Progress Report 408

1998 Kentucky Soybean Performance Tests

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INCLUDING THE 1998 KENTUCKY SOYBEAN PROMOTION BOARD ANNUAL REPORT

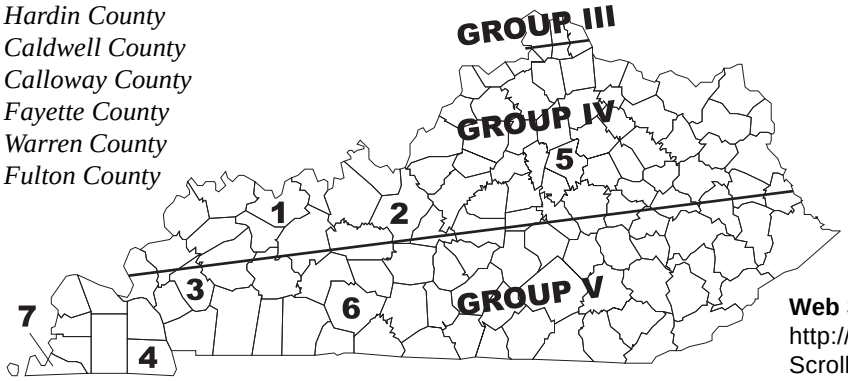
Tables

The Kentucky Soybean Performance Tests are conducted to provide an unbiased, objective estimate of the relative performance of soybean varieties in Kentucky. This information may be used by growers and seedsmen to aid in selecting varieties that will give the highest total production in a specific situation.

Ten soybean tests were planted in 1998 in Kentucky. The test locations are shown below. Soil types, planting dates, and other information are shown in Table 1.

Location of the 1998 Kentucky Soybean Tests

1. *Daviess County*
2. *Hardin County*
3. *Caldwell County*
4. *Calloway County*
5. *Fayette County*
6. *Warren County*
7. *Fulton County*



Methods

All tests were planted in a randomized complete block design. The conventional tests had two replications (plots) of each variety. The soybean cyst nematode (SCN) and Roundup Ready® (Roundup Ready is a registered trademark of Monsanto Company) tests had three replications. The individual plots were 20 feet long and 6 rows wide with 15 inches between rows (seeding rate five to six viable seeds per foot of row). All plots were treated with herbicides and maintained as weed-free as possible. The two SCN tests were planted at sites infested with soybean cyst nematode. Only varieties with some genetic resistance to SCN and susceptible check varieties were tested at these sites.

No preplant herbicides were used on the two Roundup Ready tests. Roundup Ready varieties were treated once with Roundup Ultra. The non-Roundup Ready check plots (covered during Roundup application) were treated with other herbicides.

Harvesting was done with a small plot combine according to maturity; thus, several harvests were made at each location. Sixteen feet of the center rows were harvested from the plots. No allowances were made for soybeans that may have been lost because of combining or shattering.

Yield—Yield is reported in bushels per acre adjusted to 13 percent moisture.

Lodging—Lodging is rated on a scale of 1 to 5, where 1 = almost all plants erect; 2 = all plants over slightly or a few down; 3 = all plants over moderately or 25 percent down; 4 = all plants over considerably or 50 to 80 percent down; 5 = all plants over badly.

Maturity date—A variety is considered mature when 95 percent of the pods have turned their normal mature color. One to two weeks of good drying weather will be needed beyond the date given before the beans will be ready to combine. Maturity

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http://webdocs.ca.uky.edu/agc/pubs/respubs.htm
Scroll down the list to “PR-408”.

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Department of Agronomy • Lexington

Table 1. Location, planting data, and climatic data for the 1998 Soybean Performance Tests

	Farmer	Extension Agent	Soil Type	Date of Planting	Soil Test	Fertilizer Applied[2]	50% Chance of Killing Frost[3]
Daviess Co. Conventional	Terry Joe Payne Woodlawn Farms	Wayne Mattingly	McGary Silt Loam	6/1	P 200+ K 493 pH 6.4	none	10/25
Hardin Co.[4] Conventional	Don Summers	Rod Grusy	Crider Silt Loam	5/19	P 81 K 203 pH 6.3	100 lb 12-52-60 100 lb 0-0-60 2 tons lime	10/20
Caldwell Co. Conventional	Princeton Exp. Station		Crider Silt Loam	6/1	P 166 K 501 pH 6.0	none	10/19
Calloway Co. Conventional	Jim Keiley	Gerald Claywell	Grenada Silt Loam	6/3	P 61 K 250 pH 5.6	none	10/19
Fayette Co. Conventional	Lexington Exp. Station		Maury Silt Loam	5/14	P 133 K 250 pH 6.8	50 lb KCL	10/26
Warren Co.[1] Double-Crop	Bill Jenkins	Luther Smith	Pembroke Silt Loam	6/29	P 54 K 302 pH 6.4	100 lb Sulfur Mag (22% S&K, 11% Mg) 200 lb lime	10/23
Caldwell Co. Roundup-Ready	Princeton Exp. Station		Crider Silt Loam	5/18	P 166 K 501 pH 6.0	none	10/19
Fayette Co. Roundup-Ready	Lexington Exp. Station		Maury Silt Loam	5/12	P 459 K 351 pH 6.7	none	10/26
Daviess Co. SCN	Joe Elliott and Sons	Wayne Mattingly	Calloway Silt Loam	6/25	P 112 K 151 pH 7.0	none	10/25
Fulton Co. SCN	Gene McCullum	Lincoln Martin	Commace Silt Loam	6/26	P 115 K 256 pH 7.3	none	10/19

[1] No-till double cropped after wheat - not harvested
[2] Amount per acre
[3] Based on 30-year average
[4] No-till

dates were recorded at the Fayette County and Caldwell County locations.

Plant height—Plant height was measured in inches from the soil surface to the tip of the main stem.

Pod height—Height of the lowest pod was measured in inches from the soil surface to the point of attachment of the lowest pod on the plant.

Soybean cyst nematode (SCN)—SCN populations were determined at planting and at harvest by measuring SCN egg densities in plots. Egg densities, reported as the number of eggs/100-cubic centimeters of soil (about 1/4 pint of soil), were determined from soil samples consisting of ten 6-inch-deep soil probes from the center two rows of each plot. Soil was thoroughly mixed. Cysts were extracted from two 100-cubic centimeter soil samples from each plot by wet sieving. Eggs were freed from cysts by crushing the cysts. Eggs were then stained and counted. The two egg counts from each plot were averaged to give a single egg density per plot. These data were provided by Don Hershman and Debbie Morgan of the Soybean Cyst Nematode Laboratory at Princeton, Kentucky.

Interpretation

An important step in profitable soybean production is selecting good quality seed of the best varieties for your management system. The Kentucky Soybean Performance Tests are conducted to provide information useful in making this selection.

Performance of soybean varieties is affected by many factors including year, location, soil type, and time of planting. A particular soybean variety is adapted for full-season growth in a band approximately 100 miles wide from north to south (see map, page 1). Thus, the best variety in northern Kentucky may not be the best in southern areas. For this reason, the Kentucky Soybean Performance Tests are conducted at several locations in the major soybean-producing areas of the state. The yields as reported in this publication should be used for relative comparisons; actual yields on a grower's farm may be different.

Performance of the soybean varieties will vary from year to year and location to location, depending on adaptability, weather conditions, and management. The performance data presented in Tables 3, 4, and 5 have been averaged across years

and locations. **Performance of a variety across a period of years and at several locations in the state is the best indicator of its production potential.** (See *Agronomy Notes*, Volume 21, No. 3, "Using Performance Test Results in Soybean Variety Selection in Kentucky.")

Small differences in yield are usually of little importance. The yield of two varieties at a single location can differ because of chance factors (difference in soil characteristics, fertility, or availability of moisture), although the inherent yielding ability is the same. To decide if an observed yield difference is real, use the LSD (least significant difference) values cited at the bottom of the tables. The significance level used in the tables is 0.10. If the difference in yield is greater than the LSD value, you can be reasonably certain that the entries actually do differ in yielding ability. "N.S." in the tables indicates that no statistically significant differences were determined.

Yield is only one factor to consider in selecting a variety for your production system. Maturity, lodging resistance, disease resistance, and time and equipment availability are other factors that need to be considered. With the advent of Roundup Ready soybeans, the associated economic and management decisions are additional factors to consider in the control of weeds.

The data provided have been divided into maturity groups. Due to weather patterns at a location, maturity alone can affect yield; this will be reflected by large differences in the maturity group averages. Selecting varieties from several maturity groups can reduce the impact of these maturity group fluctuations. (See *Agronomy Notes*, Volume 25, No. 3, "Growing Soybean Varieties from Multiple Maturity Groups Can Reduce Yearly Yield Volatility.")

The date of a 50 percent chance of a fall killing frost is important in determining which variety you select to plant. The dates presented in Table 1 are average dates over a long term. Actual dates will vary from year to year. For the date of a one-year-out-of-ten chance of a fall killing frost, subtract 13 to 18 days from the dates in Table 1. For maximum yield, a variety must mature before the first killing frost. Maturity dates of varieties are listed for the Fayette County and Caldwell County locations and in the combined summary table.

If you have soybean cyst nematode problems, a resistant variety should be used in your production system with a recommended crop rotation program. (See Kentucky Cooperative Extension Service publication PPA-3, *Soybean Cyst Nematode*, available at your county Extension office.) The level of SCN infestation as well as the SCN race can be determined through the SCN laboratory at Princeton. Contact your county Extension office for more information on collecting and submitting samples. The importance of resistant varieties has increased as the number of acres affected by SCN has increased. When evaluating the performance of resistant varieties in the SCN-infested location, note the change in SCN egg numbers as well as the yield presented in the SCN table.

Growing Conditions

After the wettest June and July (combined) on record in Kentucky, August rainfall averaged 2 inches with some locations suffering the driest August on record. Drought conditions with much-above-normal temperatures (+6°) and much-below-normal rainfall (rainfall averaged 1.15 inches) continued in September. As a result, yields of early maturing varieties were acceptable to above average, while yields of later maturing varieties were reduced at all locations, with severe reductions at Lexington. Erratic shattering occurred at some locations due to accelerated maturity under hot and dry conditions. Frogeye leafspot infection occurred at the Calloway County test.

Soybean Production Information

The Kentucky Cooperative Extension Service has a series of publications, "Soybean Production in Kentucky," which contains a more detailed discussion of soybean production practices: Part 1. *Status, Uses, and Planning* (AGR-128); Part II. *Seed Selection, Variety Selection, and Fertilization* (AGR-129); Part III. *Planting Practices and Double Cropping* (AGR-130); Part IV. *Weed, Disease, and Insect Control* (AGR-131); Part V. A soybean planting rate guide, reproduced from this series, is provided below for your convenience (Table 2).

Table 2. Soybean Planting Guide

Row spacing (inches)	7	15	20	30	36
Seeding Rate (seeds per ft. of row)	2-3	5-6	6-8	8-10	9-11
Viable seeds per pound	.....Pounds of Seed per Acre.....				
2000	80-110	85-105	78-104	70-87	65-80
2200	73-100	77-95	71-95	64-79	59-72
2400	66-93	71-88	65-87	58-73	54-66
2600	61-86	65-81	60-80	54-67	50-61
2800	57-80	61-75	56-75	50-62	46-56
3000	53-75	57-70	52-70	46-58	43-53
3200	50-70	53-66	49-65	44-54	41-49
3400	47-66	50-62	46-61	41-51	38-46
3600	44-62	47-58	44-58	39-48	36-44
3800	42-59	45-55	41-55	37-46	34-42
4000	40-56	43-53	39-52	35-44	33-40

Oil and Protein Data

The protein and oil concentration data for all soybean varieties entered in the Kentucky Soybean Performance Tests are presented in Table 11. The Federal Grain Inspection Service is offering soybean oil and protein testing as official criteria for grade. At this time, the testing is optional. Soybean varieties differ in their protein and oil concentrations, which are influenced by the production environments. Because soybeans are grown primarily for oil and protein, these data are provided to indicate differences that exist between varieties produced in Kentucky.

Kentucky State Seed Law

The Kentucky State Seed Law requires all seed exposed, offered for sale, or sold in Kentucky to be labeled as to kind and variety for each agricultural seed component present in excess of 5 percent of the whole and the percentage by weight of each component. All soybean seed blends should be labeled as to the percentage of each variety that makes up the mixture. The term "variety unknown" may no longer be used in place of a variety designation for soybeans, as all soybean seed must be labeled by variety name.

Acknowledgments

In addition to the county agents and farm cooperators mentioned in Table 1, Tom Stefaniak, David Pilcher, and Brenda Ward have contributed greatly to the production of this publication. Also the SCN lab at Princeton, Debbie Morgan, and Don Hershman were extremely important in the production of this publication. The Kentucky Soybean Promotion Board provided financial support for the Roundup Ready performance test.

Sources of Seeds

The seed planted in the 1998 Soybean Performance Tests was acquired from the following sources:

Agribiotech Inc.
2700 Sunset Road, Suite 25
Las Vegas, NV 89120
- HYTEST SEEDS HTS5000
- HYTEST SEEDS HTS4301RR
- HYTEST SEEDS HTS5410RR

Asgrow Seed Company
P.O. Box 210
Marion, AR 72364
- ASGROW A3904
- ASGROW A4341
- ASGROW A4922
- ASGROW A5547
- ASGROW A4604
- ASGROW AG4301
- ASGROW AG4401
- ASGROW AG4501
- ASGROW AG4601
- ASGROW AG4602
- ASGROW AG4701
- ASGROW AG4702
- ASGROW AG4901

BioPlant Research
110 East State
Camp Point, IL 62320
- EXCEL 8382 RR
- EXCEL 8422 RR
- EXCEL 8451 RR
- EXCEL 6431
- EXCEL 6467
- EXCEL 6552

Callahan Seeds
1122 169th Street
P.O. Box 367
Westfield, IN 46074-0367
- CALLAHAN 7417
- CALLAHAN 3484
- CALLAHAN 9454
- CALLAHAN 7467RR
- CALLAHAN 8394RR
- CALLAHAN 8437RR

Caverndale Farms Inc.
1921 Bluegrass Road
Danville, KY 40422
- CAVERNDALE CF 461
- CAVERNDALE CF 492
- CAVERNDALE CF 446RR
- CAVERNDALE CF 465NRR

Crow's Hybrid Corn Co.
P.O. Box 306
Milford, IL 60953
- CROW'S 38004
- CROW'S 40002
- CROW'S 43004
- CROW'S 36009RR

DeKalb Genetics Corp.
3100 Sycamore Road
DeKalb, IL 60115
- DEKALB CX450C
- DEKALB CX470C
- DEKALB CX390RR
- DEKALB CX420RR
- DEKALB CX444CRR
- DEKALB CX460RR
- DEKALB CX485RR

Delta and Pine Land Co.
P.O. Box 157
Scott, MS 38772
- DELTAPINE DP 3478
- DELTAPINE DP 3519S
- DELTAPINE DP 4344 RR
- DELTAPINE DP 4750 RR
- DELTAPINE DP 4969 RR

Delta King Seed Co.
P.O. Box 97
McCrory, AR 72101
- DELTA KING 4860
- DELTA KING 5850
- DELTA KING 4762RR
- DELTA KING 5263RR
- DELTA KING 5664RR

Gateway Seed Co.
Box 337
Ridgeway, IL 62979
- GATEWAY 470
- GATEWAY 493

Golden Harvest
RR 3 Box 257
Clinton, IL 61727
- GOLDEN HARVEST H-1383
- GOLDEN HARVEST H-1415
- GOLDEN HARVEST H-1485
- GOLDEN HARVEST H-1500
- GOLDEN HARVEST H-1487
- GOLDEN HARVEST H-1396RR
- GOLDEN HARVEST H-1444RR

Hartz Seed - A Unit of Monsanto
P.O. Box 946
Stuttgart, AR 72160
- HARTZ VARIETY H5000RR

Kentucky American Seeds Inc.
205 Means Avenue
P.O. Box 1104
Hopkinsville, KY 42240
- KAS CHEROKEE 516

Kentucky Foundation Seed Project
P.O. Box 11950
Lexington, KY 40579
- Anand
- Calhoun
- Clifford
- Delsoy 4710
- Hartwig
- Holladay
- Hutcheson
- KS 4694
- KS 5292
- Macon
- Manokin
- Omaha
- Pennyrile
- Pharaoh
- Stressland
- TN 4-86
- TN 4-94
- TN 5-95

Kentucky for Progress
1105 S. Long Grove Road
Glendale, KY 42740
- KFP 430
- TC 5498 RR

LG Seeds
P.O. Box 457
State Route 213 S
Windfall, IN 46076
- LG SEEDS LG 6437C
- LG SEEDS LG 6484
- LG SEEDS LG 6432 RR
- LG SEEDS LG 6456 RR

Miles Farm Supply Inc.
P.O. Box 22879
Owensboro, KY 42304-2879
- SOUTHERN CROSS DAVID
- SOUTHERN CROSS EXODUS
- SOUTHERN CROSS JOSHUA
- SOUTHERN CROSS MARK
- SOUTHERN CROSS JUDE
- SOUTHERN CROSS MICAH
- SOUTHERN CROSS PAUL
- SOUTHERN CROSS JAMES
- SOUTHERN CROSS SAMUEL

Mycogen Seeds
105 Allison
Lincoln, IL 62656
- MYCOGEN 470
- MYCOGEN 5474

Novartis Seed
535 Pennyrile Drive
Madisonville, KY 42431
- NK BRAND 3474
- NK BRAND 3505
- NK BRAND S 38-L5
- NK BRAND S 43-B5
- NK BRAND S 46-44
- NK BRAND S 51-00
- NK BRAND S 36-U2
- NK BRAND S 42-K2
- NK BRAND S 46-W8

Pioneer Hi-Bred Int. Inc.
348 Shaker Mill Bend
Bowling Green, KY 42103-9012
- PIONEER VARIETY 9395
- PIONEER VARIETY 9452
- PIONEER VARIETY 9481
- PIONEER VARIETY 9482
- PIONEER VARIETY 9492
- PIONEER VARIETY 94B01
- PIONEER VARIETY 94B81
- PIONEER VARIETY 95B33
- PIONEER VARIETY 93B71
- PIONEER VARIETY 94B41
- PIONEER VARIETY 95B41

Southern States Coop.
P.O. Box 26234
Richmond, VA 23260
- S. STATES EXP. 46616-STS
- S. STATES EXP. 46631-STS
- S. STATES FFR-365
- S. STATES FFR-439
- S. STATES FFR-478N
- S. STATES FFR-493
- S. STATES FFR-542N
- S. STATES SS-HT-381-STS
- S. STATES SS-HT-551-STS
- S. STATES RT EXP. 24813
- S. STATES RT-386
- S. STATES RT-3975
- S. STATES RT-446N
- S. STATES RT-447
- S. STATES RT-467
- S. STATES RT-517N
- S. STATES RT-540N
- S. STATES RT-557
- S. STATES RT-560

Terra International
P.O. Box 171376
Memphis, TN 38187
- RIVERSIDE 490
- RIVERSIDE 520
- RIVERSIDE 77
- TERRA INTL. TS 466 RR
- TERRA INTL. TS 556 RR
- TERRA INTL. TS 4792

Tri-State Delta Chemical, Inc.
6800 Poplar Avenue, Suite 100
Memphis, TN 38138
- TRI-STATE D.C. DYNA-GRO 3463 RR
- TRI-STATE D.C. UAPX 0038 RR

UniSouth Genetics
2640-C Nolensville Road
Nashville, TN 37211
- UNISOUTH GENETICS USG 7547 RR
- UNISOUTH GENETICS USG 7557 RR
- UNISOUTH GENETICS USG 7577 RR
- UNISOUTH GENETICS USG 7499

TABLE 3. 1998 COMBINED SUMMARY: CONVENTIONAL VARIETY TESTS

VARIETY / BRAND	YIELD (BU/AC)[A] 1998	97-98	96-98	LODGING 1998	97-98	96-98	PLANT[B] HEIGHT (IN) 1998	MATURITY[C] DATE 1998	POD[C] HEIGHT (IN) 1998
EARLY (GROUP III)									
GOLDEN HARVEST H-1383	**50.8**	52.2	**52.2**	2.2	1.6	1.6	38	9/9	6
PIONEER VARIETY 9395	50.5	**52.4**	50.6	2.2	1.7	1.7	40	9/11	6
ASGROW A3904**	50.2	51.6		2.1	1.6		40	9/10	6
CROW'S 40002	49.9			1.9			39	9/9	5
S. STATES FFR-365	49.2	48.6	46.3	1.8	1.4	1.4	42	9/8	8
CROW'S 38004	47.8	50.6		2.1	1.6		40	9/9	6
MACON	47.1	49.8	48.4	2.1	1.6	1.5	38	9/9	7
NK BRAND S 38-L5	46.1	47.9		2.1	1.6		41	9/9	6
S. STATES SS-HT-381-STS	39.8	45.6	46.4	2.4	1.8	1.8	44	9/11	6
GROUP III AVERAGE	47.9	49.8	48.8	2.1	1.6	1.6	40	9/9	6
MID-SEASON (GROUP IV)									
ASGROW A4341	**53.2**	**52.4**	**51.0**	1.7	1.4	1.4	40	9/11	8
NK BRAND S 43-B5	51.1	51.4		2.5	1.8		42	9/15	5
CALLAHAN 7417	50.5	50.6		2.2	1.6		41	9/9	5
S. STATES FFR-493	50.4	51.3	49.6	1.9	1.5	1.6	46	9/20	9
OMAHA	50.0	50.6	46.9	2.0	1.6	1.5	37	9/10	6
CALHOUN	49.7	50.5	48.6	1.4	1.2	1.3	27	9/10	5
PIONEER VARIETY 94B01**	49.6	47.7		2.0	1.5		43	9/12	7
MYCOGEN 5474**	48.7			2.2			47	9/14	7
CROW'S 43004**	48.6			3.0			39	9/14	7
PIONEER VARIETY 9452	48.6	50.3	49.1	1.7	1.4	1.5	37	9/12	7
STRESSLAND	48.3	49.6	49.1	2.5	1.9	1.9	43	9/12	8
CAVERNDALE CF 492	48.2	50.1	49.3	1.7	1.6	1.8	30	9/20	7
GOLDEN HARVEST H-1415**	47.9			2.3			41	9/14	8
S. STATES FFR-439	47.4	49.4	49.6	2.4	1.8	1.7	47	9/15	6
SOUTHERN CROSS MARK	47.3			2.9			45	9/10	6
CAVERNDALE CF 461	46.7	48.7	46.9	2.9	2.1	2.1	45	9/16	5
DEKALB CX470C*	46.4	50.0		2.6	1.9		47	9/15	7
NK BRAND 3474	46.1	49.7	49.3	3.4	2.4	2.2	47	9/15	7
SOUTHERN CROSS DAVID**	46.1	47.3	47.7	2.2	1.6	1.7	45	9/13	6
DEKALB CX450C*	45.1	47.9	46.6	3.1	2.2	2.1	45	9/13	7
PIONEER VARIETY 9482	44.9	50.7	50.6	2.8	2.0	1.9	45	9/15	6
ASGROW A4604**	44.8			3.2			46	9/18	8
PIONEER VARIETY 9481**	44.2	47.1	46.6	3.1	2.2	2.1	48	9/18	6
CALLAHAN 9454**	42.8			2.7			44	9/11	7
DELTAPINE DP 3478	42.6	48.6	49.2	3.1	2.2	2.1	47	9/17	7
CALLAHAN 3484	42.3	48.9	48.4	3.0	2.3	2.2	47	9/17	7
LG SEEDS LG 6437C**	41.9	48.0		2.1	1.6		46	9/13	8
SOUTHERN CROSS JOSHUA	41.6	47.4	47.2	3.0	2.1	2.0	47	9/15	7
KFP 430**	41.4			2.3			46	9/12	7
KS 4694	41.0	45.9	45.6	2.1	1.6	1.7	43	9/17	6
MYCOGEN 470	40.4	47.3	47.6	2.9	2.2	2.2	46	9/16	6
HYTEST SEEDS HTS5000	40.3			3.4			48	9/16	7
PIONEER VARIETY 9492**	40.1	44.4		2.1	1.6		46	9/21	7
PIONEER VARIETY 94B81	39.9			2.4			49	9/17	8
UNISOUTH GENETICS USG 7499	39.7	46.5	47.5	2.0	1.6	1.6	45	9/21	8
SOUTHERN CROSS EXODUS	39.6	46.2		3.1	2.2		45	9/18	6
NK BRAND S 46-44**	39.4	45.9	47.1	2.4	1.8	1.7	47	9/17	8

TABLE 3. 1998 COMBINED SUMMARY: CONVENTIONAL VARIETY TESTS *continued*

VARIETY / BRAND	YIELD (BU/AC)[A] 1998	97-98	96-98	LODGING 1998	97-98	96-98	PLANT[B] HEIGHT (IN) 1998	MATURITY[C] DATE 1998	POD[C] HEIGHT (IN) 1998
S. STATES FFR-478N*	39.3	42.8	43.9	2.0	1.5	1.6	44	9/19	9
LG SEEDS LG 6484	39.1	47.8	47.7	3.0	2.1	2.2	47	9/16	7
PHARAOH**	38.7	44.5	43.3	2.9	2.5	2.5	39	9/22	10
GOLDEN HARVEST H-1485	38.7	47.3	47.0	2.7	2.0	1.9	45	9/14	6
DELSOY 4710**	38.4	43.1	43.1	3.9	2.9	2.8	49	9/16	8
MANOKIN*	38.2	44.4	45.8	3.5	3.2	3.0	42	9/29	7
GATEWAY 470	38.2	45.9	45.8	3.1	2.2	2.1	46	9/15	7
TN 4-86**	37.5	43.2	41.8	3.0	2.2	2.1	51	9/19	8
GATEWAY 493*	36.5	42.7		2.8	2.5		40	9/16	8
DELTA KING 4860**	35.7	42.0	43.5	1.9	1.5	1.6	43	9/17	8
S. STATES EXP. 46616-STS	35.6			3.7			44	9/27	8
TN 4-94**	35.3	42.4	43.1	3.0	2.3	2.1	49	9/22	9
TERRA INTL. TS 4792**	34.9			3.2			49	9/21	7
ASGROW A4922**	34.0	42.1	42.6	2.4	1.8	1.8	46	9/18	8
TERRA INTL. RIVERSIDE 490	33.1	41.7		2.9	2.6		47	9/25	7
DELTA KING 4762RR**	31.0	41.2		2.5	1.8		51	9/22	8
GROUP IV AVERAGE	42.7	47.0	46.9	2.6	2.0	1.9	44	9/16	7
LATE (GROUP V)									
HOLLADAY	**46.0**	**48.7**	**48.2**	3.7	2.8	2.5	40	9/25	7
PIONEER VARIETY 95B33**	42.4			2.8			41	9/30	9
ANAND**	40.7			2.7			39	9/27	9
HUTCHESON	40.3	44.6	45.3	2.7	2.5	2.4	41	10/5	7
NK BRAND 3505**	39.3			3.1			40	9/23	8
ASGROW A5547**	38.5	44.0	45.1	3.1	2.9	2.7	42	10/8	9
DELTA KING 5850**	37.4	42.1	43.1	3.9	3.6	3.3	43	10/5	10
TERRA INTL. RIVERSIDE 77	37.3			3.3			44	10/11	10
KAS CHEROKEE 516*	37.2			3.0			41	9/22	10
DELTA KING 5664RR**	36.7	38.1		2.2	2.0		44	10/8	8
KS 5292*	35.8	42.2	43.1	2.7	2.2	2.1	39	9/25	7
DELTAPINE DP 3519S**	35.8	43.7	44.1	2.8	2.6	2.4	43	10/1	8
S. STATES FFR-542N**	35.3	42.0	42.3	3.1	2.4	2.2	45	9/28	9
GOLDEN HARVEST H-1500*	35.1	42.1	43.0	2.6	2.1	2.1	40	9/23	8
CLIFFORD	35.0	44.0	42.3	3.8	3.1	2.8	45	10/1	8
TERRA INTL. RIVERSIDE 520	34.6	42.9		2.7	2.2		46	9/22	8
NK BRAND S 51-00	34.3			2.3			48	9/23	8
S. STATES SS-HT-551-STS	34.0	43.0	43.1	2.5	2.2	2.1	40	10/2	9
S. STATES EXP. 46631-STS	33.8			4.3			41	10/5	9
TN 5-95**	31.3	39.7	41.0	3.4	2.9	2.7	46	9/29	10
DELTA KING 5263RR**	28.7	38.1		2.4	1.9		41	9/26	7
GROUP V AVERAGE	36.6	42.5	43.7	3.0	2.5	2.5	42	9/29	8
GRAND MEAN	41.7	46.4	46.3	2.6	2.0	2.0	43		7
LSD (0.10)	3.3	2.7	2.1	0.4	0.2	0.2	2		1

* Resistant to the soybean cyst nematode (Race 3).

** Resistant to the soybean cyst nematode (Race 3 and Race 14).

[A] Within a maturity group, shaded yields are not significantly different (0.10 level) from the highest yielding cultivar (bold data) of that maturity group and year column.

[B] Data based on observations in Fayette Co., Caldwell Co., and Calloway Co.

[C] Data based on observations in Fayette Co. and Caldwell Co.

TABLE 4. 1998 COMBINED SUMMARY: ROUNDUP READY VARIETY TESTS

VARIETY / BRAND[A]	YIELD[B] (BU/AC) 1998	LODGING 1998	PLANT HEIGHT (IN) 1998	MATURITY DATE 1998
EARLY (GROUP III)				
GOLDEN HARVEST H-1383	**51.0**	3.2	41	9/8
CROW'S 36009RR**	47.4	2.2	42	9/7
GOLDEN HARVEST H-1396RR*	45.9	3.6	44	9/10
NK BRAND S 36-U2	45.7	2.9	42	9/9
EXCEL 8382 RR*	44.7	3.5	45	9/8
CALLAHAN 8394RR**	43.6	3.8	46	9/8
DEKALB CX390RR	42.1	3.1	44	9/9
S. STATES RT-386	39.3	3.4	45	9/13
S. STATES RT-3975	38.9	3.3	43	9/11
PIONEER VARIETY 93B71	35.9	3.3	44	9/9
GROUP III AVERAGE	44.3	3.2	44	9/9
MID-SEASON (GROUP IV)				
LG SEEDS LG 6432 RR	**40.8**	2.8	46	9/13
EXCEL 8422 RR	40.6	2.7	46	9/12
ASGROW AG4702**	40.5	2.7	48	9/17
CALLAHAN 8437RR	40.3	2.7	48	9/15
PIONEER VARIETY 94B01**	39.9	2.8	46	9/9
HYTEST SEEDS HTS4301RR**	39.9	2.9	47	9/15
ASGROW AG4301**	38.8	2.7	43	9/15
DEKALB CX420RR	38.6	3.4	47	9/8
PIONEER VARIETY 9482	38.2	3.5	48	9/17
PIONEER VARIETY 9492**	38.1	2.8	47	9/17
ASGROW AG4601**	37.9	3.3	45	9/15
SOUTHERN CROSS PAUL	36.9	3.0	55	9/13
PIONEER VARIETY 94B41**	36.3	2.5	45	9/12
S. STATES RT-446N*	36.1	3.0	47	9/15
ASGROW AG4501**	35.8	3.8	50	9/18
PIONEER VARIETY 94B81	35.7	3.4	49	9/15
S. STATES RT-467	35.7	3.2	49	9/14
DEKALB CX444CRR**	35.4	2.8	44	9/12
S. STATES RT-447	35.4	3.1	52	9/13
CAVERNDALE CF 465nRR**	35.2	3.2	50	9/17
SOUTHERN CROSS JUDE	34.8	3.0	44	9/10
ASGROW AG4602**	34.6	2.8	46	9/11
DELTAPINE DP 4750 RR	34.0	3.8	53	9/24
NK BRAND S 42-K2	33.9	3.3	44	9/11
DELTA KING 4762RR**	33.5	3.2	49	9/19
NK BRAND S 46-W8**	33.5	3.2	46	9/13
SOUTHERN CROSS MICAH**	33.5	3.1	51	9/16
ASGROW AG4401**	33.5	2.7	45	9/14
DEKALB CX485RR	33.2	3.3	47	9/17
CAVERNDALE CF 446RR	33.1	3.3	49	9/12

TABLE 4. 1998 COMBINED SUMMARY: ROUNDUP READY VARIETY TESTS *continued*

VARIETY / BRAND[A]	YIELD[B] (BU/AC) 1998	LODGING 1998	PLANT HEIGHT (IN) 1998	MATURITY DATE 1998
EXCEL 8451 RR	32.8	3.4	47	9/16
GOLDEN HARVEST H-1444RR**	32.7	2.8	46	9/15
ASGROW AG4901**	31.9	3.1	50	9/16
TRI-STATE D. C. DYNA-GRO 3463**	31.8	3.5	51	9/16
S. STATES RT EXP. 24813	31.3	3.1	48	9/11
CALLAHAN 3484	31.2	3.7	49	9/16
DEKALB CX460RR	31.0	3.4	51	9/13
DELTAPINE DP 4344 RR	30.8	3.7	49	9/16
ASGROW AG4701**	30.7	3.0	53	9/18
CALLAHAN 7467RR	29.8	3.2	50	9/16
TERRA INTL. TS 466 RR**	29.1	3.1	48	9/16
DELTAPINE DP 4969 RR	24.0	3.1	49	9/27
GROUP IV AVERAGE	34.8	3.1	48	9/15
LATE (GROUP V)				
HOLLADAY	**35.3**	3.5	38	9/24
TERRA INTL. TS 556 RR	31.8	3.7	45	10/3
S. STATES RT-517N**	30.5	3.5	43	9/27
TC 5498 RR**	29.4	3.7	47	9/30
S. STATES RT-557*	27.7	3.9	50	10/4
UNISOUTH GENETICS USG 7577 RR	26.5	3.8	47	10/4
S. STATES RT-540N**	25.9	3.8	40	9/28
S. STATES RT-560	24.8	3.8	42	10/2
UNISOUTH GENETICS USG 7547 RR	24.6	3.4	46	10/1
PIONEER VARIETY 95B41*	23.3	3.6	44	9/29
DELTA KING 5263RR**	21.6	2.8	40	9/26
HYTEST SEEDS HTS5410RR**	20.6	3.5	50	9/30
DELTA KING 5664RR**	19.8	2.9	42	10/4
UNISOUTH GENETICS USG 7557 RR	18.9	3.8	58	9/30
HARTZ VARIETY H5000RR	18.1	3.4	47	10/1
TRI-STATE D. C. UAPX 0038 RR	14.9	4.0	45	10/4
GROUP V AVERAGE	24.6	3.6	45	9/30
GRAND MEAN	33.7	3.2	47	
LSD (0.10)	3.9	0.3	3	

* Resistant to the soybean cyst nematode (Race 3)

** Resistant to the soybean cyst nematode (Race 3 and Race 14)

[A] Underlined cultivars are non-Roundup Ready check varieties.

[B] Within a maturity group, shaded yields are not significantly different (0.10 level) from the highest yielding cultivar (bold data) of that maturity group and year column.

TABLE 5. 1998 COMBINED SUMMARY: SOYBEAN CYST NEMATODE VARIETY TESTS

VARIETY / BRAND	YIELD[A] (BU/AC) 1998	LODGING 1998	PLANT HEIGHT (IN) 1998	1998 REPORTED SCN RESISTANCE[B]
MID-SEASON (GROUP IV)				
DELSOY 4710	**52.1**	2.0	39	3,14
DEKALB CX450C	49.8	1.8	36	3
GOLDEN HARVEST H-1487	49.8	1.7	38	3,14
TN 4-86	49.7	1.6	45	3,14
TN 4-94	49.6	1.5	40	3,14
MANOKIN	49.1	2.3	33	3
S. STATES FFR-478N	49.1	1.2	34	3
NK BRAND S 46-44	48.4	1.5	37	3,14
EXCEL 6467	48.2	1.3	36	3
CAVERNDALE CF 465nRR	47.1	1.6	40	3,14
EXCEL 6431	47.0	2.3	34	3
DEKALB CX470C	46.8	1.3	36	3
SOUTHERN CROSS DAVID	46.3	1.1	36	3,14
CALLAHAN 9454	45.0	1.2	34	3,14
SOUTHERN CROSS JAMES	44.3	1.4	36	3,14
LG SEEDS LG 6456 RR	44.2	1.6	34	3,14
PHARAOH	42.0	1.3	30	3,14
PENNYRILE	39.6	1.2	36	SUS
CALHOUN	33.7	1.0	22	SUS
GROUP IV AVERAGE	46.4	1.5	36	
LATE (GROUP V)				
ANAND	**56.2**	1.7	29	3,5,14
S. STATES RT-517N	50.5	1.7	35	3,14
SOUTHERN CROSS SAMUEL	50.2	1.3	28	3,14
KS 5292	47.7	1.1	29	3
S. STATES RT-557	47.2	1.9	35	3
KAS CHEROKEE 516	47.0	1.0	29	3
EXCEL 6552	46.2	1.0	32	3
S. STATES FFR-542N	46.2	2.0	34	3,14
HUTCHESON	45.0	1.3	32	SUS
TN 5-95	44.0	1.8	34	3,14
HARTWIG	41.6	3.2	34	ALL
GROUP V AVERAGE	47.4	1.6	31.9	
GRAND MEAN	46.8	1.6	34	
LSD (0.10)	3.4	0.3	2	

[A] Within a maturity group, shaded yields are not significantly different (0.10 level) from the highest yielding cultivar (bold data) of that maturity group and year column.

[B] Resistance to cyst nematode races are indicated for race 3 and race 14, the predominant races in Kentucky.

SUS - susceptible to SCN

ALL - Hartwig was developed using a different source of SCN resistance which, so far, provides resistance to all known races of SCN.

Note: Two- and three-year data are not present because last year's test site was infested with SCN Race 4 and only Hartwig showed resistance.

TABLE 6. 1998 FAYETTE CO. CONVENTIONAL VARIETY TEST

VARIETY / BRAND	YIELD (BU/AC)[A] 1998	97-98	96-98	LODGING 1998	97-98	96-98	PLANT HEIGHT (IN) 1998	MATURITY DATE 1998	POD HEIGHT (IN) 1998
EARLY (GROUP III)									
S. STATES FFR-365	**52.8**	55.0	55.8	2.5	1.8	1.7	46	9/10	8
MACON	52.2	56.0	56.3	4.0	2.5	2.2	39	9/8	7
PIONEER VARIETY 9395	52.0	**58.2**	57.9	4.0	2.5	2.8	42	9/9	5
NK BRAND S 38-L5	51.7	55.9		3.5	2.3		41	9/12	6
GOLDEN HARVEST H-1383	51.3	57.2	**60.1**	3.8	2.4	2.3	41	9/9	6
ASGROW A3904**	50.9	52.6		4.0	2.6		37	9/8	6
CROW'S 38004	46.8	54.8		4.5	2.9		39	9/8	6
CROW'S 40002	45.2			3.3			42	9/8	5
S. STATES SS-HT-381-STS	41.1	48.9	52.8	4.3	3.0	2.7	46	9/13	6
GROUP III AVERAGE	49.3	54.8	56.6	3.8	2.5	2.3	41	9/9	6
MID-SEASON (GROUP IV)									
NK BRAND 3474	**56.0**	55.1	58.1	4.3	3.0	2.8	46	9/13	6
CAVERNDALE CF 461	55.6	56.2	56.4	4.0	3.0	3.0	45	9/17	5
PIONEER VARIETY 9481**	55.5	53.7	55.8	4.3	3.1	3.1	45	9/18	6
ASGROW A4341	55.4	56.9	**58.5**	2.5	2.0	1.9	41	9/13	7
DELTAPINE DP 3478	54.6	53.2	57.1	3.8	2.8	2.8	47	9/18	7
CALLAHAN 7417	52.4	**59.6**		3.0	2.1		49	9/8	4
PIONEER VARIETY 9452	52.4	53.8	55.0	2.5	2.0	2.2	39	9/13	6
OMAHA	52.0	54.7	57.3	3.5	2.4	2.3	36	9/10	5
PIONEER VARIETY 94B01**	51.4	50.6		3.0	2.0		44	9/12	8
GOLDEN HARVEST H-1415**	50.4			3.8			42	9/13	8
MYCOGEN 5474**	49.9			3.8			50	9/15	7
CALLAHAN 3484	49.8	54.3	56.4	4.0	3.0	2.9	48	9/16	6
PIONEER VARIETY 9482	49.0	50.9	55.9	3.3	2.5	2.6	43	9/14	5
CALHOUN	47.9	53.0	53.3	2.8	1.9	1.8	31	9/10	4
NK BRAND S 43-B5	47.1	54.0		4.0	2.6		41	9/12	5
S. STATES FFR-439	47.1	50.6	54.3	4.0	2.9	2.6	49	9/16	5
DEKALB CX470C*	45.3	52.5		3.0	2.5		45	9/14	7
CROW'S 43004**	44.9			4.3			41	9/14	7
DEKALB CX450C*	44.2	49.1	50.9	4.0	3.0	2.8	43	9/15	5
STRESSLAND	44.2	52.3	56.2	3.5	2.8	2.9	46	9/11	8
KS 4694	43.7	49.0	53.2	2.8	2.4	2.4	44	9/19	5
CALLAHAN 9454**	43.0			3.5			44	9/12	7
PIONEER VARIETY 9492**	41.1	47.0		2.5	2.1		47	9/20	6
S. STATES FFR-493	40.9	49.1	50.6	2.3	1.8	2.3	45	9/21	9
SOUTHERN CROSS DAVID**	40.9	49.3	53.1	3.0	2.0	2.0	47	9/13	6
SOUTHERN CROSS JOSHUA	40.6	47.3	53.3	3.5	2.6	2.6	45	9/13	5
MYCOGEN 470	40.4	50.6	53.5	4.0	2.9	3.0	49	9/14	6
SOUTHERN CROSS MARK	39.9			3.8			45	9/10	6
CAVERNDALE CF 492	39.4	46.5	49.2	3.5	2.8	3.2	35	9/21	7
ASGROW A4604**	38.9			3.8			49	9/15	9
DELTA KING 4860**	37.9	46.9	50.4	2.8	2.1	2.2	43	9/17	8
LG SEEDS LG 6437C**	37.8	47.3		3.3	2.1		45	9/16	9
ASGROW A4922**	37.5	44.3	47.9	3.8	2.6	2.8	46	9/18	8
S. STATES FFR-478N*	37.3	43.8	48.2	3.0	2.3	2.2	45	9/20	8
LG SEEDS LG 6484	37.1	47.1	50.7	4.3	3.0	3.2	45	9/14	8
GATEWAY 493*	36.9	41.4		4.0	3.3		40	9/15	7

TABLE 6. 1998 FAYETTE CO. CONVENTIONAL VARIETY TEST *continued*

VARIETY / BRAND	YIELD (BU/AC)[A] 1998	97-98	96-98	LODGING 1998	97-98	96-98	PLANT HEIGHT (IN) 1998	MATURITY DATE 1998	POD HEIGHT (IN) 1998
NK BRAND S 46-44**	36.7	46.4	53.1	4.0	2.8	2.6	47	9/18	8
PIONEER VARIETY 94B81	35.9			2.8			50	9/16	7
PHARAOH**	35.4	42.4	44.1	4.0	3.4	3.4	38	9/22	9
KFP 430**	34.8			3.3			47	9/13	6
TN 4-94**	34.7	43.7	47.9	3.8	3.1	3.1	49	9/21	7
DELTA KING 4762RR**	33.8	45.1		3.5	2.5		50	9/22	9
SOUTHERN CROSS EXODUS	33.4	44.1		4.5	3.0		48	9/18	6
GATEWAY 470	33.2	41.6	47.8	4.5	3.1	3.0	47	9/15	8
HYTEST SEEDS HTS5000	32.7			4.3			48	9/13	6
GOLDEN HARVEST H-1485	32.6	45.0	49.9	4.3	3.1	2.9	44	9/13	5
UNISOUTH GENETICS USG 7499	31.7	41.1	47.3	2.5	2.0	2.1	46	9/19	8
DELSOY 4710**	31.3	39.3	42.8	4.5	3.3	3.3	47	9/15	8
TN 4-86**	30.4	41.0	44.1	4.0	3.0	2.9	52	9/18	7
TERRA INTL. TS 4792**	28.1			3.8			50	9/20	6
MANOKIN*	27.1	38.0	41.3	4.0	3.9	3.9	46	10/3	6
TERRA INTL. RIVERSIDE 490	24.7	36.1		3.0	2.8		47	9/27	6
S. STATES EXP. 46616-STS	22.0			4.0			48	9/28	8
GROUP IV AVERAGE	41.3	48.4	51.8	3.6	2.7	2.7	45	9/16	7
LATE (GROUP V)									
HOLLADAY	**44.3**	44.9	**47.3**	3.3	3.1	3.3	41	9/21	7
CLIFFORD	38.6	**45.3**	45.4	3.8	3.6	3.7	42	10/5	7
PIONEER VARIETY 95B33**	33.8			3.5			42	9/30	8
S. STATES FFR-542N**	33.3	40.3	43.4	4.3	3.5	3.3	48	9/30	8
NK BRAND 3505**	32.5			3.5			39	9/22	8
TERRA INTL. RIVERSIDE 77	31.1			4.0			41	10/19	9
GOLDEN HARVEST H-1500*	29.6	38.5	42.7	3.3	2.9	3.0	40	9/22	7
KAS CHEROKEE 516*	29.6			3.8			43	9/21	9
KS 5292*	29.3	39.5	45.0	4.0	3.3	3.3	38	9/27	6
NK BRAND S 51-00	28.1			3.3			47	9/22	8
DELTA KING 5850**	26.6	33.6	37.7	4.0	4.1	4.0	46	10/10	9
ANAND**	25.4			3.3			37	9/27	8
HUTCHESON	23.8	35.6	38.1	3.8	3.6	3.5	38	10/11	6
DELTA KING 5664RR**	23.3	31.6		3.3	3.3		42	10/15	7
TERRA INTL. RIVERSIDE 520	23.3	35.9		3.0	2.4		41	9/22	8
DELTAPINE DP 3519S**	22.2	34.6	37.0	4.0	3.5	3.5	43	10/3	8
ASGROW A5547**	20.9	32.0	36.6	3.8	3.5	3.8	43	10/15	9
TN 5-95**	19.4	29.6	36.3	4.0	3.6	3.4	51	10/3	9
S. STATES EXP. 46631-STS	16.5			4.0			41	10/10	7
S. STATES SS-HT-551-STS	16.4	29.7	32.8	4.0	3.3	3.2	41	10/5	8
DELTA KING 5263RR**	16.1	32.9		3.0	3.0		42	9/25	4
GROUP V AVERAGE	26.9	36.0	40.2	3.7	3.3	3.5	42	10/2	8
GRAND MEAN	38.6	46.4	49.6	3.6	2.8	2.9	44		7
LSD (0.10)	6.8	9.1	7.0	0.5	1.0	0.7	5		2

* Resistant to the soybean cyst nematode (Race 3)

** Resistant to the soybean cyst nematode (Race 3 and Race 14)

[A] Within a maturity group, shaded yields are not significantly different (0.10 level) from the highest yielding cultivar (bold data) of that maturity group and year column.

TABLE 7. 1998 HARDIN CO. CONVENTIONAL VARIETY TEST[B]

VARIETY / BRAND	YIELD (BU/AC)[A] 1998	97-98	96-98	LODGING 1998	97-98	96-98
EARLY (GROUP III)						
CROW'S 40002	**61.2**			3.0		
S. STATES FFR-365	56.7	45.0	48.0	2.5	1.8	1.8
GOLDEN HARVEST H-1383	54.6	51.7	**55.4**	2.5	1.8	2.1
ASGROW A3904**	54.0	**52.8**		2.5	1.8	
PIONEER VARIETY 9395	50.5	48.5	50.4	3.0	2.0	2.3
CROW'S 38004	49.3	45.7		2.3	1.6	
NK BRAND S 38-L5	46.9	44.4		2.5	1.8	
MACON	46.2	45.5	49.9	2.8	1.9	2.1
S. STATES SS-HT-381-STS	43.0	44.6	49.7	2.8	1.9	2.3
GROUP III AVERAGE	51.4	47.3	50.7	2.7	1.8	2.1
MID-SEASON (GROUP IV)						
NK BRAND S 43-B5	**60.6**	**51.6**		3.5	2.3	
ASGROW A4341	59.7	50.1	55.0	2.5	1.8	1.9
CALHOUN	57.6	50.4	51.5	1.3	1.1	1.3
MYCOGEN 5474**	57.4			2.5		
OMAHA	55.5	50.9	51.8	2.5	1.8	1.9
PIONEER VARIETY 9452	55.5	49.1	52.3	2.5	1.8	2.3
SOUTHERN CROSS MARK	55.0			3.8		
STRESSLAND	54.7	50.9	52.4	3.5	2.3	2.4
NK BRAND 3474	54.6	47.9	50.8	3.8	2.4	2.7
DEKALB CX470C*	51.7	49.8		2.8	1.9	
PIONEER VARIETY 94B01**	51.0	44.6		2.8	1.9	
CAVERNDALE CF 492	50.7	46.9	52.5	1.8	1.4	2.4
GOLDEN HARVEST H-1415**	50.3			3.0		
CALLAHAN 7417	50.1	43.2		2.0	1.5	
ASGROW A4604**	49.6			3.3		
MYCOGEN 470	49.3	47.5	49.4	2.5	1.8	2.3
SOUTHERN CROSS JOSHUA	49.2	46.5	48.1	2.8	1.9	2.6
CAVERNDALE CF 461	49.1	46.0	46.6	3.3	2.3	2.7
PIONEER VARIETY 9482	49.0	49.9	**55.4**	3.3	2.1	2.4
DELTAPINE DP 3478	48.8	46.9	50.1	3.3	2.1	2.4
S. STATES FFR-493	48.5	47.3	49.2	2.8	1.9	2.2
CROW'S 43004**	48.3			2.8		
DEKALB CX450C*	48.0	45.8	49.3	3.3	2.1	2.4
CALLAHAN 3484	47.8	44.9	50.7	3.3	2.1	2.7
HYTEST SEEDS HTS5000	46.4			3.3		
GOLDEN HARVEST H-1485	45.9	48.5	51.1	3.5	2.3	2.8
S. STATES FFR-439	45.7	43.7	50.4	2.3	1.6	1.8
SOUTHERN CROSS EXODUS	45.4	46.0		3.0	2.1	
KFP 430**	45.3			3.0		
LG SEEDS LG 6484	43.8	46.7	50.0	3.5	2.3	3.1
SOUTHERN CROSS DAVID**	43.8	41.3	45.6	3.5	2.3	2.7
PIONEER VARIETY 94B81	42.7			2.8		
CALLAHAN 9454**	42.6			3.3		
GATEWAY 470	41.7	42.1	45.5	2.8	1.9	2.4
UNISOUTH GENETICS USG 7499	41.2	43.0	48.4	2.5	1.8	2.2
NK BRAND S 46-44**	41.0	41.5	45.4	2.5	1.8	2.3
KS 4694	40.8	43.0	49.3	3.0	2.0	2.5

TABLE 7. 1998 HARDIN CO. CONVENTIONAL VARIETY TEST[B] *continued*

VARIETY / BRAND	YIELD (BU/AC)[A] 1998	97-98	96-98	LODGING 1998	97-98	96-98
TN 4-86**	40.4	43.8	43.6	3.3	2.1	2.4
TN 4-94**	39.0	41.6	45.1	2.8	1.9	2.3
PIONEER VARIETY 9492**	38.1	39.4		2.8	1.9	
PHARAOH**	38.0	44.0	43.7	2.3	1.6	2.5
LG SEEDS LG 6437C**	37.8	42.4		3.0	2.0	
MANOKIN*	37.5	43.0	47.9	2.8	2.4	2.9
PIONEER VARIETY 9481**	37.2	43.1	47.7	3.3	2.3	2.7
S. STATES EXP. 46616-STS	33.8			4.0		
TERRA INTL. TS 4792**	32.9			3.0		
GATEWAY 493*	32.1	41.1		1.8	1.4	
DELSOY 4710**	31.7	36.9	43.1	3.8	2.4	3.2
DELTA KING 4860**	31.5	37.9	41.1	2.0	1.5	2.1
TERRA INTL. RIVERSIDE 490	31.0	38.2		2.8	2.0	
S. STATES FFR-478N*	30.2	37.0	44.2	2.8	1.9	2.4
ASGROW A4922**	22.3	30.7	36.7	3.3	2.1	2.8
DELTA KING 4762RR**	19.9	27.3		2.5	1.8	
GROUP IV AVERAGE	44.4	44.1	48.2	2.9	2.0	2.4
LATE (GROUP V)						
NK BRAND 3505**	**48.8**			3.0		
HOLLADAY	41.0	44.3	**48.1**	3.5	2.4	2.7
PIONEER VARIETY 95B33**	39.9			3.3		
ASGROW A5547**	39.6	41.5	45.5	3.0	2.4	2.8
TERRA INTL. RIVERSIDE 520	39.3	41.1		3.0	2.0	
ANAND**	38.9			3.0		
HUTCHESON	38.7	**45.2**	48.0	3.0	2.4	2.8
KAS CHEROKEE 516*	38.3			2.8		
DELTA KING 5664RR**	35.9	40.3		2.5	2.0	
DELTAPINE DP 3519S**	32.5	40.6	44.8	3.0	2.5	3.0
S. STATES SS-HT-551-STS	32.2	39.8	42.1	1.8	1.5	2.0
S. STATES EXP. 46631-STS	32.1			3.8		
TERRA INTL. RIVERSIDE 77	32.0			3.5		
GOLDEN HARVEST H-1500*	30.5	39.3	45.6	2.0	1.6	2.3
KS 5292*	30.4	34.8	40.5	2.3	1.6	2.1
TN 5-95**	30.1	37.7	39.2	3.3	2.6	3.0
NK BRAND S 51-00	30.0			2.8		
DELTA KING 5263RR**	29.3	38.2		2.8	1.9	
DELTA KING 5850**	27.6	36.0	40.3	4.0	2.9	3.3
S. STATES FFR-542N**	18.4	30.4	36.3	2.8	1.9	2.4
CLIFFORD	11.5	28.5	33.0	4.0	2.8	3.3
GROUP V AVERAGE	33.2	38.4	42.1	3.0	2.2	2.7
GRAND MEAN	42.3	43.2	47.1	2.9	2.0	2.5
LSD (0.10)	3.0	7.2	6.9	0.7	1.0	0.9

* Resistant to the soybean cyst nematode (Race 3)

** Resistant to the soybean cyst nematode (Race 3 and Race 14)

[A] Within a maturity group, shaded yields are not significantly different (0.10 level) from the highest yielding cultivar (bold data) of that maturity group and year column.

[B] No-till

TABLE 8. 1998 DAVIESS CO. CONVENTIONAL VARIETY TEST

VARIETY / BRAND	YIELD (BU/AC)[A] 1998	97-98	96-98	LODGING 1998	97-98	96-98
EARLY (GROUP III)						
ASGROW A3904**	**72.3**	**63.8**		2.0	1.6	
S. STATES FFR-365	63.0	52.7	41.6	2.0	1.5	1.3
MACON	60.1	52.7	43.4	1.8	1.4	1.3
PIONEER VARIETY 9395	59.5	56.3	**48.7**	1.5	1.3	1.2
GOLDEN HARVEST H-1383	58.8	50.8	43.2	1.8	1.4	1.3
NK BRAND S 38-L5	58.7	53.0		2.0	1.5	
CROW'S 40002	57.8			1.3		
S. STATES SS-HT-381-STS	56.8	55.4	48.3	1.5	1.3	1.2
CROW'S 38004	56.7	52.7		1.8	1.4	
GROUP III AVERAGE	60.4	54.7	45.0	1.7	1.4	1.3
MID-SEASON (GROUP IV)						
CROW'S 43004**	**74.9**			3.3		
S. STATES FFR-493	74.5	57.6	49.0	2.5	1.8	1.5
MYCOGEN 5474**	71.4			2.8		
ASGROW A4341	66.3	55.5	45.8	1.5	1.3	1.2
PIONEER VARIETY 94B01**	66.2	49.9		2.3	1.6	
SOUTHERN CROSS DAVID**	65.5	54.4	49.8	2.3	1.6	1.4
S. STATES FFR-439	65.4	55.4	48.5	2.5	1.9	1.6
UNISOUTH GENETICS USG 7499	65.3	59.4	49.2	2.3	1.8	1.5
DEKALB CX450C*	63.0	55.4	49.0	3.0	2.0	1.7
PIONEER VARIETY 9482	62.6	59.8	51.3	2.8	2.3	1.8
STRESSLAND	62.0	57.4	49.6	2.5	1.8	1.5
MANOKIN*	61.9	58.3	50.3	3.0	2.9	2.6
CAVERNDALE CF 492	61.7	59.0	49.5	1.3	1.1	1.1
GATEWAY 470	61.6	**63.7**	**54.6**	2.5	2.3	1.8
SOUTHERN CROSS MARK	61.3			2.8		
HYTEST SEEDS HTS5000	61.1			2.8		
NK BRAND S 43-B5	60.7	55.2		2.3	1.6	
DELSOY 4710**	60.5	56.7	49.0	3.3	2.6	2.1
GOLDEN HARVEST H-1415**	60.2			1.8		
SOUTHERN CROSS JOSHUA	59.5	58.2	48.7	2.5	2.0	1.7
TERRA INTL. TS 4792**	59.2			3.0		
NK BRAND 3474	59.0	57.7	48.7	2.3	1.9	1.6
ASGROW A4604**	58.9			3.3		
CALLAHAN 7417	58.5	59.1		2.3	1.6	
PIONEER VARIETY 9481**	58.5	55.5	45.8	2.8	2.1	1.8
S. STATES FFR-478N*	58.1	52.0	48.1	2.0	1.5	1.3
S. STATES EXP. 46616-STS	58.0			3.0		
PIONEER VARIETY 9492**	57.9	52.2		2.3	1.6	
CALLAHAN 9454**	57.6			2.3		
LG SEEDS LG 6484	57.6	58.6	49.6	3.3	2.1	1.8
KS 4694	57.5	55.4	45.1	2.5	1.8	1.5
GATEWAY 493*	57.0	56.2		2.3	2.4	
PIONEER VARIETY 9452	56.6	51.1	42.4	1.5	1.3	1.2
CALHOUN	56.5	55.3	47.4	1.0	1.0	1.1
LG SEEDS LG 6437C**	56.4	54.4		2.3	1.8	
TERRA INTL. RIVERSIDE 490	56.1	54.5		2.5	1.9	

TABLE 8. 1998 DAVIESS CO. CONVENTIONAL VARIETY TEST *continued*

VARIETY / BRAND	YIELD (BU/AC)[A] 1998	97-98	96-98	LODGING 1998	97-98	96-98
DEKALB CX470C*	55.8	51.3		2.5	1.8	
GOLDEN HARVEST H-1485	55.6	58.8	49.3	3.3	2.3	1.8
PHARAOH**	54.7	54.9	48.0	2.0	2.3	2.3
KFP 430**	54.4			2.8		
CAVERNDALE CF 461	54.1	50.9	42.7	2.5	2.1	1.8
MYCOGEN 470	54.0	56.6	49.5	3.0	2.4	1.9
OMAHA	53.7	50.5	40.2	1.8	1.4	1.3
ASGROW A4922**	53.6	53.3	46.9	2.0	1.5	1.3
NK BRAND S 46-44**	53.5	53.2	49.1	3.0	2.0	1.7
DELTAPINE DP 3478	53.1	55.5	50.2	2.8	2.4	1.9
TN 4-86**	52.5	48.2	41.0	2.3	1.9	1.6
CALLAHAN 3484	51.9	50.2	43.8	3.3	2.1	1.8
SOUTHERN CROSS EXODUS	51.5	52.2		3.0	2.3	
DELTA KING 4860**	51.3	50.7	46.4	2.3	1.6	1.4
PIONEER VARIETY 94B81	49.2			2.5		
DELTA KING 4762RR**	44.7	46.9		2.8	1.9	
TN 4-94**	44.1	45.3	43.5	3.0	2.0	1.7
GROUP IV AVERAGE	58.3	54.6	47.5	2.5	1.9	1.6
LATE (GROUP V)						
PIONEER VARIETY 95B33**	**72.2**			3.3		
S. STATES EXP. 46631-STS	71.3			4.0		
HUTCHESON	70.8	51.5	46.3	3.5	2.8	2.3
ANAND**	69.4			3.0		
ASGROW A5547**	67.6	63.0	**56.1**	3.5	2.5	2.3
S. STATES SS-HT-551-STS	67.3	**63.3**	54.9	2.5	2.3	1.9
DELTA KING 5664RR**	65.6	48.4		3.0	2.6	
DELTA KING 5850**	65.3	60.6	52.3	3.3	3.6	3.3
HOLLADAY	63.7	61.4	52.1	3.5	2.4	1.9
CLIFFORD	63.3	61.5	48.3	4.0	3.5	2.7
TERRA INTL. RIVERSIDE 77	62.3			3.5		
NK BRAND 3505**	60.9			3.3		
S. STATES FFR-542N**	59.7	55.5	47.4	2.5	1.9	1.6
KS 5292*	58.6	53.8	47.9	3.0	2.0	1.7
DELTAPINE DP 3519S**	58.3	57.8	49.9	3.0	2.8	2.3
GOLDEN HARVEST H-1500*	57.4	53.2	49.3	3.5	2.5	2.2
TERRA INTL. RIVERSIDE 520	57.4	56.7		3.5	2.4	
TN 5-95**	56.8	55.1	50.4	3.0	2.6	2.8
KAS CHEROKEE 516*	55.9			2.5		
DELTA KING 5263RR**	53.7	55.6		2.8	2.0	
NK BRAND S 51-00	53.0			2.3		
GROUP V AVERAGE	62.4	57.0	50.4	3.2	2.6	2.3
GRAND MEAN	59.6	55.1	47.9	2.6	2.0	1.7
LSD (0.10)	8.9	8.3	10.5	0.5	0.7	0.6

* Resistant to the soybean cyst nematode (Race 3)

** Resistant to the soybean cyst nematode (Race 3 and Race 14)

[A] Within a maturity group, shaded yields are not significantly different (0.10 level) from the highest yielding cultivar (bold data) of that maturity group and year column.

TABLE 9.1998 CALDWELL CO. CONVENTIONAL VARIETY TEST

VARIETY / BRAND	YIELD (BU/AC)[A] 1998	97-98	96-98	LODGING 1998	97-98	96-98	PLANT HEIGHT (IN) 1998	MATURITY DATE 1998	POD HEIGHT (IN) 1998
EARLY (GROUP III)									
GOLDEN HARVEST H-1383	**48.2**	**53.9**	**58.1**	1.0	1.0	1.0	40	9/10	7
CROW'S 40002	46.1			1.0			41	9/10	6
PIONEER VARIETY 9395	45.8	52.1	52.4	1.5	1.3	1.2	43	9/12	7
ASGROW A3904**	44.4	48.0		1.0	1.0		44	9/11	6
S. STATES FFR-365	44.3	50.1	49.1	1.0	1.0	1.0	41	9/6	8
CROW'S 38004	44.1	52.4		1.0	1.0		44	9/9	7
MACON	40.6	48.4	49.0	1.0	1.0	1.0	39	9/9	7
NK BRAND S 38-L5	38.2	45.7		1.5	1.3		44	9/6	6
S. STATES SS-HT-381-STS	30.0	41.6	45.4	2.5	1.8	1.5	45	9/10	6
GROUP III AVERAGE	42.4	49.0	50.8	1.3	1.2	1.1	42	9/9	7
MID-SEASON (GROUP IV)									
NK BRAND S 43-B5	**56.1**	**57.3**		1.0	1.0		46	9/18	6
CALLAHAN 7417	54.9	53.2		2.5	1.8		38	9/9	6
CAVERNDALE CF 492	51.0	51.9	53.5	1.0	1.5	1.3	28	9/19	7
CALHOUN	49.1	49.2	50.2	1.0	1.0	1.0	26	9/10	7
S. STATES FFR-493	46.0	55.2	**56.6**	1.0	1.0	1.0	48	9/20	9
SOUTHERN CROSS DAVID**	45.6	45.5	46.8	1.0	1.0	1.0	46	9/13	7
LG SEEDS LG 6437C**	44.0	50.7		1.0	1.0		47	9/11	7
PIONEER VARIETY 9452	44.0	54.0	55.3	1.0	1.0	1.0	35	9/12	8
STRESSLAND	43.8	47.4	49.1	2.0	1.5	1.3	45	9/13	8
S. STATES FFR-478N*	43.4	43.1	43.9	1.0	1.0	0.8	47	9/19	9
OMAHA	43.2	48.5	43.0	1.0	1.0	1.0	42	9/10	7
PIONEER VARIETY 94B01**	42.4	48.2		1.0	1.0		48	9/13	7
DEKALB CX470C*	42.0	50.3		3.0	2.0		49	9/17	7
GOLDEN HARVEST H-1415**	41.5			2.0			43	9/15	8
ASGROW A4604**	40.4			3.5			44	9/21	8
CALLAHAN 9454**	40.4			2.5			47	9/11	7
S. STATES FFR-439	40.3	50.1	51.2	2.0	1.5	1.3	48	9/14	8
SOUTHERN CROSS EXODUS	39.9	46.9		2.5	1.8		47	9/19	7
HYTEST SEEDS HTS5000	39.5			4.0			49	9/20	8
PIONEER VARIETY 9481**	39.2	42.6	45.5	2.0	1.5	1.3	52	9/18	6
ASGROW A4341	38.5	49.2	50.1	1.0	1.0	1.0	41	9/10	9
MYCOGEN 5474**	38.2			1.0			46	9/12	7
MANOKIN*	37.7	43.5	50.2	4.0	3.8	3.0	42	9/25	8
KFP 430**	37.5			1.0			47	9/11	8
NK BRAND S 46-44**	37.3	44.9	47.9	1.5	1.3	1.2	49	9/16	9
CAVERNDALE CF 461	37.2	44.9	46.1	2.5	1.8	1.7	48	9/15	5
CROW'S 43004**	36.1			3.0			44	9/13	8
LG SEEDS LG 6484	36.1	48.4	50.1	2.5	2.0	1.8	50	9/18	7
SOUTHERN CROSS MARK	36.0			1.5			47	9/10	7
DEKALB CX450C*	35.9	46.1	46.9	2.0	1.8	1.5	48	9/11	8
CALLAHAN 3484	35.6	51.3	49.9	2.5	2.3	2.0	47	9/17	8
KS 4694	35.6	42.1	42.4	1.0	1.0	1.0	45	9/15	6
PHARAOH**	35.5	42.3	46.6	4.0	2.8	2.2	40	9/22	10
PIONEER VARIETY 94B81	35.1			3.0			50	9/18	9
DELSOY 4710**	34.6	42.3	41.5	4.5	3.5	3.0	51	9/17	8
PIONEER VARIETY 9482	34.2	47.2	48.9	2.5	1.8	1.5	48	9/16	6

TABLE 9.1998 CALDWELL CO. CONVENTIONAL VARIETY TEST *continued*

VARIETY / BRAND	YIELD (BU/AC)[A] 1998	97-98	96-98	LODGING 1998	97-98	96-98	PLANT HEIGHT (IN) 1998	MATURITY DATE 1998	POD HEIGHT (IN) 1998
SOUTHERN CROSS JOSHUA	34.2	45.0	47.4	2.5	1.8	1.5	49	9/18	10
UNISOUTH GENETICS USG 7499	34.0	46.2	49.5	1.5	1.3	1.2	47	9/23	9
NK BRAND 3474	33.6	42.4	47.2	3.5	2.5	2.0	49	9/18	8
DELTA KING 4860**	33.1	42.0	44.2	1.5	1.3	1.2	47	9/18	8
TN 4-86**	32.9	40.9	39.6	4.5	2.8	2.3	52	9/21	9
PIONEER VARIETY 9492**	32.8	43.2		2.0	1.5		47	9/21	8
S. STATES EXP. 46616-STS	32.6			5.0			45	9/27	8
GOLDEN HARVEST H-1485	32.3	44.5	46.6	1.5	1.3	1.2	49	9/16	6
MYCOGEN 470	32.3	42.3	47.7	2.5	1.8	1.8	45	9/18	7
GATEWAY 470	32.0	44.8	44.9	2.5	1.8	1.5	49	9/16	6
DELTA KING 4762RR**	31.2	43.3		2.0	1.5		54	9/21	8
GATEWAY 493*	31.1	39.1		4.5	3.5		43	9/17	9
TN 4-94**	30.4	39.5	41.4	4.0	2.8	2.3	51	9/23	11
ASGROW A4922**	30.3	44.4	45.4	2.0	1.5	1.3	49	9/18	7
DELTAPINE DP 3478	29.9	45.9	49.4	3.0	2.0	1.7	49	9/17	7
TERRA INTL. TS 4792**	27.9			4.0			46	9/23	9
TERRA INTL. RIVERSIDE 490	24.9	42.4		3.5	3.3		48	9/23	8
GROUP IV AVERAGE	37.9	46.2	47.4	2.3	1.8	1.5	46	9/17	8
LATE (GROUP V)									
HOLLADAY	**40.8**	**50.1**	**50.4**	4.5	3.5	2.7	40	9/29	8
NK BRAND 3505**	40.3			2.5			40	9/23	9
PIONEER VARIETY 95B33**	39.2			2.5			38	9/30	9
ASGROW A5547**	38.1	48.6	49.7	3.5	3.5	2.7	43	10/1	9
KAS CHEROKEE 516*	37.5			3.0			41	9/23	10
HUTCHESON	37.0	47.6	50.0	1.5	1.5	1.5	42	9/30	9
S. STATES SS-HT-551-STS	35.1	42.6	47.6	3.0	2.5	2.0	40	9/29	10
DELTA KING 5850**	34.7	39.8	44.0	4.5	3.5	3.0	43	9/30	10
KS 5292*	34.4	40.6	43.9	1.5	2.0	1.7	39	9/23	9
DELTAPINE DP 3519S**	34.1	44.3	50.3	2.0	2.0	1.7	43	9/29	9
NK BRAND S 51-00	33.4			2.0			48	9/25	9
ANAND**	33.3			2.5			43	9/28	8
DELTA KING 5263RR**	32.8	39.9		2.0	1.5		40	9/26	9
S. STATES FFR-542N**	32.8	43.6	46.8	2.5	2.3	1.8	44	9/27	10
TN 5-95**	30.9	41.9	44.9	2.5	2.8	2.2	43	9/26	10
TERRA INTL. RIVERSIDE 77	30.7			2.5			47	10/3	11
GOLDEN HARVEST H-1500*	30.5	39.0	40.3	3.0	2.3	1.8	39	9/23	9
CLIFFORD	29.7	42.2	43.2	4.0	2.8	2.2	44	9/27	10
S. STATES EXP. 46631-STS	29.6			4.5			42	10/1	10
DELTA KING 5664RR**	29.2	35.3		1.0	1.0		45	10/1	9
TERRA INTL. RIVERSIDE 520	25.8	42.1		2.0	2.0		49	9/22	9
GROUP V AVERAGE	33.8	42.7	46.5	2.7	2.4	2.1	43	9/27	9
GRAND MEAN	37.4	45.8	47.5	2.3	1.8	1.6	44		8
LSD (0.10)	6.9	6.3	5.2	1.0	0.7	0.5	3		1

* Resistant to the soybean cyst nematode (Race 3)

** Resistant to the soybean cyst nematode (Race 3 and Race 14)

[A] Within a maturity group, shaded yields are not significantly different (0.10 level) from the highest yielding cultivar in the maturity group and year column.

TABLE 10. 1998 CALLOWAY CO. CONVENTIONAL VARIETY TEST

VARIETY / BRAND	YIELD (BU/AC)[A] 1998	97-98	96-98	LODGING 1998	97-98	96-98
EARLY (GROUP III)						
PIONEER VARIETY 9395	**44.6**	47.0	43.4	1.0	1.3	1.2
CROW'S 38004	42.2	**47.6**		1.0	1.0	
GOLDEN HARVEST H-1383	41.2	47.4	**44.1**	2.0	1.5	1.3
CROW'S 40002	39.5			1.0		
MACON	36.4	46.5	43.1	1.0	1.3	1.2
NK BRAND S 38-L5	34.8	40.7		1.0	1.0	
ASGROW A3904**	29.4	40.9		1.0	1.0	
S. STATES FFR-365	29.1	40.3	37.2	1.0	1.0	1.0
S. STATES SS-HT-381-STS	28.4	37.6	35.7	1.0	1.3	1.2
GROUP III AVERAGE	36.2	43.5	40.7	1.1	1.2	1.2
MID-SEASON (GROUP IV)						
ASGROW A4341	**46.0**	**50.3**	**45.6**	1.0	1.0	1.0
OMAHA	45.7	48.4	42.4	1.0	1.3	1.2
SOUTHERN CROSS MARK	44.4			2.5		
S. STATES FFR-493	42.1	47.5	42.5	1.0	1.0	1.0
CROW'S 43004**	38.8			1.5		
CAVERNDALE CF 492	38.6	46.1	41.7	1.0	1.0	1.0
S. STATES FFR-439	38.5	47.3	43.7	1.0	1.0	1.0
CALHOUN	37.7	44.9	40.6	1.0	1.0	1.0
CAVERNDALE CF 461	37.6	45.7	42.9	2.0	1.5	1.3
DEKALB CX470C*	37.4	46.0		1.5	1.5	
GOLDEN HARVEST H-1415**	37.4			1.0		
PIONEER VARIETY 94B01**	37.2	45.3		1.0	1.0	
STRESSLAND	37.0	40.2	38.2	1.0	1.3	1.2
PIONEER VARIETY 94B81	36.7			1.0		
CALLAHAN 7417	36.5	37.9		1.0	1.0	
ASGROW A4604**	36.3			2.0		
KFP 430**	35.0			1.5		
SOUTHERN CROSS DAVID**	34.6	45.8	43.4	1.0	1.3	1.2
PIONEER VARIETY 9452	34.5	43.4	40.5	1.0	1.0	1.0
DEKALB CX450C*	34.2	43.3	37.0	3.0	2.3	1.8
DELSOY 4710**	34.0	40.3	39.5	3.5	2.8	2.2
LG SEEDS LG 6437C**	33.7	45.3		1.0	1.3	
S. STATES EXP. 46616-STS	31.7			2.5		
TN 4-86**	31.3	42.3	40.5	1.0	1.3	1.2
NK BRAND S 43-B5	31.2	38.7		1.5	1.3	
PIONEER VARIETY 9492**	30.8	40.2		1.0	1.0	
CALLAHAN 9454**	30.6			2.0		
PIONEER VARIETY 9481**	30.6	40.8	38.3	3.0	2.0	1.7
PHARAOH**	30.1	39.0	34.0	2.0	2.5	2.0
PIONEER VARIETY 9482	29.7	45.4	41.7	2.0	1.5	1.3
NK BRAND S 46-44**	28.8	43.6	40.0	1.0	1.0	1.0
TERRA INTL. RIVERSIDE 490	28.8	37.6		2.5	3.3	
TN 4-94**	28.2	41.9	37.5	1.5	1.5	1.3
SOUTHERN CROSS EXODUS	27.9	41.7		2.5	2.0	
S. STATES FFR-478N*	27.7	38.1	35.0	1.0	1.0	1.0
GOLDEN HARVEST H-1485	27.4	39.9	38.1	1.0	1.0	1.0

TABLE 10. 1998 CALLOWAY CO. CONVENTIONAL VARIETY TEST *continued*

VARIETY / BRAND	YIELD (BU/AC)[A] 1998	97-98	96-98	LODGING 1998	97-98	96-98
KS 4694	27.4	40.3	38.2	1.0	1.0	1.0
NK BRAND 3474	27.4	45.3	42.0	3.0	2.0	1.7
MANOKIN*	26.9	39.3	39.3	3.5	3.3	2.5
DELTAPINE DP 3478	26.8	41.6	39.1	2.5	1.8	1.5
UNISOUTH GENETICS USG 7499	26.5	42.5	43.1	1.0	1.3	1.2
MYCOGEN 5474**	26.4			1.0		
CALLAHAN 3484	26.3	44.0	41.0	2.0	2.0	1.7
MYCOGEN 470	26.3	39.5	38.1	2.5	2.0	1.7
TERRA INTL. TS 4792**	26.3			2.0		
ASGROW A4922**	26.2	38.1	36.1	1.0	1.0	1.0
DELTA KING 4762RR**	25.6	43.6		1.5	1.3	
GATEWAY 493*	25.5	36.0		1.5	2.0	
DELTA KING 4860**	24.9	32.6	35.5	1.0	1.0	1.0
SOUTHERN CROSS JOSHUA	24.7	39.9	38.3	3.5	2.3	1.8
GATEWAY 470	22.6	37.5	36.4	3.0	2.0	1.7
HYTEST SEEDS HTS5000	21.9			2.5		
LG SEEDS LG 6484	21.0	38.0	38.5	1.5	1.3	1.2
GROUP IV AVERAGE	31.8	42.0	39.5	1.7	1.6	1.4
LATE (GROUP V)						
HOLLADAY	**40.4**	43.1	43.0	3.5	2.5	2.0
ANAND**	36.5			1.5		
DELTA KING 5850**	33.1	40.5	41.2	3.5	3.8	2.8
S. STATES FFR-542N**	32.2	40.2	37.7	3.5	2.5	2.0
DELTAPINE DP 3519S**	32.1	41.0	38.7	2.0	2.0	1.7
CLIFFORD	32.0	42.4	41.3	3.0	3.0	2.3
HUTCHESON	31.5	**43.4**	**44.0**	1.5	2.3	1.8
TERRA INTL. RIVERSIDE 77	30.6			3.0		
DELTA KING 5664RR**	29.4	34.8		1.0	1.0	
GOLDEN HARVEST H-1500*	27.7	40.5	36.9	1.0	1.3	1.2
NK BRAND S 51-00	27.2			1.0		
PIONEER VARIETY 95B33**	27.2			1.5		
TERRA INTL. RIVERSIDE 520	27.2	38.6		2.0	2.0	
KS 5292*	26.6	42.3	38.2	2.5	2.3	1.8
ASGROW A5547**	26.1	35.0	37.9	1.5	2.5	2.0
KAS CHEROKEE 516*	24.8			3.0		
S. STATES EXP. 46631-STS	19.8			5.0		
TN 5-95**	19.7	34.4	34.3	4.0	3.0	2.3
S. STATES SS-HT-551-STS	19.1	39.5	37.9	1.0	1.3	1.2
NK BRAND 3505**	14.3			3.0		
DELTA KING 5263RR**	11.9	24.1		1.5	1.3	
GROUP V AVERAGE	27.1	38.6	39.2	2.4	2.2	1.9
GRAND MEAN	31.1	41.4	39.6	1.8	1.6	1.5
LSD (0.10)	7.0	5.6	3.9	1.0	0.6	0.4

* Resistant to the soybean cyst nematode (Race 3)

** Resistant to the soybean cyst nematode (Race 3 and Race 14)

[A] Within a maturity group, shaded yields are not significantly different (0.10 level) from the highest yielding cultivar (bold data) of that maturity group and year column.

TABLE 11. 1998 FAYETTE CO. ROUNDUP READY VARIETY TEST

VARIETY / BRAND[B]	YIELD[A] (BU/AC) 1998	LODGING 1998	PLANT HEIGHT (IN) 1998	MATURITY DATE 1998
EARLY (GROUP III)				
GOLDEN HARVEST H-1383	**51.0**	3.3	44	9/11
CROW'S 36009RR**	48.2	2.5	44	9/12
GOLDEN HARVEST H-1396RR*	43.0	3.7	46	9/12
NK BRAND S 36-U2	42.8	2.7	41	9/12
CALLAHAN 8394RR**	40.3	4.3	48	9/11
EXCEL 8382 RR*	40.0	3.8	44	9/11
DEKALB CX390RR	39.1	3.3	45	9/12
S. STATES RT-3975	38.8	3.7	44	9/16
PIONEER VARIETY 93B71	36.0	3.8	44	9/14
S. STATES RT-386	34.8	3.5	47	9/17
GROUP III AVERAGE	42.1	3.5	44	9/13
MID-SEASON (GROUP IV)				
CALLAHAN 8437RR	**39.7**	2.8	51	9/21
DEKALB CX444CRR**	38.7	3.2	43	9/18
ASGROW AG4301**	37.8	3.0	42	9/17
HYTEST SEEDS HTS4301RR**	36.1	3.0	48	9/19
ASGROW AG4601**	36.0	3.7	46	9/18
ASGROW AG4501**	35.9	4.0	52	9/22
SOUTHERN CROSS PAUL	35.7	3.3	59	9/18
EXCEL 8422 RR	35.4	2.5	47	9/15
LG SEEDS LG 6432 RR	35.3	3.0	47	9/16
ASGROW AG4702**	35.1	2.8	49	9/20
CAVERNDALE CF 465nRR**	34.5	3.3	51	9/21
S. STATES RT-446N*	34.2	3.2	48	9/19
ASGROW AG4602**	34.2	3.2	47	9/17
PIONEER VARIETY 9482	34.0	3.3	49	9/19
DEKALB CX420RR	32.8	3.8	48	9/12
S. STATES RT-467	32.8	3.5	50	9/20
DELTA KING 4762RR**	32.6	3.5	56	9/22
ASGROW AG4901**	32.2	3.5	52	9/22
DELTAPINE DP 4750 RR	32.1	3.5	54	9/21
CALLAHAN 3484	32.0	3.5	53	9/16
SOUTHERN CROSS MICAH**	31.9	3.5	52	9/20
NK BRAND S 46-W8**	31.8	3.5	46	9/18
S. STATES RT-447	31.8	3.2	52	9/17
PIONEER VARIETY 94B81	31.5	3.5	50	9/19
DEKALB CX485RR	31.1	3.5	46	9/22
SOUTHERN CROSS JUDE	30.7	3.5	43	9/16
PIONEER VARIETY 94B01**	30.6	2.7	46	9/12
PIONEER VARIETY 9492**	30.5	2.8	48	9/21
ASGROW AG4401**	30.5	3.0	46	9/18

TABLE 11. 1998 FAYETTE CO. ROUNDUP READY VARIETY TEST *continued*

VARIETY / BRAND[B]	YIELD[A] (BU/AC) 1998	LODGING 1998	PLANT HEIGHT (IN) 1998	MATURITY DATE 1998
NK BRAND S 42-K2	29.7	3.5	46	9/11
DEKALB CX460RR	29.6	3.7	51	9/18
EXCEL 8451 RR	29.6	3.3	46	9/20
GOLDEN HARVEST H-1444RR**	29.5	3.2	47	9/21
CAVERNDALE CF 446RR	28.5	3.5	48	9/17
ASGROW AG4701**	27.9	3.5	54	9/25
S. STATES RT EXP. 24813	27.8	3.2	48	9/17
PIONEER VARIETY 94B41**	27.3	2.5	48	9/14
TRI-STATE D. C. DYNA-GRO 3463**	26.4	3.8	50	9/18
DELTAPINE DP 4344 RR	23.7	3.8	49	9/21
CALLAHAN 7467RR	22.7	3.3	53	9/19
DELTAPINE DP 4969 RR	22.2	3.3	52	9/29
TERRA INTL. TS 466 RR**	21.5	3.0	51	9/19
GROUP IV AVERAGE	31.5	3.3	49	9/19
LATE (GROUP V)				
HOLLADAY	**32.4**	3.5	39	9/25
TERRA INTL. TS 556 RR	27.2	4.0	47	10/9
TC 5498 RR**	26.2	4.0	51	10/5
DELTA KING 5263RR**	21.0	3.0	45	10/1
S. STATES RT-557*	20.8	4.3	56	10/11
UNISOUTH GENETICS USG 7577 RR	19.3	4.2	52	10/11
S. STATES RT-517N**	19.1	3.7	45	9/29
S. STATES RT-540N**	19.1	4.2	44	10/2
UNISOUTH GENETICS USG 7547 RR	17.4	3.8	50	10/6
S. STATES RT-560	17.3	3.8	46	10/8
PIONEER VARIETY 95B41*	13.7	3.3	47	10/3
DELTA KING 5664RR**	12.3	3.5	43	10/11
TRI-STATE D. C. UAPX 0038 RR	12.2	4.2	50	10/12
UNISOUTH GENETICS USG 7557 RR	10.2	4.0	70	10/3
HYTEST SEEDS HTS5410RR**	9.9	4.2	57	10/5
HARTZ VARIETY H5000RR	8.2	3.3	52	10/6
GROUP V AVERAGE	17.9	3.8	50	10/5
GRAND MEAN	29.8	3.4	49	
LSD (0.10)	6.3	0.4	4	

* Resistant to the soybean cyst nematode (Race 3)

** Resistant to the soybean cyst nematode (Race 3 and Race 14)

[A] Within a maturity group, shaded yields are not significantly different (0.10 level) from the highest yielding cultivar (bold data) of that maturity group and year column.

[B] Underlined cultivars are non-Roundup Ready check varieties.

TABLE 12. 1998 CALDWELL CO. ROUNDUP READY VARIETY TEST

VARIETY / BRAND[A]	YIELD[B] (BU/AC) 1998	LODGING 1998	PLANT HEIGHT (IN) 1998	MATURITY DATE 1998
EARLY (GROUP III)				
GOLDEN HARVEST H-1383	**51.1**	3.0	38	9/5
EXCEL 8382 RR*	49.4	3.2	46	9/5
GOLDEN HARVEST H-1396RR*	48.7	3.5	43	9/7
NK BRAND S 36-U2	48.6	3.2	42	9/5
CALLAHAN 8394RR**	47.0	3.2	44	9/4
CROW'S 36009RR**	46.6	1.8	40	9/3
DEKALB CX390RR	45.0	2.8	43	9/5
S. STATES RT-386	43.8	3.3	44	9/10
S. STATES RT-3975	39.0	2.8	43	9/6
PIONEER VARIETY 93B71	35.8	2.8	44	9/4
GROUP III AVERAGE	46.6	3.0	43	9/5
MID-SEASON (GROUP IV)				
PIONEER VARIETY 94B01**	**49.1**	2.8	46	9/6
LG SEEDS LG 6432 RR	46.2	2.5	45	9/9
ASGROW AG4702**	45.9	2.5	47	9/13
EXCEL 8422 RR	45.8	2.8	44	9/9
PIONEER VARIETY 9492**	45.7	2.7	45	9/12
PIONEER VARIETY 94B41**	45.2	2.5	42	9/10
DEKALB CX420RR	44.4	3.0	46	9/4
HYTEST SEEDS HTS4301RR**	43.7	2.8	45	9/12
PIONEER VARIETY 9482	42.4	3.7	47	9/14
CALLAHAN 8437RR	41.0	2.5	46	9/9
PIONEER VARIETY 94B81	39.9	3.3	48	9/11
ASGROW AG4301**	39.8	2.3	43	9/12
ASGROW AG4601**	39.8	3.0	43	9/12
S. STATES RT-447	39.0	3.0	51	9/8
SOUTHERN CROSS JUDE	38.8	2.5	45	9/4
S. STATES RT-467	38.5	2.8	47	9/8
NK BRAND S 42-K2	38.2	3.2	42	9/11
SOUTHERN CROSS PAUL	38.1	2.7	52	9/9
S. STATES RT-446N*	38.0	2.8	46	9/12
DELTAPINE DP 4344 RR	37.9	3.5	49	9/12
CAVERNDALE CF 446RR	37.6	3.2	49	9/8
TRI-STATE D. C. DYNA-GRO 3463**	37.3	3.2	51	9/14
CALLAHAN 7467RR	37.0	3.0	46	9/13
TERRA INTL. TS 466 RR**	36.6	3.2	44	9/13
ASGROW AG4401**	36.5	2.3	44	9/11
CAVERNDALE CF 465nRR**	36.0	3.0	49	9/13
DELTAPINE DP 4750 RR	35.9	4.0	51	9/28
GOLDEN HARVEST H-1444RR**	35.9	2.5	46	9/9

TABLE 12. 1998 CALDWELL CO. ROUNDUP READY VARIETY TEST *continued*

VARIETY / BRAND[A]	YIELD[B] (BU/AC) 1998	LODGING 1998	PLANT HEIGHT (IN) 1998	MATURITY DATE 1998
EXCEL 8451 RR	35.9	3.5	47	9/13
ASGROW AG4501**	35.8	3.5	49	9/14
DEKALB CX485RR	35.2	3.0	49	9/12
NK BRAND S 46-W8**	35.1	2.8	46	9/8
SOUTHERN CROSS MICAH**	35.1	2.7	49	9/12
ASGROW AG4602**	35.0	2.3	45	9/6
S. STATES RT EXP. 24813	34.9	3.0	48	9/5
DELTA KING 4762RR**	34.3	2.8	41	9/15
ASGROW AG4701**	33.6	2.5	51	9/11
DEKALB CX460RR	32.3	3.2	51	9/7
DEKALB CX444CRR**	32.0	2.3	45	9/6
ASGROW AG4901**	31.6	2.7	48	9/10
CALLAHAN 3484	30.4	3.8	44	9/15
DELTAPINE DP 4969 RR	25.8	2.8	46	9/24
GROUP IV AVERAGE	38.0	2.9	47	9/11
LATE (GROUP V)				
S. STATES RT-517N**	**41.8**	3.3	40	9/24
HOLLADAY	38.2	3.5	37	9/23
TERRA INTL. TS 556 RR	36.4	3.3	44	9/26
S. STATES RT-557*	34.5	3.5	45	9/26
UNISOUTH GENETICS USG 7577 RR	33.6	3.3	42	9/26
PIONEER VARIETY 95B41*	32.9	3.8	41	9/25
S. STATES RT-540N**	32.8	3.5	36	9/24
TC 5498 RR**	32.5	3.3	43	9/25
S. STATES RT-560	32.2	3.8	38	9/26
UNISOUTH GENETICS USG 7547 RR	31.7	3.0	41	9/26
HYTEST SEEDS HTS5410RR**	31.2	2.8	42	9/26
HARTZ VARIETY H5000RR	28.1	3.5	43	9/25
UNISOUTH GENETICS USG 7557 RR	27.7	3.5	45	9/27
DELTA KING 5664RR**	27.3	2.3	40	9/28
DELTA KING 5263RR**	22.2	2.5	36	9/21
TRI-STATE D. C. UAPX 0038 RR	17.5	3.8	40	9/26
GROUP V AVERAGE	31.3	3.3	41	9/25
GRAND MEAN	37.5	3.0	45	
LSD (0.10)	4.7	0.5	4	

* Resistant to the soybean cyst nematode (Race 3)

** Resistant to the soybean cyst nematode (Race 3 and Race 14)

[A] Underlined cultivars are non-Roundup Ready check varieties.

[B] Within a maturity group, shaded yields are not significantly different (0.10 level) from the highest yielding cultivar (bold data) of that maturity group and year column.

TABLE 13. 1998 DAVIESS CO. SOYBEAN CYST NEMATODE TEST

VARIETY / BRAND	YIELD[A] (BU/AC) 1998	LODGING 1998	PLANT HEIGHT (IN) 1998	1998 SCN EGG DENSITIES/100CC SOIL PLANTING(Pi)	HARVEST(Pf)	Pf-Pi[B]	1998 REPORTED SCN RESISTANCE[C]
MID-SEASON (GROUP IV)							
TN 4-94	**61.4**	2.0	40	6200	9160	+2960	3, 14
GOLDEN HARVEST H-1487	61.1	2.3	37	9290	2120	-7170	3, 14
DELSOY 4710	60.2	3.0	40	8380	3920	-4460	3, 14
MANOKIN	58.8	3.2	31	11930	2680	-9250	3
TN 4-86	57.2	2.2	42	12650	4630	-8020	3, 14
CAVERNDALE CF 465nRR	55.2	2.2	36	9170	4900	-4270	3, 14
S. STATES FFR-478N	54.7	1.3	30	9220	4460	-4760	3
EXCEL 6467	54.1	1.7	32	9210	3420	-5790	3
DEKALB CX450C	53.4	2.2	31	9460	6730	-2730	3
PHARAOH	53.0	1.7	28	11950	6900	-5050	3, 14
EXCEL 6431	52.8	1.7	32	13620	5450	-8170	3
NK BRAND S 46-44	52.5	2.0	32	9510	5440	-4070	3, 14
SOUTHERN CROSS JAMES	52.1	1.8	33	10400	8200	-2200	3, 14
SOUTHERN CROSS DAVID	49.9	1.2	30	12360	8830	-3530	3, 14
LG SEEDS LG 6456 RR	49.2	2.2	33	8690	15300	+6610	3, 14
CALLAHAN 9454	48.7	1.3	29	10980	26280	+15300	3, 14
DEKALB CX470C	48.3	1.7	33	12440	6180	-6260	3
PENNYRILE	40.1	1.3	32	10530	34930	+24400	SUS
CALHOUN	39.0	1.0	20	9660	19680	+10020	SUS
GROUP IV AVERAGE	52.7	1.9	33				
LATE (GROUP V)							
ANAND	**64.5**	2.3	26	9640	3750	-5890	3,5,14
S. STATES RT-517N	60.1	2.3	31	9600	8490	-1110	3, 14
S. STATES RT-557	56.4	2.8	32	9010	6910	-2100	3
S. STATES FFR-542N	56.0	2.7	30	6450	6850	+400	3, 14
SOUTHERN CROSS SAMUEL	55.4	1.7	24	7520	7550	+30	3, 14
KS 5292	55.1	1.2	25	15560	7500	-8060	3
TN 5-95	54.7	2.5	32	9920	10910	+990	3, 14
EXCEL 6552	52.7	1.0	27	9900	9740	-160	3
HUTCHESON	51.1	1.7	28	9450	48620	+39170	SUS
HARTWIG	51.1	3.3	30	8900	1270	-7630	ALL
KAS CHEROKEE 516	50.5	1.0	27	10880	8460	-2420	3
GROUP V AVERAGE	55.7	2.2	29				
GRAND MEAN	53.6	1.9	31				
LSD (0.10)	4.4	0.4	2				

[A] Within a maturity group, shaded yields are not significantly different (0.10 level) from the highest yielding cultivar (bold data) of that maturity group and year column.

[B] Pf-Pi represents SCN reproduction during the growing season. Changes in SCN populations are best gauged by following SCN egg development through the season. Pf is the SCN egg count at the end of the season. Pi is the number of eggs present at planting. A positive number indicates an increase in the SCN population while a negative number indicates a decrease in the SCN population.

[C] Resistance to cyst nematode races are indicated for race 3 and race 14, the predominant races in Kentucky.

SUS - susceptible to SCN

ALL - Hartwig was developed using a different source of SCN resistance which, so far, provides resistance to all known races of SCN.

Note: Yield loss in soybeans caused by SCN is determined by the SCN population at planting - not the population at harvest. A race test indicated that the field was infested with SCN race 3.

TABLE 14. 1998 FULTON CO. SOYBEAN CYST NEMATODE TEST

VARIETY / BRAND	(BU/AC)[A] 1998	LODGING 1998	PLANT HEIGHT (IN) 1998	1998 SCN EGG DENSITIES/100CC SOIL PLANTING(Pi)	HARVEST(Pf)	Pf-Pi[B]	1998 REPORTED SCN RESISTANCE[C]
MID-SEASON (GROUP IV)							
DEKALB CX450C	**46.2**	1.3	41	6900	4700	-2200	3
DEKALB CX470C	45.4	1.0	40	5830	6670	+840	3
NK BRAND S 46-44	44.2	1.0	41	5230	3740	-1490	3,14
DELSOY 4710	44.1	1.0	39	4120	2230	-1890	3,14
S. STATES FFR-478N	43.5	1.0	37	4820	2830	-1990	3
SOUTHERN CROSS DAVID	42.7	1.0	41	7030	6760	-270	3,14
EXCEL 6467	42.2	1.0	39	6230	2670	-3560	3
TN 4-86	42.2	1.0	48	5100	5310	+210	3,14
CALLAHAN 9454	41.4	1.0	40	3160	18990	+15830	3,14
EXCEL 6431	41.2	3.0	37	7050	5180	-1870	3
MANOKIN	39.4	1.3	36	6130	12950	+6820	3
LG SEEDS LG 6456 RR	39.2	1.0	35	5710	13330	+7620	3,14
PENNYRILE	39.1	1.0	40	4320	12590	+8270	SUS
CAVERNDALE CF 465nRR	38.9	1.0	44	7710	4140	-3570	3,14
GOLDEN HARVEST H-1487	38.6	1.0	40	4970	10530	+5560	3,14
TN 4-94	37.8	1.0	41	4050	3580	-470	3,14
SOUTHERN CROSS JAMES	36.4	1.0	39	4950	2970	-1980	3,14
PHARAOH	31.1	1.0	31	6640	14470	+7830	3,14
CALHOUN	28.5	1.0	24	5340	15960	+10620	SUS
GROUP IV AVERAGE	40.1	1.1	39				
LATE (GROUP V)							
ANAND	**48.0**	1.0	32	5230	1830	-3400	3,5,14
SOUTHERN CROSS SAMUEL	45.0	1.0	32	8170	4870	-3300	3,14
KAS CHEROKEE 516	43.6	1.0	31	6130	8540	+2410	3
S. STATES RT-517N	40.9	1.0	38	6800	8070	+1270	3,14
KS 5292	40.3	1.0	34	5360	13990	+8630	3
EXCEL 6552	39.7	1.0	36	7860	6790	-1070	3
HUTCHESON	38.9	1.0	36	7180	16790	+9610	SUS
S. STATES RT-557	38.0	1.0	38	7020	10010	+2990	3
S. STATES FFR-542N	36.5	1.3	38	7170	6720	-450	3,14
TN 5-95	33.2	1.0	36	5680	6360	+680	3,14
HARTWIG	32.1	3.0	38	5650	1040	-4610	ALL
GROUP V AVERAGE	39.7	1.2	35				
GRAND MEAN	39.9	1.2	37				
LSD (0.10)	5.3	0.5	3				

[A] Within a maturity group, shaded yields are not significantly different (0.10 level) from the highest yielding cultivar (bold data) of that maturity group and year column.

[B] Pf-Pi represents SCN reproduction during the growing season. Changes in SCN populations are best gauged by following SCN egg development through the season. Pf is the SCN egg count at the end of the season. Pi is the number of eggs present at planting. A positive number indicates an increase in the SCN population while a negative number indicates a decrease in the SCN population.

[C] Resistance to cyst nematode races are indicated for race 3 and race 14, the predominant races in Kentucky.

SUS - susceptible to SCN

ALL - Hartwig was developed using a different source of SCN resistance which, so far, provides resistance to all known races of SCN.

Note: Yield loss in soybeans caused by SCN is determined by the SCN population at planting - not the population at harvest. The SCN population in the field was race 9. Race 9 will not reproduce on soybean varieties which get the bulk of their resistance from PI 88788, PI90763, or PI 437654. However, race 9 will reproduce on varieties which have Peking resistance in their pedigree. Most varieties which resist SCN race 3 or 1,3 derive their resistance from Peking, and these will allow SCN race 9 to reproduce. Most race 3,14 resistant varieties derive their resistance from PI 88788, but some also have other sources, such as Peking, built in. Race 9 will not increase under these varieties as long as PI 88788 is the main source of resistance. However, in some race 3,14 resistant varieties, a substantial component of the resistance is from Peking. In those cases, you can expect race 9 to increase. The above information explains why some resistant varieties did not allow SCN to reproduce in the above test while other varieties allowed for considerable reproduction.

TABLE 15. 1998 KENTUCKY SOYBEAN PERFORMANCE TEST PROTEIN AND OIL COMPOSITION[A]

VARIETY/BRAND	PROTEIN%	OIL%	VARIETY/BRAND	PROTEIN%	OIL%
ANAND**	37.7	16.6	LG SEEDS LG 6437C**	37.1	17.2
ASGROW A3904**	37.4	18.0	LG SEEDS LG 6484	34.9	17.7
ASGROW A4341	36.4	18.4	MACON	36.0	18.2
ASGROW A4604**	39.3	17.4	MANOKIN*	39.0	16.9
ASGROW A4922**	39.7	17.3	MYCOGEN 470	35.3	17.6
ASGROW A5547**	37.4	16.2	MYCOGEN 5474**	38.0	17.3
ASGROW AG4301**	38.2	17.8	NK BRAND 3474	35.5	17.8
ASGROW AG4401**	38.2	17.7	NK BRAND 3505**	36.0	16.5
ASGROW AG4501**	36.6	18.3	NK BRAND S 36-U2	36.9	17.7
ASGROW AG4601**	38.5	17.1	NK BRAND S 38-L5	34.3	18.5
ASGROW AG4602**	36.6	17.6	NK BRAND S 42-K2	38.7	17.1
ASGROW AG4701**	39.7	17.4	NK BRAND S 43-B5	37.9	17.1
ASGROW AG4702**	37.6	18.1	NK BRAND S 46-44**	35.2	17.6
ASGROW AG4901**	39.2	18.0	NK BRAND S 46-W8**	37.7	16.5
CALHOUN	37.6	17.5	NK BRAND S 51-00	35.6	16.9
CALLAHAN 3484	34.8	19.0	OMAHA	37.9	18.7
CALLAHAN 7417	33.9	18.6	PHARAOH**	40.8	16.4
CALLAHAN 7467RR	38.7	17.1	PIONEER VARIETY 9395	36.9	17.6
CALLAHAN 8394RR**	36.4	18.0	PIONEER VARIETY 93B71	38.9	16.4
CALLAHAN 8437RR	38.7	17.4	PIONEER VARIETY 9452	39.5	16.4
CALLAHAN 9454**	36.3	17.4	PIONEER VARIETY 9481**	38.5	17.9
CAVERNDALE CF 446RR	35.0	17.8	PIONEER VARIETY 9482	35.4	17.7
CAVERNDALE CF 461	35.3	18.9	PIONEER VARIETY 9492**	38.4	18.0
CAVERNDALE CF 465nRR**	40.3	16.2	PIONEER VARIETY 94B01**	36.3	18.5
CAVERNDALE CF 492	38.9	16.7	PIONEER VARIETY 94B41**	36.8	18.6
CLIFFORD	38.0	17.0	PIONEER VARIETY 94B81	38.5	17.8
CROW'S 36009RR**	36.1	17.8	PIONEER VARIETY 95B33**	40.3	15.9
CROW'S 38004	34.9	18.6	PIONEER VARIETY 95B41*	39.5	16.2
CROW'S 40002	34.0	18.6	S. STATES EXP. 46616-STS	38.3	16.5
CROW'S 43004**	37.0	17.4	S. STATES EXP. 46631-STS	37.1	17.1
DEKALB CX390RR	35.1	17.9	S. STATES FFR-365	36.3	18.5
DEKALB CX420RR	38.1	17.8	S. STATES FFR-439	35.6	18.2
DEKALB CX444CRR**	36.4	17.6	S. STATES FFR-478N*	38.0	17.7
DEKALB CX450C*	39.5	16.8	S. STATES FFR-493	36.1	17.3
DEKALB CX460RR	37.9	17.4	S. STATES FFR-542N**	39.2	16.7
DEKALB CX470C*	37.9	17.2	S. STATES RT EXP. 24813	34.9	17.8
DEKALB CX485RR	36.4	17.0	S. STATES RT-386	37.8	18.6
DELSOY 4710**	35.3	17.5	S. STATES RT-3975	39.9	17.1
DELTA KING 4762RR**	37.8	18.4	S. STATES RT-446N*	39.0	17.5
DELTA KING 4860**	36.5	17.7	S. STATES RT-447	33.9	18.0
DELTA KING 5263RR**	40.2	15.6	S. STATES RT-467	36.1	18.2
DELTA KING 5664RR**	39.3	17.2	S. STATES RT-517N**	38.3	17.7
DELTA KING 5850**	40.5	16.1	S. STATES RT-540N**	38.3	16.4
DELTAPINE DP 3478	35.6	19.6	S. STATES RT-557*	39.1	16.6
DELTAPINE DP 3519S**	38.3	16.8	S. STATES RT-560	38.8	16.5
DELTAPINE DP 4344 RR	39.4	17.3	S. STATES SS-HT-381-STS	35.6	18.1
DELTAPINE DP 4750 RR	34.7	18.9	S. STATES SS-HT-551-STS	35.8	17.7
DELTAPINE DP 4969 RR	38.5	18.3	SOUTHERN CROSS DAVID**	37.6	16.8
EXCEL 8382 RR*	36.2	18.7	SOUTHERN CROSS EXODUS	41.1	15.9
EXCEL 8422 RR	40.2	16.6	SOUTHERN CROSS JOSHUA	35.4	17.8
EXCEL 8451 RR	36.9	17.4	SOUTHERN CROSS JUDE	38.9	16.9
GATEWAY 470	36.6	17.9	SOUTHERN CROSS MARK	34.8	17.3
GATEWAY 493*	36.3	18.0	SOUTHERN CROSS MICAH**	40.8	15.6
GOLDEN HARVEST H-1383	33.8	19.2	SOUTHERN CROSS PAUL	35.4	17.8
GOLDEN HARVEST H-1396RR*	36.2	18.5	STRESSLAND	36.8	17.7
GOLDEN HARVEST H-1415**	36.1	17.8	TC 5498 RR**	38.6	16.9
GOLDEN HARVEST H-1444RR**	36.0	17.6	TERRA INTL. RIVERSIDE 490	38.7	16.6
GOLDEN HARVEST H-1485	35.8	17.5	TERRA INTL. RIVERSIDE 520	38.1	17.2
GOLDEN HARVEST H-1500*	35.4	17.5	TERRA INTL. RIVERSIDE 77	41.0	17.2
HARTZ VARIETY H5000RR	37.1	17.2	TERRA INTL. TS 466 RR**	39.8	16.8
HOLLADAY	36.6	17.1	TERRA INTL. TS 4792**	38.1	17.6
HUTCHESON	37.6	17.2	TERRA INTL. TS 556 RR	39.9	16.9
HYTEST SEEDS HTS4301RR**	36.3	18.3	TN 4-86**	36.7	17.7
HYTEST SEEDS HTS5000	36.2	17.9	TN 4-94**	37.3	17.3
HYTEST SEEDS HTS5410RR**	39.4	16.3	TN 5-95**	39.8	15.3
KAS CHEROKEE 516*	35.9	17.4	TRI-STATE D. C. DYNA-GRO 3463**	40.1	16.8
KFP 430**	36.4	16.6	TRI-STATE D. C. UAPX 0038 RR	40.9	15.9
KS 4694	37.4	16.9	UNISOUTH GENETICS USG 7547 RR	38.7	16.2
KS 5292*	36.4	17.6	UNISOUTH GENETICS USG 7557 RR	38.9	16.1
LG SEEDS LG 6432 RR	38.5	17.8	UNISOUTH GENETICS USG 7577 RR	38.8	16.2

[A] Variety protein and oil concentration was determined at the Fayette Co. (conventional soybeans) and Caldwell Co. (Roundup Ready soybeans) locations and expressed on the basis of 13% moisture. The mean protein concentration was 33.3%, and the mean oil concentration was 15.5%.

* Resistant to the soybean cyst nematode (Race 3)

** Resistant to the soybean cyst nematode (Race 3 and Race 14)

1998 KENTUCKY SOYBEAN PROMOTION BOARD ANNUAL REPORT

Kentucky Soybean Promotion Board Statement of Activity
Cash Basis for the Years Ended June 30, 1998 and 1997

		1998		1997
Cash Receipts				
Assessments:				
In State		$1,278,471		$1,604,924
Out of State		117,121		123,959
Penalties		1,105		0
Total Assessments		$1,396,697		$1,728,883
Less:				
Out of State Assessments	$133,504		$157,174	
United Soybean Board	620,880	754,384	773,210	$930,384
Net Assessments		642,313		798,499
Interest Income		26,395		25,704
KY Department of Agriculture Grant		0		5,000
Total Cash Receipts		$668,708		$829,203
Cash Disbursements				
Administration		$27,707		$34,430
Collection and Compliance		24,519		19,119
KY Ag. & Environment in Classroom		10,000		10,000
KSA Consumer and Producer		250,797		254,468
Consumer Information		64,486		51,759
Industry Information		51,758		54,362
International Market Development		30,929		30,651
Research		171,522		69,737
Producer Communications		49,094		37,757
Depreciation Expense		2,260		2,117
Total Cash Disbursements		$683,072		564,400
Excess (Deficit) of Cash Receipts Over Cash Disbursements		($14,364)		$264,803

1998 KENTUCKY SOYBEAN PROMOTION BOARD ANNUAL REPORT

Kentucky Soybean Promotion Board Statement of Research Funding for the Year Ended June 30, 1998

Researcher	Title	Amount
Breeding		
Dr. Todd Pfeiffer	Genetic Improvement of Soybeans for Kentucky	$15,000
Dr. Todd Pfeiffer	Searching for New Yield Genes	8,000
Biotechnology		
Dr. Glenn Collins	Develop Efficient Soybean Regeneration and Transformation with Genes	10,000
Dr. David Hildebrand	Genetic Engineering of Soybean Oil for Increased Value	10,000
Production		
Dr. Don Hershman	Effect Of Cropping Sequences on SCN Densities and Yield	4,500
Dr. Larry Grabau	Altered Fatty Acid Varieties: Does Our Climate Give Us an Edge?	8,000
Dr. Dennis TeKrony	Lignin Content in Soybean Seedcoats	5,000
Utilization		
Dr. Luke Boatright	Improving the Flavor of Soy Protein Products for Human Consumption	13,000
Dr. Paolo Fanti	Beneficial Effects of the Soy Constituent Genistein on Post Menopausal	15,000
Dr. Paolo Fanti	Potential Effects of Soy Protein an the Urine Composition and Bone Metabolism of Patients with Calcium-containing Kidney Stones	15,000
Dr. Phil Lee	Evaluation of Soy-Based Heavy Fuel Oil Emulsifiers for Efficiency	5,000
Dr. Gunnar Lynum	Evaluation of Soy Asphalt Release Agent	5,000
Utilization Research	Meetings/Travel, Postage, Supplies, and Printing	12,086
Education		
Dr. Don Hershman	SCN Workshop for Ag. Educators/Consultants	2,000
Education Research	15th Annual Soy Research Symposium and Southern Soybean Conference	33,603
Coordination		
Research Coordination	Soy Research Coordination	10,333
Total		$171,522

UNAUDITED

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