

# 1990 Kentucky Soybean Performance Tests

*J.M. Wood, Charles Tutt, and Todd Pfeiffer*

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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 a variety that will give the highest total production in a specific situation.

Soybean tests in 1990 were planted at six locations in the state. The testing locations, soil types, planting dates, and other information are shown on the following page.

The date of a 50% chance of a fall killing frost is important in determining which variety you select to plant (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, Hickman, and Lexington locations in Tables 6, 7, and 8. Particular attention should be given to the maturity date of a variety when double-cropping soybeans (see the discussion on double-crop soybeans).

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 1 year out of 10 chance of a fall killing frost subtract 13-18 days from the dates in Table 1.

## Methods

All tests were planted in a randomized complete block design with three replications (plots) of each variety. Individual plots were 20 feet long and 4 rows wide with 30 inches between rows in the conventional tests; in the double-crop tests the plots were 20 feet long and 8 rows wide with 15 inches between rows. The seeding rate for the conventional tests was 8-10 viable seeds per foot of row and for the double-crop tests was 5-6 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.

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 as a result of combining or shattering.

*Location of the 1990 Kentucky Soybean Performance Tests*



## 1. Location, Planting Date, and Climatic Data for 1990 Soybean Performance Tests.

	1 Morganfield	2 Nebo	3 Princeton	3 <sup>1</sup> Princeton <sup>1</sup> Double Crop	4 Hickman	5 Lexington	6 Franklin <sup>1</sup> Double Crop
Farmer	Ben Dyer	Ray Weir	Exp. Sta.	Exp. Sta.	Austin & Doug Voorhees	Exp. Sta.	Willard Allen
Extension	Gene Brown	George Kelley			Darold Akridge		Don Kessler
Soil Type	Patton Silt Loam (Overwash)	Grenada Silt Loam	Crider Silt Loam	Crider Silt Loam	Sharky Clay	Maury Silt Loam	Pembroke Silty Clay Loam
Date of Planting	6/6	5/24	6/5	6/15	6/10	5/15	6/12
Row Width	30	30	30	15	30	30	15
Herbicides <sup>2*</sup>	1 pt. Blazer	2 pt. Treflan 2/3 pt. Scepter	2.5 pt. Dual	2 pt. Lorox 10 pt. Branco	1 1/2 pt. Treflan	8 pt. Lasso 2/3 pt. Scepter	6 pt. Lasso 2 pt. Lorox
Soil Test							
P	110	71	119	119	93	200	125
K	380	167	501	501	501	204	380
pH	6.5	6.8	5.8	5.8	6.4	6.9	6.5
Fertilizer Applied	None	None	None	None	None	None	None
50% chance of Killing Frost <sup>3</sup>	10/25	10/20	10/19	10/19	10/24	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.

**Yield**—Yield is reported in bushels per acre adjusted to 13% 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% down; 4=all plants over considerably or 50-80% down; 5=all plants over badly.

**Maturity date**—A variety was considered mature when 95% 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 may also be expressed as days earlier (–) or later (+) than that of a standard variety (Williams 82). Maturity dates were recorded at the Lexington, Wickliffe, 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.

## Interpretation

An important step in profitable soybean production is selecting good quality seed of the best variety 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. Data from the location nearest to a soybean grower's farm probably provide the best estimate of the potential of the soybean varieties in that area. **The yields as reported in this publication should be used for relative comparisons; absolute yields on a grower's farm may be different.**

Yield is only one factor to consider in selecting a variety for your production system. Maturity, lodging resistance, disease resistance, seed shattering resistance, and time and equipment availability are other factors that need to be considered.

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.**

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) even though 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.

## Soybean Production in Kentucky

### Variety Adaptation

Early-maturing varieties (Group III), such as Pella 86 and Williams 82, are best adapted in areas of Kentucky north of the line indicated on the following map. The line is approximately the same as where the Western Kentucky Parkway is located. Late-maturing varieties (Group V), such as Essex and TN5-85, are best adapted in areas south of the indicated line. Mid-season varieties (Group IV), such as Union and Pennyrile, can be successfully grown in most areas in Kentucky.

### Double-Crop Soybeans

Planting soybeans in a double-cropping system usually results in a later planting date than conventional-planted beans. Previous research has shown that soybean yields are generally reduced by 1/2-3/4 bu/acre per day for each day planting is delayed after mid-June and 1 bu/acre per day when planted after the last part of June. Practices such as high-moisture harvesting or swathing of the small grains and no-till planting of the soybeans all help to get the soybeans planted earlier and should be used where possible.

The shorter growing season of a double-cropping system results in a shorter vegetative growth period, reduced plant height, and a smaller plant canopy. Row spacing research has indicated that the highest yields in double-crop plantings are obtained using narrow rows (10-12 in.), particularly when the planting date is in late June and July.

Variety selection is very important in a soybean double-cropping system. Research has shown that the mid- to full-season maturing varieties adapted in your area perform best in a double-crop planting. Caution must be used to select a variety that will mature before the first fall frost. When plantings are made in July, a variety that is one maturity group earlier

Approximate areas of adaptation of the maturity groups commonly grown in Kentucky.



than normally used should be selected to prevent a yield reduction due to frost injury.

### Soil Fertility and Inoculation

Failure to adjust soil acidity is often the most limiting fertility practice. Acid soils should be limed to pH 6.4. If soil pH is below 6.2 at planting, molybdenum should be applied. Apply phosphate and potash as needs are indicated by soil test results. For double-cropped beans, phosphate and potash can be applied for both crops when seeding the small grain. Foliar applications may be necessary to correct manganese deficiency problems on some soils with high pH levels in the Western Coal Field region.

No nitrogen is recommended for soybeans. However, if soybeans have not been planted in the field in the past 3

years, seed should be inoculated as close to planting time as possible. See Kentucky Cooperative Extension publication AGR-1 for specific fertility and inoculation recommendations.

### Seeding Rates

Soybean seeding rates should be governed by the final stand desired in terms of plants per foot of row. To obtain a given number of plants per foot of row, seed size and percent germination of the seed lot must be considered. Soybean varieties differ considerably in seed size, with the more common varieties ranging from 2,600 to 3,500 seed per pound. After selecting the variety, row spacing, and the number of seeds per foot, the planting rate in pounds per acre can be determined from Table 2. If the field conditions are nearly ideal and the seed is of high quality

## 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

use the lower rate. Adjustments also need to be made for differences in seed lot germination. The seeding rates in Table 2 are recommended for both conventional plantings and double-crop plantings. **When planting with a no-till system, the seeding rates should be increased by 10% to compensate for higher seedling mortality.**

#### Certified Seed

Always plant high quality seed of the variety you select. Certified seed is a reliable source of good seed. Certified seed has passed rigid field and laboratory standards for genetic identity and purity of a variety. Certified soybean seed also has good germination and is free of noxious weed seed and other crop seed. The Agricultural Experiment Station recommends that Kentucky-certified seed be used whenever possible for growing a commercial crop of soybeans. Information on certified seed growers in Kentucky can be obtained from your local county Extension agent or the Kentucky Seed Improvement Association (P.O. Box 12008, Lexington, KY 40579).

#### For More Information

The Kentucky Cooperative Extension Service has a series of publications which contain a more detailed discussion of soybean production practices: "Soybean Production in Kentucky"—Part I. 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).

#### Growing Conditions

Dry weather through August, with adequate rainfall only in September, reduced yields over most of the state. The effects of this late season rainfall were seen at Lexington where later maturing varieties yielded better than earlier varieties, and at Princeton where later planting (double-crop) did not reduce yield. The Franklin double-crop location yields were severely reduced by extremely dry conditions. Morganfield had much better weather conditions than other locations, resulting in good yields in all maturity groups.

#### Special Notes

No data are presented for the 1988 Glasgow double-crop test due to drought damage. No data are presented for the 1990 Nebo test due to poor stands. Note also that yields at the Franklin double-crop location were affected by the soybean cyst nematode.

#### Average Statewide Performance

The performance data presented in Table 3 have been averaged across all locations. **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 and locations in Kentucky. If you have soybean cyst nematode problems a resistant variety should be used in your production system in conjunction with a recommended crop rotation program (see Kentucky Cooperative Extension publication PPA-3, "Soybean Cyst Nematode," available at your county Extension office.)

#### 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% 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. No blends were tested in 1990.

#### Changes In Data Presentation

This year the data are presented differently. In the past, there was one table with one-year, two-year and three-year data for each location; varieties were listed alphabetically. There will now be three separate tables (one-year, two-year and three-year) for each location with varieties within each maturity group ranked by yield. Also, averages of all data within a maturity group will be presented in addition to a grand average over all maturity groups. Data are viewed on an

agronomic regional basis rather than strictly a location basis. This will allow us to always present three years of data despite any location moves within a region.

Also, the across years and locations data are combined across all locations to better predict yielding ability. (See *Agronomy Notes* Volume 21, No.3, "Using Performance Test Results in Soybean Variety Selection in Kentucky.")

We have made these changes in format so that the data will be easier to understand and use.

#### Oil and Protein Data

The average protein and oil concentration from the full-season tests is provided for all soybean varieties entered in the Kentucky Soybean Performance Tests. 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 which exist between varieties produced in Kentucky. The data are reported in Table 3 on a 13 percent moisture basis.

#### Source of Seed

The seed planted in the 1990 Soybean Performance Tests was acquired from the following sources:

Asgrow Seed Company, P.O. Box 7570, Des Moines, IA 50322

A3935

A4595

A4715

A5403

Agratech Seeds Inc, 5559 N. 500 W., McCordsville, IA 46055

AT 455

AT 495

Callahan Seeds, 1122 E. 169th St., Westfield, IN 46074

Callahan 1410

Callahan 9455N

Callahan 7390

Callahan 9480

Callahan 7510N

Callahan 8464

Cargill Inc., Cargill Office Center, P.O. Box  
5602, Section 20, Minneapolis, MN 55440  
*Cargill 445*  
*Cargill 437*

Caverndale Farms, Inc., 1921 Bluegrass Road,  
Danville, KY 40422  
*CF 495*  
*CF 490*

Ciba-Geigy Seed Division (Funk's G), 6330  
Gardner Rd., Chandler, IN 47610  
*G-3388*  
*G-3415*

DeKalb-Pfizer Genetics, 3100 Sycamore Road,  
DeKalb, IL 60115  
*DeKalb CX 366*  
*DeKalb CX 415*  
*DeKalb CX 458*

Jacob Hartz Seed Co., P.O. Box 946, Stuttgart,  
AR 72160  
*Hartz 5164*  
*Hartz H5240*  
*Hartz H4464*

HyPerformer Seed Co., 5100 Poplar, Suite  
3200, Memphis, TN 38137  
*HyPerformer Br. 401*  
*HyPerformer Br. 360*  
*HyPerformer Br. 388*

Jacques Seed Co., Hwy. 10E, Lincoln, IL  
62656  
*Jacques J-442*  
*Jacques J-499*

Kentucky Foundation Seed Project, P.O. Box  
11950, Lexington, KY 40579  
*BASS*  
*Essex*  
*Fayette*  
*Flyer*  
*Hamilton*  
*Hutcheson*  
*Kunitz*  
*Linford*  
*Lawrence*  
*Pella 86*  
*Pennyrile*  
*Pharoah*  
*Ripley*  
*Spencer*  
*Stafford*  
*TN4-86*  
*TN5-85*  
*Union*  
*Williams 82*

Miles Seed, 2760 Keller Road, Owensboro,  
KY 42301  
*Jacob*  
*Isaac*  
*Goliath*

Northrup King Co., 705 Woodbridge Dr.,  
Somerville TN 38068  
*Coker 425*  
*S 48-84*  
*RA-452*  
*S42-40*  
*Coker 69-55*

Pioneer Hi-Bred Int., 1000 W. Jefferson St.,  
Tipton, IN 46072  
*Pioneer Brand 9391*  
*Pioneer Brand 9442*  
*Pioneer Brand 9461*  
*Pioneer Brand 9501*  
*Pioneer Brand 9531*  
*Pioneer Brand 9581*  
*Pioneer Brand 9591*

Ridgway Seed Co., Box 212, Ridgway, IL  
62979  
*Jader 461*  
*Jadar 467*

Scott Seed Co., 709 E. 4th St., New Albany,  
IN 47150  
*Scott Brand 8055 (cm 555)*

Seedex, Inc., P.O. Box 231, Sheridan, IN  
46069  
*Seedex 391 (Var. 31949)*  
*Seedex 456 (Var. 32332)*  
*Seedex 540 (Var. M0234)*

Southern States Coop., P.O. Box 26234,  
Richmond, VA 23260  
*SS-390*  
*SS-431*  
*SS-461*  
*SS-516*  
*SS-391*  
*SS-487*  
*FFR-398*  
*FFR-464*  
*FFR-561*  
*FFR-565*  
*FFR-544*  
*FFR-499*

Stine Soybean Seed, R.R. 3 Box 204, Adel, IA  
50003  
*Stine 4880*  
*Stine 3790*

### 3. Summary for all Full-Season Locations Statewide<sup>1</sup> — Year 1

VARIETY	YIELD BU/AC	MAT. DATE	LODG 1990	HT <sup>2</sup> 1990	POD HT. 1990	MAT. DATE 1990	APPRX. SEED/LB.	PROTEIN %	GIL %
EARLY (GROUPS II AND III)									
CF 490	50.4	9/30	2.3	42	6	+8	3000	34.2	19.5
SEEDX 391	49.3	9/21	1.3	34	6	-1	3000	34.5	19.9
FFR-398	49.3	9/25	1.2	30	5	+1	2800	35.3	19.3
STINE 3790	49.4	9/21	1.2	32	5	+1	2800	34.5	18.8
SS-390	48.9	9/23	1.5	32	5	+2	2500	33.1	20.1
HYPERTHORMER BR. 360	48.6	9/20	1.2	31	5	-5	2600	34.6	19.9
HYPERTHORMER BR. 388	48.3	9/17	1.2	31	5	+1	2650	34.2	19.8
ISRAC	47.9	9/23	1.2	32	5	0	3350	35.1	19.4
A3935	47.8	9/22	1.3	36	5	-3	2800	34.5	19.9
PIONEERBRAND 9391	47.7	9/19	1.2	31	5	-3	2500	33.7	19.9
G-2386 <sup>c</sup>	47.4	9/18	1.4	36	4	0	3400	35.5	19.2
SS-391	47.2	9/22	1.2	31	5	0	2900	33.8	20.0
FLYER	47.1	9/20	1.3	35	5	-2	3000	35.5	19.2
DEKALB CX366	46.4	9/20	1.4	32	5	-2	2500	35.0	19.4
CALLAHAN 7390	45.3	9/20	1.8	37	6	-5	2500	35.2	19.4
LINFORD <sup>d</sup>	45.0	9/17	1.7	35	5	0	2500	35.5	19.4
MONITE	44.2	9/20	1.7	35	5	0	2500	35.2	19.4
WILLIAMS 82	42.1	9/20	1.4	36	4	-2	2600	34.5	20.3
FAYETTE <sup>c</sup>	41.9	9/18	1.6	30	5	-4	3000	34.0	19.9
G-3415	41.8	9/16	1.2	31	5	-6			
PELLA 86									
GROUP III AVERAGE	46.9	9/21	1.4	33	5				
MID-SEASON (GROUP IV)									
SS-431	53.2	9/29	1.6	36	6	+7	2900	34.9	19.7
HYPERTHORMER BRAND 401	52.4	10/1	2.3	43	6	+9	2800	33.6	19.6
STAFFORD	51.8	10/10	1.7	31	8	+18	3200	34.0	19.6
JADER 467 <sup>e</sup>	51.3	10/2	2.1	41	6	+10	3100	32.7	20.3
STINE 4880	51.1	9/28	2.0	37	6	+6	2800	34.3	20.1
JACQUES J-442	51.0	9/27	2.1	37	6	+5	2800	34.0	20.2
PENNYRILE	50.7	10/4	1.2	38	7	+12	2800	35.5	19.3
DEKALB CX458	50.6	9/25	2.0	37	6	+3	2600	34.9	19.9
SS-487	50.6	9/28	1.5	35	6	+6	2450	34.9	19.2
JACQUES J-499	50.5	10/5	2.1	35	6	+10	2800	34.1	19.4
CALLAHAN 1410	50.3	9/24	1.3	31	5	+13	2700	34.7	19.5
A4715 <sup>d</sup>	50.2	10/1	1.5	35	6	+2	2800	34.9	19.5
PIONEERBRAND 9442	50.1	9/27	1.2	31	6	+9	3400	34.1	19.9
JADER 461	49.7	9/28	1.5	34	5	+7	2700	34.1	19.4
CARGILL 445	49.7	9/26	1.7	38	6	+6	2900	34.5	19.7
S-48-84 <sup>d</sup>	49.5	10/4	2.3	37	7	+12	2800	34.1	19.5
CALLAHAN 9480	49.4	9/30	2.0	35	6	+8	3000	35.0	19.5
SEEDX 456	49.4	9/24	2.0	36	6	+2	2500	34.7	19.4
A4595	49.4	9/28	1.8	38	6	+6	2900	34.3	19.7
RA-452	49.3	10/10	1.4	40	9	+18	3200	35.2	19.4
PIONEERBRAND 9461	49.0	9/24	1.4	30	5	+2	2600	35.0	19.4
DEKALB CX 415	48.6	9/23	1.5	38	5	+1	3000	34.9	19.7
JACOB	48.4	9/28	2.2	37	6	+6	2600	34.1	20.0
LAWRENCE	48.2	9/25	1.3	34	6	+3	2650	35.7	19.2
AT 455	48.2	9/29	1.5	36	6	+7	2950	34.4	19.7
AT 495 <sup>d</sup>	47.6	10/2	2.2	34	6	+10	3350	34.6	19.4
HARTE BR. H4464	47.5	10/3	2.0	40	7	+11	2700	34.5	19.7
SPENCER	47.3	9/25	1.4	34	6	+3	2900	35.7	19.1
CARGILL 437 <sup>d</sup>	47.3	10/2	1.4	38	6	+10	2800	35.0	19.5
HAMILTON	47.3	9/30	2.1	35	7	-1	2700	34.4	20.0
BASS	47.1	9/20	1.3	30	5	0	3300	35.1	19.3
TH 4-86 <sup>d</sup>	46.8	9/22	1.2	32	5	+9	3600	34.1	19.9
FURMAN <sup>d</sup>	46.0	10/1	1.8	42	6	+11	3300	34.3	19.8
SS-461 <sup>d</sup>	45.7	10/3	2.1	32	9	+8	3000	35.4	18.9
RIPLEY	45.4	9/30	1.5	39	6	+6	3450	34.1	19.4
S-42-40	45.2	9/22	1.1	38	4	0	2800	33.7	20.3
UNION	45.1	9/24	1.4	32	6	-2	2600	36.0	19.0
CALLAHAN 9455H <sup>d</sup>	43.5	9/21	2.0	38	5	-5	2500	34.4	19.7
GROUP IV AVERAGE	48.7	9/29	1.7	34	6				
LATE (GROUPS V AND VI)									
HITCHESON	54.5	10/19	2.0	31	7	+27	3000	33.8	19.8
PIONEERBRAND 9591	54.0	10/21	1.5	30	7	+29	3500	34.8	19.0
FFR-561	53.5	10/20	1.5	35	7	+28	3400	35.2	18.8
A5403 <sup>d</sup>	52.9	10/18	1.5	35	9	+26	2900	35.1	18.8
PIONEERBRAND 9501	51.7	10/4	1.6	40	6	+12	3200	34.6	19.9
COKER 425	51.7	10/13	1.8	29	7	+21	3000	33.7	20.0
FFR-544	51.1	10/13	1.8	29	7	+21	3400	33.9	19.4
CF 495	51.1	10/19	1.5	36	7	+27	3000	34.5	19.4
CALLAHAN 7510N <sup>c</sup>	51.1	10/14	1.4	31	7	+21	2900	35.0	19.2
COLTAR <sup>h</sup>	50.0	10/14	1.3	32	9	+22	2900	35.1	18.8
SS-514 <sup>d</sup>	49.9	10/15	1.6	33	7	+23	3000	34.7	18.8
ESSEX	49.8	10/13	1.8	30	8	+21	3400	35.2	19.2
PIONEERBRAND 9582 <sup>f</sup>	49.6	10/20	2.8	35	9	+28	2800	34.9	19.0
FFR-565 <sup>d</sup>	49.4	10/22	2.2	37	8	+30	2800	34.3	19.2
SEEDX 340	49.1	10/13	1.2	32	7	+21	2800	35.0	18.5
HARTE 5164 <sup>d</sup>	49.0	10/21	2.9	34	7	+29	3700	33.2	19.8
HARTE BRAND H5240 <sup>c</sup>	48.8	10/18	3.6	35	9	+28	3000	34.6	19.3
COKER 49-55	48.7	10/16	2.0	35	8	+20	3200	35.0	18.9
PIONEERBRAND 9531 <sup>d</sup>	47.6	10/12	2.5	34	8	+23	2600	34.0	19.6
SCOTT ROSS BRAND <sup>g</sup> (CM 555)	47.4	10/15	1.3	31	7	+23	3000	34.8	19.6
FFR-499	45.9	10/9	2.9	39	8	+17	3300	34.2	19.3
TH 5-85 <sup>c</sup>	45.8	10/21	2.7	34	7	+29			
GROUPS V AND VI AVG	50.5	10/15	1.9	34	7				
GRAND AVERAGE	48.7	10/1	1.7	34	6			34.6	19.5
LSB (.10)	4.2		0.4	2	1			1.2	0.6

<sup>1</sup>Days earlier (-) or later (+) than Williams 82.  
<sup>2</sup>Data based on observations at Lexington, Princeton and Hickman.  
<sup>3</sup>Resistant to the soybean cyst nematode (Race 3).  
<sup>4</sup>Resistant to the soybean cyst nematode (Race 3 and Race 4).  
<sup>5</sup>Plant height.  
<sup>6</sup>No 1989 data reported for Glasgow due to water damage. No 1990 data reported for Bebe due to poor stand.



VARIETY	YIELD	LOGG	HT <sup>a</sup>	POD
	80/AC 89-90	-1NG (1N) 89-90 89-90	HT. 89-90	HT. 89-90
EARLY (GROUPS II AND III)				
A3935	51.5	1.6	33	5
PIONEER <sup>®</sup> BRAND 9391	50.8	1.7	35	5
FFR-399	50.8	1.5	31	6
SS-391	50.2	1.7	34	5
FLYER	49.7	1.5	31	5
DEKALB CX366	49.1	1.6	34	5
WILLIAMS 82	47.9	1.9	37	6
TSRAC	47.8	1.7	32	6
CALLAHAN 7390	47.5	1.4	32	6
FAYETTE <sup>c</sup>	45.9	1.9	37	5
PELLA 86	42.9	1.4	31	5
GROUP III AVERAGE	48.5	1.6	33	5
MID-SEASON (GROUP IV)				
DEKALB CX458	53.4	1.5	34	6
PIONEER <sup>®</sup> BRAND 9441	53.4	1.7	31	5
PIONEER <sup>®</sup> BRAND 9442	53.2	1.5	32	6
SS-431	53.1	1.7	36	7
PENNYRILE	52.6	1.6	40	7
CALLAHAN 8464	52.5	2.1	37	6
SS-487	52.4	1.5	35	6
JACOB 487	52.3	2.3	43	6
JACQUES J-442	52.3	2.2	34	6
JACQUES J-499	51.9	2.0	35	7
HYPERFORMER BRAND 401	51.9	2.4	43	6
A4595	51.7	1.9	37	6
CALLAHAN 8480	51.6	2.1	34	5
DEKALB CX 415	51.2	1.7	38	6
JACOB	50.5	2.2	37	6
RA-452	50.0	1.8	41	5
SPENCER	49.6	1.7	34	6
STAFFORD	49.6	2.0	31	8
S-42-40	48.5	1.6	33	6
PARSON <sup>c</sup>	48.3	2.2	32	9
LAWRENCE	48.1	1.5	34	6
TN 4-86 <sup>d</sup>	47.6	2.0	42	7
RIPLEY	46.2	1.1	18	4
UNION	45.1	2.1	39	6
GROUP IV AVERAGE	50.7	1.8	35	6
LATE (GROUPS V AND VI)				
PIONEER <sup>®</sup> BRAND 9501	55.2	1.8	41	7
HUTCHESON	55.0	2.0	33	7
CORER 425	53.7	1.8	29	8
ESSEX	52.4	1.8	30	9
FFR-561	52.0	1.7	36	8
A5403 <sup>c</sup>	51.9	1.7	36	9
FFR-564	51.8	1.7	37	8
CALLAHAN 7510W <sup>b</sup>	50.8	1.5	32	8
SS-516 <sup>c</sup>	50.7	1.6	34	8
PIONEER <sup>®</sup> BRAND 9531 <sup>c</sup>	50.4	2.5	36	8
HARTE 5164 <sup>c</sup>	49.3	2.7	38	8
FFR-565 <sup>c</sup>	48.4	2.2	37	9
FFR-499	47.4	1.9	40	9
HARTE BRAND H5240 <sup>b</sup>	47.0	3.4	37	9
TN S-85 <sup>b</sup>	46.4	2.6	35	7
GROUPS V AND VI AVG	50.8	2.1	35	8
GRAND AVERAGE	50.3	1.9	35	7
LSD (.10)	3.0	0.3	2	1

VARIETY	YIELD	LOGG	HT. <sup>a</sup>	POD
	80/AC 88-90	-1NG (1N) 88-90 88-90	HT. 88-90	HT. 88-90
EARLY (GROUPS II AND III)				
A3935	59.8	1.5	35	6
PIONEER <sup>®</sup> BRAND 9391	48.8	1.8	37	6
FFR-398	47.7	1.4	32	7
SS-391	47.4	1.7	36	6
FLYER	46.8	1.6	32	5
DEKALB CX366	45.7	1.7	35	6
WILLIAMS 82	45.4	1.9	38	6
FAYETTE <sup>c</sup>	42.8	1.9	38	6
PELLA 86	41.1	1.3	32	5
GROUP III AVERAGE	46.1	1.6	35	6
MID-SEASON (GROUP IV)				
PIONEER <sup>®</sup> BRAND 9442	50.9	1.6	34	6
DEKALB CX458	50.5	1.5	36	7
JACQUES J-442	49.5	2.1	37	6
SS-487	49.3	1.5	36	7
PENNYRILE	49.2	1.6	41	8
A4595	49.0	1.9	39	7
RA-452	48.6	1.8	43	10
STAFFORD	48.6	2.0	32	8
HYPERFORMER BRAND 401	48.5	2.3	44	7
DEKALB CX 415	48.0	1.7	39	6
JACOB	47.9	2.1	38	6
SPENCER	47.8	1.5	35	7
S-42-40	47.3	1.6	34	7
LAWRENCE	46.0	1.4	36	7
TN 4-86 <sup>d</sup>	45.6	2.1	44	7
RIPLEY	43.9	1.2	20	4
UNION	42.9	2.3	40	6
GROUP IV AVERAGE	47.8	1.8	37	7
LATE (GROUPS V AND VI)				
CORER 425	51.9	1.9	31	8
HUTCHESON	50.9	2.0	34	8
ESSEX	49.9	1.8	31	9
FFR-561	49.5	1.7	37	9
PIONEER <sup>®</sup> BRAND 9531 <sup>c</sup>	48.5	2.5	37	9
FFR-564	48.0	2.0	39	8
FFR-499	48.3	1.9	41	10
TN S-85 <sup>b</sup>	45.8	2.7	29	8
HARTE 5164 <sup>c</sup>	45.7	3.0	39	8
FFR-565 <sup>c</sup>	44.7	2.5	39	9
GROUPS V AND VI AVG	48.1	2.2	37	9
GRAND AVERAGE	47.5	1.9	36	7
LSD (.10)	2.3	0.2	1	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 4).

<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 4).

<sup>d</sup>No data reported for 1990 Neba due to poor stand.

## 4. Lexington — Year 1

## Year 2

## Year 3

VARIETY	YIELD BU/AC	MAT. DATE	LOGG -ING	HT. <sup>a</sup> (IN)	POD HT.
<b>EARLY (GROUPS II AND III)</b>					
SS-390	52.5	9/27	2.2	30	4
CF 440	51.8	10/5	2.8	38	6
HYPERFORMER BR. 388	49.8	9/22	1.5	29	6
FFR-398	49.5	9/27	1.5	26	5
PIIONEER <sup>b</sup> BRAND 9391	47.9	9/25	1.8	33	6
SEDEX 391	47.5	9/23	1.7	30	6
A3935	46.9	9/27	1.5	29	5
FAYETTE <sup>c</sup>	46.8	9/23	2.0	35	5
FLYER	46.4	9/24	1.5	27	5
DEXALB CK346	44.8	9/25	1.7	33	5
IRAC	44.8	9/24	1.5	30	5
SS-391	44.7	9/27	1.7	30	6
WILLIAMS 82	44.5	9/27	2.0	31	5
G-3388 <sup>b</sup>	42.2	9/22	1.3	28	4
KUNITZ	41.9	9/20	2.2	31	5
STINE 3790	41.9	9/22	1.5	29	5
HYPERFORMER BR. 380	41.7	9/23	1.5	28	5
LINFORD <sup>c</sup>	41.6	9/24	2.2	33	6
CALLAHAN 7390	39.2	9/23	1.5	29	6
G-3415	36.1	9/22	1.5	24	5
VELLA 86	28.5	9/19	1.2	26	4
GROUP III AVERAGE	44.3	9/25	1.7	30	5
<b>MID-SEASON (GROUP IV)</b>					
STINE 4880	55.9	10/1	2.8	34	6
CALLAHAN 9480	55.6	10/3	2.5	31	5
A4715 <sup>c</sup>	53.8	10/3	1.7	30	6
PIIONEER <sup>b</sup> BRAND 9441	53.0	10/1	1.5	28	6
CARGILL 445	52.5	10/2	1.8	34	7
SS-487	52.0	10/5	1.7	28	7
DEXALB CK458	51.5	10/4	1.7	32	5
SS-441 <sup>c</sup>	51.5	10/3	1.8	36	6
JACOB	51.3	10/6	2.7	34	6
SS-431	51.3	10/3	1.7	30	6
STAFFORD	51.2	10/17	2.8	33	9
JACOBS J-442	51.1	10/1	2.5	34	6
FFR-444	50.8	10/2	2.3	32	6
HYPERFORMER BRAND 401	50.8	10/4	2.7	39	6
PIIONEER <sup>b</sup> BRAND 9442	50.8	9/30	1.7	29	5
JADER 441	50.6	10/5	2.8	38	6
RA-452	50.3	10/9	2.2	38	9
JACOBS J-499	49.8	10/7	1.7	31	7
TN 4-86 <sup>c</sup>	49.7	10/3	2.2	38	7
S-42-40 <sup>c</sup>	49.6	10/6	2.2	34	9
SEDEX 456	49.6	9/28	2.5	33	6
A4595	49.4	10/4	2.2	32	5
JADER 441	49.1	10/4	1.5	29	6
RASS	49.0	9/27	1.5	28	4
DEXALB CK 415	48.5	9/27	1.5	33	5
CALLAHAN 8466	48.1	9/28	2.2	32	5
PENNYRILE	47.8	10/5	1.5	34	7
CALLAHAN 8455W <sup>b</sup>	47.6	10/4	2.2	39	6
HARTZ BR. H4444	47.3	10/5	3.2	38	8
SPENCER	47.2	10/4	1.2	30	6
PHAROS <sup>a</sup>	44.0	10/9	3.2	35	10
RIPLEY	45.9	9/28	1.5	21	4
CALLAHAN 1410	45.5	9/20	1.5	27	5
CARGILL 437 <sup>c</sup>	45.4	10/3	1.5	36	7
LAWRENCE	44.3	9/30	1.3	28	6
S-42-40	44.1	9/28	2.0	29	5
AT 455	43.6	9/30	1.5	29	6
AT 495 <sup>c</sup>	43.2	10/4	3.3	35	8
UNION	41.4	9/25	1.8	34	5
HAMILTON	40.0	9/22	1.7	30	6
GROUP IV AVERAGE	48.9	10/3	2.1	32	6
<b>LATE (GROUPS V AND VI)</b>					
PIIONEER <sup>b</sup> BRAND 9501	53.5	10/6	2.0	37	6
SEDEX 540	53.3	10/17	1.5	35	7
PIIONEER <sup>b</sup> BRAND 9591	52.8	10/19	2.3	32	8
SS-514 <sup>c</sup>	52.2	10/18	2.2	34	8
FFR-541	50.8	10/19	2.2	36	7
ESSEX	50.0	10/12	2.5	31	10
CORER 47-55	48.9	10/17	2.7	33	9
PIIONEER <sup>b</sup> BRAND 9581 <sup>c</sup>	48.9	10/18	4.0	37	11
FFR-544	48.5	10/20	2.0	40	8
HARTZ BRAND H5240 <sup>b</sup>	48.5	10/17	4.7	37	10
HARTZ 5144 <sup>c</sup>	48.5	10/19	3.3	37	7
GOLIATH <sup>d</sup>	47.8	10/19	2.7	36	11
HUTCHESON	47.8	10/20	3.2	32	8
FFR-545 <sup>c</sup>	47.7	10/19	2.3	39	8
CORER 425	47.4	10/12	2.3	27	8
SCOTT 8055 BRAND <sup>b</sup> (CM 55)	47.3	10/12	1.7	32	8
FFR-499	47.4	10/7	2.0	35	9
PIIONEER <sup>b</sup> BRAND 9531 <sup>c</sup>	47.1	10/16	4.2	34	9
A5403 <sup>c</sup>	46.7	10/18	2.9	33	9
CF 495 <sup>b</sup>	46.7	10/12	2.2	32	7
CALLAHAN 7510W <sup>b</sup>	45.7	10/13	2.2	33	9
TN 5-85 <sup>b</sup>	45.6	10/19	3.7	37	8
GROUPS V AND VI AVG	49.2	10/15	2.6	34	8
GRAND AVERAGE	47.8	10/4	2.1	32	6
LSD (.10)	3.5	0.4	2	1	

<sup>a</sup>Plant height.<sup>b</sup>Resistant to the soybean cyst nematode (Race 1).<sup>c</sup>Resistant to the soybean cyst nematode (Race 3 and Race 4).

VARIETY	YIELD BU/AC	LOGG -ING	HT. <sup>a</sup> (IN)	POD HT.	
					89-90
<b>EARLY (GROUPS II AND III)</b>					
FFR-398	52.0	1.5	29	6	
FLYER	51.7	1.8	30	6	
SS-391	50.6	1.7	32	5	
ISAAC	49.9	1.6	32	5	
PIONEER <sup>b</sup> BRAND 9391	49.7	1.9	33	5	
FAYETTE <sup>c</sup>	49.7	2.5	37	6	
A3935	49.6	1.6	30	5	
WILLIAMS 82	48.2	2.4	34	6	
CALLAHAN 7390	48.1	1.8	32	5	
DEXALB CK346	45.8	2.1	34	5	
VELLA 86	37.4	1.4	28	4	
GROUP III AVERAGE	48.4	1.8	32	5	
<b>MID-SEASON (GROUP IV)</b>					
PIONEER <sup>b</sup> BRAND 9441	57.0	1.6	30	5	
JACOBS J-442	55.8	1.8	25	6	
DEXALB CK458	54.6	1.6	33	6	
SS-431	54.3	1.9	33	6	
A4595	54.0	2.4	33	6	
PIONEER <sup>b</sup> BRAND 9442	53.6	1.7	30	6	
JACOBS J-499	53.5	1.8	33	6	
SPENCER	53.5	1.5	32	6	
CALLAHAN 9480	53.1	2.3	31	6	
DEXALB CK 415	52.8	1.8	36	6	
JACOB	52.6	2.4	36	6	
SS-487	52.4	1.7	35	6	
CALLAHAN 8466	52.2	2.3	36	6	
PENNYRILE	52.1	1.9	38	7	
S-42-40	51.5	1.9	33	6	
HYPERFORMER BRAND 401	50.3	2.9	41	6	
JADER 441 <sup>c</sup>	50.2	2.7	41	6	
PHAROS <sup>a</sup>	49.3	2.8	36	10	
LAWRENCE	48.4	1.3	30	6	
TN 4-86 <sup>c</sup>	47.7	2.5	40	7	
STAFFORD	47.3	2.8	34	9	
RA-452	47.0	2.2	40	10	
RIPLEY	46.9	1.3	21	4	
UNION	44.0	2.1	35	5	
GROUP IV AVERAGE	51.4	2.1	34	7	
<b>LATE (GROUPS V AND VI)</b>					
PIONEER <sup>b</sup> BRAND 9501	54.6	2.2	39	8	
ESSEX	49.3	2.3	31	11	
FFR-541 <sup>c</sup>	48.7	2.2	36	9	
SS-516	48.5	2.1	38	8	
CORER 425	48.3	2.2	29	8	
FFR-544	47.9	2.2	39	9	
A5403 <sup>c</sup>	47.4	2.5	36	11	
HUTCHESON	46.5	2.7	34	8	
FFR-499	45.9	2.0	37	10	
FFR-545 <sup>c</sup>	44.9	2.3	39	9	
CALLAHAN 7510W <sup>b</sup>	44.8	2.0	34	10	
PIONEER <sup>b</sup> BRAND 9531 <sup>c</sup>	43.9	3.6	35	10	
HARTZ 5144 <sup>c</sup>	43.1	3.0	42	7	
TN 5-85 <sup>b</sup>	42.1	3.2	38	8	
HARTZ BRAND H5240 <sup>b</sup>	39.3	4.6	41	11	
GROUPS V AND VI AVG	46.4	2.6	37	9	
GRAND AVERAGE	49.2	2.2	34	7	
LSD (.10)	6.9	0.4	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 4).

VARIETY	YIELD BU/AC	LOGG -ING	HT. <sup>a</sup> (IN)	POD HT.	
					88-90
<b>EARLY (GROUPS II AND III)</b>					
FFR-398	46.6	1.6	30	6	
FLYER	45.8	1.6	31	5	
A3935	45.4	1.6	31	5	
PIONEER <sup>b</sup> BRAND 9391	44.6	1.9	35	5	
SS-391	44.3	1.7	35	6	
WILLIAMS 82	44.0	2.3	35	6	
FAYETTE <sup>c</sup>	42.4	2.4	35	6	
DEXALB CK366	41.8	2.1	35	6	
VELLA 86	34.7	1.3	29	5	
GROUP III AVERAGE	43.3	1.8	33	6	
<b>MID-SEASON (GROUP IV)</b>					
JACOBS J-442	49.9	2.6	35	6	
DEXALB CK458	49.5	1.6	34	7	
A4595	48.9	2.2	36	7	
SS-487	48.6	1.6	32	7	
JACOB	47.7	2.4	37	7	
PIONEER <sup>b</sup> BRAND 9442	47.7	1.6	31	6	
PENNYRILE	47.4	1.8	38	8	
HYPERFORMER BRAND 401	46.8	2.6	41	7	
S-42-40	46.4	1.8	33	6	
STAFFORD	46.2	2.6	35	9	
DEXALB CK 415	46.2	1.7	36	6	
SPENCER	46.2	1.4	32	6	
PHAROS <sup>a</sup>	46.1	2.2	41	11	
TN 4-86 <sup>c</sup>	43.9	2.3	40	7	
LAWRENCE	43.5	1.3	32	6	
RIPLEY	42.2	1.3	22	6	
UNION	40.0	2.3	37	6	
GROUP IV AVERAGE	46.3	2.0	35	7	
<b>LATE (GROUPS V AND VI)</b>					
ESSEX	47.5	2.2	31	10	
FFR-499	46.3	1.9	38	11	
CORER 425	44.7	2.1	30	8	
FFR-541	44.2	2.3	38	10	
PIONEER <sup>b</sup> BRAND 9531 <sup>c</sup>	41.3	3.4	35	11	
FFR-544	41.2	2.4	41	9	
HUTCHESON	40.5	2.6	34	10	
FFR-545 <sup>c</sup>	39.4	2.7	40	10	
TN 5-85 <sup>b</sup>	38.4	3.5	39	9	
HARTZ 5144 <sup>c</sup>	34.9	2.4	45	8	
GROUPS V AND VI AVG	42.8	2.6	37	10	
GRAND AVERAGE	44.3	2.1	35	7	
LSD (.10)	5.0	0.4	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 4).



5. Hickman — Year 1

Hickman/Wickliffe — Year 2

Hickman/Wickliffe<sup>a</sup> — Year 3

VARIETY	YIELD BU/AC	HAT. DATE	LOGG -ING (IN)	HT <sup>d</sup> (IN)
EARLY (GROUPS II AND III)				
CF 490	55.9	10/1	1.0	41
SEEDEX 391	49.8	9/20	1.0	30
FFR-398	49.0	9/27	1.0	27
STINE 3790	47.2	9/22	1.0	30
LIMFORD <sup>c</sup>	44.8	9/21	1.0	35
PIONEERBRAND 9391	44.5	9/18	1.0	33
HYPERFORMER BR. 388	44.5	9/15	1.0	27
HYPERFORMER BR. 360	43.7	9/16	1.0	29
FLYER	41.6	9/22	1.0	29
KONITE	41.2	9/16	1.0	34
ISAAC	41.1	9/21	1.0	29
CALLAHAN 7390	41.0	9/19	1.0	30
DEXALB CX344	40.9	9/17	1.0	31
SS-390	40.4	9/24	1.0	28
A3935	40.1	9/20	1.0	28
G-3415	39.9	9/15	1.0	27
SS-391	38.7	9/20	1.0	31
G-3388 <sup>b</sup>	37.2	9/16	1.0	27
FAYETTE <sup>c</sup>	36.1	9/19	1.0	33
WILLIAMS 82	36.1	9/20	1.0	33
PELLA 86	33.3	9/15	1.0	27
GROUP III AVERAGE	42.2	9/20	1.0	31
MID-SEASON (GROUP IV)				
S-48-84 <sup>c</sup>	56.4	10/5	1.3	32
HYPERFORMER BRAND 401	54.8	9/28	1.0	40
DEXALB CX458	52.6	9/28	1.0	33
AT 455	51.9	9/30	1.0	34
AT 495 <sup>c</sup>	51.9	10/1	1.0	29
JACOUES J-499	51.5	10/6	1.3	31
HARTE BR. H4464	51.5	10/1	1.0	39
JACOB	50.9	9/27	1.3	34
RA-452	50.4	9/28	1.0	34
JAUER 461	49.5	9/30	1.0	33
A4715 <sup>c</sup>	48.6	9/30	1.0	34
PENNYRILE	48.9	10/2	1.0	34
CALLAHAN 9480	47.8	9/29	1.7	35
STAFFORD	47.5	10/4	1.0	21
JACOB 467	47.3	9/30	1.0	39
SEEDEX 456	47.1	9/23	1.0	34
DEXALB CX 415	46.6	9/22	1.0	34
CARGILL 445	46.4	9/24	1.0	34
SS-487	46.1	9/25	1.0	31
CARGILL 437 <sup>c</sup>	45.8	9/30	1.0	34
JACOUES J-442	45.7	9/25	1.0	32
TR 4-86 <sup>c</sup>	45.3	9/30	1.0	38
CALLAHAN 1410	45.2	9/23	1.0	31
CALLAHAN 9444	43.9	9/24	1.0	34
A4595	43.6	9/25	1.0	32
BASS	43.6	9/21	1.0	28
FFR-464	43.4	9/30	1.0	32
STINE 4680	43.0	9/25	1.0	33
LAWRENCE	42.8	9/22	1.0	32
SPENCER	42.3	9/23	1.0	30
PHAROAH <sup>c</sup>	42.2	9/30	1.0	22
SS-481	42.2	9/27	1.0	34
PIONEERBRAND 9442	41.2	9/27	1.0	29
PIONEERBRAND 9461	40.4	9/22	1.0	25
HAMILTON	39.0	9/22	1.0	24
S-42-40	38.6	9/21	1.0	29
UNION	38.4	9/19	1.0	35
CALLAHAN 9455H <sup>c</sup>	35.5	9/27	1.0	34
RIPLEY	31.0	9/19	1.0	13
GROUP IV AVERAGE	46.0	9/28	1.0	32
LATE (GROUPS V AND VI)				
FFR-541	58.0	10/21	1.0	28
A5403 <sup>c</sup>	57.4	10/16	1.0	31
PIONEERBRAND 9591	56.3	10/23	1.0	25
HUTCHESON	56.2	10/16	1.0	23
PIONEERBRAND 9581 <sup>c</sup>	55.7	10/18	1.0	30
FFR-544	55.4	10/17	1.0	30
FFR-545 <sup>c</sup>	54.1	10/21	1.0	31
PIONEERBRAND 9501	54.1	10/7	1.0	38
HARTE BRAND 5144 <sup>c</sup>	53.4	10/21	1.0	27
ESSEX	52.4	10/17	1.0	25
GOLIATH <sup>c</sup>	52.4	10/21	1.0	28
SS-516 <sup>c</sup>	52.4	10/14	1.0	24
COHER 48-55	52.2	10/21	1.0	30
COHER 425	51.4	10/13	1.0	23
FFR-499	51.4	10/12	1.0	27
SEEDEX 540	50.7	10/13	1.0	24
PIONEERBRAND 9521 <sup>c</sup>	50.0	10/13	1.0	26
TR 5-85 <sup>b</sup>	49.0	10/20	1.0	27
CF 495 <sup>b</sup>	49.0	10/13	1.0	26
CALLAHAN 7510H <sup>b</sup>	47.1	10/13	1.0	26
HARTE BRAND H5240 <sup>b</sup>	47.1	10/14	1.7	30
SCOTT 8055 BRAND <sup>b</sup> (CH 565)	43.2	10/14	1.0	29
GROUPS V AND VI AVG	52.3	10/16	1.0	28
GRAND AVERAGE	46.6	9/30	1.0	31

VARIETY	YIELD BU/AC	HAT. DATE	LOGG -ING (IN)	HT <sup>d</sup> (IN)
EARLY (GROUPS II AND III)				
PIONEERBRAND 9391	47.5	9/13	1.0	32
FFR-398	45.3	9/20	1.0	24
A3935	44.4	9/15	1.0	28
DEXALB CX344	43.5	9/11	1.0	28
WILLIAMS 82	42.7	9/16	1.0	34
FLYER	42.7	9/16	1.0	27
CALLAHAN 7390	42.6	9/13	1.0	28
FAYETTE <sup>c</sup>	42.0	9/14	1.0	32
SS-391	38.8	9/16	1.0	28
ISAAC	38.5	9/15	1.0	25
PELLA 86	38.4	9/8	1.0	24
GROUP III AVERAGE	42.4	9/14	1.0	29
MID-SEASON (GROUP IV)				
HYPERFORMER BRAND 401	52.4	9/26	1.0	38
SS-431	52.2	9/20	1.0	32
PENNYRILE	51.0	9/28	1.0	35
DEXALB CX458	50.8	9/21	1.0	30
JACOB 467	50.5	9/27	1.2	39
RA-452	50.5	10/7	1.0	38
JACOUES J-499	49.5	10/4	1.2	28
JACOB	48.9	9/21	1.2	31
STAFFORD	48.6	10/3	1.0	20
SS-487	47.8	9/28	1.0	31
DEXALB CX 415	47.5	9/17	1.0	34
JACOUES J-442	47.5	9/19	1.0	29
CALLAHAN 9480	47.4	9/24	1.3	32
PIONEERBRAND 9461	46.1	9/18	1.0	25
TR 4-86 <sup>c</sup>	46.0	9/28	1.0	36
A4595	45.4	9/19	1.0	31
PIONEERBRAND 9442	45.1	9/21	1.0	27
CALLAHAN 9444	44.9	9/20	1.0	32
SPENCER	41.3	9/18	1.0	29
PHAROAH <sup>c</sup>	40.3	9/27	1.0	21
LAWRENCE	39.7	9/15	1.0	29
UNION	39.0	9/15	1.0	34
S-42-40	37.2	9/16	1.0	26
RIPLEY	32.3	9/15	1.0	12
GROUP IV AVERAGE	45.9	9/23	1.0	30
LATE (GROUPS V AND VI)				
HUTCHESON	60.8	10/13	1.0	26
PIONEERBRAND 9501	60.5	10/4	1.0	39
COHER 425	57.1	10/11	1.0	23
A5403 <sup>c</sup>	56.4	10/13	1.0	32
PIONEERBRAND 9531 <sup>c</sup>	56.1	10/9	1.0	30
ESSEX	54.3	10/12	1.0	24
FFR-544	54.1	10/13	1.0	31
FFR-541	52.6	10/16	1.0	31
HARTE BRAND H5240 <sup>b</sup>	52.2	10/11	1.3	31
HARTE 5144 <sup>c</sup>	52.1	10/13	1.0	30
SS-516 <sup>c</sup>	51.5	10/10	1.0	24
FFR-545 <sup>c</sup>	50.2	10/15	1.0	33
FFR-499	50.2	10/8	1.0	27
CALLAHAN 7510H <sup>b</sup>	48.5	10/10	1.0	25
TR 5-85 <sup>b</sup>	47.2	10/14	1.0	28
GROUPS V AND VI AVG	53.6	10/12	1.0	30
GRAND AVERAGE	47.4	9/27	1.0	30
LSD (.10)	5.5	0	3	

VARIETY	YIELD BU/AC	HAT. DATE	LOGG -ING (IN)	HT <sup>d</sup> (IN)
EARLY (GROUPS II AND III)				
PIONEERBRAND 9391	42.9		1.0	33
FFR-398	39.2		1.0	26
A3935	38.8		1.0	29
FAYETTE <sup>c</sup>	37.4		1.0	32
WILLIAMS 82	37.3		1.0	33
DEXALB CX344	37.2		1.0	28
FLYER	36.5		1.0	26
SS-391	35.7		1.0	29
PELLA 86	34.3		1.0	26
GROUP III AVERAGE	37.7		1.0	29
MID-SEASON (GROUP IV)				
RA-452	46.1		1.0	38
PENNYRILE	45.0		1.0	35
DEXALB CX458	44.5		1.0	30
STAFFORD	44.3		1.0	23
HYPERFORMER BRAND 401	44.2		1.0	38
TR 4-86 <sup>c</sup>	43.3		1.0	36
JACOB	42.2		1.1	32
JACOUES J-442	42.0		1.0	30
SS-487	41.6		1.0	31
PIONEERBRAND 9442	40.7		1.0	28
DEXALB CX 415	40.5		1.0	33
A4595	39.7		1.0	32
SPENCER	37.2		1.0	28
LAWRENCE	36.1		1.0	29
S-42-40	35.4		1.0	27
UNION	33.4		1.0	35
RIPLEY	30.9		1.0	15
GROUP IV AVERAGE	40.4		1.0	31
LATE (GROUPS V AND VI)				
COHER 425	53.7		1.0	25
HUTCHESON	53.2		1.0	27
PIONEERBRAND 9531 <sup>c</sup>	50.7		1.0	32
FFR-541	48.4		1.0	31
HARTE 5144 <sup>c</sup>	48.0		1.0	34
FFR-544	47.3		1.0	34
ESSEX	46.7		1.0	24
TR 5-85 <sup>b</sup>	45.6		1.0	32
FFR-545 <sup>c</sup>	45.4		1.0	35
FFR-499	45.2		1.0	37
GROUPS V AND VI AVG	48.4		1.0	31
GRAND AVERAGE	42.0		1.0	30
LSD (.10)	4.5	0	3	

<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 4).

<sup>a</sup>1988 data from Wickliffe affected by soybean cyst nematode.

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

<sup>c</sup>Resistant to the soybean cyst nematode (Race 3 and Race 4).

<sup>d</sup>Plant height.

