

# 1995 Kentucky Soybean Performance Tests

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## Acknowledgments

In addition to the county agents and farm cooperators mentioned in Table 1, several people have contributed greatly to

the production of this publication: Eugene Lacefield, John Byars, and Julie Scollin.

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.

Soybean tests in 1995 were planted at seven locations in Kentucky. The testing locations, soil types, planting dates, and other information are shown in Table 1.

## Methods

All tests were planted in a randomized complete block design with two replications (plots) of each variety. Individual plots were 20 feet long and four rows wide with 30 inches between rows in the conventional tests; in the double-

crop tests, the plots were 20 feet long and eight rows wide with 15 inches between rows. The seeding rate for the conventional tests was 8 to 10 viable seeds per foot of row and for the double-crop tests was 5 to 6 viable seeds per foot of row. All plots were planted with a modified soybean planter. All plots were treated with herbicides and maintained as weed free as possible.

One test (SCN test at Calhoun) was planted at a site infested with soybean cyst nematode. Only varieties with some genetic resistance to SCN and susceptible check varieties were tested at this site.

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 beans 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 was rated on a scale of 1 to 5: 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 was considered mature when 95 percent

*Location of the 1995 Kentucky Soybean Tests*

1. Mclean County
2. Hardin County
3. Caldwell County
4. Ballard County
5. Fayette County
6. Logan County



Table 1. Location, planting data, and climatic data for 1995 Soybean Performance Tests\*.

	<i>Calhoun</i>	<i>Glendale</i>	<i>Princeton</i>	<i>Princeton<sup>1</sup> Double-crop</i>	<i>La Center</i>	<i>Lexington</i>	<i>Russellville<sup>1</sup> Double-crop</i>
<b>Farmer</b>	Bobby and Greg Thomas	Frank Brown	Exp. Sta.	Exp. Sta.	Lynn Denton	Exp. Sta.	Denny & Ed Price
<b>Extension Agent</b>	Greg Henson	Rod Grusy			Kenny Perry		Rodney Haines
<b>Soil Type</b>	Karnak Silty Clay	Nicholason A	Crider Silt Loam	Crider Silt Loam	Henry Silt Loam	Lanton Silt Loam	Pembroke Silt Loam
<b>Date of Planting</b>	6/12	6/15	6/5	6/21	6/8	5/31	6/19
<b>Row Width</b>	30	30	30	15	30	30	15
<b>Herbicides<sup>2</sup></b>	2 pt. Tornado	3 lb. Partner 1 pt. Blazer 2 oz. Butyrac	2.5 pt. Dual 1/2 lb. Canopy	2 pt. Dual 3 pt. Roundup 2 pt. Lorox	1.5 pt. Prowl	8 pt. Lasso	4 pt. Butyrac 1.5 pt. Roundup 2 pt. Dual 1.5 pt. Storm
<b>Soil Test</b>							
<b>P</b>	57	55	154	154	40	200+	79
<b>K</b>	285	328	501	501	412	244	500
<b>pH</b>	6.7	7.0	6.8	6.8	5.9	6.1	6.4
<b>Fertilizer<sup>2</sup> Applied</b>	none	100 lb 18-46-0	none	none	none	100 lb/KCL	none
<b>50% Chance of Killing Frost<sup>3</sup></b>	10/25	10/20	10/19	10/19	10/19	10/26	10/23

<sup>1</sup> No-till double cropped after wheat.

<sup>2</sup> Amount per acre.

<sup>3</sup> Based on 30 year average

\*Trade names or products mentioned or similar products not named is neither intended as an endorsement nor criticism of such products by the Kentucky Agricultural Experiment Station.

of the pods had 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 dates were recorded at the Lexington, La Center, and Princeton 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 season, 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. 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 average performance of a variety over a period of years provides a better estimate of its potential and stability than its performance in a particular year. When selecting a variety, it is important to consider the three- or two-year average presented in the tables; this provides an estimate of a variety's stability and performance potential over years.

The performance data presented in Table 3 have been averaged across all locations. The across years and locations data are combined across all locations to predict yielding ability. (See Agronomy Notes, Volume 21, No. 3, "Using Performance Test Results in Soybean Variety Selection in Kentucky.") Performance of a variety across a period of years and at several locations in the state is a good indicator of its production potential. Varieties that have shown satisfactory yields and lodging resistance in Table 3 can be expected to have satisfactory field performance under similar conditions in Kentucky.

Small differences in yield are usually of little importance. The

yield of two varieties at a single location may 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) value quoted 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 may 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. 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 13-18 days from the dates in Table 1. For maximum yield, a variety must mature before the first killing frost in the fall. Maturity dates of varieties are listed for the Princeton, La Center, and Lexington locations, and in the one-year summary table.

If you have soybean cyst nematode (SCN) 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 cyst numbers as well as the yield presented in this table.

## Growing Conditions

Wet soil conditions delayed planting dated at all conventional locations. Inadequate summer rainfall reduced yields at all locations, especially Calhoun. Double-crop yields were not reduced.

## Soybean Production Information

The Kentucky Cooperative Extension Service has a series of publications, "Soybean Production in Kentucky," which contain 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); and Part IV. Weed, Disease, and Insect Control (AGR 131). A soybean planting rate guide, reproduced from this series, is provided below for your convenience (Table 2).

## Oil and Protein Data

The average protein and oil concentration for all soybean varieties entered in the Kentucky Soybean Performance Tests is presented in Table 13. 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, and the protein and oil concentrations are influenced by the production environments. Because soybean is grown primarily for its 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 composition of each variety that makes up the mixture. The term "variety unknown" may no longer be used in place of a variety designation for soybean, as all soybean seed must be labeled by variety name.

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## Sources of Seed

The seed planted in the 1995 Soybean Performance Tests was acquired from the following sources:

### ***Adler's Seeds Inc.***

Route 1, Box 403  
Sharpsville, IN 46068  
Adler 394

### ***AgraTech Seeds, Inc.***

5559 N 500W  
McCordsville, IN 46055  
AT 425  
AT 480  
AT 440

### ***Asgrow Seed Company***

2605 East Kilgore  
Kalamazoo, MI 49002  
Asgrow A 4922  
Asgrow A 4715  
Asgrow A 4341  
Asgrow A 4138  
Asgrow A 5403  
Asgrow A 5979

### ***Callahan Seeds***

1122 E. 169th Street  
Westfield, IN 46038  
Callahan 3484  
Callahan 5410  
Callahan 6455x  
Callahan 5510  
Callahan 3444  
Callahan 4435  
Callahan 6440x  
Callahan 3377N

### ***Caverndale Farms Inc.***

1921 Bluegrass Road  
Danville, KY 40422  
CF 492  
CF 461

### ***Ciba Seeds Division***

P.O. Box 18300  
Greensboro, NC 27419-8300  
Ciba Seeds 3474  
Ciba Seeds 3505  
Ciba Seeds 4305Y

### ***DeKalb Genetics Corporation***

3100 Sycamore Road  
DeKalb, IL 60115  
DeKalb CX478  
DeKalb CX499C  
DeKalb CX394C

### ***Delta and Pine Land Company***

P.O. Box 157  
Scott, MS 38772  
Deltapine DP3478

### ***Delta King Seed Co.***

P.O. Box 970  
McCrary, AR 72101  
Delta King 5850  
Delta King 5475  
Delta King 4450  
Delta King 4875

### ***Kentucky American Seeds, Inc***

205 Means Avenue  
P.O. Box 1104  
Hopkinsville, Ky 42240  
KAS Apache 486  
KAS Cherokee 516

**Kentucky Foundation**

Seed Project  
 P.O. Box 11950  
 Lexington, KY 40579  
 Calhoun  
 Chesapeake  
 Clifford  
 Delsoy 4210  
 Delsoy 4710  
 Delsoy 4900  
 Essex  
 Fayette  
 Hartwig  
 Holladay  
 Hutcheson  
 Jack  
 KS 5292  
 KS 4694  
 Macon  
 Manokin  
 Nile  
 Pennyrile  
 Pharaoh  
 Probst  
 Spry  
 Stressland  
 TN 4-86  
 Yale

**Freedom Seed Co.**

P.O. Box 710  
 Astoria, IL 61501  
 Freedom Br. 4437  
 Freedom Br. 4498

**Gateway Seed Co.**

Box 337  
 Ridgway, IL 62979  
 D.E.F. 470  
 D.E.F. 451

**Jacob Hartz Seed Co., Inc.**

P.O. Box 946  
 901 N. Park Avenue  
 Stuttgart, AR 72160  
 Hartz H4994

**LG Seeds**

P.O. Box 457  
 State Route 2135  
 Windfall, IN 46076  
 LG Seeds LG 6462C  
 LG Seeds JMS 4788  
 LG Seeds JMS 5009C

**Miles Seed**

2760 Keller Road  
 Owensboro, KY 42301  
 Southern Cross Luke  
 Southern Cross Saul  
 Southern Cross Ezra  
 Southern Cross Joshua  
 Southern Cross Samuel

**Mycogen Plant Sciences**

720 St. Croix Street  
 Prescott, WI 54021  
 Mycogen 470  
 Mycogen 429

**Northrup King Co.**

410 Woodbridge Drive  
 Somerville, TN 38068  
 Northrup King S52-25  
 Northrup King S46-44  
 Northrup King S42-60  
 Northrup King S39-11

**Pioneer Hi-Bred International, Inc.**

6767 Old Madison Pike #110  
 Huntsville, AL 35806  
 Pioneer Brand 9392  
 Pioneer Brand 9521  
 Pioneer Brand 9391  
 Pioneer Brand 9551  
 Pioneer Brand 9452  
 Pioneer Brand 9481  
 Pioneer Brand 9273  
 Pioneer Brand 9472

**Scott Seed Company**

709 East 4th Street  
 New Albany, IN 47150  
 BT 484  
 V 394

**Southern States Coop**

P.O. Box 26234  
 Richmond, VA 23260  
 S. States FFR-439  
 S. States FFR-545  
 S. States FFR-493  
 S. States FFR-514  
 S. States FFR-542  
 S. States FFR-553  
 S. States FFR-365  
 S. States SS-Exp. 20964  
 S. States FFR-474  
 S. States FFR-461  
 S. States FFR-414N  
 S. States SS-381-ST  
 S. States FFR-396  
 S. States FFR-495  
 S. States SS-Exp. 5510-ST  
 S. States FFR-442

**Stine Seed Co.**

2225 Laredo Trail  
 Adel, IA 50003  
 Stine Br. 3680  
 Stine Br. 4650  
 Stine Br. 5170  
 Stine Br. 4572

**Terra International Inc.**

P.O. Box 171376  
 Memphis, TN 38187  
 Terra TR 393  
 Riverside 529  
 Terra TR 474  
 Terra TR 4792  
 Terra TR 4292  
 Riverside 499  
 Terra TR 504

**Vigoro Industries, Inc.**

P.O. Box 156  
 Jefferson, GA 30549  
 Vigoro V455  
 Vigoro V485

Table 2. COMBINED SUMMARY, ALL CONVENTIONAL LOCATIONS

VARIETY/BRAND	YIELD BU/AC			LODGING			HT <sup>a</sup>	MAT <sup>b</sup>	POD	APPROX SEED/LB
	93-95	94-95	1995	93-95	94-95	1995	(IN) 1995	DATE 1995	HT. 1995	
<b>EARLY (GROUPS II AND III)</b>										
STINE BRAND 3680	-	53.5	44.7	-	2.4	2.0	35	9/21	5	3000
S.STATES FFR-365	-	-	44.5	-	-	1.2	35	9/18	5	2700
PIONEER BRAND 9392	49.1	47.8	43.5	1.5	1.6	1.6	35	9/19	5	2900
N.KING S39-11 <sup>c</sup>	48.2	48.4	43.0	2.2	2.1	2.1	38	9/19	7	2500
DEKALB CX394C <sup>b</sup>	-	47.4	42.8	-	1.5	1.5	39	9/18	6	2790
S.STATES FFR-396	-	45.6	41.3	-	1.3	1.2	32	9/17	5	3000
PIONEER BRAND 9391	-	-	41.2	-	-	1.9	37	9/17	6	2850
TERRA TR393	-	-	41.0	-	-	1.5	35	9/21	6	3200
SOUTHERN CROSS SAUL <sup>e</sup>	-	-	40.9	-	-	1.3	34	9/17	7	3100
MACON	-	-	40.7	-	-	1.4	31	9/19	5	2600
PROBST	-	-	40.4	-	-	1.5	31	9/16	5	3000
S.STATES SS-381-STS	-	45.9	40.4	-	2.1	1.8	37	9/19	7	3000
PIONEER BRAND 9273	-	42.8	40.0	-	1.3	1.3	24	9/10	4	2800
YALE <sup>e</sup>	-	42.8	39.3	-	1.5	1.5	35	9/18	5	2900
JACK <sup>c</sup>	42.0	40.2	37.8	2.5	2.4	2.1	36	9/13	5	3300
FAYETTE <sup>c</sup>	40.7	40.0	34.1	2.3	2.2	2.0	40	9/19	7	2500
GROUP III AVERAGE	45.0	45.4	41.0	2.1	1.8	1.7	35	9/18	6	
<b>MID-SEASON (GROUP IV)</b>										
D.E.F. 470	51.9	52.0	47.6	2.1	2.1	1.9	42	10/1	6	2900
VIGORO V485	-	-	47.5	-	-	2.0	41	9/28	7	2900
DELTAPINE DP 3478	-	52.6	47.4	-	2.3	2.2	40	10/1	7	3000
CALLAHAN 5410	-	48.0	46.4	-	2.0	1.8	39	9/21	5	2700
SOUTHERN CROSS LUKE <sup>e</sup>	-	-	46.1	-	-	1.4	40	9/29	6	2900
ASGROW A4341	-	-	46.1	-	-	1.6	33	9/21	6	3200
AGRATECH AT480	-	-	46.1	-	-	2.2	42	9/28	8	3200
STRESSLAND	50.8	50.6	45.9	2.2	2.2	2.0	39	9/21	7	2700
S.STATES FFR-495	-	-	45.6	-	-	1.6	44	9/30	8	3600
CIBA SEEDS 3474	51.2	50.2	45.5	2.1	2.2	2.2	41	9/28	7	2900
LG SEEDS LG6462C <sup>c</sup>	-	-	45.4	-	-	1.5	38	9/27	7	2900
MANOKIN <sup>b</sup>	48.2	49.3	45.3	2.8	2.7	2.5	38	10/9	9	3200
CALLAHAN 3484	51.1	50.8	45.2	2.2	2.3	2.1	41	9/29	6	2800
CHESAPEAKE	47.8	49.0	45.1	2.2	2.1	2.0	39	9/30	7	2950
HARTZ H4994 <sup>c</sup>	-	49.4	45.0	-	2.6	2.4	37	10/13	9	3100
KS 4694	49.1	50.1	44.9	1.6	1.6	1.5	35	9/24	6	3600
CF461	49.3	48.8	44.8	2.3	2.3	2.2	42	9/24	6	3000
CF492	48.7	50.2	44.5	1.7	1.7	1.8	29	9/30	7	3500
CALLAHAN 6455X	-	-	44.4	-	-	1.6	38	9/22	6	3000
TERRA TR474	-	-	44.3	-	-	2.3	40	10/3	7	3000
LG SEEDS JMS 4788	-	-	44.1	-	-	1.8	41	9/28	7	2800
ASGROW A4715 <sup>c</sup>	50.0	49.4	43.9	1.5	1.6	1.4	38	9/28	7	2800
ASGROW A4922 <sup>c</sup>	-	-	43.8	-	-	1.9	41	9/29	8	2800
VIGORO V455 <sup>c</sup>	-	-	43.8	-	-	1.3	39	9/28	7	2750
SOUTHERN CROSS JOSHUA	50.5	48.5	43.7	2.1	2.1	2.2	42	9/29	8	2850
MYCOGEN 470	-	-	43.7	-	-	2.0	40	10/1	6	2900
AGRATECH AT425 <sup>c</sup>	-	48.6	43.7	-	2.2	2.1	42	9/19	7	3000
DELTA KING 4875 <sup>c</sup>	-	-	43.7	-	-	2.2	41	9/25	7	2700
CALLAHAN 3444	47.3	46.9	43.2	2.1	2.1	1.9	42	9/22	7	2800
S.STATES FFR-439	49.7	50.2	43.2	1.8	1.7	1.6	42	9/22	7	3000
DELTA KING 4450 <sup>c</sup>	-	-	43.2	-	-	1.6	39	9/20	8	3100
N.KING S42-60	-	46.6	43.1	-	2.0	1.8	35	9/20	6	2800
S.STATES FFR-442	-	48.2	42.6	-	1.9	1.8	42	9/24	6	3000
ASGROW A4138 <sup>c</sup>	48.8	47.2	42.5	2.3	2.2	2.2	38	9/20	7	2900
CALHOUN	47.4	46.8	42.5	1.5	1.7	1.5	25	9/19	6	2800
S.STATES FFR-493	50.3	50.6	42.4	1.8	1.7	1.6	40	9/25	7	3200
TERRA TR4292 <sup>c</sup>	44.6	46.6	42.1	2.1	2.0	2.0	37	9/21	6	2900
KAS APACHE 486 <sup>b</sup>	-	-	41.9	-	-	1.7	44	10/2	7	3400
PENNYRILE	46.3	46.3	41.7	1.7	1.7	1.7	45	9/28	8	2800
PIONEER BRAND 9481 <sup>c</sup>	-	-	41.5	-	-	2.0	44	9/25	8	2830
ADLER 394	-	-	41.2	-	-	1.4	31	9/19	4	2500
STINE BRAND 4650	-	-	41.1	-	-	2.4	37	9/30	7	3000

**Table 2. COMBINED SUMMARY, ALL CONVENTIONAL LOCATIONS (continued)**

VARIETY/BRAND	YIELD BU/AC			LODGING			HT <sup>a</sup> (IN) 1995	MAT <sup>d</sup> DATE 1995	POD HT. 1995	APPROX SEED/LB
	93-95	94-95	1995	93-95	94-95	1995				
DELSONY 4710 <sup>e</sup>	47.4	47.6	41.0	2.4	2.3	1.9	45	10/2	9	2550
TN 4-86 <sup>e</sup>	43.6	44.3	40.7	2.0	2.1	2.0	47	9/25	8	3800
N.KING S46-44 <sup>c</sup>	46.4	47.7	40.6	1.9	1.8	1.6	41	9/23	8	2750
DELSONY 4900 <sup>b</sup>	47.0	48.5	40.4	2.6	2.3	1.8	35	10/9	7	3450
DEKALB CX499C	-	-	40.3	-	-	2.0	48	9/25	10	2700
DEKALB CX478	-	-	39.8	-	-	2.0	40	9/26	7	2900
PIONEER BRAND 9472 <sup>c</sup>	-	46.7	39.3	-	2.4	2.2	39	9/22	7	2700
S.STATES FFR-EX.20964	-	-	39.1	-	-	1.8	38	9/20	7	2800
TERRA TR4792 <sup>c</sup>	43.6	43.4	39.0	2.1	2.0	1.9	46	9/26	7	2950
S.STATES FFR-414N <sup>e</sup>	-	-	38.6	-	-	2.1	43	9/23	7	2800
S.STATES FFR-474 <sup>c</sup>	-	-	38.4	-	-	2.2	46	9/28	8	3600
NILE <sup>b</sup>	42.7	41.7	38.3	2.3	2.3	2.1	41	9/21	6	2800
PHARAOH <sup>c</sup>	44.4	43.7	38.2	2.2	2.3	2.6	37	9/30	10	3300
RIVERSIDE 499 <sup>b</sup>	-	-	38.0	-	-	2.2	49	10/7	7	3000
PIONEER BRAND 9452	-	45.3	37.5	-	1.6	1.7	32	9/22	6	2500
SPRY	46.0	45.8	37.0	2.5	2.6	2.6	36	9/23	7	2600
DELSONY 4210	44.7	44.1	36.2	2.4	2.4	1.9	41	9/22	7	2600
GROUP IV AVERAGE	47.7	47.9	42.7	2.1	2.1	1.9	40	9/27	7	
<b>LATE (GROUPS V AND VI)</b>										
HUTCHESON	49.2	52.0	48.6	2.3	2.1	2.0	36	10/14	9	3000
HOLLADAY	49.1	50.6	47.5	2.0	2.0	1.7	30	10/9	6	3300
S.STATES SS-EX.5510-ST	-	-	45.9	-	-	2.0	36	10/12	9	3200
DELTA KING 5475 <sup>e</sup>	-	-	45.3	-	-	2.1	34	10/16	9	3000
ASGROW A5403 <sup>c</sup>	-	-	45.2	-	-	2.0	37	10/7	8	3300
TERRA TR504 <sup>b</sup>	-	-	45.0	-	-	2.0	35	10/4	10	2850
S.STATES FFR-553	45.5	47.6	45.0	2.0	2.0	1.8	34	10/8	8	3200
DELTA KING 5850 <sup>c</sup>	-	-	44.9	-	-	2.1	39	10/18	9	3300
PIONEER BRAND 9521 <sup>b</sup>	47.3	47.9	44.4	2.3	2.2	2.1	38	10/7	9	3300
CLIFFORD	47.2	49.0	44.3	2.5	2.4	2.3	37	10/9	9	2650
SOUTHERN CROSS SAMUEL <sup>c</sup>	-	49.0	44.1	-	2.2	2.1	29	10/9	9	3250
CIBA SEEDS 3505 <sup>b</sup>	-	48.5	44.0	-	2.1	2.1	34	10/5	10	3000
S.STATES FFR 545	-	-	43.6	-	-	1.9	36	10/12	8	3300
CALLAHAN 5510 <sup>b</sup>	-	47.6	43.3	-	2.0	1.8	34	10/5	8	3100
S.STATES FFR-542 <sup>c</sup>	-	51.0	43.3	-	2.2	2.0	37	10/11	9	3000
LG SEEDS JMS 5009C <sup>b</sup>	-	-	43.0	-	-	1.9	34	10/3	9	2900
ASGROW A5979 <sup>b</sup>	-	-	42.9	-	-	1.9	38	10/19	9	3200
N.KING S52-25 <sup>b</sup>	-	45.3	42.7	-	2.2	2.0	35	10/10	9	3350
KS 5292 <sup>b</sup>	47.8	48.8	42.6	2.2	2.0	2.0	34	10/9	9	2700
PIONEER BRAND 9551 <sup>c</sup>	45.7	46.7	42.1	2.0	2.0	1.8	38	10/12	7	2800
S.STATES FFR-514 <sup>c</sup>	-	45.9	42.0	-	2.2	2.1	39	10/4	8	3800
ESSEX	45.6	47.3	41.3	1.9	2.2	2.2	32	10/10	9	3400
SOUTHERN CROSS EZRA <sup>b</sup>	-	-	40.7	-	-	1.7	37	10/7	8	3100
STINE BRAND 5170	-	-	40.4	-	-	2.1	34	10/1	9	3000
KAS CHEROKEE 516 <sup>b</sup>	-	-	39.9	-	-	2.1	33	9/29	9	3500
RIVERSIDE 529	-	-	38.8	-	-	2.1	47	10/13	9	2900
GROUPS V AND VI AVG	47.2	48.4	43.5	2.2	2.1	2.0	36	10/9	9	
GRAND AVERAGE	47.3	47.4	42.6	2.1	2.1	1.9	38	9/28	7	
LSD (0.10)	2.3	3.0	4.1	0.3	0.3	1.1	2		1	

<sup>a</sup>Plant height

<sup>b</sup>Resistant to the soybean cyst nematode (Race 3).

<sup>c</sup>Resistant to the soybean cyst nematode (Race 3 and Race 14).

<sup>d</sup>Maturity date based on observations at Lexington, Princeton, and La Center.

Table 3. COMBINED SUMMARY, DOUBLE-CROP LOCATIONS

VARIETY/BRAND	YIELD BU/AC			LODGING			HT <sup>a</sup>	MAT <sup>d</sup>	POD
	93-95	94-95	1995	93-95	94-95	1995	(IN) 1995	DATE 1995	HT. 1995
<b>EARLY (GROUPS II AND III)</b>									
PIONEER BRAND 9392	40.4	44.8	51.5	1.1	1.1	1.2	35	9/30	6
SOUTHERN CROSS SAUL <sup>c</sup>	-	-	49.2	-	-	1.2	38	10/1	6
TERRA TR393	-	-	46.2	-	-	1.5	35	10/2	6
S.STATES SS-381-ST5	-	40.6	45.1	-	2.1	2.9	39	10/4	6
S.STATES FFR-365	-	-	44.1	-	-	1.4	32	9/28	6
N.KING S39-11 <sup>c</sup>	36.0	40.6	43.8	1.5	1.7	2.2	44	9/30	9
PROBST	-	-	40.6	-	-	1.5	34	9/25	6
S.STATES FFR-396	-	34.4	40.5	-	1.2	1.4	33	9/29	5
YALE <sup>c</sup>	-	35.3	39.5	-	1.3	1.6	35	9/29	6
DEKALB CX394C <sup>b</sup>	-	36.2	39.1	-	1.2	1.4	39	10/2	5
FAYETTE <sup>c</sup>	29.8	34.0	37.8	1.6	1.7	2.1	42	9/29	5
JACK <sup>c</sup>	31.0	35.7	37.4	2.1	2.6	3.6	43	9/24	7
PIONEER BRAND 9391	-	-	37.4	-	-	2.0	39	9/26	8
MACON	-	-	37.2	-	-	1.6	33	10/3	6
STINE BRAND 3680	-	35.8	35.4	-	1.5	1.6	30	9/26	4
PIONEER BRAND 9273	-	35.1	33.8	-	1.2	1.4	24	9/17	4
GROUP III AVERAGE	34.7	37.2	41.1	1.5	1.6	1.9	36	9/29	6
<b>MID-SEASON (GROUP IV)</b>									
HARTZ H4994 <sup>c</sup>	-	50.4	59.5	-	2.3	2.7	37	10/17	8
D.E.F. 470	44.4	50.0	56.5	1.8	1.7	1.6	44	10/14	7
AGRATECH AT480	-	-	55.8	-	-	2.1	44	10/10	8
CALLAHAN 3444	43.1	48.8	55.1	1.5	1.5	1.7	39	10/9	8
S.STATES FFR-493	43.0	46.9	52.3	1.2	1.2	1.4	41	10/10	9
SOUTHERN CROSS JOSHUA	43.1	47.3	52.0	1.7	1.9	2.1	40	10/9	7
STRESSLAND	40.5	47.2	51.9	1.5	1.7	2.0	37	10/3	8
ASGROW A4341	-	-	51.5	-	-	1.2	37	10/5	5
CALLAHAN 3484	41.5	46.4	51.3	1.4	1.6	1.9	43	10/11	7
MANOKIN <sup>p</sup>	41.9	47.7	51.2	2.5	2.4	3.0	34	10/18	8
S.STATES FFR-439	42.0	48.1	51.1	1.4	1.6	1.9	43	10/7	8
STINE BRAND 4650	-	-	51.0	-	-	1.9	43	10/13	7
PIONEER BRAND 9472 <sup>c</sup>	-	46.3	50.5	-	2.3	2.9	43	10/9	8
ASGROW A4138 <sup>c</sup>	39.0	44.7	50.2	1.5	1.7	2.0	40	10/2	7
CALLAHAN 5410	-	44.8	48.9	-	1.7	2.4	43	10/6	8
VIGORO V485	-	-	48.8	-	-	1.7	43	10/11	8
LG SEEDS JMS 4788	-	-	48.7	-	-	2.2	45	10/12	6
DEL SOY 4900 <sup>p</sup>	40.6	46.3	48.6	1.9	1.6	1.9	39	10/16	6
CALHOUN	41.0	45.3	48.2	1.2	1.3	1.4	24	9/30	6
ADLER 394	-	-	48.2	-	-	1.7	37	10/3	7
MYCOGEN 470	-	-	48.2	-	-	2.1	40	10/10	6
DELTAPINE DP 3478	-	45.4	48.0	-	2.1	2.1	44	10/12	8
CHESAPEAKE	40.0	44.6	47.8	1.6	1.7	2.0	38	10/11	9
TERRA TR474	-	-	47.1	-	-	1.7	42	10/15	9
CF492	41.8	45.3	47.1	1.3	1.4	1.4	27	10/10	7
KS 4694	38.9	42.4	47.1	1.2	1.4	1.7	36	10/5	5
PIONEER BRAND 9452	-	43.1	46.4	-	1.1	1.2	33	10/7	7
CIBA SEEDS 3474	40.8	45.7	46.0	1.6	1.9	1.9	38	10/10	7
ASGROW A4922 <sup>c</sup>	-	-	45.9	-	-	1.6	40	10/13	8
S.STATES FFR-495	-	-	45.7	-	-	1.6	44	10/16	9
N.KING S42-60	-	43.2	45.2	-	1.6	2.0	37	10/1	6
DELTA KING 4450 <sup>c</sup>	-	-	44.7	-	-	1.6	35	10/5	6
PENNYRILE	40.6	45.2	44.7	1.2	1.4	1.7	43	10/11	8
DEKALB CX478	-	-	44.5	-	-	2.2	45	10/13	9
SPRY	39.3	45.3	44.3	2.2	1.9	2.1	32	10/7	7
VIGORO V455 <sup>c</sup>	-	-	43.5	-	-	1.4	38	10/10	5
CALLAHAN 6455X	-	-	42.8	-	-	1.6	39	10/4	6
S.STATES FFR-442	-	39.7	42.3	-	1.4	1.5	37	10/9	7
DEL SOY 4710 <sup>c</sup>	37.5	38.9	42.2	1.5	1.6	1.7	39	10/12	6
TN 4-86 <sup>c</sup>	34.6	38.7	42.2	1.7	1.7	2.0	48	10/10	8
PIONEER BRAND 9481 <sup>c</sup>	-	-	42.1	-	-	1.2	45	10/8	6



Table 3. COMBINED SUMMARY, DOUBLE-CROP LOCATIONS (continued)

VARIETY/BRAND	YIELD BU/AC			LODGING			HT <sup>a</sup>	MAT <sup>d</sup>	POD
	93-95	94-95	1995	93-95	94-95	1995	(IN) 1995	DATE 1995	HT. 1995
CF461	39.9	43.6	42.0	1.7	2.0	2.2	39	10/8	5
PHARAOH <sup>c</sup>	34.8	38.7	42.0	1.9	1.7	1.7	30	10/6	9
SOUTHERN CROSS LUKE <sup>c</sup>	-	-	41.9	-	-	1.2	33	10/12	6
RIVERSIDE 499 <sup>b</sup>	-	-	41.4	-	-	1.9	50	10/17	9
S.STATES FFR-EX.20964	-	-	40.5	-	-	1.7	39	10/7	6
TERRA TR4292 <sup>c</sup>	31.5	34.4	40.1	1.4	1.4	1.6	36	10/9	5
AGRATECH AT425 <sup>c</sup>	-	39.3	40.0	-	1.8	2.1	43	10/2	7
DELTA KING 4875 <sup>c</sup>	-	-	39.8	-	-	2.2	39	10/7	7
LG SEEDS LG6462C <sup>c</sup>	-	-	39.4	-	-	1.2	40	10/9	7
TERRA TR4792 <sup>c</sup>	34.2	37.8	38.5	1.8	2.1	2.9	48	10/9	7
DEL SOY 4210	33.5	36.7	38.1	1.8	2.1	2.7	47	10/8	7
N.KING S46-44 <sup>c</sup>	36.0	39.2	37.7	1.2	1.2	1.4	36	10/9	7
NILE <sup>b</sup>	32.8	36.2	37.3	1.9	2.2	3.2	43	10/7	6
ASGROW A4715 <sup>c</sup>	34.6	38.1	37.2	1.2	1.2	1.2	32	10/11	6
KAS APACHE 486 <sup>b</sup>	-	-	36.8	-	-	1.9	37	10/12	6
S.STATES FFR-414N <sup>c</sup>	-	-	36.8	-	-	2.6	45	10/2	7
DEKALB CX499C	-	-	35.9	-	-	1.6	45	10/7	7
S.STATES FFR-474 <sup>c</sup>	-	-	35.5	-	-	2.1	42	10/8	8
GROUP IV AVERAGE	38.9	43.4	45.3	1.6	1.7	1.9	40	10/9	7
<b>LATE (GROUPS V AND VI)</b>									
S.STATES FFR-553	42.2	48.2	55.8	1.7	1.5	1.6	36	10/17	7
HOLLADAY	44.8	50.4	52.8	1.5	1.6	1.7	30	10/17	7
DELTA KING 5850 <sup>c</sup>	-	-	52.6	-	-	2.1	43	10/22	1
PIONEER BRAND 9521 <sup>b</sup>	40.2	47.1	52.5	1.7	1.9	2.4	42	10/13	9
TERRA TR504 <sup>b</sup>	-	-	52.1	-	-	2.4	39	10/14	7
CIBA SEEDS 3505 <sup>b</sup>	-	49.9	52.1	-	1.4	1.6	30	10/16	6
CLIFFORD	44.1	48.3	51.9	2.1	1.9	2.0	36	10/22	9
S.STATES FFR 545	-	-	49.9	-	-	2.1	36	10/16	9
STINE BRAND 5170	-	-	48.6	-	-	1.9	33	10/11	7
ASGROW A5979 <sup>b</sup>	-	-	48.4	-	-	2.1	40	10/22	9
DELTA KING 5475 <sup>c</sup>	-	-	48.4	-	-	2.9	37	10/23	1
HUTCHESON	38.8	41.1	47.9	1.8	1.6	2.0	34	10/18	8
KAS CHEROKEE 516 <sup>b</sup>	-	-	47.8	-	-	1.9	32	10/12	7
S.STATES FFR-542 <sup>c</sup>	-	43.5	47.0	1.7	-	2.0	40	10/19	9
ASGROW A5403 <sup>c</sup>	-	-	46.7	-	-	2.1	38	10/21	9
SOUTHERN CROSS SAMUEL <sup>c</sup>	-	41.1	46.2	-	1.4	1.5	27	10/18	7
PIONEER BRAND 9551 <sup>c</sup>	38.7	43.4	45.6	1.9	1.6	1.7	30	10/18	7
KS 5292 <sup>b</sup>	38.7	44.5	45.0	1.5	1.7	2.0	32	10/18	8
N.KING S52-25 <sup>b</sup>	-	46.0	44.7	-	1.9	2.2	32	10/18	7
CALLAHAN 5510 <sup>b</sup>	-	45.4	44.0	-	1.7	2.1	31	10/12	8
LG SEEDS JMS 5009C <sup>b</sup>	-	-	43.9	-	-	1.7	29	10/14	
ESSEX	37.9	41.5	42.8	1.5	1.4	1.4	25	10/12	5
S.STATES SS-EX.5510-ST	-	-	42.5	-	-	1.6	41	10/23	9
SOUTHERN CROSS EZRA <sup>b</sup>	-	-	41.9	-	-	1.5	35	10/17	9
RIVERSIDE 529	-	-	41.4	-	-	2.1	47	10/21	1
S.STATES FFR-514 <sup>c</sup>	-	43.1	39.1	-	1.6	1.7	38	10/14	7
GROUPS V AND VI AVG	40.7	45.3	47.4	1.7	1.6	1.9	35	10/17	8
GRAND AVERAGE	38.7	42.9	45.3	1.6	1.7	1.9	38	10/10	7
LSD (.10)	2.4	3.0	6.1	0.3	0.4	1.0	4		2

<sup>a</sup>Plant Height.

<sup>b</sup>Resistant to the soybean cyst nematode (Race 3).

<sup>c</sup>Resistant to the soybean cyst nematode (Race 3 and Race 14).

<sup>d</sup>Maturity date based on observations at Princeton.

