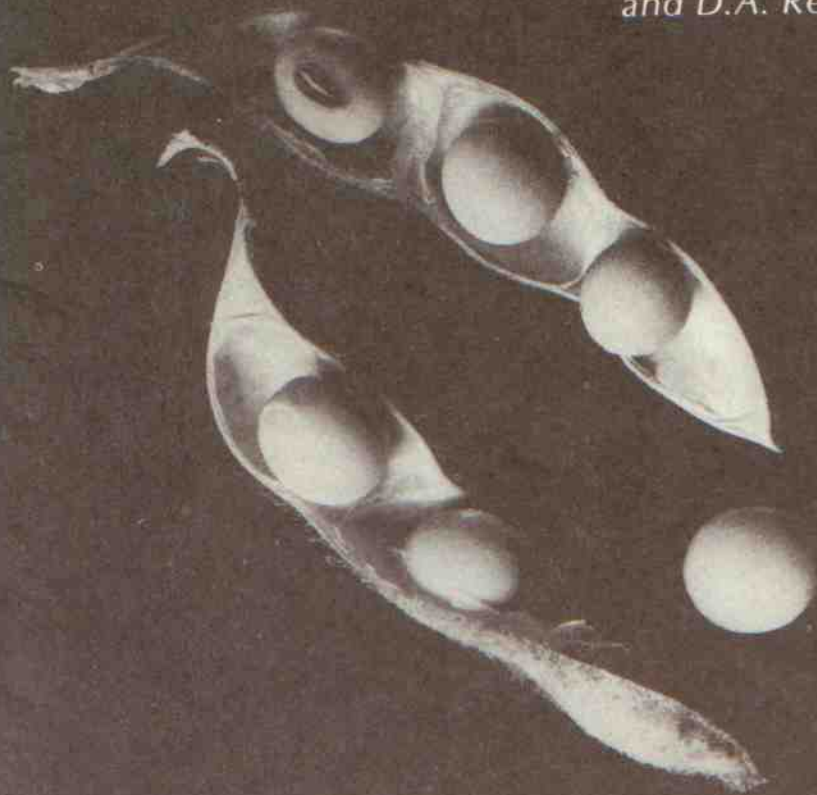


# Kentucky Soybean Performance Tests 1979

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UNIVERSITY of KENTUCKY • COLLEGE of AGRICULTURE  
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# Kentucky Soybean Performance Tests—1979

J.H. Orf, J.M. Wood, Charles Turt, and D.A. Reicosky

The objective of the Kentucky Soybean Performance tests is to provide an estimate of the relative performance of soybean varieties in Kentucky. This information may be used by growers and seedsmen in selecting the variety that will give the highest total production for a specific situation. Experimental strains of soybeans provided by the U.S. Regional Soybean Laboratory are also tested at several locations in Kentucky.

Soybean tests in 1979 were conducted at six locations in the state. The testing locations, soil types, planting date, row width, and other information are shown on the opposite page.

The information on the dates that soil temperatures reach 65°F and the date of a 50% chance of a spring killing frost is provided for various areas of the state as guidelines for planting of soybeans (Table 1). *To obtain good germination and stand establishment it is recommended that soybean planting be delayed until after there is a low probability of a killing frost and until the soil temperature at the 2-inch depth reaches 65°F.*

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 and Lexington locations in Tables 7 and 9. 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, and the date for each factor may vary from year to year. For the date of a 1 year out of 10 chance of a spring killing frost, add 13-16 days to the dates in Table 1 and 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

Each variety was planted in three plots (replications) at all locations, with individual plots being 20 feet long and 4 rows wide.

## LOCATION OF THE 1979 SOYBEAN PERFORMANCE TESTS

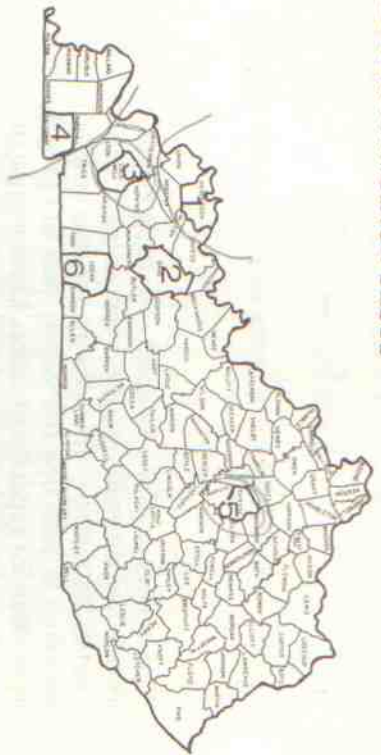


Table 1.—Location, Planting Date and Climatic Data for the 1979 Soybean Performance Tests.\*

	1	2	3	3	4	5	6
	Henderson	Hartford	Princeton	Princeton Double-Crop	Murray	Lexington	Russellville
Farmer cooperator	James McConathy	Dane Milligan	Exp. Sta.	Exp. Sta.	Dunry Cunningham	Exp. Sta.	W. L. and Charles Moore
Extension agent	William Hendrick	John Kavanaugh			Ted Howard		Aubrey Warren
Soil type	Grenada silt loam	Meixin silt loam	Chider silt loam	Chider silt loam	Grenada silt loam	Maury silt loam	Pembroke silt loam
Date of planting	6/6	6/4	6/6	6/29 <sup>b</sup>	6/8	5/23	6/27 <sup>b</sup>
Growth conditions	Excellent	see special note p. 6	Excellent	Excellent	Excellent	Excellent	Excellent
Row width (inches) <sup>b</sup>	30	30	30	15	30	30	15
Herbicides <sup>b</sup>	2 pt Tre- flin 3/4 lb Laxone	2 pt Tre- flin	2 pt Tre- flin	1 lb Lorox 4 pt Lasso 2 pt Para- quat	1 1/4 lb Lorox 4 pt Lasso	3/4 lb Lorox 6 pt Lasso	1 lb Lorox 6 pt Lasso 2 pt Para- quat
Soil Test							
P	100	68	27	27	56	300+	104
K	293	182	297	297	260	282	265
pH	7.0	6.8	5.6	5.6	6.9	6.3	6.3
Fertilizer applied	None	350 lb/A	90 lb P <sub>2</sub> O <sub>5</sub> 0-23-30	600 lb/A 0-20-20	None	None	None
Date soil temp. reaches 65°F in the spring <sup>c</sup>	5/2	4/25	4/18	4/18	4/22	5/12	5/6
50% chance spring killing frost <sup>d</sup>	4/11	4/22	4/10	4/10	4/13	4/22	4/13
50% chance fall killing frost <sup>d</sup>	10/26	10/13	10/19	10/19	10/24	10/26	10/24

\*No-till double-cropped after wheat.

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

<sup>c</sup>Temperature at 2-inch depth of bare soil for years 1967-72 (weekly average),  
based on a 30-year average.

<sup>d</sup>Trade names of products mentioned or similar products not named is neither intended as an endorsement nor criticism  
of such products by the Kentucky Agricultural Experiment Station.

The seeding rate was approximately 8-10 viable seeds per foot of row. Double-crop plots were planted 8 rows wide, with a seeding rate of 5-6 viable seeds per foot of row.

### 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

This is the date when the pods are dry, have reached their normal mature color, and most of the leaves have dropped. Stems are also dry, under most conditions. Maturity may also be expressed as days earlier (—) or later (+) than that of a standard variety (Williams). Maturity dates were recorded at the Princeton and Lexington 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.

### SHATTERING

Shattering was scored 3 weeks after maturity and was based on estimates of the percent of open pods on a scale of 1 to 5; 1 = No shattering; 2 = 1-10% shattered; 3 = 10-25% shattered; 4 = 25-30% shattered; and 5 = over 50% shattered. Shattering scores were taken at the Princeton location.

## HARVEST

All plots were harvested according to maturity with a small plot combine.

## INTERPRETATION

An important step in profitable soybean production is to select good 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.

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 to get 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. 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.

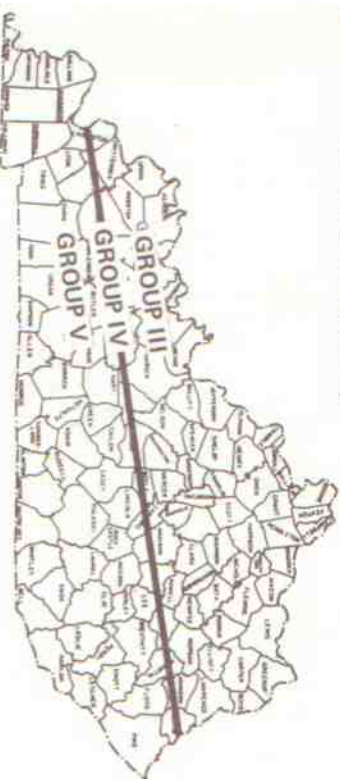
## SPECIAL NOTES

Flooding in October 1979 prevented harvest of the Hartford variety test plots. Therefore, only data for 1977 and 1978 are presented for the Hartford test.

Drought conditions at planting in 1978 prevented adequate stand establishment for yield comparison of the Princeton double-crop test. Therefore only data for 1977 and 1979 are presented for the Princeton double-crop test.

## VARIETY ADAPTATION

Early-maturing varieties (Group III), such as Woodworth and Williams, 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 (Groups V and VI), such as Essex and Forrest are best adapted in areas south of the indicated line. Mid-season varieties (Group IV), such as Union, Franklin and Kent, can be successfully grown in most areas in Kentucky.\*



*Approximate areas of adaptation of the maturity groups commonly grown 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/A per day for each day planting is delayed after mid-

\*Varieties for other groups not named are not adapted for growing in Kentucky.

June and 1 bu/A 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 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 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 use the lower rate. If field conditions or seed quality is marginal use the higher 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 extension agent or the Kentucky Seed Improvement Association (P.O. Box 12008, Lexington, Ky. 40579).

**Table 2.—Pounds of Seed per Acre for the Given Row Width and Seed Size at the Recommended Seeding Rate.**

Row spacing (inches)	10	20	30	40
Seeding Rate (seeds per foot)	3-4	6-8	8-10	10-12
Seeds per pound				
2600	60-80	60-80	54-67	50-60
2800	56-75	56-75	50-62	47-56
3000	52-70	52-70	46-58	44-52
3200	49-65	49-65	44-54	41-49
3400	46-61	46-61	41-51	38-46
3600	44-58	44-58	39-48	36-44

## 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. Table 3 lists the soybean blends tested in 1979 and the components of the mixture.

**Table 3.—Percentage Composition of Each Variety in the Soybean Blends Tested in 1979.**

Name	Variety 1	Variety 2	Variety 3
CB 347	33.3% Wayne	33.3% Williams	33.3% Cutler 71
RA 31	50% SB 27	50% Williams	
VB 350	50% Agripro 35	50% Williams	
Migro HP 30-30	75% Agripro 25	25% Agripro 27	
Migro HP 40-40	75% Agripro 35	25% Williams	
Multivar 92	50% S4055	50% Williams	
Agro-soy 45B	50% Exp. 500	50% Exp. 668	

### AVERAGE STATEWIDE PERFORMANCE

The performance data of varieties that have been in the Kentucky variety test for at least 2 years are averaged over years and across locations in maturity zones and are shown in Table 4. 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 4 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 conjunction with a recommended crop rotation in your production system (See Kentucky Cooperative Extension publication PPA-3, "Soybean Cyst Nematode," available at your county extension office.)

**TABLE 4.—AVERAGE PERFORMANCE ACROSS YEARS AND LOCATIONS**

Variety	Hartford, Henderson and Lexington <sup>a</sup>		Murray and Princeton		Princeton and Russellville <sup>b</sup> double-crop		Approx. seed/lb	Approx. maturity <sup>c</sup>
	Yield Bu/Ac 78-79	Lodg- ing 78-79	Yield Bu/Ac 78-79	Lodg- ing 78-79	Yield Bu/Ac 78-79	Lodg- ing 78-79		
<b>Early (Group III)</b>								
Agripro 35	50.6	2.2	42.1	1.7	48.1	3.4	2800	+2
CB 347 <sup>f</sup>	48.6	2.4	40.1	1.4	46.1	1.7	2400	+2
Cumberland	49.8	1.8	46.6	1.6	51.4	3.1	2600	-2
CX 350	43.8	2.4	43.3	1.7	47.6	3.0	2400	0
Elf	46.0	1.2	46.7	1.0	45.6	1.1	2600	0
RA 31 <sup>f</sup>	48.5	2.2	40.0	1.4	45.4	3.1	2600	+2
SRP 35g	47.0	2.8	45.3	2.2	52.0	4.1	3000	0
VB 350 <sup>f</sup>	49.6	2.1	45.7	1.7	46.0	2.7	2400	0
Williams	48.1	1.9	42.5	1.4	49.7	2.3	2600	0
Williams 79	47.6	1.9	40.5	1.2	46.2	3.3	2600	0
<b>Mid-Season (Group IV)</b>								
Agripro 40	47.9	3.2	44.7	2.6	50.9	4.5	2600	+9
Franklin <sup>h</sup>	45.3	2.6	41.4	1.7	46.9	2.7	2600	+11
Kent	44.9	2.0	41.3	1.7	43.2	3.2	2600	+13
Mitchell	50.2	2.5	48.7	2.5	51.6	4.2	2900	+9
RA 401	49.1	2.1	45.3	1.7	48.3	2.8	2600	+12
SRP 425	46.9	2.9	45.9	2.3	46.7	3.7	3200	+5
Union	50.7	2.8	44.6	2.1	48.7	3.5	2600	+3
VS 465	47.9	2.4	46.2	1.8	44.0	3.1	2600	+6
<b>Late (Groups V and VI)</b>								
Bedford <sup>e</sup>	35.3	3.7	39.7	3.2	31.9	4.2	3500	+39
Essex	51.0	1.9	47.2	1.5	47.2	3.2	3500	+27
Forrest <sup>d</sup>	42.9	3.0	43.2	1.8	36.6	4.3	3500	+33
McNair 500	36.4	2.6	42.8	1.8	34.7	3.7	3000	+35
York	42.8	2.5	42.5	1.9	41.2	3.7	2600	+28
Grand Average	46.2	2.4	43.7	1.8	45.7	3.2		
LSD (.05)	8.3	1.0	7.0	1.0	8.7	1.0		

<sup>a</sup>1978 data only for Hartford.

<sup>b</sup>1979 data only.

<sup>c</sup>Days earlier (-) or later (+) than Williams.

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

<sup>e</sup>Resistant to soybean cyst nematode (Race 4).

<sup>f</sup>Blend, see Table 3.

**SOURCES OF SEED**

The seed planted in the 1979 Soybean Performance Tests was acquired from the following sources:

Entry	Source
A3860	Agrow Seed Co., 634 E. Lincoln Way, Ames, Iowa 50010
A4268	Ames, Iowa 50010
1125	Jacques Seed Company, Prescott, Wisconsin 54021
McNair 500	McNair Seed Company, P. O. Box 706, Laurinburg, N. C. 28352
Caroline	North American Plant Breeders, Route 2, Ames, Iowa 50010
Agipro 35	Ames, Iowa 50010
AP40	Northrup, King & Co., P. O. Box 49, Washington, Iowa 52353
Multivar 92, S4055	Pfizer Genetics, Inc., Rural Route 1, Box 99, Beaman, Iowa 50609
CX 350	Ring Around Products Inc., P. O. Box 1629, Plainview, Texas 79072
CB 347	
RA 31, 401 Mitchell 450	Soybean Research Foundation Inc., Mason City, Ill. 62664
SRE 350, 425	
VB 350	Voris Seeds, Inc., Box 457, Windfall, Ind. 46076
VS 495, 465	
SB 4200	Stewart Seed Inc., RR 8 Box 227, Greenburg, IN 47240
SB 4600	
USS 410, 450	USS Agri Chemicals, P. O. Box 1685 Atlanta, GA 30301
Agro-5oy 45B, 45NR	Bailey Seed Farms, Box 178 R No. 6 Portland, IN 47371
Delta Classic II	V. R. Seeds Inc., P. O. Box M Plymouth, IN 46563
Migro HP 30-30, Migro HP 40-40	Migro/HP Division of NAFB Rt. No. 2, New Hwy 30 East Ames, IA 50010
Callahan 61544, 7302R	Callahan Seeds, 700 W. 169th St. Westfield, IN
FFR 335, 446	F. F. R. Coop., 4112 E. State Road 225 West Lafayette, IN 47906
Williams 79, Miles, Ware, Day, Bedford, Eli, Union, Cumberland, Shore Williams, York, Kent, Essex, Forrest, Franklin	Kentucky Foundation Seed Project, P. O. Box 11950, Lexington, Ky.

**TABLE 5.—KENTUCKY SOYBEAN VARIETY TESTS—HENDERSON<sup>a</sup>**

VARIETY	YIELD		L00G		L00G		HT <sup>b</sup>		POD	
	BU/AC	BU/AC	-ING	-ING	-ING	-ING	(IN)	(IN)	HT <sup>c</sup>	HT <sup>c</sup>
	78-79	1979	78-79	1979	78-79	1979	1979	1979	1979	1979
<b>EARLY (GROUPS II AND III)</b>										
AGRI 40	51.1	48.2	1.8	1.8	3.8	3.7	3.7	3.7	3.7	3.7
AGRO-50Y 45B <sup>e</sup>	-	29.5	-	1.6	3.8	5.3	3.8	5.3	5.3	5.3
AGRO-50Y 45NR	-	36.4	-	1.6	4.5	6.0	4.5	6.0	6.0	6.0
ASGROW A 3860	-	48.7	-	1.7	3.5	6.3	3.5	6.3	6.3	6.3
CAL. 41544	-	38.7	-	2.0	3.4	4.7	3.4	4.7	4.7	4.7
CAL. 7302R	-	41.6	-	2.0	3.9	4.3	3.9	4.3	4.3	4.3
CB 347 <sup>e</sup>	49.6	47.3	2.1	1.5	3.9	4.0	3.9	4.0	4.0	4.0
CLASSIC II	37.0	37.0	-	2.3	3.6	6.0	3.6	6.0	6.0	6.0
CUMBERLAND	47.5	44.2	1.3	1.0	3.1	3.7	3.1	3.7	3.7	3.7
CX 350	42.4	35.7	1.9	1.6	3.9	5.0	3.9	5.0	5.0	5.0
ELF	37.4	28.6	1.1	1.1	1.6	1.3	1.6	1.3	1.3	1.3
MIGRO HP 30-30 <sup>e</sup>	-	45.5	-	1.6	3.5	4.3	3.5	4.3	4.3	4.3
MIGRO HP 40-40 <sup>e</sup>	-	40.2	-	1.6	3.3	3.7	3.3	3.7	3.7	3.7
PELLA	44.2	37.3	1.2	1.2	3.5	4.7	3.5	4.7	4.7	4.7
RA 31 <sup>e</sup>	44.7	41.4	2.5	2.2	3.7	5.3	3.7	5.3	5.3	5.3
SB 4600	33.7	33.7	-	2.3	3.6	4.7	3.6	4.7	4.7	4.7
SFP 350	45.1	38.7	2.4	1.5	3.3	4.3	3.3	4.3	4.3	4.3
V9 350	50.3	48.4	1.7	1.7	3.5	4.3	3.5	4.3	4.3	4.3
WILL	-	45.3	-	1.3	3.6	4.3	3.6	4.3	4.3	4.3
WILLIAMS	49.6	49.1	1.8	2.0	3.8	4.7	3.8	4.7	4.7	4.7
WILLIAMS 79	46.3	41.1	2.1	1.6	3.4	3.7	3.4	3.7	3.7	3.7
<b>MID-SEASON (GROUP IV)</b>										
AGRI 40	43.1	41.8	2.5	2.0	3.6	6.0	3.6	6.0	6.0	6.0
ASGROW 44268	-	46.5	-	1.0	3.3	6.0	3.3	6.0	6.0	6.0
CAROLINE	-	27.7	-	2.3	4.0	7.3	4.0	7.3	7.3	7.3
DELTA	-	44.6	-	1.8	4.0	4.0	4.0	4.0	4.0	4.0
DESOTO	-	40.3	-	1.8	3.7	4.7	3.7	4.7	4.7	4.7
FFR 335	-	39.3	-	1.7	3.9	8.3	3.9	8.3	8.3	8.3
FRANK INC	46.4	40.5	2.6	2.8	4.3	4.7	4.3	4.7	4.7	4.7
HAMILTON	-	45.8	-	2.3	3.8	5.7	3.8	5.7	5.7	5.7
J 125	-	32.4	-	1.7	3.4	4.0	3.4	4.0	4.0	4.0
KENT	43.3	38.9	1.9	1.7	4.0	4.7	4.0	4.7	4.7	4.7
MILES	-	45.2	-	2.2	3.7	6.0	3.7	6.0	6.0	6.0
MITCHELL 450	52.1	47.7	2.4	2.0	3.9	4.3	3.9	4.3	4.3	4.3
MULTIVAR 92 <sup>e</sup>	-	36.8	-	1.6	3.2	4.0	3.2	4.0	4.0	4.0
N.K. 34055	-	40.5	-	1.5	3.3	5.0	3.3	5.0	5.0	5.0
RA 401	47.4	42.5	2.2	1.8	4.2	7.0	4.2	7.0	7.0	7.0
SR 4200	-	42.5	-	2.0	3.6	6.3	3.6	6.3	6.3	6.3
SFP 425	45.5	41.4	2.7	1.6	3.9	5.0	3.9	5.0	5.0	5.0
UNION	48.3	48.9	2.5	2.2	3.9	5.3	3.9	5.3	5.3	5.3
USS 410	-	26.9	-	1.7	3.2	5.7	3.2	5.7	5.7	5.7
USS 450	-	39.1	-	2.2	4.2	5.0	4.2	5.0	5.0	5.0
VORIS 495	-	47.2	-	2.0	4.2	6.0	4.2	6.0	6.0	6.0
V9 465	45.2	37.8	2.3	2.0	3.6	4.7	3.6	4.7	4.7	4.7
WANE	-	24.3	-	1.0	1.7	2.7	1.7	2.7	2.7	2.7
<b>LATE (GROUPS V AND VI)</b>										
BAV	-	36.5	-	2.3	3.7	5.3	3.7	5.3	5.3	5.3
BEDFORD	34.8	30.7	3.8	4.3	4.5	8.0	4.5	8.0	8.0	8.0
ESSEX	53.4	46.5	2.2	2.2	2.9	5.3	2.9	5.3	5.3	5.3
FFR 446	-	39.5	-	3.3	4.3	7.0	4.3	7.0	7.0	7.0
FORREST <sup>c</sup>	48.2	33.0	2.5	2.7	3.3	6.7	3.3	6.7	6.7	6.7
MICHAEL 500	33.3	27.3	2.6	2.5	3.2	5.7	3.2	5.7	5.7	5.7
YORK	45.6	37.7	2.7	2.6	3.5	4.3	3.5	4.3	4.3	4.3
<b>GRAND AVERAGE</b>	<b>45.7</b>	<b>39.9</b>	<b>2.2</b>	<b>2.0</b>	<b>3.6</b>	<b>5.1</b>	<b>3.6</b>	<b>5.1</b>	<b>5.1</b>	<b>5.1</b>
<b>LSD (.05)</b>	<b>8.3</b>	<b>8.8</b>	<b>1.0</b>	<b>0.7</b>	<b>5</b>	<b>2.2</b>	<b>5</b>	<b>2.2</b>	<b>2.2</b>	<b>2.2</b>

<sup>a</sup> Data from 1977 not reported owing to infestation by the Mexican Bean Beetle.  
<sup>b</sup> Plant height.  
<sup>c</sup> Resistant to the soybean cyst nematode (Race 3).  
<sup>d</sup> Resistant to the soybean cyst nematode (Race 4).  
<sup>e</sup> Blend, see Table 1.

TABLE 6.—KENTUCKY SOYBEAN VARIETY TESTS—HARTFORD

VARIETY	YIELD		L00G		HT <sup>a</sup>		POD	
	BU/AC	BU/AC	-ING	-ING	(IN)	(IN)	SCORE	DATE
	77-78	1978	77-78	1978	1978	1978	1978	1978
<b>EARLY (GROUPS II AND III)</b>								
AGRIPRO 35	54.4	54.8	2.2	2.3	44	5.0		
AGRO-50V 45B <sup>b</sup>	-	46.6	-	3.0	47	4.3		
AGRO-50V 45NR	-	49.3	-	2.0	43	5.3		
AGROW A 3960	53.2	49.3	2.4	2.0	43	4.0		
CAL. 6154A	-	57.5	-	3.7	43	4.0		
CAL. 7302R	-	56.3	-	2.0	42	5.0		
CB 347 <sup>c</sup>	-	49.3	-	3.3	44	4.3		
CUMBERLAND	-	56.3	-	2.0	44	4.7		
CX 350	57.9	53.8	1.0	1.0	20	1.7		
ELF	-	47.1	-	1.6	47	5.0		
J 150	-	49.6	-	1.5	44	4.0		
RA 31	60.3	55.2	2.0	1.5	44	4.3		
SRF 350	-	49.6	-	2.6	44	4.3		
VB 350	52.5	51.6	2.3	2.5	44	5.7		
WILLIAMS	54.9	50.1	1.7	1.5	42	5.3		
WILLIAMS 79	-	53.0	-	1.3	43	4.7		
WOODMORTH	56.8	53.0	2.6	2.2	41	6.3		
<b>MID-SEASON (GROUP IV)</b>								
AGRIPRO 40	-	56.7	-	4.2	46	5.7		
CB 470	-	47.0	-	2.3	46	5.0		
CUSTER	52.8	53.9	2.3	2.5	49	5.3		
CUTLER 71	53.1	51.0	1.7	1.7	44	5.7		
FRANKLIN	54.0	51.3	2.2	2.2	44	5.0		
KENT	50.1	51.5	2.9	1.6	46	5.3		
MITCHELL	54.1	53.6	2.6	2.0	46	5.0		
MULTIVAR 91	55.6	50.8	2.2	2.2	44	5.3		
RA 401	-	56.2	-	1.8	47	5.0		
RA 41	-	51.3	-	2.0	47	4.7		
SRF 425	54.0	52.3	2.7	2.7	49	5.7		
SRF 450	48.0	51.7	2.2	2.0	45	5.0		
SSP 402	49.2	48.7	2.6	1.4	45	5.0		
UNION	59.0	53.8	2.7	3.0	46	5.0		
VS 457	-	52.2	-	1.7	49	4.7		
VS 465	55.6	52.7	2.5	2.2	44	5.7		
WILSTAR 430	56.8	49.0	2.4	2.2	49	4.7		
<b>LATE (GROUPS V AND VI)</b>								
DEFORD <sup>d</sup>	47.4	49.6	3.5	3.5	47	11.3		
DARE	55.2	53.9	3.2	3.0	42	6.0		
ESSEX	57.4	59.3	1.7	1.6	37	7.7		
FOREST <sup>c</sup>	60.2	56.1	2.0	3.5	40	10.7		
MCAIR 500	52.5	50.7	3.0	3.0	43	6.7		
MULTIVAR 100	54.3	52.6	2.8	2.5	41	5.3		
RA 501A	-	51.2	-	2.0	51	5.0		
SHORE	-	47.2	-	2.5	39	4.3		
SSP 500-N	55.6	52.1	2.3	2.3	45	6.7		
YORK	-	52.1	-	2.3	38	6.7		
<b>GRAND AVERAGE</b>	<b>54.4</b>	<b>52.3</b>	<b>2.4</b>	<b>2.4</b>	<b>44</b>	<b>5.5</b>		
LSD (.05)	N.S. <sup>e</sup>	N.S. <sup>e</sup>	0.9	1.0	5	2.1		

<sup>a</sup>Data for 1979 not reported owing to flooding at harvest.  
<sup>b</sup>Plant height.  
<sup>c</sup>Resistant to the soybean cyst nematode (Race 3).  
<sup>d</sup>Resistant to the soybean cyst nematode (Race 4).  
<sup>e</sup>Blend, see Table 3.  
<sup>f</sup>No statistically significant differences were indicated.

TABLE 7.—KENTUCKY SOYBEAN VARIETY TESTS—PRINCETON

VARIETY	YIELD		L00G		HT <sup>a</sup>		SHAT <sup>b</sup>		MAT.	
	BU/AC	BU/AC	-ING	-ING	(IN)	(IN)	SCORE	DATE	DATE	POD
	77-79	78-79	1979	77-79	78-79	1979	1979	1979	1979	1979
<b>EARLY (GROUPS II AND III)</b>										
AGRIPRO 35	45.6	46.3	50.5	1.3	1.5	2.0	37	2.0	9/27	3.7
AGRO-50V 45B <sup>b</sup>	-	54.4	-	1.7	1.7	3.0	36	1.7	9/30	3.3
AGRO-50V 45NR	-	54.4	-	3.0	4.0	1.3	44	1.3	9/26	3.0
AGROW A 3960	-	50.3	-	1.7	3.8	1.0	38	1.0	9/29	4.7
CAL. 6154A	-	51.1	-	1.0	1.0	1.0	33	1.0	9/29	2.7
CAL. 7302R	-	53.3	-	2.3	4.1	2.0	41	2.0	9/24	5.0
CB 347 <sup>c</sup>	-	43.8	-	1.3	1.7	3.8	38	1.0	9/24	4.0
CUMBERLAND	-	49.0	-	1.7	3.8	1.0	37	1.0	9/25	3.3
CX 350	52.2	59.0	-	1.7	2.3	3.5	35	1.0	9/24	3.0
ELF	48.3	53.9	-	1.7	2.3	3.9	1.0	9/24	3.0	
J 150	50.1	51.0	54.2	1.0	1.0	1.0	19	1.0	9/30	2.0
MICRO HP 30-30 <sup>d</sup>	-	49.0	-	1.0	1.0	1.0	34	1.0	9/27	3.3
MICRO HP 40-40 <sup>e</sup>	-	49.0	-	1.0	1.0	1.0	35	1.0	9/26	3.7
PELLA	48.5	47.5	51.6	1.1	1.2	1.5	34	1.0	9/24	2.7
RA 31	40.3	40.8	43.5	1.4	1.5	2.0	35	1.0	9/27	3.7
SRF 350	-	51.7	-	1.4	1.4	3.3	42	1.0	10/4	3.7
VB 350 <sup>f</sup>	49.2	51.0	54.9	-	2.6	2.7	34	1.0	9/24	4.0
WILLIAMS	42.6	45.4	50.9	1.6	1.8	2.3	37	1.7	9/25	3.7
WILLIAMS 79	41.7	41.6	41.6	1.1	1.2	1.3	36	1.0	9/24	4.0
<b>MID-SEASON (GROUP IV)</b>										
AGRIPRO 40	50.1	54.3	-	3.0	4.0	43	1.0	10/6	4.0	
AGRO-AR266	-	53.8	-	1.0	2.7	3.2	1.0	9/26	3.3	
CAROLINE	-	46.0	-	2.0	2.0	4.0	4.0	10/3	3.7	
DELTA	-	50.5	-	2.0	2.0	3.0	1.0	10/3	3.7	
DESOTO	-	51.1	-	1.2	1.2	1.0	1.0	10/1	3.7	
FR 335	-	43.2	-	2.0	2.0	3.0	1.0	9/30	5.7	
FRANKLIN <sup>c</sup>	48.2	47.5	49.7	1.6	1.5	2.0	41	1.0	10/1	4.0
HAMILTON	-	52.4	-	2.0	2.0	4.0	4.0	1.0	9/30	3.7
J 125	-	56.6	-	1.6	1.6	3.0	3.0	1.0	10/4	3.7
KENT	47.1	46.5	47.5	1.6	1.8	2.3	3.8	1.0	10/7	3.5
MILES	-	55.2	-	3.0	3.0	3.0	3.0	1.0	10/5	4.0
MITCHELL 450	52.4	52.4	51.6	2.1	2.7	3.0	3.6	1.3	10/4	3.3
MULTIVAR 92	-	54.7	-	3.0	3.0	3.6	1.0	10/4	3.7	
N.K. 54055	-	46.5	-	1.7	3.6	1.3	9/27	4.3	3.7	
RA 401	-	50.6	-	1.7	3.6	1.0	9/28	3.7		
SR 4200	-	49.4	-	1.7	2.3	4.0	1.0	10/4	5.0	
SRF 425	-	48.4	-	1.7	1.7	3.5	1.0	9/26	3.3	
UNION	46.3	49.0	49.3	2.2	2.8	2.0	3.0	1.0	10/2	4.0
US8 410	50.6	50.6	50.6	2.2	2.5	2.0	3.0	1.0	9/28	3.3
US8 450	-	48.9	-	1.0	1.0	1.0	3.7	1.0	9/28	4.0
VORIS 495	-	62.3	-	2.7	4.2	1.0	10/4	3.7		
VS 465	50.6	50.7	41.7	1.8	2.0	2.3	4.2	1.0	10/9	4.3
WARE	-	41.7	-	1.0	1.0	1.0	4.2	1.0	9/29	3.3
<b>LATE (GROUPS V AND VI)</b>										
8AY	-	57.6	-	2.0	4.0	4.0	1.0	10/12	4.0	
DEFORD <sup>d</sup>	41.4	42.4	49.4	3.2	3.7	3.0	3.1	1.0	10/10	5.7
ESSEX	52.0	55.3	56.4	1.3	1.5	2.0	4.0	1.0	10/10	5.0
FER 446 <sup>e</sup>	-	46.9	-	3.3	4.2	1.0	10/5	4.3		
FOREST <sup>c</sup>	43.3	46.1	56.0	2.0	2.0	3.9	1.0	10/5	4.3	
MCAIR 500	41.0	44.5	44.6	1.7	2.0	2.3	3.5	1.0	10/5	4.7
YORK	45.5	47.0	54.3	1.9	1.8	2.3	3.6	1.0	10/5	4.0
<b>GRAND AVERAGE</b>	<b>46.6</b>	<b>48.0</b>	<b>52.0</b>	<b>1.7</b>	<b>1.9</b>	<b>2.1</b>	<b>3.7</b>	<b>1.1</b>	<b>9/30</b>	<b>3.7</b>
LSD (.05)	6.1	7.2	6.4	0.8	1.1	1.2	3	0.3	3	.9

<sup>a</sup>Plant height.  
<sup>b</sup>Shattering score, 1 (no shattering) to 5 (over 50% shattered).  
<sup>c</sup>Resistant to the soybean cyst nematode (Race 3).  
<sup>d</sup>Resistant to the soybean cyst nematode (Race 4).  
<sup>e</sup>Blend, see Table 3.  
<sup>f</sup>Not mature when frost occurred on 10/14.



TABLE 8.—KENTUCKY SOYBEAN VARIETY TESTS—MURRAY

VARIETY	YIELD		YIELD	LOGG		HT. <sup>a</sup>	MAT. DATE	POD
	BU/AC	BU/AC		-1NG	-1NG			
	77-79	78-79	1979	77-79	78-79	1979	1979	1979
EARLY (GROUPS II AND III)								
AGRI 35	41.2	37.9	53.5	2.2	2.0	3.0	38	9/24
AGRO-40Y 45R <sup>d</sup>	-	51.2	-	-	-	1.3	39	9/22
AGRO-40Y 45NR	-	48.2	-	-	-	2.0	42	9/19
AGROW A 3860	-	46.1	-	-	-	1.7	31	9/23
CAL. 6154	-	55.7	-	-	-	1.3	35	9/23
CAL. 7302 <sup>e</sup>	-	51.6	-	-	-	2.3	41	9/19
CR 347 <sup>b</sup>	36.3	50.2	-	1.5	2.0	3.0	38	9/21
CLASSIC II	41.1	48.2	-	2.3	2.0	3.5	39	9/21
CUMBERLAND	38.3	46.6	-	1.7	2.3	3.8	42	9/21
CX 350	45.5	42.4	-	1.3	1.0	1.7	35	9/20
ELF	42.4	52.4	-	1.7	1.7	2.0	36	9/20
MIGRO HP 30-30 <sup>d</sup>	45.8	51.5	-	2.0	1.7	2.5	37	9/25
MIGRO HP 40-40	42.6	42.6	-	1.9	1.3	1.7	42	9/24
PELLA	40.5	51.2	-	1.0	1.0	1.7	38	9/24
RA 31 <sup>d</sup>	39.1	50.8	-	1.3	1.3	3.3	42	9/24
SR 4600	58.9	52.3	-	1.7	2.3	3.7	42	9/24
VF 350	43.5	40.4	-	2.0	1.5	2.0	39	9/25
WILL	41.9	39.5	-	1.7	1.7	2.3	36	9/22
WILLIAMS 79	39.2	50.0	-	1.3	1.7	1.7	36	9/22
MID-SEASON (GROUP IV)								
AGRI 40	39.3	55.6	-	2.2	3.3	4.3	43	10/3
AGROW A 4264	-	55.9	-	-	1.0	3.3	43	9/23
CAROLINE	2.7	45.2	-	2.7	4.6	10/12	5.3	
DELTA	-	51.2	-	-	3.3	44	9/30	3.7
DESOTO	-	54.1	-	-	2.7	40	9/28	5.0
FR 335 <sup>b</sup>	40.7	38.1	-	2.0	2.7	40	10/1	7.3
FRANKLIN <sup>b</sup>	35.3	48.5	-	1.8	2.9	41	9/28	4.0
HAMILTON	-	51.1	-	-	2.0	37	9/27	3.7
J 125	41.6	36.1	-	2.7	4.0	39	9/28	4.7
KENT	41.6	46.5	-	2.2	4.3	38	10/1	3.7
MILES	40.5	51.6	-	1.7	2.7	41	9/30	5.0
MITCHELL 450	44.6	57.3	-	2.3	3.7	38	10/1	4.7
MITCHELL 920	-	52.4	-	-	2.3	40	9/25	4.7
MULTIVAR 920	-	49.4	-	-	1.7	37	9/21	4.0
N.K. 48055	-	53.6	-	-	2.3	43	10/5	5.0
RA 401	41.0	53.6	-	1.7	2.0	38	9/23	4.7
SR 4200	44.4	42.8	-	2.7	1.8	2.7	39	10/11
SRF 425	44.9	50.5	-	2.1	1.7	2.3	41	9/25
UNION	-	51.4	-	-	3.7	43	9/30	4.7
US 410	-	50.2	-	-	2.3	42	10/4	5.0
US 450	-	51.9	-	-	2.3	43	9/29	5.0
VORIS 495	47.0	41.7	-	1.9	1.7	2.3	43	9/29
VS 465	-	46.0	-	-	1.0	2.2	42	10/2
WARE	-	-	-	-	-	-	-	-
LATE (GROUPS V AND VI)								
BAY	40.0	36.9	52.3	-	-	3.0	41	10/10
BEDFORD <sup>c</sup>	48.5	59.1	46.0	3.0	2.6	2.3	45	10/6
ESSEX	48.5	40.6	52.5	2.0	1.5	2.0	32	10/6
FR 446 <sup>b</sup>	46.0	40.3	52.9	2.3	1.7	1.3	39	10/12
FOREST <sup>d</sup>	44.9	41.2	51.9	2.1	1.7	1.3	40	10/6
MCKAIR 500	-	30.9	37.5	-	-	1.6	32	10/12
SHORE	43.8	37.9	46.4	2.0	2.0	1.3	37	10/12
YORK	-	-	-	-	-	-	-	-
GRAND AVERAGE	43.9	39.2	51.0	2.1	1.7	2.2	38	9/27
LSD (.05)	5.4	7.4	5.3	N.S.	N.S.	N.S.	0.8	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 4).  
<sup>d</sup> Hybrid, see Table 3.  
<sup>e</sup> Not mature when frost occurred on 10/14.  
 No statistically significant differences were indicated.

TABLE 9.—KENTUCKY SOYBEAN VARIETY TESTS—LEXINGTON

VARIETY	YIELD		YIELD	LOGG		HT. <sup>a</sup>	MAT. DATE	POD
	BU/AC	BU/AC		-1NG	-1NG			
	77-79	78-79	1979	77-79	78-79	1979	1979	1979
EARLY (GROUPS II AND III)								
AGRI 35	50.9	48.0	49.9	2.6	2.6	2.2	41	9/27
AGRO-40Y 45R <sup>d</sup>	-	48.5	-	-	-	2.2	41	9/25
AGRO-40Y 45NR	-	43.4	-	-	-	2.0	42	9/25
AGROW A 3860	-	45.9	-	-	-	1.7	36	9/25
CAL. 6154	-	49.7	-	-	-	1.7	34	9/20
CAL. 7302 <sup>e</sup>	-	47.3	-	-	-	2.0	40	9/27
CR 347 <sup>b</sup>	44.6	42.7	-	2.2	1.6	42	42	9/25
CLASSIC II	49.0	47.4	-	2.1	1.7	43	10/1	7.7
CUMBERLAND	42.3	42.2	-	2.5	2.2	1.5	24	9/26
CX 350	54.3	50.7	-	1.3	1.5	2.0	24	9/25
ELF	49.9	43.4	-	2.9	2.0	3.8	49	9/25
MIGRO HP 30-30 <sup>d</sup>	55.3	51.6	-	4.2	1.7	1.6	41	9/25
MIGRO HP 40-40	51.9	49.0	-	2.4	2.2	2.2	43	10/1
PELLA	47.7	45.6	-	3.2	2.2	1.6	41	9/25
RA 31 <sup>d</sup>	47.7	48.1	-	3.1	2.2	1.6	41	9/25
SR 4600	49.4	48.1	-	2.2	2.2	2.0	41	9/27
SRF 350	40.6	47.8	-	2.3	2.2	2.0	41	9/27
WILL	45.7	45.3	-	2.3	2.2	2.7	41	9/27
WILLIAMS 79	46.3	45.3	-	2.3	2.0	1.7	39	9/27
MID-SEASON (GROUP IV)								
AGRI 40	46.4	45.2	-	3.5	3.0	4.3	43	10/7
AGROW A 4264	-	35.6	-	-	1.2	3.7	37	9/29
CAROLINE	-	44.0	-	-	2.6	54	10/12	4.7
DELTA	-	44.5	-	-	2.5	41	10/4	4.3
DESOTO	-	42.2	-	-	2.7	45	10/8	6.7
FR 335 <sup>b</sup>	44.8	41.2	-	2.5	2.9	2.7	45	10/2
FRANKLIN <sup>b</sup>	44.6	46.5	-	2.2	2.3	3.9	10/2	7.7
HAMILTON	-	42.5	-	-	2.0	3.0	40	10/4
J 125	46.0	43.2	-	2.0	2.1	2.0	42	10/10
KENT	41.1	40.1	-	2.7	2.8	3.2	43	10/7
MILES	51.1	45.7	-	1.6	1.6	4.3	43	10/5
MITCHELL 450	-	43.1	-	-	2.2	4.0	42	10/11
MITCHELL 920	-	50.7	-	-	2.2	4.5	43	10/11
MULTIVAR 920	-	50.6	-	-	2.2	2.3	42	10/12
N.K. 54055	-	47.2	-	-	2.2	4.3	43	10/11
RA 401	47.1	45.8	-	3.1	3.2	2.7	42	10/1
SR 4200	47.1	45.8	-	2.9	3.1	2.6	39	10/2
SRF 425	53.2	51.6	-	2.9	3.1	2.0	43	10/12
UNION	-	44.6	-	-	2.0	4.5	45	10/4
US 410	-	44.0	-	-	2.3	4.6	46	10/12
US 450	-	45.2	-	-	2.5	4.2	42	9/29
VORIS 495	50.9	48.2	-	1.9	2.1	2.0	42	9/29
VS 465	-	45.6	-	-	1.3	2.6	40	10/10
WARE	-	-	-	-	-	-	-	-
LATE (GROUPS V AND VI)								
BAY	31.9	28.6	26.4	4.0	3.7	3.2	46	9.3
BEDFORD <sup>c</sup>	47.5	44.5	46.3	1.9	1.7	1.5	47	13.0
ESSEX	40.0	34.1	34.3	3.3	3.1	2.6	42	10/11
FR 446 <sup>b</sup>	38.2	30.3	30.1	2.6	2.3	2.2	34	9.0
FOREST <sup>d</sup>	40.6	35.2	31.6	2.6	2.4	2.2	42	9.7
MCKAIR 500	-	-	-	-	-	-	-	-
SHORE	-	-	-	-	-	-	-	-
YORK	-	-	-	-	-	-	-	-
GRAND AVERAGE	47.2	43.0	44.2	2.5	2.5	2.2	41	10/1
LSD (.05)	5.8	4.5	7.3	0.7	0.8	0.6	3	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 4).  
<sup>d</sup> Hybrid, see Table 3.  
<sup>e</sup> Not mature when frost occurred on 10/14.

