vigoro	V442NRR	4.4	RR	MR 3, 14	MR	MR	MS	LT	P	3218
Vigoro	V46N3RR	4.6	RR	R 3, 14	-	R	-	T	P	2661
Vigoro	V49N3RR	4.9	RR	R 3, MR 14	-	MR	MR	T	P	3285

RR = contains a gene for tolerance to glyphosate herbicide; STS = tolerance to sulfonylurea class of herbicides.

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible

T = Tawny, LT = Light Tawny, G = Gray, P = Purple, W = White

Most information supplied by companies.

**Table 30. Characteristics of Maturity Group V Roundup Ready soybean varieties evaluated in Tennessee during 2002.**

Brand	Variety	Relative Maturity	Herbicide Tolerance	SCN Resistance	Stem			Pubescence Color	Flower Color	Seed Size Seed / lb.
					Canker	SDS	Frogeye			
Asgrow	AG5301	5.3	RR	MR 3	MR	MR	MS	G	W	3780
Asgrow	AG5501	5.5	RR	R 3	R	R	MR	G	P	3285
Asgrow	AG5903	5.9	RR	R 3	MR	MS	R	G	W	3451
Asgrow	AG5701	5.7	RR	MR 3	MS	R	MR	G	W	3692
Asgrow	AG5603	5.6	RR/STS	R 3	-	-	MS	G	P	3581
Armor	Armor 5135	5.1	RR	-	-	-	-	T	W	3692
Armor	Armor 53-K3	5.3	RR	-	-	-	-	G	P	3307
Armor	Armor 54-Z4	5.4	RR	-	-	-	-	T	W	2661
Armor	Armor 56-J6	5.6	RR	-	-	-	-	G	W	3936
Croplan	RC 5252	5.2	RR	MR 3, 14	-	R	-	G	P	3307
Croplan	RC 5454	5.4	RR	MR 3, 14	-	R	-	T	W	3113
D&PL	DP5414RR	5.4	RR	R 3	R	-	-	T	W	2958
D&PL	DP5806RR	5.8	RR	MR, R 3, 14	R	MR	MR	G	W	3872
D&PL	DP5915RR	5.9	RR	R 3, MR 14	MR	MR	R	T	W	3240
D&PL	DPX5734RR	5.7	RR	R 1, 3	R	-	-	T	W	2904
Delta Grow	5250RR	5.2	RR	3, 14	MR	MR	MS	G	P	2958
Delta Grow	5350RR	5.3	RR	3, 14	MR	MR	MR	T	P	2958
Delta Grow	5450RR	5.4	RR	R 3, MR 14	MR	MR	MS	T	W	3034
Delta Grow	5630RR	5.6	RR	R 3, 14, MR 6	MR	MR	MR	G	W	3196
Delta King	DK 5366RR	5.3	RR	MR 3, 14	MS	MR	R	G	P	3378
Delta King	DK 5465RR	5.4	RR	R 3, MR 5, 14	R	MR	MR	T	W	3218
Delta King	DK 5661RR	5.6	RR	MR 3, 14	MS	R	MR	G	W	3692
Delta King	DK 5668RR	5.6	RR	R 3, MR 5, 14	R	R	R	G	W	3750
Delta King	DK 5961RR	5.9	RR	R 3, MR 5, 14	R	MS	MR	G	W	2904
Delta King	DK XTJ057RR	5.7	RR	R 3, MR 14	-	MR	-	G	W	3476
Delta King	DK XTJ051RR	5.1	RR	-	-	-	-	G	P	3402
Dyna-Gro	3518NRR	5.1	RR	R 3, 14	R	MR	R	G	P	3285
Dyna-Gro	3521NRR	5.2	RR	R 3, 14	R	MR	R	G	P	3476
Dyna-Gro	3562NRR	5.6	RR	R 3, 14	R	MR	R	G	W	3093
Dyna-Gro	3583NRR	5.8	RR	R 3, 14	R	MR	R	G	P	2958
Eagle	ES Ranger RR	5.1	RR	R 3, R-M INCOGNITA	R	-	-	G	P	4002
Eagle	Marshal RR	5.9	RR	R 3	R	-	-	T	P	3476
Eagle	Punch RR	5.5	RR	R 3	R	-	-	T	P	3872
Eagle	Trooper RR	5.7	RR	-	R	-	-	G	P	3664
FFR	4900RR	4.9	RR	R 3, 14	R	MS	MS	G	P	3154
FFR	5225RR	5.2	RR	MR 3, 14	R	R	R	T	P	2869
FFR	5542RR	5.5	RR	R 3	R	MR	MR	G	W	3133
FFR	RT 517	5.1	RR	R 3, 14	MR	S	MR	G	P	3476
FFR	RT 557	5.5	RR	R 3, 14	MR	MR	S	G	P	3307
Garst	5512 RR/N	5.5	RR	3, 14	-	-	R	T	W	2661
Garst	588 RR/N	5.8	RR	3	-	-	-	B	W	3285
Golden Harvest	H-5422RR	5.4	RR	R 3	-	-	-	LT,T	W	2995



Hartz H5223RR 5.2 RR R 3 MR MR MR G P 3285

**Table 30. Cont.**

Brand	Variety	Relative Maturity	Herbicide Tolerance	SCN Resistance	Stem Canker	SDS	Frogeye	Pubescence Color	Flower Color	Seed Size Seed / lb.
Hartz	H5444RR	5.4	RR	R 3	R	-	MS	T	W	3528
Hartz	H5887RR	5.8	RR	R 3	MS	MS	R	G	W	3528
Hornbeck	HBK R5422	5.4	RR	MR 3, 14	R	R	-	T	P	2940
Hornbeck	HBK R5620	5.6	RR	R 3, MR 14	MS	MR	R	G	W	3053
Midwest Premium Genetics	MPV 5302nRR	5.3	RR	3, 14	-	R	-	T	W	2995
Midwest Premium Genetics	MPV 5502nRR	5.5	RR	3, 14	-	R	-	T	W	3502
Morsoy	RT5252	5.2	RR	3, 14	-	R	R	T	W	3780
Morsoy	RT5440	5.4	RR	3, 14	R	R	S	T	W	2958
Morsoy	RT5442	5.4	RR	3, 14	-	R	-	G	P	3354
Morsoy	RT5620	5.6	RR	3, 14	S	S	S	G	W	3196
Pioneer	95B32	5.3	RR	3, 14	MR	MR	MR	G	W	3240
Pioneer	95B42	5.4	RR	3	-	M	-	G	P	2869
Pioneer	95B43	5.4	RR	-	-	M	MR	G	W	3014
Stine	S 5502-4	5.5	RR	3, 14	-	-	-	G	W	3354
Syngenta	S 52-U3	5.2	RR	3, 9, 14	R	MS	R	G	W	3608
Terral	TV52R42	5.2	RR	3, 14	R	MR	MR	G	P	3154
Terral	TV54R11	5.4	RR	MR 3, 14	R	-	MR	T	W	3133
Terral	TV56R11	5.6	RR	R 3, MR 14	S	-	MR	G	W	3581
Terral	TV58R11	5.8	RR	R 3, MR 14	MR	MR	MR	G	P	3502
Terral	TV59R85	5.9	RR	3, 14	S	-	R	G	P	3780
Terral	TV59R98	5.9	RR	-	R	-	R	G	P	3307
TN	TN01-278-RR	5.6	RR	-	-	-	-	G	W	3175
USG	7524nRR	5.2	RR	-	-	-	-	G	W	3476
USG	510nRR	5.1	RR	MR 3, 14	R	R	MR	G	P	2904
USG	570nRR	5.7	RR	R 3, MR 14	-	-	MR	G	W	3476
USG	7522nRR	5.2	RR	R 3, 14	R	-	MR	G	P	3692
USG	7547RR	5.4	RR	-	-	R	MR	T	W	2977
USG	7562nRR	5.6	RR	3, 14	-	MR	MR	G	P	3721
USG	7582nRR	5.8	RR	R 3, MR 14	-	MR	R	G	W	2940
USG	540nRR	5.4	RR	R 3, 14	-	R	MR	T	W	3285
Va.	99VPI-120	V	RR	-	-	-	-	G	W	3969
Va.	99VPI-67	V	RR	-	-	-	-	G	W	3904
Va.	V99-3337	V	RR	-	-	-	-	G	W	3721
Vigoro	V503RR	5.0	RR	S	-	R	MR	LT	P	3262
Vigoro	V52N3RR	5.2	RR	MR 3, 14	S	MR	MR	T	W	3904
Vigoro	V562NRR	5.6	RR	R 3, MR 14	MS	MS	MR	G	W	3262

RR = contains a gene for tolerance to glyphosate herbicide; STS = tolerance to sulfonyleurea class of herbicides.

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible

T = Tawny, LT = Light Tawny, G = Gray, P = Purple, W = White

Most information supplied by companies.

**Table 31. Characteristics of Maturity Group IV and V Conventional soybean varieties evaluated in Tennessee during 2002.**

Brand	Variety	Relative	Herbicide	SCN	Stem			Pubescence	Flower	Seed Size
		Maturity	Tolerance	Resistance	Canker	SDS	Frogeye	Color	Color	(Seed / lb.)
Armor	Armor 52-C2	5.2	-	-	-	-	-	G	W	3402
D&PL	DP4748S	4.7	STS	-	R	MR	MS	T	W	3378
D&PL	DP5110S	5.1	STS	-	R	-	R	T	W	3378
MD	Manokin	4.9	-	1,3	R	R	R	T	W	3554
Delta King	DK5850	5.8	-	1,3,4,9,14	MS	MR	MR	T	W	3133
Delta King	DK5995	5.9	-	R5, MR2,3,14	R	R	MR	G	W	3608
Hornbeck	HBK 4944CX	4.9	-	All	-	MR	-	G	W/P	3073
MO	Anand		-	2,3,14,5	R	R	R	T	P	2852
MO	Delsoy 5500	5.5	-	3,14	MS	MS	S	T	W	2852
NC	Holladay		-	S	MS	MR	MR	G	P	3554
TN (Exp TN 96-68)	TN 5002T	5	-	-	R	R	R	T	W	2769
USG	550nSTS	5.5	STS	MR 3, LR 14	-	-	-	T	P	3307
USG	5601T	5.6	-	-	R	MS	R	G	W	3175
VA	Hutcheson		-	S	R	MS	R	G	W	3240
VA	V95-0016		-	-	-	-	-	G	P	4252
VA	V96-0340		-	-	-	-	-	G	P	3218

STS = tolerance to sulfonyleurea class of herbicides.

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible

T = Tawny, LT = Light Tawny, G = Gray, P = Purple, W = White

Most information supplied by companies.

## SOYBEAN DISEASE RATINGS FOR 2002

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The data contained in Tables 32-37 are from tests conducted at the West Tennessee (WTES) and Milan (MES) Experiment Stations during the 2002 growing season. The test at WTES was artificially inoculated with the stem canker fungus. The occurrences of diseases at MES were the result of natural infestations.

**Table 32. Soybean Disease Ratings and Yields, Maturity Group V Roundup Ready, Milan Experiment Station, 2002**

Brand-Variety <sup>1,2,3,4,5</sup>	FLS	SDS	CLB	SC	Bu/A
1 Armor 5135	6.0	3.3	0.0	0.0	34.0
2 Armor 53-K3	6.7	1.0	1.0	0.0	30.6
3 Armor 54-Z4	7.7	0.3	1.3	0.0	31.6
4 Armor 56-J6	2.3	1.3	0.7	0.7	43.7
5 Asgrow 5301	5.3	3.7	1.0	0.0	40.4
6 Asgrow 5501	6.0	0.3	1.7	0.0	40.3
7 Asgrow 5603	7.3	2.7	0.0	0.0	32.0
8 Asgrow 5701	3.3	1.0	0.3	0.0	52.4
9 Asgrow 5901 RR	4.7	2.0	0.7	0.0	45.0
10 Asgrow AG 5903	2.3	2.7	0.0	0.0	56.4
11 Croplan RC 5252	5.3	4.3	2.7	0.0	47.0
12 Croplan RC 5454	8.3	0.7	2.0	0.0	43.2
13 Delta Grow 5250 RR	7.0	2.0	3.3	0.0	37.7
14 Delta Grow 5350 RR	0.3	2.0	2.3	0.0	46.1
15 Delta Grow 5450 RR	7.3	0.7	1.7	0.0	35.6
16 Delta Grow 5630 RR	2.3	4.0	0.7	0.0	46.7
17 Delta King DK 5366 RR	2.0	2.7	1.0	0.0	50.0
18 Delta King DK 5465 RR	8.0	0.7	0.0	0.0	49.9
19 Delta King DK 5661 RR	2.3	0.7	0.3	0.0	45.3
20 Delta King DK 5668 RR	1.0	0.3	0.7	0.0	50.9
21 Delta King DK 5961 RR	7.7	4.7	0.0	0.0	31.3
22 Deltapine DP 5414 RR	0.0	1.7	0.0	0.0	62.5
23 Deltapine DP 5644 RR	0.7	1.7	1.3	0.0	56.2
24 Deltapine DP 5806 RR	5.7	2.7	0.3	0.0	36.7
25 Deltapine DP 5915 RR	0.3	2.0	0.0	0.3	57.4
26 Deltapine DPX 5734 RR	0.0	1.0	0.0	0.3	70.4
27 DynaGro 3521N RR	7.0	2.3	3.3	1.3	45.5
28 DynaGro 3583N RR	1.7	5.7	0.7	0.0	49.5
29 DynaGro DG 3518	7.7	2.0	5.7	0.0	41.0
30 DynaGro DG 3562	1.3	1.0	1.0	0.0	61.4
31 Eagle ES Ranger RR	9.3	3.0	1.3	2.0	31.8
32 Eagle Marshal RR	0.0	4.3	0.7	0.0	39.6
33 Eagle Punch RR	10.0	0.7	0.0	2.7	27.3
34 Eagle Trooper RR	5.7	4.0	1.0	0.0	37.7
35 FFR 4900 RR	6.0	5.7	5.0	2.7	27.7
36 FFR 5225 RR	0.7	2.7	1.7	0.0	49.9
37 FFR 5485 RR	1.0	0.3	1.3	3.0	47.4
38 FFR 5542 RR	6.3	2.7	2.3	0.0	41.9
39 FFR RT 517 RR	7.7	5.7	2.3	0.0	31.6
40 FFR RT 557 RR	7.0	2.3	3.0	0.0	30.9

Brand-Variety <sup>1,2,3,4,5</sup>	FLS	SDS	CLB	SC	Bu/A
41 G. Harvest H-5422 RR	1.3	6.0	0.0	0.0	35.2
42 Garst 5512 RR/N	8.0	1.0	1.3	0.0	33.3
43 Garst 588 RR/N	0.3	2.0	1.0	0.0	52.8
44 Hartz H 5223 RR	8.0	3.3	0.3	0.0	34.2
45 Hartz H 5444	8.0	0.3	0.7	0.0	42.0
46 Hartz H 5887 RR	2.0	3.0	0.7	0.0	49.8
47 Hornbeck HBK R5422	0.0	2.3	1.7	0.3	51.8
48 Hornbeck HBK R5620	2.7	3.7	1.3	0.3	40.7
49 Midw. Perm. G. MPV 5302n RR	9.3	2.7	0.0	0.7	27.5
50 Morsoy RT 5252	4.0	5.0	0.0	0.0	43.0
51 Morsoy RT 5440	8.7	1.3	0.3	0.0	1.1
52 Morsoy RT 5442	8.3	3.0	0.0	0.0	32.3
53 Morsoy RT 5620	1.3	1.7	1.0	0.0	49.8
54 Pioneer 95B32	7.7	0.7	1.3	4.7	37.7
55 Pioneer 95B42	5.3	2.7	1.3	2.0	32.5
56 Pioneer 95B43	6.7	2.3	1.3	0.0	34.1
57 Pioneer 95B96	6.3	1.7	0.0	1.0	39.1
58 Progeny 5660	2.7	2.0	1.0	0.0	44.8
59 Stine S 5502-4	2.3	2.0	0.7	0.0	44.0
60 Syngenta S 52-U3	6.0	6.0	0.0	0.0	25.8
61 Terral TV 52 R 42	7.3	5.3	3.7	0.0	34.5
62 Terral TV 54 R 11	9.0	0.3	0.7	0.0	35.3
63 Terral TV 56 R 11	3.0	3.7	1.3	0.7	39.5
64 Terral TV 58 R 11	3.0	2.0	0.7	1.0	40.5
65 Terral TV 59 R 85	4.0	2.7	0.7	0.7	36.7
66 Terral TV 59 R 98	6.3	3.7	1.0	0.0	41.3
67 USG 510	5.7	3.3	2.0	0.0	37.9
68 USG 540	9.0	0.0	1.0	0.0	42.3
69 USG 570	3.3	2.0	1.3	0.0	49.7
70 USG 7522	6.0	4.7	4.7	0.0	40.0
71 USG 7547 RR	6.0	3.3	3.7	0.0	38.0
72 USG 7562n RR	7.7	0.7	1.0	9.0	21.4
73 USG 7582n RR	2.7	7.3	0.0	0.0	37.2
74 VA. 99VPI-67	8.7	5.0	0.3	0.0	29.7
75 VA. 99VPI-120	8.3	4.7	0.0	0.0	23.3
76 VA. V 99-3337	8.3	2.7	0.0	0.0	32.2
77 Vigoro V 503 RR	5.3	2.0	0.3	0.0	32.9
78 Vigoro V 52N3 RR	5.7	4.0	0.3	0.0	43.6
79 Vigoro V 543	8.7	0.3	0.3	0.0	36.4
80 Vigoro V 562N RR	2.7	2.3	0.3	0.3	39.2
LSD (P=.05)	1.65	2.69	1.62	1.63	11.95
CV	20.42	64.95	89.16	239.39	18.14

**NOTES:**

1. Disease ratings were made on a scale of 0-10, where 0=no disease and 10=the most disease possible.
2. FLS = Frogeye Leaf Spot, SDS = Sudden Death Syndrome, CLB = Cercospora Leaf Blight, SC = Stem Canker.
3. Disease ratings were made on September 12, 2002.
4. Harvest was October 24, 2002, and all yields were adjusted to 13% moisture.
5. Plots were under pivot irrigation.

**Table 33. Soybean Disease Ratings and Yields, Maturity Group V Conventional, Milan Experiment Station, 2002.**

Brand-Variety <sup>1,2,3,4</sup>	FLS	SDS	SC	Bu/A
1 Armor 52-C2	6.00	2.00	3.3	25.1
2 Asgrow 5427	1.00	6.33	3.7	38.5
3 Asgrow 5944	6.00	1.67	1.3	38.1
4 Delta King DK 5850	1.00	2.67	7.7	23.7
5 Delta King DK 5995	2.00	0.33	1.0	56.0
6 Deltapine DP 4748 S	3.00	1.00	0.3	33.4
7 Deltapine DP 5110 S	4.67	2.67	1.0	30.4
8 FFR 5700	0.67	2.00	2.0	55.8
9 Hornbeck 5991	6.67	0.33	0.0	38.2
10 MD Manokin	1.67	1.00	0.3	35.1
11 MO Anand	1.33	0.67	0.0	67.6
12 MO Delsoy 5500	7.67	5.00	3.7	23.5
13 NC Holladay	1.00	2.33	3.0	43.3
14 Pioneer 95B33	2.17	1.00	0.7	52.6
15 TN 5002 T	0.33	1.00	0.7	60.2
16 USG 550nSTS	6.00	4.33	2.0	23.0
17 USG 5601 T	2.33	2.00	0.0	51.0
18 VA Hutcheson	6.67	4.00	2.0	27.1
19 VA V 96-0340	6.83	0.67	0.3	35.1
20 Vigoro V 521 sts	6.67	6.83	5.7	21.5

LSD (P=.05)                                  1.103    2.064            3.00    11.11

**NOTES:**

1. Disease ratings were made on a scale of 0-10, where 0=no disease and 10=the most disease possible.
2. FLS = Frogeye Leaf Spot, SDS = Sudden Death Syndrome, SC = Stem Canker.
3. Disease ratings for FLS and SDS were made on August 28, 2002; for SC, ratings were made on September 18, 2002.
4. Harvest was November 2, 2002.

**Table 34. Soybean Disease Ratings and Yields, Maturity Group IV Roundup Ready, Milan and West Tennessee Experiment Stations, 2002**

Brand-Variety <sup>1,2,3,4</sup>	MES	MES	MES	WTES	WTES
	FLS	SDS	Bu/A	SC	Bu/A
1 Armor 4280	0.00	1.7	43.9	0.7	49.7
2 Armor 42-L2	6.00	1.7	24.9	7.0	40.9
3 Armor 44-R4	5.00	1.0	50.9	0.7	46.4
4 Armor 47-G7	3.67	2.0	33.1	3.7	42.6
5 Armor AXR-4699 RR	2.67	2.7	27.1	6.0	50.5
6 Asgrow AG 4201	2.67	0.7	34.1	5.0	49.5
7 Asgrow AG 4403	5.33	1.0	45.6	5.0	56.6
8 Asgrow AG 4603	7.33	0.3	35.8	0.3	46.7
9 Asgrow AG 4702	6.67	1.7	30.9	1.0	57.6
10 Asgrow AG4902	2.33	1.3	47.3	0.7	51.2
11 Croplan RC 4432	5.67	3.7	40.4	0.3	47.2
12 Croplan RC 4444	5.67	0.7	49.3	1.7	43.5
13 Croplan RC 4772	5.67	0.7	39.4	1.3	41.5
14 Croplan RC 4848	6.00	1.3	29.9	0.7	46.0
15 Croplan RC 4992	7.00	1.7	30.8	0.0	43.7
16 Delta Grow 4950 RR	4.33	0.0	42.9	0.3	49.0
17 Delta King 4461	5.00	0.7	53.6	2.0	43.7
18 Delta King 4762 RR	6.00	4.0	26.3	7.0	37.0
19 Delta King 4763 RR	5.00	3.7	33.7	3.3	56.8
20 Delta King 4868	6.33	0.7	50.0	8.3	54.5
21 Delta King 4965	7.33	0.3	30.3	0.7	65.0
22 Delta King XTJ 040 RR	4.33	2.3	34.3	6.3	42.9
23 Deltapine DP 4344 RR	3.00	0.0	29.0	1.0	44.4
24 Deltapine DP 4690 RR	4.33	0.0	50.1	0.3	55.5
25 Deltapine DPX 4527 RR	7.00	0.7	23.2	1.0	49.6
26 Deltapine DPX 4727 RR	3.00	2.3	38.7	3.0	56.0
27 Deltapine DPX 4933 RR	7.67	2.7	35.4	0.0	50.8
28 Deltapine SG 498 RR	6.00	0.3	50.9	0.0	52.0
29 DynaGro 3443 NRR	5.67	0.0	57.7	4.7	49.3
30 DynaGro 3468 NRR	8.33	0.3	33.0	1.0	52.4
31 DynaGro 3484 NRR	6.33	1.7	35.9	0.7	57.4
32 DynaGro X419 NRR	4.33	4.3	39.7	3.7	44.0
33 Eagle ES Prairie RRI	9.33	8.3	16.2	0.2	49.3
34 FFR 4455 RR	6.00	2.3	44.2	0.3	57.3
35 FFR 4712 RR	6.33	1.0	31.9	1.7	56.7
36 FFR 4891t RR	4.67	0.3	46.3	0.0	60.9
37 FFR 4922 RR	8.00	2.3	32.2	0.3	55.9
38 G. Harvest H-4534 RR	5.00	0.0	55.1	5.3	52.3
39 G. Harvest H-4772 RR	4.33	4.3	31.4	4.3	45.5
40 G. Harvest H-4850 RR	6.67	0.0	28.2	0.3	56.4
41 G. Harvest H-8854	5.00	0.7	50.8	3.0	51.8
42 Garst 4312 RR/STS/N	0.33	1.7	40.4	3.0	55.0
43 Garst 4512 RR/N	5.67	0.3	51.4	4.7	55.1
44 Garst D484 RR/N	5.67	0.7	29.5	0.3	56.2
45 Hartz 4884 RR	6.00	0.7	34.7	0.0	49.8
46 Hartz H 4454	5.67	0.7	48.1	4.3	51.8
47 Hartz H 4554 RR	8.00	1.7	29.9	3.7	53.0
48 Hornbeck HBK R4622	0.00	1.0	40.3	1.3	50.3
49 Hornbeck HBK R4820	6.67	0.7	51.4	4.7	53.6
50 Hornbeck HBK R4920	4.00	0.0	48.5	0.0	54.7
51 Midw. Prem. G. MPV 457n RR	8.00	0.3	31.4	1.0	49.4
52 Midw. Prem. G. MPV 4802n RR	8.67	1.7	24.0	0.0	47.6

<b>Brand-Variety<sup>1,2,3,4</sup></b>	<b>MES FLS</b>	<b>MES SDS</b>	<b>MES Bu/A</b>	<b>WTES SC</b>	<b>WTES Bu/A</b>
53 Morsoy RT 4809	6.50	0.3	50.0	3.3	53.8
54 NK Brand X248	6.33	1.0	44.6	0.0	57.3
55 Pioneer 9492	0.67	3.3	35.9	1.3	40.4
56 Pioneer 94B13	1.33	2.3	37.9	1.0	51.9
57 Pioneer 94B23	2.67	0.7	36.6	4.0	45.1
58 Pioneer 94B73	0.00	0.7	46.6	1.3	53.9
59 Pioneer 94B74	6.00	1.7	39.6	1.7	49.5
60 Progeny 4858	6.00	0.7	26.4	0.3	56.3
61 Steyer 4410	5.33	1.3	57.8	4.3	47.5
62 Stine S4442-4	0.00	1.0	55.2	1.7	50.4
63 Stine S4882-4	1.33	1.0	49.3	0.0	53.4
64 Syngenta NK X248 R	6.33	0.7	51.7	0.0	63.8
65 Terral TV 4589 RR	8.33	0.3	32.3	1.0	58.5
66 Terral TV 4886 RR	8.67	4.3	19.6	0.3	59.1
67 Terral TV 4890 RR	4.67	2.0	33.4	0.3	59.3
68 USG 7440n	6.00	2.3	52.4	4.3	54.3
69 USG 7449n RR	0.00	0.3	44.0	3.7	58.2
70 USG 7489 RR	3.33	0.3	47.3	0.0	53.6
71 USG 7499n	6.00	1.7	34.0	0.7	54.1
72 USG BG 4401	5.33	0.7	53.7	5.3	61.8
73 Vigoro V42N3 RR	0.00	1.7	58.5	1.3	51.3
74 Vigoro V442N RR	5.00	0.0	59.3	6.0	53.3
75 Vigoro V46N3 RR	0.00	2.3	44.6	0.7	37.7
76 Vigoro V49N3 RR	1.67	1.3	55.2	0.0	46.2

LSD (P=.05)

1.490

2.30

11.91

2.98

12.47

**NOTES:**

1. Disease ratings were made on a scale of 0-10, where 0=no disease and 10=the most disease possible.
2. FLS = Frogeye Leaf Spot, SDS = Sudden Death Syndrome, CLB = Cercospora Leaf Blight, SC = Stem Canker.
3. Diseases were rated at Milan Experiment Station (MES) on September 12, 2002, and plots were harvested on October 29, 2002.
4. Stem Canker was rated on September 3, 2002, at West Tennessee Experiment Station (WTES), and plots were harvested on September 13, 2002.

**Table 35. Soybean Disease Ratings and Yields, Maturity Group III Roundup Ready, Milan and West Tennessee Experiment Stations, 2002**

Brand-Variety <sup>1,2,3,4</sup>	MES	MES	MES	WTES	WTES
	FLS	SDS	Bu/A	SC	Bu/A
1 Adler 395 t	0.3	0.0	62.0	0.0	32.70
2 Armor 39-E9	3.7	0.3	56.4	0.0	35.73
3 Asgrow AG 3701	1.0	1.3	52.9	0.0	36.57
4 Asgrow AG 3703	5.7	0.0	47.9	0.0	36.80
5 Asgrow AG 3902	7.7	0.0	41.6	0.0	35.53
6 Delta King 3862	7.0	0.0	53.1	0.0	35.00
7 Delta King 3964	4.7	0.0	58.9	0.7	37.10
8 Delta King 3968	4.3	1.3	60.1	0.7	37.40
9 Delta King DK XTJ033 RR	4.3	0.3	56.3	0.0	33.30
10 Delta King DK 3961RR	4.7	1.0	51.5	0.0	39.97
11 Deltapine DPX 3761 RR	0.0	1.7	63.4	0.0	34.70
12 Deltapine DPX 3819 RR	7.0	1.7	43.8	0.0	28.97
13 Deltapine DPX 3940 RR	7.3	0.0	52.0	0.0	32.20
14 DynaGro DG 3373	0.3	1.0	60.8	0.0	32.83
15 FFR 3975	0.0	0.3	60.9	0.3	33.83
16 G. Harvest 3983	5.3	0.3	61.3	5.0	33.40
17 Hornbeck HBK R 3980	9.7	1.0	46.2	0.7	31.90
18 NK Brand S39-Q4	4.7	0.7	53.5	1.3	37.80
19 Pioneer 93B67	0.3	0.3	60.9	0.7	33.53
20 Pioneer 93B68	2.0	0.0	64.4	0.0	35.93
21 Pioneer 93B72	8.7	0.7	56.0	0.0	36.60
22 Steyer 3811	10.0	0.0	38.8	0.0	34.27
23 Terral TVX 39R201	7.7	0.7	47.5	0.0	37.43
24 Vigoro V382	0.0	1.7	56.3	0.0	34.13
LSD (P=.05)	1.69	1.24	7.03	1.28	5.926

**NOTES:**

1. Disease ratings were made on a scale of 0-10, where 0=no disease and 10=the most disease possible.
2. FLS = Frogeye Leaf Spot, SDS = Sudden Death Syndrome, SC = Stem Canker.
3. Disease ratings were made at MES on August 29, 2002, and plots were harvested on September 13, 2002. Stem Canker ratings were made at WTES on September 3, 2002, and plots were harvested September 9, 2002.
4. Plots at MES were under pivot irrigation.



**Table 36. Soybean Yields, Maturity Group III Roundup Ready, Weakley County, 2002.**

Brand-Variety	Bu/A
NK Brand S39-Q4	38.30
Asgrow AG 3703	38.23
Terral TVX 39R201	38.13
Deltapine DPX 3940 RR	36.80
Delta King DK 3961RR	36.43
Deltapine DPX 3761 RR	36.23
Deltapine DPX 3819 RR	34.80
Delta King 3862	34.53
Steyer 3811	34.37
Vigoro V382	34.37
FFR 3975	33.17
Pioneer 93B68	32.20
Adler 395	31.23
Delta King 3964	30.93
Asgrow AG 3701	30.47
Asgrow AG 3902	30.40
Armor 39-E9	30.33
Hornbeck HBK R 3980	30.30
Dyna-Gro DG 3373	30.13
Pioneer 93B67	29.30
Delta King 3968	29.27
Pioneer 93B72	28.80
Golden Harvest 3983	26.47
Delta King DK XTJ033 RR	25.13

LSD (P=.05)

9.56

**Table 37. Variety Reaction to Foliar Fungicide Application, Milan Experiment Station, 2002.**

Brand-Variety <sup>1,2,3</sup>	Treated			Untreated			Yield Diff. Bu/A Inc.+ or -
	FLS	SDS	Bu/A	FLS	SDS	Bu/A	
1 Asgrow AG4603	4.18	3.02	30.3	7.67	1.33	31.9	-1.6
2 Asgrow AG4403	5.67	1.33	47.8	5.00	1.67	42.1	5.7
3 Asgrow 4702	4.50	5.33	28.0	7.00	5.17	25.8	2.2
4 S.G. 498	4.14	1.96	50.7	6.33	0.67	38.5	12.2
5 Asgrow 5427	0.67	4.67	58.3	0.33	5.33	50.6	7.7
6 Asgrow 5301	2.67	3.00	54.9	4.67	3.00	45.9	9.0
7 Asgrow 5501	2.33	1.33	53.6	5.17	1.67	52.7	0.9
8 Asgrow 5701	1.33	0.67	55.3	1.67	1.00	55.8	-0.5
9 Asgrow 5603	6.67	4.00	36.8	8.00	3.33	30.0	6.8
10 Delta King 4868	4.33	1.00	46.7	6.00	0.67	41.2	5.5
11 Delta King 4965	5.43	1.51	27.2	7.33	0.33	26.7	0.5
12 Delta King 4461	3.00	1.00	48.1	5.33	1.00	42.2	5.9
13 Delta King 5366	1.00	0.33	47.8	1.00	0.33	43.9	3.9
14 Delta King 5465	4.33	0.67	53.4	6.33	0.67	39.8	13.6
15 Delta King 5661	2.00	0.33	47.5	2.33	0.00	41.3	6.2
16 Delta King 5668	0.33	0.67	57.8	1.00	0.33	57.9	-0.1
17 Deltapine 4690	3.33	1.00	39.3	4.00	1.00	40.7	-1.4
18 Deltapine 5110	3.43	1.51	38.1	4.00	1.00	41.2	-3.1
19 Deltapine 5414	0.00	1.83	50.9	0.00	3.00	53.2	-2.3
20 Deltapine 5644	0.33	0.67	57.5	0.67	1.00	59.4	-1.9
21 FFR 5485	0.68	1.52	54.8	0.33	2.33	48.7	6.1
22 FFR 557	5.50	1.67	48.4	7.00	3.00	32.1	16.3
23 FFR 5542	2.00	1.00	52.0	2.67	1.00	44.9	7.1
24 Garst 4512	3.17	1.67	49.6	4.50	1.00	38.5	11.1
25 Garst 5512	4.67	0.67	54.7	6.67	0.67	39.1	15.6
26 Hartz H4454	3.00	0.67	51.3	4.33	1.00	39.1	12.2
27 Hartz H5444	4.33	0.33	56.5	6.67	0.33	42.4	14.1
28 Pioneer 94B13	0.67	0.67	34.8	1.00	0.67	36.1	-1.3
29 Pioneer 94B74	4.33	1.33	37.1	5.33	1.00	32.9	4.2
30 Pioneer 94B73	0.67	3.17	42.1	0.33	2.00	39.6	2.5
31 Pioneer 95B32	4.17	2.00	46.8	6.00	1.33	35.6	11.2
32 Pioneer 95B42	2.67	1.00	46.0	4.00	1.33	37.3	8.7
33 Pioneer 95B43	2.67	1.00	48.6	3.83	1.00	37.4	11.2
34 TCV Holladay	0.67	0.67	56.6	1.33	0.67	59.5	-2.9
35 TCV Hutcheson	3.83	2.00	41.3	6.33	0.33	39.0	2.3
36 USG/TCV BG 4401	2.33	1.33	45.0	4.33	2.00	35.1	9.9
37 USG/TCV Anand	1.00	0.00	70.7	1.33	1.00	73.4	-2.7
38 USG/TCV 5601 T	1.00	1.33	66.6	1.67	2.00	51.4	15.2
39 USG 510	3.00	2.50	53.0	5.83	2.50	40.2	12.8
40 USG 540	4.00	0.33	55.8	6.33	2.33	39.0	16.8

LSD (P=.05)      1.448    1.661    12.06    1.476    1.853    12.97    15.40

**NOTES:**

1. Disease ratings were made on a scale of 0-10, where 0=no disease and 10=the most disease possible.
2. FLS = Frogeye Leaf Spot (on 8/28), SDS = Sudden Death Syndrome (on 8/28), Bu/A = bushels per acre adjusted for moisture.
3. Harvested: 11/7/02.

## CYST NEMATODES

In 2002, 682 soybean cyst nematode samples were pulled from 389 fields in 15 counties. Of the 682 samples, 330 (48%) had some cysts present. Thirty-four percent (234 samples) contained 1-50 cysts/pt. of soil and 14 percent (96) had damaging levels of 50+ cysts/pt. of soil. The highest cyst counts were from Weakley County where 80 of the 115 samples submitted were infested with cysts. Thirty-five of those infested samples were at damaging levels. The sampling program will continue this fall and winter to obtain as many more samples as possible.

**Table 38. Summary of findings from the 2002 SCN sampling season.**

<u>County</u>	<u># Fields</u>	<u># Samples</u>	<b>Cyst Counts</b>		
			<u>1 to 50</u>	<u>51 to 100</u>	<u>&gt;100</u>
<b>Cannon</b>	<b>123</b>	<b>266</b>	<b>103</b>	<b>13</b>	<b>3</b>
<b>Chester</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Coffee</b>	<b>9</b>	<b>13</b>	<b>4</b>	<b>0</b>	<b>0</b>
<b>Dyer</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>Gibson</b>	<b>37</b>	<b>38</b>	<b>16</b>	<b>3</b>	<b>7</b>
<b>Henderson</b>	<b>26</b>	<b>43</b>	<b>15</b>	<b>2</b>	<b>8</b>
<b>Henry</b>	<b>10</b>	<b>10</b>	<b>5</b>	<b>1</b>	<b>1</b>
<b>Humphreys</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>
<b>Lake</b>	<b>16</b>	<b>32</b>	<b>8</b>	<b>1</b>	<b>0</b>
<b>Lauderdale</b>	<b>25</b>	<b>39</b>	<b>6</b>	<b>1</b>	<b>0</b>
<b>Madison</b>	<b>16</b>	<b>16</b>	<b>2</b>	<b>1</b>	<b>4</b>
<b>Obion</b>	<b>18</b>	<b>45</b>	<b>17</b>	<b>4</b>	<b>0</b>
<b>Tipton</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>0</b>
<b>Warren</b>	<b>17</b>	<b>52</b>	<b>12</b>	<b>3</b>	<b>4</b>
<b>Weakley</b>	<b>49</b>	<b>115</b>	<b>44</b>	<b>11</b>	<b>25</b>
<b>TOTALS</b>	<b>389</b>	<b>682</b>	<b>234</b>	<b>43</b>	<b>53</b>

**Observation and Conclusions:**

Since the program started, we have sampled approximately 94,550 acres and pulled about 3,782 samples. Approximately 50 percent of the samples contained SCN. Some of these samples were taken after dry seasons in 1997-99 when SCN populations were down.

**Value:** When soybean producers receive their “free” soil analysis report for SCN, they will be able to select soybean varieties, cultural practices, nematicides and control strategies that will

increase their production and reduce the populations of SCN and at the same time slow down the advancement of new races. Hopefully, other producers not on this program will see the value of sampling their fields.

An even greater value stems from the fact that through this program we were able to show that a significant percentage of SCN infested fields contain Race 2. This is a very important finding since there are only two commercially available “conventional” varieties with resistance to Race 2. There are no “round-up ready” varieties on the market with Race 2 resistance. Breeders were alerted so that they can begin to incorporate Race 2 resistance into their breeding programs.

There is no doubt that the cyst nematode numbers vary from field to field. Producers should soil sample every soybean field every year and keep a record so they can be proactive about their control strategies. This is especially a good year to sample because SCN counts will probably be high, and the UT Extension Service will run the samples free-of-charge through the Soybean Promotion Board grant.

**INSECT RATINGS**  
**Gary L. Lentz, Associate Professor**  
**Department of Entomology and Plant Pathology**

**Table 38. Damage by *Dectes* stem borer and yield of 20 Group V soybean varieties at Jackson in 2002.**

Yield Rank	Variety	Number damaged plants per 30 row ft.	Yield Bu/Acre
1	Delta King DK 5995G	1.8 de	42.7 a
2	Asgrow 5427G	6.2 bcde	40.3 ab
3	Pioneer 95B33 G	2.4 de	40.2 ab
4	MO Anand B	0.2 e	39.8 ab
5	USG 5601T	5.2 cde	39.3 ab
6	FFR 5700 G	2.4 de	38.4 abc
7	Hornbeck 5991 T	5.6 cde	37.9 abc
8	TN 5002 T	3.4 cde	37.3 abc
9	Delta King DK 5850	12.2 b	37.1 abc
10	NC Holladay G	3.2 de	36.9 abc
11	MO Delsoy 5500	4.4 cde	36.7 abc
12	Armor 52-C2	6.0 bcde	34.1 abcd
13	MD Manokin	7.2 bcd	34.0 abcd
14	VA V 96-0340	10.0 bc	31.5 abcde
15	Asgrow 5944	1.8 de	31.1 bcde
16	Deltapine DP 4748S	2.0 de	30.8 bcde
17	5601 T	7.0 bcde	30.2 bcde
18	VA Hutcheson G	6.4 bcde	27.9 cde
19	USG 550 n STS	27.2 a	25.3 de
20	Vigoro V521 STS	24.6 a	22.8 e
	Mean:	7.0	34.7
	CV (%)	64.1	21.4
	LSD (0.05)	5.64	9.37
	Treatment Prob(F)	0.0001	0.0014

Planted 24 May 02. *Dectes* damage evaluated 31 Oct 02. Harvested 01 Nov 02.