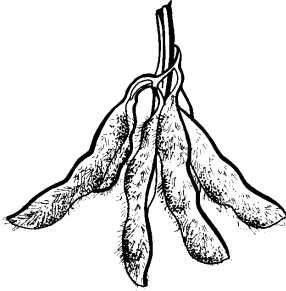


# Soybean Disease Ratings and Yields



## 2002 Test Summaries

Variety Reactions to:

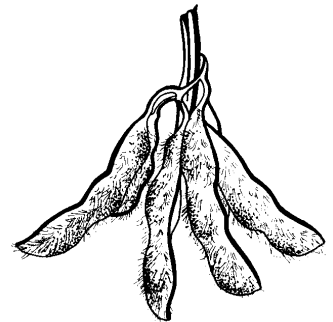
Stem Canker (SC)  
Frogeye Leaf Spot (FLS)  
Cercospora Leaf Blight (CLB)  
Sudden Death Syndrome (SDS)  
Soybean Cyst Nematode (SCN)  
Foliar Fungicides

by

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funded by

***Tennessee Soybean Promotion Board***

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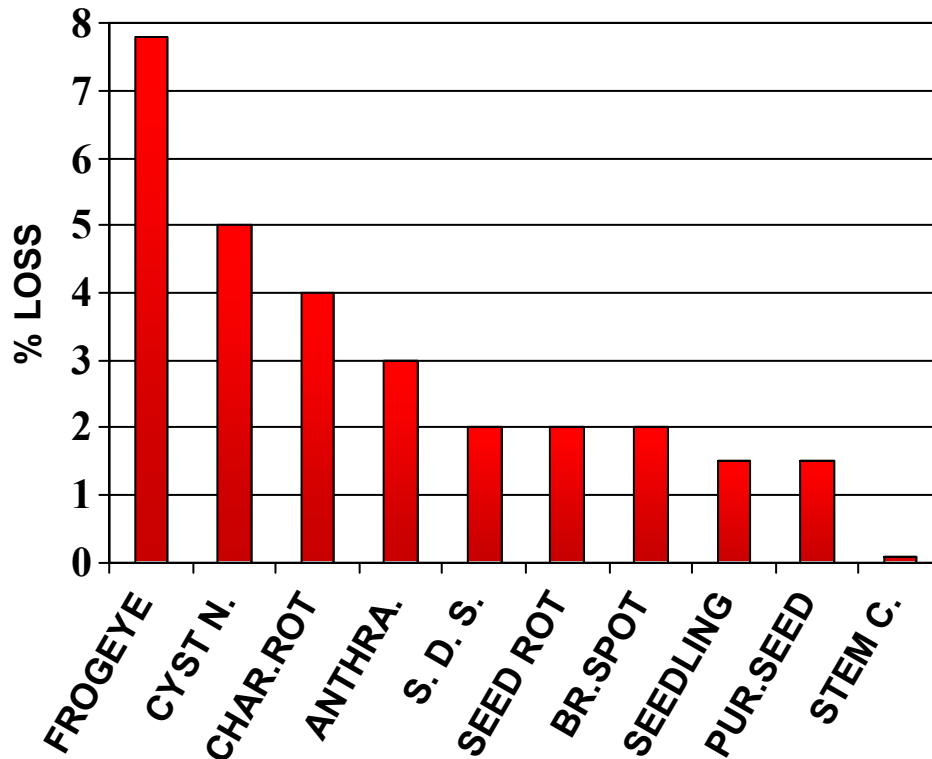
# **SOYBEAN DISEASE LOSS ESTIMATE FOR TENNESSEE, 2002**

**TOTAL LOSS = 28.81 %**

**TOTAL BU. LOST =**

**10,325,504**

**TOTAL \$ LOST = 51,627,000**



## Report for 2002

### Tennessee Soybean Promotion Board by Melvin A. Newman, Professor

**Title:** Evaluation of Soybean Cultivars for Resistance to Sudden Death Syndrome (SDS).

#### **Personnel:**

Melvin A. Newman, Principal Investigator

Bob Williams, Extension Area Specialist

Blake Brown, Superintendent-Milan Experiment Station

#### **Objectives:**

1. To evaluate the effect of Sudden Death Syndrome on all available soybean cultivars.
2. To make this information available in a timely fashion to soybean producers so that they might use resistant cultivars for control of SDS.
3. To increase the exposure of the Soybean Promotion Board and the University of Tennessee to the soybean producers in Tennessee concerning their cooperative efforts to improve the economics of production through better disease control.

#### **Procedures:**

1. A two-acre soybean plot was prepared and planted in a conventional manner on May 16, 2002, in Weakley County, TN. The plot was replanted on May 24 due to flooding by a 7" rain on May 17.
2. Planting equipment: a four-row Case I.H. planter modified with Almaco cone seed hoppers.
3. Plot information: Plots were two rows wide and 25' long and trimmed to 22'. Rows were 36" apart. Plots were randomized in a complete block design. Squadron was sprayed at 3 pts./A in 15 gallons of water/A. B.C. after planting. A total of 200 varieties were replicated three times, making 600 plots.
4. Harvest: Yields were harvested on October 25 for the group III's. No disease was present; therefore, yields were not determined for the other maturity groups. Seed moisture was adjusted to 13 percent for all varieties. The same varieties were used at the Milan Experiment Station (MES), and because there were severe SDS symptoms in that location, ratings were recorded at Milan.

#### **Observation and Conclusions:**

The average SDS ratings at MES ranged from 0 to 7.3 among 80 varieties of the MG V Round-up Ready, and the average yield was 41.1 bu/A. Some individual plots rated as high as 9.0. There were 37 varieties that rated 0-2.1 (low susceptibility) for SDS and averaged 43.8 bu/A; 31 varieties rated 2.1-4.9 (medium susceptibility) and averaged 38.9 bu/A; and nine varieties rated 5.0-7.3 (high susceptibility) and averaged 34.9 bu/A.

That is an average increase of 4.0 bu/A from medium to low susceptibility and an 8.9 bu/A increase from high susceptibility to low susceptibility.

The average difference between the top five high yielding varieties (SDS rating = 1.7 and 61.6 bu/A) and the lowest yielding five varieties (SDS rating = 3.0 and 25 bu/A) is 36.6 bu/A. The highest yielding variety was DPX 5734 RR at 70.4 bu/A with an SDS rating of 1.0. The lowest yielding variety was USG 7562 RR at 21.4 bu/A with an SDS rating of 0.7, but it had an FLS rating of 7.7 and an SC rating of 9.0. This is a difference of 49 bu/A between the highest yielding variety and the lowest yielding variety.

There were 20 varieties in the MG V Conventional test at the MES with an average yield of 39 bu/A. The SDS ratings ranged from 0.3 to 6.8. The highest yield was 67.6 bu/A for Anand with a rating of 0.7, and the lowest yield was Vigoro 521 with 21.5 bu/A and a rating of 6.8. There were five varieties with SDS ratings greater than 3.9.

At the MES, the 76 varieties in the MG IV Round-up Ready test averaged 40.3 bu/A with an average SDS rating of 1.4. The highest yielding soybean variety was Vigoro 442 with 59.3 bu/A and a 0.0 SDS rating. The lowest yielding was Eagle ES Prairie with 16.2 bu/A and an SDS rating of 8.3. There were 57 varieties with a 1.9 SDS rating or less and 19 with an SDS rating of 2.0 or higher.

In the MG III Round-up Ready test, there were 24 varieties that averaged 54.4 bu/A and an SDS rating of only 0.6. The highest yielding variety was Pioneer 93B68 with 64.6 bu/A and an SDS rating of 0.0. The lowest yield was Steyer 3811 with 38.8 bu/A and an SDS rating of 0.0. There were no SDS ratings above 1.7 in the MG III RR varieties.

<b>SDS Tests – 2002 Irrigated Highs and Lows of Yields and Ratings Milan Experiment Station</b>				
<b>Average, Highest, and Lowest</b>	<b>V RR</b>	<b>V C</b>	<b>IV RR</b>	<b>III RR</b>
Average Yield (bu/A)	40.7	38.9	40.3	54.4
Average SDS Rating	2.6	2.4	1.4	0.6
Highest Yielding Variety	70.4	67.6	59.3	64.6
SDS Rating for that Variety	1.0	0.7	0.0	0.0
Lowest Yielding Variety	21.4	21.5	16.2	38.8
SDS Rating for that Variety	0.7	6.8	8.3	0.0*

\*Group III RR – the lowest yielding variety (Steyer 3811) had "0" for SDS rating but 10.0 for FLS.

It is clear that susceptibility to SDS can vary greatly from one variety to another. SDS was shown to be very destructive, and producers could increase or decrease their yields significantly simply by choosing a certain variety. Although these tests were conducted using the best scientific methods available, environmental and disease

conditions could vary greatly for producers from field to field and from year to year and cause research results to vary as well.

<b>SDS Tests – 2002</b>				
<b>Percentage of Varieties with SDS</b>				
<b>SDS Susceptibility</b>	<b>V RR</b>	<b>V C</b>	<b>IV RR</b>	<b>III RR</b>
Detectable	99	100	90	66
Low	32	45	65	66
Moderate	49	35	18	0
Severe	18	20	7	0

The highest percentage of SDS infection occurred in the MG V Round-up Ready and Conventional groups with 18-20 percent of the ratings in the severe category. The MG III Round-up Ready varieties had the lowest amount of SDS with none in the severe or moderate rating (see above chart).

**Report for 2002  
Tennessee Soybean Promotion Board  
by Melvin A. Newman**

**Title:** Evaluation of Soybean Cultivars for Resistance to Frogeye Leaf Spot (FLS).

**Personnel:**

Melvin A. Newman, Professor

Bob Williams, Extension Area Specialist

Fred Allen, Professor

Blake Brown, Superintendent-Milan Experiment Station

**Objectives**

1. To evaluate the effect of natural infections of Frogeye Leaf Spot on available soybean cultivars.
2. To make this information available to soybean producers in a timely fashion.
3. To increase the exposure of the Soybean Promotion Board and the University of Tennessee to the soybean producers of Tennessee concerning their cooperative efforts to improve the economics of production through better disease control.
4. To increase yields and profits to Tennessee soybean growers.

**Procedures:**

1. Equipment: A two-acre soybean plot was planted no-till at the Milan Experiment Station on May 8 with a four-row Case I.H. 900 planter with cone seed attachments.
2. Plot information: The 200 varieties were planted on two-row plots with 36" centers and 25' long. Each plot was randomized and replicated three times. Irrigation was provided with a center pivot system.
3. Disease ratings: Frogeye leaf spot (FLS) ratings were taken on September 12 from the Milan Experiment Station plot. The rating scale was 0-10 with 0=no detectable disease and 10=complete defoliation and severe yield loss. FLS severity was fairly high this season.

**Observation and Conclusions:**

Of the 80 varieties in the MG V Round-up Ready test, there were only four that had no detectable levels of FLS. There were 23 varieties that rated low for FLS (0.3-3.0) and 13 varieties that rated a medium susceptibility (3.1-5.9). There were 39 varieties that rated high susceptibility (6.0-10.0). Considerable yield loss could be expected in this category.

All the MG V Conventional varieties had detectable levels of FLS. There were seven with a low level of FLS (0.3-1.9), five with a medium level (2.0-5.9), and eight with a high rating of (6.0-7.7) for FLS.

In the MG IV Round-up Ready test 69 of the 76 varieties had detectable levels of FLS. There were 13 varieties that rated low (0.3-3.9), 24 varieties that rated medium (4.0-5.9), and 32 varieties that rated high (6.0-10.0) for susceptibility to FLS.

The MG III Round-up Ready test had 21 of the 24 varieties with detectable levels of FLS. There were five varieties in the low susceptibility range (0.3-2.9), eight varieties in the medium range (3.0-6.0), and eight varieties in the high susceptibility range (7.0-10.0).

Frogeye Leaf Spot Tests - 2002 Milan Experiment Station Percent of Varieties with Frogeye Leaf Spot Symptoms				
Frogeye Leaf Spot Susceptibility	V RR	V C	IV RR	III RR
<b>Detectable</b>	<b>95</b>	<b>100</b>	<b>91</b>	<b>88</b>
<b>Low</b>	<b>29</b>	<b>35</b>	<b>17</b>	<b>21</b>
<b>Moderate</b>	<b>17</b>	<b>25</b>	<b>32</b>	<b>33</b>
<b>Severe</b>	<b>49</b>	<b>40</b>	<b>42</b>	<b>34</b>

In conclusion, these FLS tests show that nearly all varieties tested have some FLS. The high percentages in the moderate to severe rating indicate that well over 60% of all maturity groups are at risk of yield loss.

### **Cercospora Leaf Blight (CLB)**

Although not officially in the protocol of the Frogeye Leaf Spot tests, ratings were recorded for CLB on the MG V RR's. Of the 80 varieties in the test, 61 had detectable levels of CLB. Forty-seven varieties rated in the low range (0.3-1.9) and 11 varieties rated in the medium range (2.0-3.9) while only three rated in the high range of susceptibility (4.4-5.7). Foliar fungicides can reduce the severity of this disease as well as Frogeye Leaf Spot.



Cercospora Leaf Blight – 2002 ( <i>Cercospora kikuchii</i> ) Percentage of Varieties with Cercospora Leaf Blight (CLB)	
CLB Susceptibility	V RR
Detectable	77
Low	59
Medium	14
High	4

### Soybean Foliar Fungicide Trials

Although not an official part of the protocol for variety rating or for the 40-variety spray test for foliar diseases, conducting a foliar fungicide trial conducted in the same area seemed like a good plan.

A susceptible variety (Asgrow 5501 RR) was sprayed at the R<sub>3</sub> growth stage (early pod set) on July 30 before FLS had reached 10% infection level. A backpack CO<sub>2</sub> sprayer was used to apply each fungicide in 15 gallons of water per acre. Plots were 50 feet long and two rows wide on 30" centers and replicated four times. A similar test was sprayed adjacent to the first spray test on September 3, after FLS had increased to about the 50% infection level.

Results: In the R<sub>3</sub> sprayed soybean, Quadris at 12.3 oz/A rate increased the yields by 8.1 bu/A, and at the lower rate of 6.2 oz/A, increased yields by 6.0 bu/A. Bravo Ultrex 82.5 WG at 2.0 lbs/A increased yields by 4.1 bu/A. Topsin-M 70 WP only increased the yield by 0.7 bu/A. Foliar ratings for FLS, percent defoliation, and amount of Anthracnose at harvest time all had responses similar to the yield results (See Chart 1).

The late R<sub>6</sub> foliar spray test gave very little, if any, control of FLS or Anthracnose. The yield responses were very poor, indicating that if producers are planning to spray a foliar fungicide, they must spray early at the R<sub>3</sub> growth stage before diseases like FLS get started (See Chart 2).

### Chart 1

Soybean Foliar Fungicide Test  
MES - 2002  
Sprayed at R<sub>3</sub> Growth Stage  
(10% infection)

Fungicide	Rate/A	FLS 8-28	FLS 9-11	% Defol. 9-18	Anthra. 11-8	Test Wt. 11-8	Bu/A 11-8
Untreated	--	8.4	8.0	8.5	9.0	52.7	26.8
Quadris	6.2 oz.	4.3	3.6	4.3	4.5	53.2	32.8
Quadris	12.3 oz.	2.1	2.4	1.8	2.5	53.4	34.9
TOPSIN - M	0.5 lb.	5.1	4.6	8.0	7.0	52.9	27.5
BRAVO Ultrex	2.0 lb.	2.6	2.8	3.3	5.0	52.4	30.9
LSD (P=.05)		1.414	1.453	1.77	0.97	0.95	4.11

### Chart 2

Soybean Foliar Fungicide Test  
MES-2002  
Later Spraying at R<sub>6</sub> (50% infection)

Fungicide	Rate/A	FLS 9-19	Anthra. 11-8	Test Wt. 11-8	Bu/A 11-8
Untreated	--	9.0	9.0	52.5	20.1
Quadris	6.2 oz	7.7	7.0	52.2	24.3
Quadris	12.3 oz.	8.3	7.0	52.4	20.2
Topsin-M	0.5 lb.	7.3	5.3	52.6	20.3
Bravo Ultrex	2.0 lb.	9.3	8.0	52.0	19.6
Bravo Ultrex Quadris	1.0 lb. 6.2	8.7	6.7	52.7	19.3
LSD (P=.05)		2.34	2.23	0.68	5.27

**Report for 2002**  
**Tennessee Soybean Promotion Board**  
**by Melvin A. Newman, Professor**

**Title:** Evaluation of Soybean Cultivars for Resistance and Control of Foliar Diseases such as Anthracnose, Diaporthe/Phomopsis Complex, Frogeye Leaf Spot, and Cercospora Leaf Blight.

**Personnel:**

Melvin Newman, Principal Investigator  
Bob Williams, Area Extension Specialist  
Fred Allen, Variety Specialist and Coordinator  
Blake Brown, Milan Experiment Station

**Objectives:**

1. To evaluate the relative field resistance of available commercial soybean cultivars to foliar diseases.
2. To evaluate the degree of control by the use of a foliar fungicide for available commercial soybean cultivars.
3. To make information available to all soybean producers in a timely manner so they may use this information to help reduce foliar disease losses and thereby increase profits.
4. To increase exposure of the Soybean Promotion Board and the University of Tennessee to soybean producers of Tennessee concerning their cooperative efforts to improve the economics of production through better disease control.

**Procedures:**

1. A two-acre soybean plot was established under pivot irrigation at the MES where foliar diseases are known to occur. Forty commercial soybean cultivars were planted in a randomized complete block design with three replications. Varieties from MG IV's and V's with both Round-up Ready and conventional genetics were tested.
2. Each variety was sprayed with a foliar fungicide (Topsin-M at ½ lb/A). Each variety also had an unsprayed plot beside it.
3. Disease ratings were made for Frogeye Leaf Spot and Sudden Death Syndrome using the usual scale of 0-10.
4. Yields were determined by harvesting with a two-row combine.

5. Data were summarized and subjected to statistical analysis.

**Observation and Conclusions:**

There are many variables in disease control and the use of fungicides to control foliar diseases. Varieties differ in their genetic ability to produce seed as well as their susceptibility to other non-foliar diseases such as SDS or charcoal rot. However, good results were obtained with one application of fungicide (Topsin-M at ½ lb/A) at early pod set. Each of the 40 varieties tested had treated and untreated side-by-side plots.

Even with a significant SDS and charcoal rot presence in the plots, 23 (57.5%) of the 40 varieties had at least a 5 bu/A increase. Twelve varieties (30%) had a 10+ bu/A increase in yield over their side-by-side check. Seven varieties (17.5%) increased yields by 5 bu/A or less. Only 10 varieties (25%) had no increase in yield. Nine of those 10 varieties with no yield increase had very low FLS ratings on the untreated checks. (See charts below).

<b>Foliar Fungicide Spray Test – 2002 40 Varieties Treated and Untreated Number and Percent of Varieties with Increased Yield</b>		
	<u># of Varieties</u>	<u>%</u>
Varieties with 10-17 bu/A increase	12	30.0
Varieties with 5-10 bu/A increase	11	27.5
Varieties with 0.5-5 bu/A increase	7	17.5
Varieties with no increase	10	25.0

Soybean producers should consider the foliar reaction to Frogeye Leaf Spot as well as other diseases and nematode ratings. In these tests, the increase in yield over the untreated plots ranged from a low of -3.1 bu/A to a +16.8 bu/A. Several varieties such as Anand are resistant to FLS or other diseases and can produce high yields without a foliar fungicide.

**Variety Reaction to Foliar Fungicide Application  
Frogeye Leaf Spot & SDS Ratings and Yield Differences  
Milan Experiment Station Summary - 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.

**Report for 2002**  
**Tennessee Soybean Promotion Board**  
**by Melvin A. Newman, Professor**

**Title:** Evaluation of Soybean Cultivars for Resistance to Stem Canker.

**Personnel:**

Melvin A. Newman, Professor

Bob Williams, Extension Area Specialist

Bob Hayes, Superintendent-West Tennessee Experiment Station

**Objectives:**

1. To inoculate and rate the available varieties for resistance to Stem Canker. This work was done on the West Tennessee Experiment Station.
2. To make readily available to producers a more reliable list of cultivars resistant to Stem Canker.
3. To reduce yield loss from Stem Canker and hence increase the net income of Tennessee soybean growers.
4. To provide valuable information to soybean breeders about the relative susceptibility or resistance of their breeding lines.
5. To increase the exposure of the Soybean Promotion Board and the University of Tennessee to the producers of Tennessee concerning their cooperative efforts to improve the economics of production through better disease management.

**Procedures:**

1. **Inoculum:** *Diaporthe phaseolorum* var. *caulivora* (DPC), the fungus that causes Stem Canker, was grown in the lab for three months on both PDA agar and on sterile white grain sorghum seeds. When soybean plants were at the V<sub>3</sub> growth stage, they were field inoculated four times on a weekly basis – twice with the infected grain sorghum and twice with a spore suspension grown on PDA.
2. **Equipment:** The plot was planted on May 6 at the West Tennessee Experiment Station with a four-row Case I.H. 900 planter with Almaco seed cone attachments.
3. **Plot information:** Plots were two rows wide, spaced at 36", and 25' long. Each variety was randomized and replicated three times in a complete block design. Squadron herbicide was sprayed at 3 pts./A in 15 gallons of water/A and B.C. after planting. A total of 180 varieties were replicated three times.
4. **Disease ratings:** Stem Canker ratings were made on September 3 for the MG III's

and on September 12 for the MG V's on a scale of 0-10, where 0=no disease and 10=most disease possible with 100 percent dead plants and little or no yield.

**Observation and Conclusions:**

In the MG V Round-up Ready test, 44 of the 80 had detectable levels of Stem Canker. There were 34 varieties in the low susceptibility range (0.3-1.9), six varieties in the moderate susceptibility range (2.0-3.9), and four in the high susceptibility range (4.0-7.3).

The MG V Conventional varieties, which were planted at the MES, had 17 of the 20 with detectable levels of Stem Canker. However, only two had severe damaging levels of Stem Canker (5.7-7.7). There were seven varieties with a moderate rating of 2.0-3.7 and eight varieties with a low rating of 0.3-1.3.

In the MG IV Round-up Ready test, 69 of the 76 varieties had detectable levels of Stem Canker at MES and 64 at WTES. At the MES, 36 varieties rated low susceptibility (0.2-1.9), and 18 rated moderate (2.0-4.9). There were only 10 that rated highly susceptible (5.0-10.0).

In the MG III Round-up Ready test, seven of the 24 varieties had detectable Stem Canker. Six of those varieties were in the low category (0.3-1.3), and one variety was in the severe category (5.0).

Stem Canker Tests - 2002 Percent of Varieties with Stem Canker MES, Milan, TN		
Stem Canker Susceptibility	V RR	V C
Detectable	24	85
Low	15	40
Moderate	6	35
Severe	3	10

Stem Canker Tests - 2002 Percent of Varieties with Stem Canker WTES at Jackson, TN			
Stem Canker Susceptibility	V RR	IV RR	III RR
Detectable	55	84	29
low	42	47	25
Moderate	8	24	0
Severe	5	13	4



In conclusion, these tests show that 24-85 percent of the varieties tested had detectable levels of Stem Canker (see charts). These tests show that the MG IV RR varieties rated higher in the severe range and also had the highest percent detectable Stem Canker at the WTES.

These tests show clearly that producers must carefully select Stem Canker-resistant varieties to avoid severe losses. These ratings are the only source of unbiased information available to Tennessee soybean producers for Stem Canker control.

**Report for 2002  
Tennessee Soybean Promotion Board  
by Melvin A. Newman**

**Title:** Soybean Cyst Nematode Sampling and Advisory Program (SCN)

**Personnel:**

Melvin A. Newman, Principal Investigator  
Pat Donald, USDA-ARS Nematologist  
Prakash Arelli, USDA-ARS, Soybean Breeder

**Objectives:**To assist and stimulate producers into taking more SCN samples.

1. Reduce loss from SCN and hence increase the net income of Tennessee soybean growers.
2. To provide valuable information to soybean growers on control of SCN.
3. To increase exposure of the Soybean Promotion Board and UT to the producers of Tennessee concerning their cooperative efforts to improve the economics of production through better disease and nematode management.
4. To identify new races of SCN and help the producer devise control methods.

**Procedures:**

1. Three part-time college summer/fall assistants were hired to help producers obtain soil samples for SCN analysis. The County Extension Agents coordinated the program in those counties that had SCN problems. Each county was allocated a certain number of "free" samples based on their history of soybean acres.
2. Soil samples were analyzed for the number of SCN per pint of soil.
3. Upon receipt of the SCN analysis form, the Extension agent scheduled visits with each producer to build a variety selection strategy for SCN control.
4. Certain fields were selected by Dr. Patricia Donald, USDA/ARS, to be resampled and located by aid of the Global Positioning System (GPS) for race determination in the greenhouse.

**Results:**

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.

**2002 SCN Sampling Season  
Summary of Findings**

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

Table 1

Soybean Disease Ratings and Yields  
Maturity Group V Roundup Ready  
Milan Experiment Station  
Summary - 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
Standard Deviation	1.02	1.66	1.00	1.01	7.39
CV	20.42	64.95	89.16	239.39	18.14
Replicate F	12.031	3.537	3.785	3.108	1.591
Replicate Prob(F)	0.0001	0.0314	0.0248	0.0474	0.2069
Treatment F	24.758	2.978	4.413	4.712	4.704
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.0001

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 2

Soybean Disease Ratings and Yields  
Maturity Group V Roundup Ready  
Milan Experiment Station  
Frogeye Leaf Spot and Cercospora Leaf Blight Ratings -  
2002

(descending order)

Brand-Variety <sup>1,2,3</sup>	FLS	Brand-Variety <sup>1,2,3</sup>	CLB
33 Eagle Punch RR	10.0	29 DynaGro DG 3518	5.7
31 Eagle ES Ranger RR	9.3	35 FFR 4900 RR	5.0
49 Midw. Perm. G. MPV 5302n RR	9.3	70 USG 7522n	4.7
62 Terral TV 54 R 11	9.0	61 Terral TV 52 R 42	3.7
68 USG 540n	9.0	71 USG 7547 RR	3.7
51 Morsoy RT 5440	8.7	13 Delta Grow 5250 RR	3.3
74 VA. 99VPI-67	8.7	27 DynaGro 3521N RR	3.3
79 Vigoro V 543	8.7	40 FFR RT 557 RR	3.0
12 Croplan RC 5454	8.3	11 Croplan RC 5252	2.7
52 Morsoy RT 5442	8.3	14 Delta Grow 5350 RR	2.3
75 VA. 99VPI-120	8.3	38 FFR 5542 RR	2.3
76 VA. V 99-3337	8.3	39 FFR RT 517 RR	2.3
18 Delta King DK 5465 RR	8.0	12 Croplan RC 5454	2.0
42 Garst 5512 RR/N	8.0	67 USG 510n	2.0
44 Hartz H 5223 RR	8.0	6 Asgrow 5501	1.7
45 Hartz H 5444	8.0	15 Delta Grow 5450 RR	1.7
3 Armor 54-Z4	7.7	36 FFR 5225 RR	1.7
21 Delta King DK 5961 RR	7.7	47 Hornbeck HBK R5422	1.7
29 DynaGro DG 3518	7.7	3 Armor 54-Z4	1.3
39 FFR RT 517 RR	7.7	23 Deltapine DP 5644 RR	1.3
54 Pioneer 95B32	7.7	31 Eagle ES Ranger RR	1.3
72 USG 7562n RR	7.7	37 FFR 5485 RR	1.3
7 Asgrow 5603	7.3	42 Garst 5512 RR/N	1.3
15 Delta Grow 5450 RR	7.3	48 Hornbeck HBK R5620	1.3
61 Terral TV 52 R 42	7.3	54 Pioneer 95B32	1.3
13 Delta Grow 5250 RR	7.0	55 Pioneer 95B42	1.3
27 DynaGro 3521N RR	7.0	56 Pioneer 95B43	1.3
40 FFR RT 557 RR	7.0	63 Terral TV 56 R 11	1.3
2 Armor 53-K3	6.7	69 USG 570n	1.3
56 Pioneer 95B43	6.7	5 Asgrow 5301	1.0
38 FFR 5542 RR	6.3	17 Delta King DK 5366 RR	1.0
57 Pioneer 95B96	6.3	30 DynaGro DG 3562	1.0
66 Terral TV 59 R 98	6.3	34 Eagle Trooper RR	1.0
1 Armor 5135	6.0	43 Garst 588 RR/N	1.0
6 Asgrow 5501	6.0	53 Morsoy RT 5620	1.0
35 FFR 4900 RR	6.0	58 Progeny 5660	1.0
60 Syngenta S 52-U3	6.0	66 Terral TV 59 R 98	1.0
70 USG 7522n	6.0	68 USG 540n	1.0
71 USG 7547 RR	6.0	72 USG 7562n RR	1.0



Brand-Variety <sup>1,2,3</sup>	FLS	Brand-Variety <sup>1,2,3</sup>	CLB
24 Deltapine DP 5806 RR	5.7	4 Armor 56-J6	0.7
34 Eagle Trooper RR	5.7	9 Asgrow 5901 RR	0.7
67 USG 510n	5.7	16 Delta Grow 5630 RR	0.7
78 Vigoro V 52N3 RR	5.7	20 Delta King DK 5668 RR	0.7
5 Asgrow 5301	5.3	28 DynaGro 3583N RR	0.7
11 Croplan RC 5252	5.3	32 Eagle Marshal RR	0.7
55 Pioneer 95B42	5.3	45 Hartz H 5444	0.7
77 Vigoro V 503 RR	5.3	46 Hartz H 5887 RR	0.7
9 Asgrow 5901 RR	4.7	59 Stine S 5502-4	0.7
50 Morsoy RT 5252	4.0	62 Terral TV 54 R 11	0.7
65 Terral TV 59 R 85	4.0	64 Terral TV 58 R 11	0.7
8 Asgrow 5701	3.3	65 Terral TV 59 R 85	0.7
69 USG 570n	3.3	8 Asgrow 5701	0.3
63 Terral TV 56 R 11	3.0	19 Delta King DK 5661 RR	0.3
64 Terral TV 58 R 11	3.0	24 Deltapine DP 5806 RR	0.3
48 Hornbeck HBK R5620	2.7	44 Hartz H 5223 RR	0.3
58 Progeny 5660	2.7	51 Morsoy RT 5440	0.3
73 USG 7582n RR	2.7	74 VA. 99VPI-67	0.3
80 Vigoro V 562N RR	2.7	77 Vigoro V 503 RR	0.3
4 Armor 56-J6	2.3	78 Vigoro V 52N3 RR	0.3
16 Delta Grow 5630 RR	2.3	79 Vigoro V 543	0.3
19 Delta King DK 5661 RR	2.3	80 Vigoro V 562N RR	0.3
59 Stine S 5502-4	2.3	1 Armor 5135	0.0
17 Delta King DK 5366 RR	2.0	7 Asgrow 5603	0.0
46 Hartz H 5887 RR	2.0	10 Asgrow AG 5903	0.0
28 DynaGro 3583N RR	1.7	18 Delta King DK 5465 RR	0.0
30 DynaGro DG 3562	1.3	21 Delta King DK 5961 RR	0.0
41 G. Harvest H-5422 RR	1.3	22 Deltapine DP 5414 RR	0.0
53 Morsoy RT 5620	1.3	25 Deltapine DP 5915 RR	0.0
20 Delta King DK 5668 RR	1.0	26 Deltapine DPX 5734 RR	0.0
37 FFR 5485 RR	1.0	33 Eagle Punch RR	0.0
23 Deltapine DP 5644 RR	0.7	41 G. Harvest H-5422 RR	0.0
36 FFR 5225 RR	0.7	49 Midw. Perm. G. MPV 5302n RR	0.0
14 Delta Grow 5350 RR	0.3	50 Morsoy RT 5252	0.0
25 Deltapine DP 5915 RR	0.3	52 Morsoy RT 5442	0.0
43 Garst 588 RR/N	0.3	57 Pioneer 95B96	0.0
22 Deltapine DP 5414 RR	0.0	60 Syngenta S 52-U3	0.0
26 Deltapine DPX 5734 RR	0.0	73 USG 7582n RR	0.0
32 Eagle Marshal RR	0.0	75 VA. 99VPI-120	0.0
47 Hornbeck HBK R5422	0.0	76 VA. V 99-3337	0.0

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.

Table 3

**Soybean Disease Ratings and Yields  
Maturity Group V Roundup Ready  
Milan Experiment Station  
Sudden Death Syndrome and Stem Canker Ratings - 2002**

(descending order)

Brand-Variety <sup>1,2,3</sup>	SDS	Brand-Variety <sup>1,2,3</sup>	SC
73 USG 7582n RR	7.3	72 USG 7562n RR	9.0
41 G. Harvest H-5422 RR	6.0	54 Pioneer 95B32	4.7
60 Syngenta S 52-U3	6.0	37 FFR 5485 RR	3.0
28 DynaGro 3583N RR	5.7	33 Eagle Punch RR	2.7
35 FFR 4900 RR	5.7	35 FFR 4900 RR	2.7
39 FFR RT 517 RR	5.7	31 Eagle ES Ranger RR	2.0
61 Terral TV 52 R 42	5.3	55 Pioneer 95B42	2.0
50 Morsoy RT 5252	5.0	27 DynaGro 3521N RR	1.3
74 VA. 99VPI-67	5.0	57 Pioneer 95B96	1.0
21 Delta King DK 5961 RR	4.7	64 Terral TV 58 R 11	1.0
70 USG 7522n	4.7	4 Armor 56-J6	0.7
75 VA. 99VPI-120	4.7	49 Midw. Perm. G. MPV 5302n RR	0.7
11 Croplan RC 5252	4.3	63 Terral TV 56 R 11	0.7
32 Eagle Marshal RR	4.3	65 Terral TV 59 R 85	0.7
16 Delta Grow 5630 RR	4.0	25 Deltapine DP 5915 RR	0.3
34 Eagle Trooper RR	4.0	26 Deltapine DPX 5734 RR	0.3
78 Vigoro V 52N3 RR	4.0	47 Hornbeck HBK R5422	0.3
5 Asgrow 5301	3.7	48 Hornbeck HBK R5620	0.3
48 Hornbeck HBK R5620	3.7	80 Vigoro V 562N RR	0.3
63 Terral TV 56 R 11	3.7	1 Armor 5135	0.0
66 Terral TV 59 R 98	3.7	2 Armor 53-K3	0.0
1 Armor 5135	3.3	3 Armor 54-Z4	0.0
44 Hartz H 5223 RR	3.3	5 Asgrow 5301	0.0
67 USG 510n	3.3	6 Asgrow 5501	0.0
71 USG 7547 RR	3.3	7 Asgrow 5603	0.0
31 Eagle ES Ranger RR	3.0	8 Asgrow 5701	0.0
46 Hartz H 5887 RR	3.0	9 Asgrow 5901 RR	0.0
52 Morsoy RT 5442	3.0	10 Asgrow AG 5903	0.0
7 Asgrow 5603	2.7	11 Croplan RC 5252	0.0
10 Asgrow AG 5903	2.7	12 Croplan RC 5454	0.0
17 Delta King DK 5366 RR	2.7	13 Delta Grow 5250 RR	0.0
24 Deltapine DP 5806 RR	2.7	14 Delta Grow 5350 RR	0.0
36 FFR 5225 RR	2.7	15 Delta Grow 5450 RR	0.0
38 FFR 5542 RR	2.7	16 Delta Grow 5630 RR	0.0
49 Midw. Perm. G. MPV 5302n RR	2.7	17 Delta King DK 5366 RR	0.0
55 Pioneer 95B42	2.7	18 Delta King DK 5465 RR	0.0
65 Terral TV 59 R 85	2.7	19 Delta King DK 5661 RR	0.0
76 VA. V 99-3337	2.7	20 Delta King DK 5668 RR	0.0
27 DynaGro 3521N RR	2.3	21 Delta King DK 5961 RR	0.0
40 FFR RT 557 RR	2.3	22 Deltapine DP 5414 RR	0.0

Brand-Variety <sup>1,2,3</sup>	SDS	Brand-Variety <sup>1,2,3</sup>	SC
47 Hornbeck HBK R5422	2.3	23 Deltapine DP 5644 RR	0.0
56 Pioneer 95B43	2.3	24 Deltapine DP 5806 RR	0.0
80 Vigoro V 562N RR	2.3	28 DynaGro 3583N RR	0.0
9 Asgrow 5901 RR	2.0	29 DynaGro DG 3518	0.0
13 Delta Grow 5250 RR	2.0	30 DynaGro DG 3562	0.0
14 Delta Grow 5350 RR	2.0	32 Eagle Marshal RR	0.0
25 Deltapine DP 5915 RR	2.0	34 Eagle Trooper RR	0.0
29 DynaGro DG 3518	2.0	36 FFR 5225 RR	0.0
43 Garst 588 RR/N	2.0	38 FFR 5542 RR	0.0
58 Progeny 5660	2.0	39 FFR RT 517 RR	0.0
59 Stine S 5502-4	2.0	40 FFR RT 557 RR	0.0
64 Terral TV 58 R 11	2.0	41 G. Harvest H-5422 RR	0.0
69 USG 570n	2.0	42 Garst 5512 RR/N	0.0
77 Vigoro V 503 RR	2.0	43 Garst 588 RR/N	0.0
22 Deltapine DP 5414 RR	1.7	44 Hartz H 5223 RR	0.0
23 Deltapine DP 5644 RR	1.7	45 Hartz H 5444	0.0
53 Morsoy RT 5620	1.7	46 Hartz H 5887 RR	0.0
57 Pioneer 95B96	1.7	50 Morsoy RT 5252	0.0
4 Armor 56-J6	1.3	51 Morsoy RT 5440	0.0
51 Morsoy RT 5440	1.3	52 Morsoy RT 5442	0.0
2 Armor 53-K3	1.0	53 Morsoy RT 5620	0.0
8 Asgrow 5701	1.0	56 Pioneer 95B43	0.0
26 Deltapine DPX 5734 RR	1.0	58 Progeny 5660	0.0
30 DynaGro DG 3562	1.0	59 Stine S 5502-4	0.0
42 Garst 5512 RR/N	1.0	60 Syngenta S 52-U3	0.0
12 Croplan RC 5454	0.7	61 Terral TV 52 R 42	0.0
15 Delta Grow 5450 RR	0.7	62 Terral TV 54 R 11	0.0
18 Delta King DK 5465 RR	0.7	66 Terral TV 59 R 98	0.0
19 Delta King DK 5661 RR	0.7	67 USG 510n	0.0
33 Eagle Punch RR	0.7	68 USG 540n	0.0
54 Pioneer 95B32	0.7	69 USG 570n	0.0
72 USG 7562n RR	0.7	70 USG 7522n	0.0
3 Armor 54-Z4	0.3	71 USG 7547 RR	0.0
6 Asgrow 5501	0.3	73 USG 7582n RR	0.0
20 Delta King DK 5668 RR	0.3	74 VA. 99VPI-67	0.0
37 FFR 5485 RR	0.3	75 VA. 99VPI-120	0.0
45 Hartz H 5444	0.3	76 VA. V 99-3337	0.0
62 Terral TV 54 R 11	0.3	77 Vigoro V 503 RR	0.0
79 Vigoro V 543	0.3	78 Vigoro V 52N3 RR	0.0
68 USG 540n	0.0	79 Vigoro V 543	0.0

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.

Table 4

Soybean Disease Ratings and Yields  
Maturity Group V Roundup Ready  
Milan Experiment Station  
Yields - 2002

(descending order)

Brand-Variety <sup>1,2</sup>	Bu/A
26 Deltapine DPX 5734 RR	70.4
22 Deltapine DP 5414 RR	62.5
30 DynaGro DG 3562	61.4
25 Deltapine DP 5915 RR	57.4
10 Asgrow AG 5903	56.4
23 Deltapine DP 5644 RR	56.2
43 Garst 588 RR/N	52.8
8 Asgrow 5701	52.4
47 Hornbeck HBK R5422	51.8
20 Delta King DK 5668 RR	50.9
17 Delta King DK 5366 RR	50.0
18 Delta King DK 5465 RR	49.9
36 FFR 5225 RR	49.9
46 Hartz H 5887 RR	49.8
53 Morsoy RT 5620	49.8
69 USG 570n	49.7
28 DynaGro 3583N RR	49.5
37 FFR 5485 RR	47.4
11 Croplan RC 5252	47.0
16 Delta Grow 5630 RR	46.7
14 Delta Grow 5350 RR	46.1
27 DynaGro 3521N RR	45.5
19 Delta King DK 5661 RR	45.3
9 Asgrow 5901 RR	45.0
58 Progeny 5660	44.8
59 Stine S 5502-4	44.0
4 Armor 56-J6	43.7
78 Vigoro V 52N3 RR	43.6
12 Croplan RC 5454	43.2
50 Morsoy RT 5252	43.0
68 USG 540n	42.3
45 Hartz H 5444	42.0
38 FFR 5542 RR	41.9
66 Terral TV 59 R 98	41.3
51 Morsoy RT 5440	41.1
29 DynaGro DG 3518	41.0
48 Hornbeck HBK R5620	40.7
64 Terral TV 58 R 11	40.5
5 Asgrow 5301	40.4
6 Asgrow 5501	40.3

Brand-Variety <sup>1,2</sup>	Bu/A
70 USG 7522n	40.0
32 Eagle Marshal RR	39.6
63 Terral TV 56 R 11	39.5
80 Vigoro V 562N RR	39.2
57 Pioneer 95B96	39.1
71 USG 7547 RR	38.0
67 USG 510n	37.9
54 Pioneer 95B32	37.7
13 Delta Grow 5250 RR	37.7
34 Eagle Trooper RR	37.7
73 USG 7582n RR	37.2
65 Terral TV 59 R 85	36.7
24 Deltapine DP 5806 RR	36.7
79 Vigoro V 543	36.4
15 Delta Grow 5450 RR	35.6
62 Terral TV 54 R 11	35.3
41 G. Harvest H-5422 RR	35.2
61 Terral TV 52 R 42	34.5
44 Hartz H 5223 RR	34.2
56 Pioneer 95B43	34.1
1 Armor 5135	34.0
42 Garst 5512 RR/N	33.3
77 Vigoro V 503 RR	32.9
55 Pioneer 95B42 g	32.5
52 Morsoy RT 5442	32.3
76 VA. V 99-3337	32.2
7 Asgrow 5603	32.0
31 Eagle ES Ranger RR	31.8
3 Armor 54-Z4	31.6
39 FFR RT 517 RR	31.6
21 Delta King DK 5961 RR	31.3
40 FFR RT 557 RR	30.9
2 Armor 53-K3	30.6
74 VA. 99VPI-67	29.7
35 FFR 4900 RR	27.7
49 Midw. Perm. G. MPV 5302n RR	27.5
33 Eagle Punch RR	27.3
60 Syngenta S 52-U3	25.8
75 VA. 99VPI-120	23.3
72 USG 7562n RR	21.4

NOTES:

1. Harvest was October 24, 2002, and all yields were adjusted to 13% moisture.
2. Plots were under pivot irrigation.

Table 5

Soybean Disease Ratings and Yields  
Maturity Group V Conventional  
Milan Experiment Station  
Frogeye Leaf Spot, SDS, Stem Canker, and Yields  
Summary - 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 6

Soybean Disease Ratings and Yields  
Maturity Group V Roundup Ready  
West Tennessee Experiment Station  
Stem Canker Ratings and Yields  
Summary - 2002

Brand-Variety <sup>1,2,3,4</sup>	SC	Bu/A	Brand-Variety <sup>1,2,3,4</sup>	SC	Bu/A
1 Armor 5135	0.0	38.2	41 G. Harvest H-5422 RR	0.0	36.0
2 Armor 53-K3	0.0	41.4	42 Garst 5512 RR/N	0.0	41.4
3 Armor 54-Z4	0.3	40.8	43 Garst 588 RR/N	0.0	41.6
4 Armor 56-J6	0.7	40.2	44 Hartz H 5223 RR	0.3	43.0
5 Asgrow 5301	0.0	45.9	45 Hartz H 5444	0.0	44.9
6 Asgrow 5501	0.0	47.5	46 Hartz H 5887 RR	0.0	40.5
7 Asgrow 5603	0.0	44.4	47 Hornbeck HBK R5422	0.3	37.5
8 Asgrow 5701	1.3	40.9	48 Hornbeck HBK R5620	1.7	40.9
9 Asgrow 5901 RR	1.0	46.5	49 Midw. Perm. G. MPV 5302n	1.0	44.4
10 Asgrow AG 5903	0.0	51.3	50 Morsoy RT 5252	0.0	49.6
11 Croplan RC 5252	0.0	41.1	51 Morsoy RT 5440	0.0	48.1
12 Croplan RC 5454	0.3	41.2	52 Morsoy RT 5442	0.0	49.3
13 Delta Grow 5250 R	0.3	36.8	53 Morsoy RT 5620	2.7	42.8
14 Delta Grow 5350 RR	1.0	38.9	54 Pioneer 95B32	4.3	43.6
15 Delta Grow 5450 R	0.0	39.6	55 Pioneer 95B42	2.7	38.1
16 Delta Grow 5630 RR	1.0	36.7	56 Pioneer 95B43	0.0	40.0
17 Delta King DK 5366 RR	1.7	44.2	57 Pioneer 95B96	4.0	47.0
18 Delta King DK 5465 RR	0.0	53.4	58 Progeny 5660	3.0	43.8
19 Delta King DK 5661 RR	0.0	45.5	59 Stine S 5502-4	0.0	45.4
20 Delta King DK 5668 RR	1.7	41.2	60 Syngenta S 52-U3	1.7	42.7
21 Delta King DK 5961 RR	0.0	45.2	61 Terral TV 52 R 42	1.0	49.1
22 Deltapine DP 5414 R	0.0	45.0	62 Terral TV 54 R 11	0.7	48.5
23 Deltapine DP 5644 RR	1.0	45.6	63 Terral TV 56 R 11	0.7	43.4
24 Deltapine DP 5806 RR	2.0	40.5	64 Terral TV 58 R 11	2.0	44.5
25 Deltapine DP 5915 RR	0.0	45.8	65 Terral TV 59 R 85	2.0	41.5
26 Deltapine DPX 5734 RR	1.7	47.4	66 Terral TV 59 R 98	0.3	48.7
27 DynaGro 3521N RR	0.0	39.8	67 USG 510n	0.3	39.2
28 DynaGro 3583N RR	1.0	45.6	68 USG 540n	1.0	48.4
29 DynaGro DG 3518	0.0	40.3	69 USG 570n	1.3	48.9
30 DynaGro DG 3562	0.3	50.6	70 USG 7522n	0.0	53.0
31 Eagle ES Ranger RR	0.0	45.1	71 USG 7547 RR	0.0	42.4
32 Eagle Marshal RR	0.3	38.8	72 USG 7562n RR	7.3	34.6
33 Eagle Punch RR	0.3	46.6	73 USG 7582n RR	0.7	57.3
34 Eagle Trooper RR	0.3	42.4	74 VA. 99VPI-67	0.0	43.4
35 FFR 4900 RR	0.0	52.5	75 VA. 99VPI-120	0.3	43.0
36 FFR 5225 RR	1.0	48.7	76 VA. V 99-3337	0.0	43.4
37 FFR 5485 RR	6.3	47.6	77 Vigoro V 503 RR	0.0	42.3
38 FFR 5542 RR	1.3	51.3	78 Vigoro V 5	0.0	43.4
39 FFR RT 517 RR	0.0	49.6	79 Vigoro V	0.0	43.0

Brand-Variety <sup>1,2,3,4</sup>	SC	Bu/A	Brand-Variety <sup>1,2,3,4</sup>	SC	Bu/A
40 FFR RT 557 RR	0.0	47.3	80 Vigoro V 562N RR	0.3	38.9
LSD (P=.05)	1.63	7.48			

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 18, 2002.
4. Plots were harvested October 2, 2002.



Table 7

**Soybean Disease Ratings and Yields  
Maturity Group V Roundup Ready  
West Tennessee Experiment Station  
Stem Canker Ratings and Yields - 2002**

(descending order)

Brand-Variety	SC	Brand-Variety	Bu/A
72 USG 7562n RR	7.3	73 USG 7582n RR	57.3
37 FFR 5485 RR	6.3	18 Delta King DK 5465 RR	53.4
54 Pioneer 95B32	4.3	70 USG 7522n	53.0
57 Pioneer 95B96	4.0	35 FFR 4900 RR	52.5
58 Progeny 5660	3.0	38 FFR 5542 RR	51.3
53 Morsoy RT 5620	2.7	10 Asgrow AG 5903	51.3
55 Pioneer 95B42	2.7	30 DynaGro DG 3562	50.6
24 Deltapine DP 5806 RR	2.0	39 FFR RT 517 RR	49.6
64 Terral TV 58 R 11	2.0	50 Morsoy RT 5252	49.6
65 Terral TV 59 R 85	2.0	52 Morsoy RT 5442	49.3
17 Delta King DK 5366 RR	1.7	61 Terral TV 52 R 42	49.1
20 Delta King DK 5668 RR	1.7	69 USG 570n	48.9
26 Deltapine DPX 5734 RR	1.7	36 FFR 5225 RR	48.7
48 Hornbeck HBK R5620	1.7	66 Terral TV 59 R 98	48.7
60 Syngenta S 52-U3	1.7	62 Terral TV 54 R 11	48.5
8 Asgrow 5701	1.3	68 USG 540n	48.4
38 FFR 5542 RR	1.3	51 Morsoy RT 5440	48.1
69 USG 570n	1.3	37 FFR 5485 RR	47.6
9 Asgrow 5901 RR	1.0	6 Asgrow 5501	47.5
14 Delta Grow 5350 RR	1.0	26 Deltapine DPX 5734 RR	47.4
16 Delta Grow 5630 RR	1.0	40 FFR RT 557 RR	47.3
23 Deltapine DP 5644 RR	1.0	57 Pioneer 95B96	47.0
28 DynaGro 3583N RR	1.0	33 Eagle Punch RR	46.6
36 FFR 5225 RR	1.0	9 Asgrow 5901 RR	46.5
49 Midw. Perm. G. MPV 5302n RR	1.0	5 Asgrow 5301	45.9
61 Terral TV 52 R 42	1.0	25 Deltapine DP 5915 RR	45.8
68 USG 540n	1.0	23 Deltapine DP 5644 RR	45.6
4 Armor 56-J6	0.7	28 DynaGro 3583N RR	45.6
62 Terral TV 54 R 11	0.7	19 Delta King DK 5661 RR	45.5
63 Terral TV 56 R 11	0.7	59 Stine S 5502-4	45.4
73 USG 7582n RR	0.7	21 Delta King DK 5961 RR	45.2
3 Armor 54-Z4	0.3	31 Eagle ES Ranger RR	45.1
12 Croplan RC 5454	0.3	22 Deltapine DP 5414 RR	45.0
13 Delta Grow 5250 RR	0.3	45 Hartz H 5444	44.9
30 DynaGro DG 3562	0.3	64 Terral TV 58 R 11	44.5
32 Eagle Marshal RR	0.3	49 Midw. Perm. G. MPV 5302n RR	44.4
33 Eagle Punch RR	0.3	7 Asgrow 5603	44.4
34 Eagle Trooper RR	0.3	17 Delta King DK 5366 RR	44.2
44 Hartz H 5223 RR	0.3	58 Progeny 5660	43.8

Brand-Variety	SC	Brand-Variety	Bu/A
47 Hornbeck HBK R5422	0.3	54 Pioneer 95B32	43.6
66 Terral TV 59 R 98	0.3	63 Terral TV 56 R 11	43.4
67 USG 510n	0.3	68 Vigoro V 52N3 RR	43.4
75 VA. 99VPI-120	0.3	74 VA. 99VPI-67	43.4
80 Vigoro V 562N RR	0.3	76 VA. V 99-3337	43.4
1 Armor 5135	0.0	44 Hartz H 5223 RR	43.0
2 Armor 53-K3	0.0	75 VA. 99VPI-120	43.0
5 Asgrow 5301	0.0	79 Vigoro V 543	43.0
6 Asgrow 5501	0.0	53 Morsoy RT 5620	42.8
7 Asgrow 5603	0.0	60 Syngenta S 52-U3	42.7
10 Asgrow AG 5903	0.0	34 Eagle Trooper RR	42.4
11 Croplan RC 5252	0.0	71 USG 7547 RR	42.4
15 Delta Grow 5450 RR	0.0	77 Vigoro V 503 RR	42.3
18 Delta King DK 5465 RR	0.0	43 Garst 588 RR/N	41.6
19 Delta King DK 5661 RR	0.0	65 Terral TV 59 R 85	41.5
21 Delta King DK 5961 RR	0.0	2 Armor 53-K3	41.4
22 Deltapine DP 5414 RR	0.0	42 Garst 5512 RR/N	41.4
25 Deltapine DP 5915 RR	0.0	20 Delta King DK 5668 RR	41.2
27 DynaGro 3521N RR	0.0	12 Croplan RC 5454	41.2
29 DynaGro DG 3518	0.0	11 Croplan RC 5252	41.1
31 Eagle ES Ranger RR	0.0	48 Hornbeck HBK R5620	40.9
35 FFR 4900 RR	0.0	8 Asgrow 5701	40.9
39 FFR RT 517 RR	0.0	3 Armor 54-Z4	40.8
40 FFR RT 557 RR	0.0	24 Deltapine DP 5806 RR	40.5
41 G. Harvest H-5422 RR	0.0	46 Hartz H 5887 RR	40.5
42 Garst 5512 RR/N	0.0	29 DynaGro DG 3518	40.3
43 Garst 588 RR/N	0.0	4 Armor 56-J6	40.2
45 Hartz H 5444	0.0	56 Pioneer 95B43	40.0
46 Hartz H 5887 RR	0.0	27 DynaGro 3521N RR	39.8
50 Morsoy RT 5252	0.0	15 Delta Grow 5450 RR	39.6
51 Morsoy RT 5440	0.0	67 USG 510n	39.2
52 Morsoy RT 5442	0.0	80 Vigoro V 562N RR	38.9
56 Pioneer 95B43	0.0	14 Delta Grow 5350 RR	38.9
59 Stine S 5502-4	0.0	32 Eagle Marshal RR	38.8
70 USG 7522n	0.0	1 Armor 5135	38.2
71 USG 7547 RR	0.0	55 Pioneer 95B42	38.1
74 VA. 99VPI-67	0.0	47 Hornbeck HBK R5422	37.5
76 VA. V 99-3337	0.0	13 Delta Grow 5250 RR	36.8
77 Vigoro V 503 RR	0.0	16 Delta Grow 5630 RR	36.7
78 Vigoro V 52N3 RR	0.0	41 G. Harvest H-5422 RR	36.0
79 Vigoro V 543	0.0	72 USG 7562n RR	34.6

LSD (P=.05)

1.63

LSD (P=.05)

7.48

Table 8

Soybean Disease Ratings and Yields  
Maturity Group IV Roundup Ready  
Milan and West Tennessee Experiment Stations  
Summary - 2002

Brand-Variety <sup>1,2,3,4</sup>	MES FLS	MES SDS	MES Bu/A	WTES SC	WTES 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

Brand-Variety <sup>1,2,3,4</sup>	MES FLS	MES SDS	MES Bu/A	WTES SC	WTES Bu/A
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
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 9

**Soybean Disease Ratings and Yields  
Maturity Group IV Roundup Ready  
Milan Experiment Station  
Sudden Death Syndrome and Frogeye Leaf Spot Ratings -  
2002**

(descending order)

Brand-Variety <sup>1,2,3</sup>	SDS	Brand-Variety <sup>1,2,3</sup>	FLS
33 Eagle ES Prairie RRI	8.3	33 Eagle ES Prairie RRI	9.33
32 DynaGro X419 NRR	4.3	52 Midw. Prem. G. MPV 4802n RR	8.67
39 G. Harvest H-4772 RR	4.3	66 Terral TV 4886 RR	8.67
66 Terral TV 4886 RR	4.3	30 DynaGro 3468 NRR	8.33
18 Delta King 4762 RR	4.0	65 Terral TV 4589 RR	8.33
11 Croplan RC 4432	3.7	37 FFR 4922 RR	8.00
19 Delta King 4763 RR	3.7	47 Hartz H 4554 RR	8.00
55 Pioneer 9492	3.3	51 Midw. Prem. G. MPV 457n RR	8.00
5 Armor AXR-4699 RR	2.7	27 Deltapine DPX 4933 RR	7.67
27 Deltapine DPX 4933 RR	2.7	8 Asgrow AG 4603	7.33
22 Delta King XTJ 040 RR	2.3	21 Delta King 4965	7.33
26 Deltapine DPX 4727 RR	2.3	15 Croplan RC 4992	7.00
34 FFR 4455 RR	2.3	25 Deltapine DPX 4527 RR	7.00
37 FFR 4922 RR	2.3	9 Asgrow AG 4702	6.67
56 Pioneer 94B13	2.3	40 G. Harvest H-4850 RR	6.67
68 USG 7440n	2.3	49 Hornbeck HBK R4820	6.67
75 Vigoro V46N3 RR	2.3	53 Morsoy RT 4809	6.50
4 Armor 47-G7	2.0	20 Delta King 4868	6.33
67 Terral TV 4890 RR	2.0	31 DynaGro 3484 NRR	6.33
1 Armor 4280	1.7	35 FFR 4712 RR	6.33
2 Armor 42-L2	1.7	54 NK Brand X248	6.33
9 Asgrow AG 4702	1.7	64 Syngenta NK X248 R	6.33
15 Croplan RC 4992	1.7	2 Armor 42-L2	6.00
31 DynaGro 3484 NRR	1.7	14 Croplan RC 4848	6.00
42 Garst 4312 RR/STS/N	1.7	18 Delta King 4762 RR	6.00
47 Hartz H 4554 RR	1.7	28 Deltapine SG 498 RR	6.00
52 Midw. Prem. G. MPV 4802n RR	1.7	34 FFR 4455 RR	6.00
59 Pioneer 94B74	1.7	45 Hartz 4884 RR	6.00
71 USG 7499n	1.7	59 Pioneer 94B74	6.00
73 Vigoro V42N3 RR	1.7	60 Progeny 4858	6.00
10 Asgrow AG4902	1.3	68 USG 7440n	6.00
14 Croplan RC 4848	1.3	71 USG 7499n	6.00
61 Steyer 4410	1.3	11 Croplan RC 4432	5.67
76 Vigoro V49N3 RR	1.3	12 Croplan RC 4444	5.67
3 Armor 44-R4	1.0	13 Croplan RC 4772	5.67
7 Asgrow AG 4403	1.0	29 DynaGro 3443 NRR	5.67
35 FFR 4712 RR	1.0	43 Garst 4512 RR/N	5.67
48 Hornbeck HBK R4622	1.0	44 Garst D484 RR/N	5.67
54 NK Brand X248	1.0	46 Hartz H 4454	5.67

Brand-Variety <sup>1,2,3</sup>	SDS	Brand-Variety <sup>1,2,3</sup>	FLS
62 Stine S4442-4	1.0	7 Asgrow AG 4403	5.33
63 Stine S4882-4	1.0	61 Steyer 4410	5.33
6 Asgrow AG 4201	0.7	72 USG BG 4401	5.33
12 Croplan RC 4444	0.7	3 Armor 44-R4	5.00
13 Croplan RC 4772	0.7	17 Delta King 4461	5.00
17 Delta King 4461	0.7	19 Delta King 4763 RR	5.00
20 Delta King 4868	0.7	38 G. Harvest H-4534 RR	5.00
25 Deltapine DPX 4527 RR	0.7	41 G. Harvest H-8854	5.00
41 G. Harvest H-8854	0.7	74 Vigoro V442N RR	5.00
44 Garst D484 RR/N	0.7	36 FFR 4891t RR	4.67
45 Hartz 4884 RR	0.7	67 Terral TV 4890 RR	4.67
46 Hartz H 4454	0.7	16 Delta Grow 4950 RR	4.33
49 Hornbeck HBK R4820	0.7	22 Delta King XTJ 040 RR	4.33
57 Pioneer 94B23	0.7	24 Deltapine DP 4690 RR	4.33
58 Pioneer 94B73	0.7	32 DynaGro X419 NRR	4.33
60 Progeny 4858	0.7	39 G. Harvest H-4772 RR	4.33
64 Syngenta NK X248 R	0.7	50 Hornbeck HBK R4920	4.00
72 USG BG 4401	0.7	4 Armor 47-G7	3.67
8 Asgrow AG 4603	0.3	70 USG 7489 RR	3.33
21 Delta King 4965	0.3	23 Deltapine DP 4344 RR	3.00
28 Deltapine SG 498 RR	0.3	26 Deltapine DPX 4727 RR	3.00
30 DynaGro 3468 NRR	0.3	5 Armor AXR-4699 RR	2.67
36 FFR 4891t RR	0.3	6 Asgrow AG 4201	2.67
43 Garst 4512 RR/N	0.3	57 Pioneer 94B23	2.67
51 Midw. Prem. G. MPV 457n RR	0.3	10 Asgrow AG4902	2.33
53 Morsoy RT 4809	0.3	76 Vigoro V49N3 RR	1.67
65 Terral TV 4589 RR	0.3	56 Pioneer 94B13	1.33
69 USG 7449n RR	0.3	63 Stine S4882-4	1.33
70 USG 7489 RR	0.3	55 Pioneer 9492	0.67
16 Delta Grow 4950 RR	0.0	42 Garst 4312 RR/STS/N	0.33
23 Deltapine DP 4344 RR	0.0	1 Armor 4280	0.00
24 Deltapine DP 4690 RR	0.0	48 Hornbeck HBK R4622	0.00
29 DynaGro 3443 NRR	0.0	58 Pioneer 94B73	0.00
38 G. Harvest H-4534 RR	0.0	62 Stine S4442-4	0.00
40 G. Harvest H-4850 RR	0.0	69 USG 7449n RR	0.00
50 Hornbeck HBK R4920	0.0	73 Vigoro V42N3 RR	0.00
74 Vigoro V442N RR	0.0	75 Vigoro V46N3 RR	0.00

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.

Table 10

**Soybean Disease Ratings and Yields**  
**Maturity Group IV Roundup Ready**  
**Milan and West Tennessee Experiment Stations**  
**Yields - 2002**

(descending order)

Brand-Variety <sup>1</sup>	MES Bu/A	Brand-Variety <sup>1</sup>	WTES Bu/A
74 Vigoro V442N RR	59.3	21 Delta King 4965	65.0
73 Vigoro V42N3 RR	58.5	64 Syngenta NK X248 R	63.8
61 Steyer 4410	57.8	72 USG BG 4401	61.8
29 DynaGro 3443 NRR	57.7	36 FFR 4891t RR	60.9
62 Stine S4442-4	55.2	67 Terral TV 4890 RR	59.3
76 Vigoro V49N3 RR	55.2	66 Terral TV 4886 RR	59.1
38 G. Harvest H-4534 RR	55.1	65 Terral TV 4589 RR	58.5
72 USG BG 4401	53.7	69 USG 7449n RR	58.2
17 Delta King 4461	53.6	9 Asgrow AG 4702	57.6
68 USG 7440n	52.4	31 DynaGro 3484 NRR	57.4
64 Syngenta NK X248 R	51.7	34 FFR 4455 RR	57.3
43 Garst 4512 RR/N	51.4	54 NK Brand X248	57.3
49 Hornbeck HBK R4820	51.4	19 Delta King 4763 RR	56.8
28 Deltapine SG 498 RR	50.9	35 FFR 4712 RR	56.7
3 Armor 44-R4	50.9	7 Asgrow AG 4403	56.6
41 G. Harvest H-8854	50.8	40 G. Harvest H-4850 RR	56.4
24 Deltapine DP 4690 RR	50.1	60 Progeny 4858	56.3
53 Morsoy RT 4809	50.0	44 Garst D484 RR/N	56.2
20 Delta King 4868	50.0	26 Deltapine DPX 4727 RR	56.0
12 Croplan RC 4444	49.3	37 FFR 4922 RR	55.9
63 Stine S4882-4	49.3	24 Deltapine DP 4690 RR	55.5
50 Hornbeck HBK R4920	48.5	43 Garst 4512 RR/N	55.1
46 Hartz H 4454	48.1	42 Garst 4312 RR/STS/N	55.0
10 Asgrow AG4902	47.3	50 Hornbeck HBK R4920	54.7
70 USG 7489 RR	47.3	20 Delta King 4868	54.5
58 Pioneer 94B73	46.6	68 USG 7440n	54.3
36 FFR 4891t RR	46.3	71 USG 7499n	54.1
7 Asgrow AG 4403	45.6	58 Pioneer 94B73	53.9
54 NK Brand X248	44.6	53 Morsoy RT 4809	53.8
75 Vigoro V46N3 RR	44.6	49 Hornbeck HBK R4820	53.6
34 FFR 4455 RR	44.2	70 USG 7489 RR	53.6
69 USG 7449n RR	44.0	63 Stine S4882-4	53.4
1 Armor 4280	43.9	74 Vigoro V442N RR	53.3
16 Delta Grow 4950 RR	42.9	47 Hartz H 4554 RR	53.0
42 Garst 4312 RR/STS/N	40.4	30 DynaGro 3468 NRR	52.4
11 Croplan RC 4432	40.4	38 G. Harvest H-4534 RR	52.3
48 Hornbeck HBK R4622	40.3	28 Deltapine SG 498 RR	52.0
32 DynaGro X419 NRR	39.7	56 Pioneer 94B13	51.9
59 Pioneer 94B74	39.6	41 G. Harvest H-8854	51.8

Brand-Variety <sup>1</sup>	MES Bu/A	Brand-Variety <sup>1</sup>	WTES Bu/A
13 Croplan RC 4772	39.4	46 Hartz H 4454	51.8
26 Deltapine DPX 4727 RR	38.7	73 Vigoro V42N3 RR	51.3
56 Pioneer 94B13	37.9	10 Asgrow AG4902	51.2
57 Pioneer 94B23	36.6	27 Deltapine DPX 4933 RR	50.8
31 DynaGro 3484 NRR	35.9	5 Armor AXR-4699 RR	50.5
55 Pioneer 9492	35.9	62 Stine S4442-4	50.4
8 Asgrow AG 4603	35.8	48 Hornbeck HBK R4622	50.3
27 Deltapine DPX 4933 RR	35.4	45 Hartz 4884 RR	49.8
45 Hartz 4884 RR	34.7	1 Armor 4280	49.7
22 Delta King XTJ 040 RR	34.3	25 Deltapine DPX 4527 RR	49.6
6 Asgrow AG 4201	34.1	6 Asgrow AG 4201	49.5
71 USG 7499n	34.0	59 Pioneer 94B74	49.5
19 Delta King 4763 RR	33.7	51 Midw. Prem. G. MPV 457n RR	49.4
67 Terral TV 4890 RR	33.4	29 DynaGro 3443 NRR	49.3
4 Armor 47-G7	33.1	33 Eagle ES Prairie RRI	49.3
30 DynaGro 3468 NRR	33.0	16 Delta Grow 4950 RR	49.0
65 Terral TV 4589 RR	32.3	52 Midw. Prem. G. MPV 4802n RR	47.6
37 FFR 4922 RR	32.2	61 Steyer 4410	47.5
35 FFR 4712 RR	31.9	11 Croplan RC 4432	47.2
51 Midw. Prem. G. MPV 457n RR	31.4	8 Asgrow AG 4603	46.7
39 G. Harvest H-4772 RR	31.4	3 Armor 44-R4	46.4
9 Asgrow AG 4702	30.9	76 Vigoro V49N3 RR	46.2
15 Croplan RC 4992	30.8	14 Croplan RC 4848	46.0
21 Delta King 4965	30.3	39 G. Harvest H-4772 RR	45.5
14 Croplan RC 4848	29.9	57 Pioneer 94B23	45.1
47 Hartz H 4554 RR	29.9	23 Deltapine DP 4344 RR	44.4
44 Garst D484 RR/N	29.5	32 DynaGro X419 NRR	44.0
23 Deltapine DP 4344 RR	29.0	15 Croplan RC 4992	43.7
40 G. Harvest H-4850 RR	28.2	17 Delta King 4461	43.7
5 Armor AXR-4699 RR	27.1	12 Croplan RC 4444	43.5
60 Progeny 4858	26.4	22 Delta King XTJ 040 RR	42.9
18 Delta King 4762 RR	26.3	4 Armor 47-G7	42.6
2 Armor 42-L2	24.9	13 Croplan RC 4772	41.5
52 Midw. Prem. G. MPV 4802n RR	24.0	2 Armor 42-L2	40.9
25 Deltapine DPX 4527 RR	23.2	55 Pioneer 9492	40.4
66 Terral TV 4886 RR	19.6	75 Vigoro V46N3 RR	37.7
33 Eagle ES Prairie RRI	16.2	18 Delta King 4762 RR	37.0

LSD (P=.05)

11.91

LSD (P=.05)

12.47

NOTES:

1. Plots were harvested at MES on October 23 and at WTES on September 13.



Table 11

Soybean Disease Ratings and Yields  
Maturity Group IV Roundup Ready  
West Tennessee Experiment Station  
Stem Canker Ratings - 2002

(descending order)

Brand-Variety <sup>1,2,3</sup>	SC
20 Delta King 4868	8.3
2 Armor 42-L2	7.0
18 Delta King 4762 RR	7.0
22 Delta King XTJ 040 RR	6.3
5 Armor AXR-4699 RR	6.0
74 Vigoro V442N RR	6.0
38 G. Harvest H-4534 RR	5.3
72 USG BG 4401	5.3
6 Asgrow AG 4201	5.0
7 Asgrow AG 4403	5.0
29 DynaGro 3443 NRR	4.7
43 Garst 4512 RR/N	4.7
49 Hornbeck HBK R4820	4.7
39 G. Harvest H-4772 RR	4.3
46 Hartz H 4454	4.3
61 Steyer 4410	4.3
68 USG 7440n	4.3
57 Pioneer 94B23	4.0
4 Armor 47-G7	3.7
32 DynaGro X419 NRR	3.7
47 Hartz H 4554 RR	3.7
69 USG 7449n RR	3.7
19 Delta King 4763 RR	3.3
53 Morsoy RT 4809	3.3
26 Deltapine DPX 4727 RR	3.0
41 G. Harvest H-8854	3.0
42 Garst 4312 RR/STS/N	3.0
17 Delta King 4461	2.0
12 Croplan RC 4444	1.7
35 FFR 4712 RR	1.7
59 Pioneer 94B74	1.7
62 Stine S4442-4	1.7
13 Croplan RC 4772	1.3
48 Hornbeck HBK R4622	1.3
55 Pioneer 9492	1.3
58 Pioneer 94B73	1.3
73 Vigoro V42N3 RR	1.3
9 Asgrow AG 4702	1.0
23 Deltapine DP 4344 RR	1.0
25 Deltapine DPX 4527 RR	1.0

Brand-Variety <sup>1,2,3</sup>	SC
30 DynaGro 3468 NRR	1.0
51 Midw. Prem. G. MPV 457n RR	1.0
56 Pioneer 94B13	1.0
65 Terral TV 4589 RR	1.0
31 DynaGro 3484 NRR	0.7
1 Armor 4280	0.7
3 Armor 44-R4	0.7
10 Asgrow AG4902	0.7
14 Croplan RC 4848	0.7
21 Delta King 4965	0.7
71 USG 7499n	0.7
75 Vigoro V46N3 RR	0.7
8 Asgrow AG 4603	0.3
11 Croplan RC 4432	0.3
16 Delta Grow 4950 RR	0.3
24 Deltapine DP 4690 RR	0.3
34 FFR 4455 RR	0.3
37 FFR 4922 RR	0.3
40 G. Harvest H-4850 RR	0.3
44 Garst D484 RR/N	0.3
60 Progeny 4858	0.3
66 Terral TV 4886 RR	0.3
67 Terral TV 4890 RR	0.3
33 Eagle ES Prairie RRI	0.2
15 Croplan RC 4992	0.0
27 Deltapine DPX 4933 RR	0.0
28 Deltapine SG 498 RR	0.0
36 FFR 4891t RR	0.0
45 Hartz 4884 RR	0.0
50 Hornbeck HBK R4920	0.0
52 Midw. Prem. G. MPV 4802n RR	0.0
54 NK Brand X248	0.0
63 Stine S4882-4	0.0
64 Syngenta NK X248 R	0.0
70 USG 7489 RR	0.0
76 Vigoro V49N3 RR	0.0

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. Stem Canker was rated on September 3, 2002, at West Tennessee Experiment Station (WTES), and plots were harvested on September 13, 2002.

Table 12

**Soybean Disease Ratings and Yields  
Maturity Group III Roundup Ready  
Milan and West Tennessee Experiment Stations  
Summary - 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 13

Soybean Disease Ratings and Yields  
Maturity Group III Roundup Ready  
Milan Experiment Station  
Frogeye Leaf Spot Ratings and Yields - 2002

(descending order)

Brand-Variety	FLS	Brand-Variety	Bu/A
22 Steyer 3811	10.0	20 Pioneer 93B68	64.4
17 Hornbeck HBK R 3980	9.7	11 Deltapine DPX 3761 RR	63.4
21 Pioneer 93B72	8.7	1 Adler 395	62.0
5 Asgrow AG 3902	7.7	16 G. Harvest 3983	61.3
23 Terral TVX 39R201	7.7	15 FFR 3975	60.9
13 Deltapine DPX 3940 RR	7.3	19 Pioneer 93B67	60.9
6 Delta King 3862	7.0	14 DynaGro DG 3373	60.8
12 Deltapine DPX 3819 RR	7.0	8 Delta King 3968	60.1
4 Asgrow AG 3703	5.7	7 Delta King 3964	58.9
16 G. Harvest 3983	5.3	2 Armor 39-E9	56.4
7 Delta King 3964	4.7	9 Delta King DK XTJ033 RR	56.3
10 Delta King DK 3961RR	4.7	24 Vigoro V382	56.3
18 NK Brand S39-Q4	4.7	21 Pioneer 93B72	56.0
8 Delta King 3968	4.3	18 NK Brand S39-Q4	53.5
9 Delta King DK XTJ033 RR	4.3	6 Delta King 3862	53.1
2 Armor 39-E9	3.7	3 Asgrow AG 3701	52.9
20 Pioneer 93B68	2.0	13 Deltapine DPX 3940 RR	52.0
3 Asgrow AG 3701	1.0	10 Delta King DK 3961RR	51.5
1 Adler 395	0.3	4 Asgrow AG 3703	47.9
14 DynaGro DG 3373	0.3	23 Terral TVX 39R201	47.5
19 Pioneer 93B67	0.3	17 Hornbeck HBK R 3980	46.2
11 Deltapine DPX 3761 RR	0.0	12 Deltapine DPX 3819 RR	43.8
15 FFR 3975	0.0	5 Asgrow AG 3902	41.6
24 Vigoro V382	0.0	22 Steyer 3811	38.8

LDS (P=.05)

1.69

LDS (P=.05)

7.03

Table 14

Soybean Disease Ratings and Yields  
 Maturity Group III Roundup Ready  
 Milan Experiment Station  
 Sudden Death Syndrome - 2002

(descending order)

Brand-Variety	SDS
11 Deltapine DPX 3761 RR	1.7
12 Deltapine DPX 3819 RR	1.7
24 Vigoro V382	1.7
3 Asgrow AG 3701	1.3
8 Delta King 3968	1.3
10 Delta King DK 3961RR	1.0
14 DynaGro DG 3373	1.0
17 Hornbeck HBK R 3980	1.0
18 NK Brand S39-Q4	0.7
21 Pioneer 93B72	0.7
23 Terral TVX 39R201	0.7
2 Armor 39-E9	0.3
9 Delta King DK XTJ033 RR	0.3
15 FFR 3975	0.3
16 G. Harvest 3983	0.3
19 Pioneer 93B67	0.3
1 Adler 395	0.0
4 Asgrow AG 3703	0.0
5 Asgrow AG 3902	0.0
6 Delta King 3862	0.0
7 Delta King 3964	0.0
13 Deltapine DPX 3940 RR	0.0
20 Pioneer 93B68	0.0
22 Steyer 3811	0.0

LDS (P=.05)

1.24

Table 15

Soybean Disease Ratings and Yields  
Maturity Group III Roundup Ready  
West Tennessee Experiment Station  
Stem Canker Ratings and Yields - 2002

(desending order)

Brand-Variety	SC	Brand-Variety	Bu/A
16 G. Harvest 3983	5.0	10 Delta King DK 3961RR	39.97
18 NK Brand S39-Q4	1.3	18 NK Brand S39-Q4	37.80
7 Delta King 3964	0.7	23 Terral TVX 39R201	37.43
8 Delta King 3968	0.7	8 Delta King 3968	37.40
17 Hornbeck HBK R 3980	0.7	7 Delta King 3964	37.10
19 Pioneer 93B67	0.7	4 Asgrow AG 3703	36.80
15 FFR 3975	0.3	21 Pioneer 93B72	36.60
1 Adler 395	0.0	3 Asgrow AG 3701	36.57
2 Armor 39-E9	0.0	20 Pioneer 93B68	35.93
3 Asgrow AG 3701	0.0	2 Armor 39-E9	35.73
4 Asgrow AG 3703	0.0	5 Asgrow AG 3902	35.53
5 Asgrow AG 3902	0.0	6 Delta King 3862	35.00
6 Delta King 3862	0.0	11 Deltapine DPX 3761 RR	34.70
9 Delta King DK XTJ033 RR	0.0	22 Steyer 3811	34.27
10 Delta King DK 3961RR	0.0	24 Vigoro V382	34.13
11 Deltapine DPX 3761 RR	0.0	15 FFR 3975	33.83
12 Deltapine DPX 3819 RR	0.0	19 Pioneer 93B67	33.53
13 Deltapine DPX 3940 RR	0.0	16 G. Harvest 3983	33.40
14 DynaGro DG 3373	0.0	9 Delta King DK XTJ033 RR	33.30
20 Pioneer 93B68	0.0	14 DynaGro DG 3373	32.83
21 Pioneer 93B72	0.0	1 Adler 395	32.70
22 Steyer 3811	0.0	13 Deltapine DPX 3940 RR	32.20
23 Terral TVX 39R201	0.0	17 Hornbeck HBK R 3980	31.90
24 Vigoro V382	0.0	12 Deltapine DPX 3819 RR	28.97

LDS (P=.05)

1.28

LDS (P=.05)

5.93

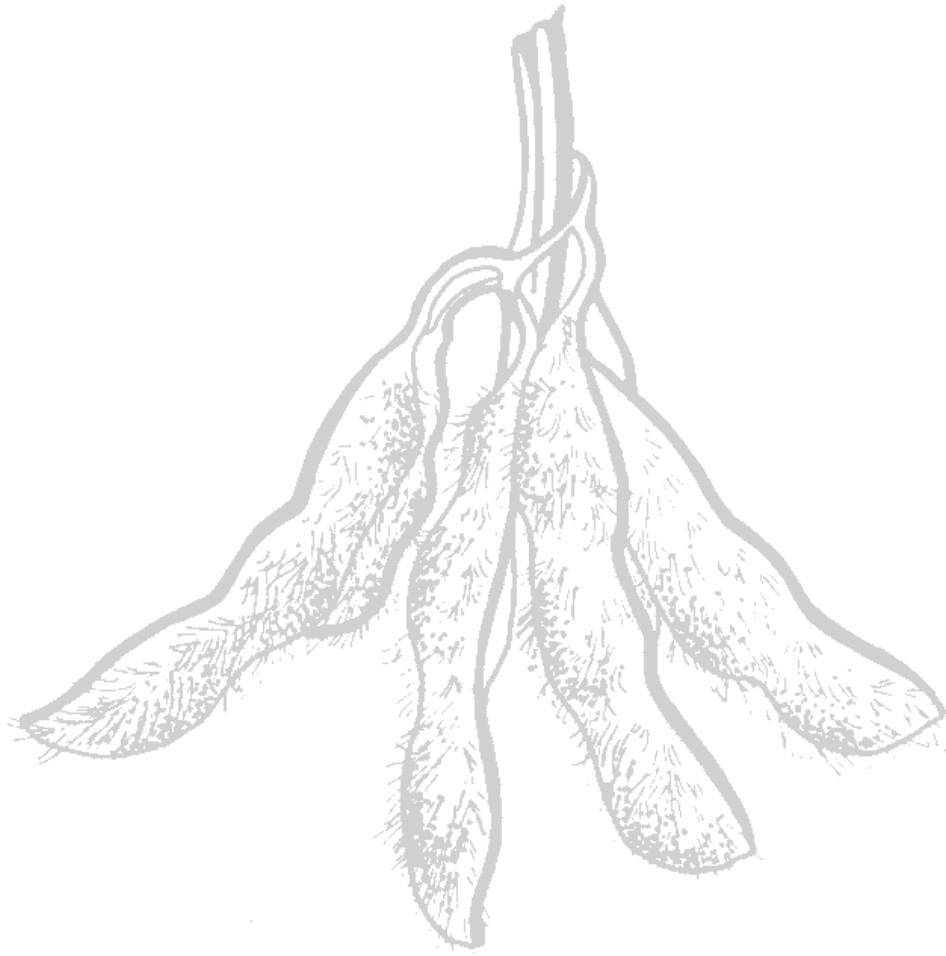
Table 16

Soybean Disease Ratings and Yields  
Maturity Group III Roundup Ready  
Weakley County Yields - 2002

(desending order)

Brand-Variety	Bu/A
18 NK Brand S39-Q4	38.30
4 Asgrow AG 3703	38.23
23 Terral TVX 39R201	38.13
13 Deltapine DPX 3940 RR	36.80
10 Delta King DK 3961RR	36.43
11 Deltapine DPX 3761 RR	36.23
12 Deltapine DPX 3819 RR	34.80
6 Delta King 3862	34.53
22 Steyer 3811	34.37
24 Vigoro V382	34.37
15 FFR 3975	33.17
20 Pioneer 93B68	32.20
1 Adler 395	31.23
7 Delta King 3964	30.93
3 Asgrow AG 3701	30.47
5 Asgrow AG 3902	30.40
2 Armor 39-E9	30.33
17 Hornbeck HBK R 3980	30.30
14 DynaGro DG 3373	30.13
19 Pioneer 93B67	29.30
8 Delta King 3968	29.27
21 Pioneer 93B72	28.80
16 G. Harvest 3983	26.47
9 Delta King DK XTJ033 RR	25.13
LDS (P=.05)	9.56

## Notes . . .





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*PRECAUTIONARY STATEMENT*

*In order to protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user's. Read and follow label directions carefully before you buy, mix, apply, store, or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label.*

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Agricultural Extension Service

Charles L. Norman, Dean