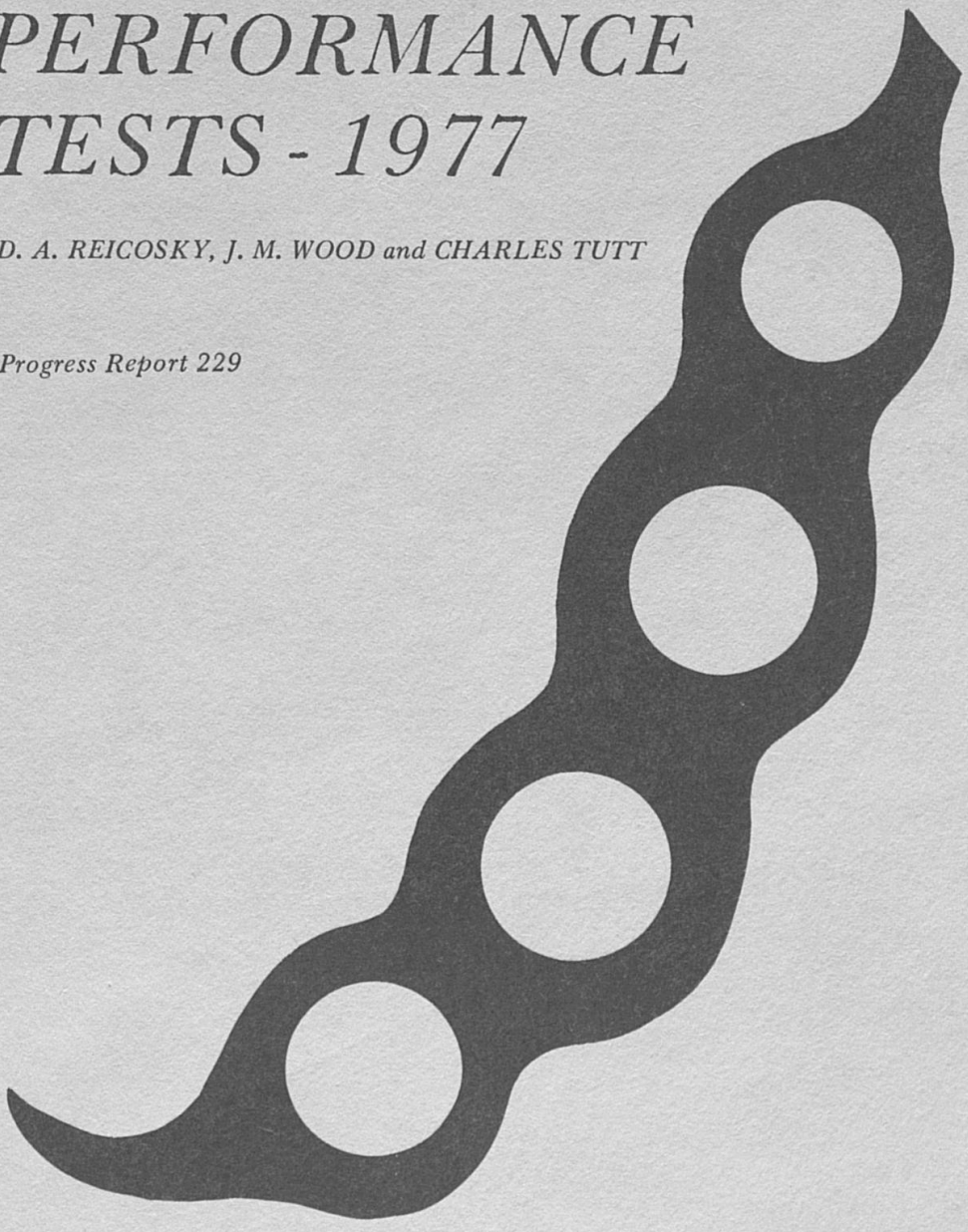
KENTUCKY SOYBEAN PERFORMANCE TESTS - 1977

D. A. REICOSKY, J. M. WOOD and CHARLES TUTT

Progress Report 229



UNIVERSITY of KENTUCKY • COLLEGE of AGRICULTURE
Agricultural Experiment Station • Department of Agronomy • Lexington

LOCATION OF THE 1977 SOYBEAN PERFORMANCE TESTS

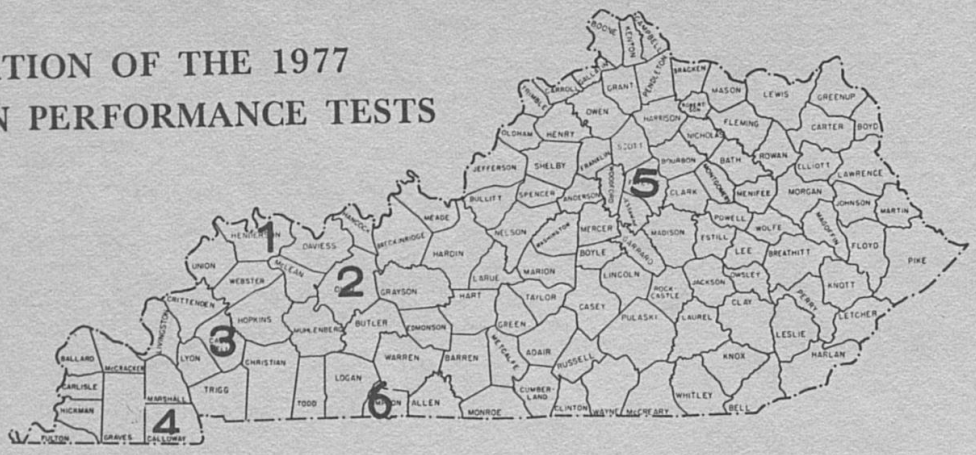


Table 1.—Location, Planting Date and Climatic Data for the 1977 Soybean Performance Tests.

	1 Henderson	2 Hartford	3 Princeton	3 Princeton Double Crop	4 Murray	5 Lexington	6 Franklin Double Crop
Farmer cooperator	James McConathy	Dane Milligan	Exp. Sta.	Exp. Sta.	Gus RobertsonJr.	Exp. Sta.	Joe & Ben Neely
Extension agent	William Hendrick	John Kavanaugh	-	-	Ted Howard	-	Don Kessler
Soil type	Wakeland silt loam	Melvin silt loam	Crider silt loam	Crider silt loam	Granada silt loam	Maury silt loam	Pembroke silt loam
Date of planting	6/18	6/17	6/1	7/5[1]	5/26	5/21	7/11[1]
Row width (inches)	30	30	30	16	30	30	20
Herbicides[2]	1 lb Lorox 2 qt Lasso 3 pt Basagran	1 qt Treflan 3 pt Basagran	1 lb Lorox 2 lb Lasso	1 lb Lorox 2 qt Lasso 1 qt Paraquat	1 lb Lorox 2 qt Lasso	1 lb Lorox 3 qt Lasso 4 pt Basagran[3]	1 1/2 lb Lorox 2 qt Lasso 1 qt Paraquat
Soil Test							
P	166	40	48	70	62	300+	155
K	337	167	163	174	299	384	239
pH	6.8	6.6	6.7		58	6.4	6.5
Fertilizer applied[2]	None	81 lb P_2O_5 105 lb K_2O	92 lb P_2O_5 120 lb K_2O	None	20 lb N 80 lb P_2O_5 80 lb K_2O	60 lb K_2O	None
Date soil temp. reaches 65°F in the spring[4]	5/2	4/25	4/18	4/18	4/22	5/12	5/6
50% chance spring killing frost[5]	4/11	4/22	4/10	4/10	4/13	4/22	4/13
50% chance fall killing frost[5]	10/26	10/13	10/19	10/19	10/24	10/23	10/24

See footnotes at bottom of opposite page.

Kentucky Soybean Performance Tests–1977

By D. A. Reicosky, J. M. Wood and Charles Tutt

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 1977 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

---

(These footnotes concern Table 1 and material on page 2.)

[1]No-till double-cropped after wheat.

[2]Amount per acre.

[3]Two applications of 2 pints each.

[4]Temperature at 2-inch depth of bare soil for years 1967-72 (weekly average).

[5]Based on a 30-year average.

*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.

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. The seeding rate was approximately 8-10 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 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.

Height

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

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 and Lexington locations.

INTERPRETATION

An important step of 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.

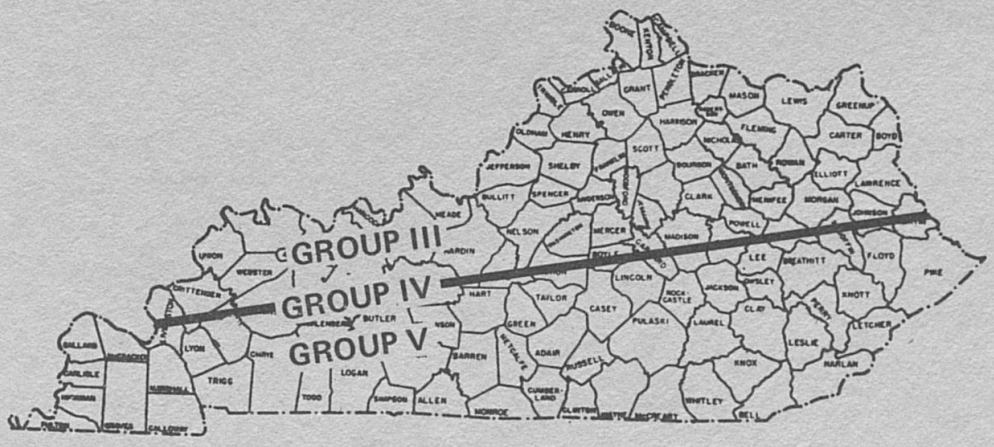
Special Note

A severe infestation of the Mexican Bean Beetle occurred at the Henderson location during the last week of August. All varieties in the test suffered defoliation ranging from 75% defoliation to nearly complete defoliation by September 7. Owing to the range of pod development of the various varieties at the time of infestation yield comparisons would be misleading and confusing. Therefore, only data for 1976 and 1975 are presented for the Henderson location.

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 map shown below. The line is approximately the same as where the Western Kentucky Parkway is located. Late-maturing varieties (Groups V and VI), such as Essex, York and Forrest are best adapted in areas south of the indicated line. Mid-season varieties (Group IV), such as Cutler 71, Custer and Kent, can be successfully grown in most areas in Kentucky.*

*Varieties for other groups not named are not adapted for growing 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-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 (10-20"), 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 Ky. Coop. Ext. 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 slightly higher seedling mortality.*

Certified Seed

Always plant high quality seed of the variety you select. Certified soybean seed is a reliable source of good seed.

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

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. 40511).

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 1977 and the components of the mixture.

Table 3.—Percentage Composition of Each Variety in the Soybean Blends Tested in 1977.

Name	Variety 1	Variety 2	Variety 3
Multivar 100	33.3% Dare	33.3% Essex	33.3% Mack
Multivar 91	33.3% Calland	33.3% Williams	33.3% Cutler 71
RA-31	50% SB 27	50% Williams	
VB 350	50% Agripro 35	50% Williams	

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 Ky. Coop. Ext. PPA-3, "Soybean Cyst Nematode," available at your county extension office.)

Table 4.—Average Performance Across Years and Location.

	Hartford and Lexington 1976-77		Princeton, Murray and Mayfield 1976-77[1]			
	Yield (Bu/Ac)	Lodging[2]	Yield (Bu/Ac)	Lodging[2]	Approx. Seed/ Pound	Approx. Maturity[3]
Early (Group III)						
SRF 307P	49.2	3.1	-	-	2800	-3
Williams	51.2	1.8	44.8	1.4	2600	0
Woodworth	50.2	2.3	46.4	2.1	2600	-4
Mid-Season (Group IV)						
Bonus	50.9	1.8	49.4	1.6	2600	+4
Cutler 71	49.5	2.2	47.0	2.4	2600	+4
Kent	46.1	2.0	48.2	1.8	2600	+13
Mitchell	53.2	2.5	52.5	1.9	2900	+9
SRF 425	46.1	2.7	43.1	3.0	3200	+5
SRF 450	45.3	1.9	47.0	2.2	2700	+13
SSF 402	47.1	2.6	44.1	2.3	-	-1
VS 405	46.8	2.8	48.3	2.1	2400	+4
Wilstar 430	55.3	2.3	50.6	2.8	2800	+6
Late (Groups V and VI)						
Dare	44.9	3.3	46.3	2.6	3500	+33
Essex	50.1	2.0	53.1	1.8	3500	+27
Forrest[4]	44.7	3.5	44.7	2.3	3500	+33
James	41.9	2.1	45.1	1.8	2800	+23
McNair 500	38.1	3.0	42.6	2.3	3500	+35
Multivar 100[5]	45.1	3.4	46.0	2.8	2600	+36
York	47.7	2.7	48.0	1.9	2600	+36
FFR 556	39.6	3.1	41.0	3.1	2600	+31
Hood 75	-	-	40.5	4.1	3400	+35
Average	47.1	2.6	49.5	2.3		
LSD (.05)	7.8	0.7	N.S.[6]	1.0		

[1] Murray data for 1977 and Mayfield data for 1976 were used to obtain a 2-year mean from the Purchase Area.
[2] See explanation in text.
[3] Days earlier (-) or later (+) than Williams.
[4] Resistant to the soybean cyst nematode (Race 3).
[5] Blend, see Table 3.
[6] No statistically significant differences were indicated.

SOURCES OF SEED

The seed planted in the 1977 Soybean Performance Tests was acquired from the following sources:

Entry	Source
Multivar 91, 100	Northrup, King & Co., P.O. Box 49, Washington, Iowa 52353
SRF 307P, 425, 450,	Soybean Research Foundation Inc., Mason City, Ill. 62664
McNair 500	McNair Seed Company, P.O. Box 706, Laurinburg, N.C. 28352
RA-31, 501 Mitchell	Ring Around Products Inc., P.O. Box 1629, Plainview, Texas 79072
A3585	Asgrow Seed Co., P.O. Box 1059, 9001 Hickman Rd., Des Moines, Iowa 50053
AGRIPRO 27, 35	North American Plant Breeders, Route 2, Ames, Iowa 50010
FFR 336, 556	Farmers Forage Research Coop, 4112 E. State Road 225, Lafayette, Ind. 47906
SSF 402, 503	Smith Seed Farms, Route 2, Box 59B, Goodlettsville, Tenn. 37072
Wilstar 430	Wilstar Seeds, Hopkinsville, Ky. 42240
VS 405, 465 VB 350	Voris Seeds, Inc., Box 457, Windfall, Ind. 46076
CX 215	Pfizer Genetics, Inc., Rural Route 1, Box 99, Beaman, Iowa 50609
Williams, York, Woodworth, Dare, Kent, Custer, Essex, Cutler 71, Bonus, James, Forrest, Franklin, Bedford, Hood 75, Elf, Union	Kentucky Foundation Seed Project, P.O. Box 11950, Lexington, Ky. 40511

Table 5.—Kentucky Soybean Variety Tests—Henderson.

Variety	Yield (Bu/Ac)			Lodging[2]		
	75-76	1976	1977[1]	75-76	1976	1977[1]
Early (Group III)						
Calland	57.0	65.1	-	3.6	4.0	-
Clemens 327	-	55.5	-	-	4.5	-
Funk's G3333	-	52.1	-	-	4.2	-
RA 31[4]	-	56.5	-	-	3.5	-
SRF 307P	51.7	52.9	-	4.4	4.7	-
SRF 72-3299	-	59.5	-	-	4.5	-
Williams	54.1	57.5	-	1.9	2.0	-
Woodworth	55.9	63.8	-	2.8	3.0	-
Mid-Season (Group IV)						
A72-512	-	58.9	-	-	4.3	-
Bonus	56.3	53.6	-	2.3	2.2	-
Custer[3]	-	57.8	-	-	4.0	-
Cutler 71	49.7	51.5	-	3.5	3.0	-
FFR 444	49.7	49.9	-	3.3	3.0	-
Franklin[3]	-	50.9	-	-	4.3	-
Kent	53.3	56.7	-	3.2	3.7	-
L73-6536	-	52.2	-	-	4.0	-
Mitchell	62.9	62.0	-	4.3	4.2	-
NAPB 418	-	55.4	-	-	3.2	-
Pomona	52.6	55.1	-	2.9	3.3	-
RA Expt 1	-	55.7	-	-	3.2	-
SRF 425	52.5	55.0	-	4.3	4.2	-
SRF 450	48.1	48.6	-	3.8	4.5	-
SRF 72-89	-	49.8	-	-	3.2	-
SSF 402	-	48.9	-	-	3.2	-
VS 405	-	62.2	-	-	4.2	-
Wilstar 430	-	58.6	-	-	3.2	-
Late (Groups V and VI)						
Dare	41.3	49.1	-	4.8	5.0	-
Essex	44.8	46.1	-	3.3	5.0	-
Forrest[3]	42.5	43.9	-	4.0	5.0	-
James	44.0	49.2	-	3.3	4.0	-
McNair 500	-	28.2	-	-	5.0	-
Multivar 100[4]	-	43.6	-	-	5.0	-
York	44.0	46.7	-	4.1	4.8	-
FFR 556	38.8	25.2	-	4.1	4.8	-
Greensoy 74-45	-	34.2	-	-	3.5	-
Average	50.0	51.8	-	3.5	3.9	-
LSD (.05)	14.4	11.4	-	1.5	1.5	-

1/ Data from 1977 not reported owing to infestation by the Mexican Bean Beetle. See explanation in text.
2/ See explanation in text.
3/ Resistant to the soybean cyst nematode (Race 3).
4/ Blend, see Table 3.

Table 6.—Kentucky Soybean Variety Tests—Hartford.

Variety	Yield (Bu/Ac) 75-77	76-77	1977	Lodging[1] 75-77	76-77	1977	Ht[2] (In)
Early (Group III)							
Agripro 27	-	-	54.2	-	-	2.5	38
Agripro 35	-	-	53.9	-	-	2.0	41
Asgrow 3585	-	-	57.1	-	-	2.8	42
CX 215	-	-	48.6	-	-	2.8	40
ELF	-	-	62.0	-	-	1.0	23
FFR 336	-	-	50.7	-	-	1.7	33
RA 31[5]	-	58.1	65.3	-	2.3	2.5	44
SRF 307P	48.0	52.5	57.4	2.7	3.3	2.8	43
VB 350[5]	-	-	53.5	-	-	2.2	41
Williams	49.9	53.0	59.8	1.7	1.6	1.8	41
Woodworth	47.3	50.7	60.7	2.2	2.6	3.0	42
Mid-Season (Group IV)							
Bonus	50.4	55.9	61.9	1.8	1.8	2.0	47
Custer[3]	-	46.7	51.7	-	2.8	2.2	43
Cutler 71	50.1	53.2	55.2	2.0	2.2	1.8	43
Franklin[3]	-	52.4	56.7	-	2.3	2.3	46
Kent	45.3	45.8	48.7	2.1	2.4	3.0	43
Mitchell	49.0	51.9	52.6	2.3	2.7	2.5	45
Multivar 91[5]	-	-	60.4	-	-	2.3	44
SRF 425	48.0	50.1	55.8	2.3	2.7	2.7	46
SRF 450	42.3	42.8	44.4	1.9	2.0	2.5	43
SSF 402	-	49.5	49.8	-	2.3	3.0	44
Union	-	-	64.1	-	-	2.5	48
VS 405	-	45.3	50.5	-	2.8	3.3	45
VS 465	-	-	58.5	-	-	1.8	48
Wilstar 430	-	56.3	64.6	-	2.5	2.7	46
Late (Groups V and VI)							
Bedford[4]	-	-	45.2	-	-	3.5	51
Dare	46.3	50.6	56.4	2.6	3.3	3.5	39
Essex	50.0	51.2	55.5	1.5	1.8	1.5	34
Forrest[3]	50.0	50.5	64.3	2.4	2.7	2.2	40
James	44.6	43.3	37.9	2.3	2.3	2.7	51
McNair 500	-	41.8	54.4	-	3.0	3.0	40
Multivar 100[5]	-	49.5	55.9	-	3.3	3.2	41
RA 501	-	-	59.2	-	-	3.7	52
SSF 503	-	-	60.8	-	-	2.0	33
York	48.0	51.0	59.0	2.1	2.3	2.3	44
FFR 556	44.6	40.5	48.1	3.1	3.5	3.3	56
Average	47.6	49.7	55.4	2.2	2.5	2.5	43
LSD (.05)	N.S.[6]	N.S.	11.0	N.S.	1.1	1.0	6

[1] See explanation in text.
[2] 1977 data only.
[3] Resistant to the soybean cyst nematode (Race 3).
[4] Resistant to the soybean cyst nematode (Race 4).
[5] Blend, see Table 3.
[6] No statistically significant differences were indicated.

Table 7.—Kentucky Soybean Variety Tests—Princeton.

Variety	Yield (Bu/Ac) 75-77	76-77	1977	Lodging[1] 75-77	76-77	1977	Ht[2] (In)	SS[3]	Maturity Date[2]
Early (Group III)									
Agripro 27	-	-	37.1	-	-	1.0	32	1.0	15 Sep
Agripro 35	-	-	44.0	-	-	1.0	37	1.3	17 Sep
Asgrow 3585	-	-	47.1	-	-	1.0	38	1.0	18 Sep
CX 215	-	-	32.9	-	-	1.7	34	1.3	11 Sep
ELF	-	-	48.2	-	-	1.0	24	1.0	18 Sep
FFR 336	-	-	38.5	-	-	1.7	32	2.0	13 Sep
RA 31[6]	-	43.8	39.2	-	1.5	1.3	40	1.0	15 Sep
SRF 307P	45.3	43.1	37.5	2.9	3.2	2.0	36	1.0	13 Sep
VB 350[6]	-	-	45.7	-	-	1.0	37	1.0	17 Sep
Williams	44.4	39.2	37.0	1.0	1.0	1.0	34	1.0	15 Sep
Woodworth	47.7	46.3	43.8	1.3	1.5	1.0	37	1.0	15 Sep
Mid-Season (Group IV)									
Bonus	48.6	46.2	45.4	1.3	1.3	1.0	43	1.0	23 Sep
Custer[4]	-	42.3	41.3	-	2.7	3.0	48	2.0	26 Sep
Cutler 71	47.3	43.2	44.0	1.8	1.8	1.0	41	1.0	19 Sep
Franklin[4]	-	46.7	49.6	-	1.3	1.7	47	1.0	21 Sep
Kent	48.6	45.5	48.4	1.1	1.2	1.0	42	1.0	27 Sep
Mitchell	56.8	53.4	52.7	1.8	1.2	1.0	42	1.3	22 Sep
Multivar 91[6]	-	-	43.3	-	-	1.3	39	1.0	18 Sep
SRF 425	46.3	41.5	40.8	2.2	2.5	1.0	41	1.0	20 Sep
SRF 450	49.1	47.4	45.6	1.6	1.5	1.0	42	1.0	28 Sep
SSF 402	-	42.2	42.0	-	1.3	1.0	42	1.0	19 Sep
Union	-	-	51.1	-	-	1.7	43	1.3	18 Sep
VS 405	-	46.8	44.0	-	1.8	1.0	45	1.0	20 Sep
VS 465	-	-	50.5	-	-	1.3	43	1.0	22 Sep
Wilstar 430	-	51.6	57.2	-	2.2	2.0	43	1.3	22 Sep
Late (Groups V and VI)									
Bedford[5]	-	-	39.2	-	-	2.3	49	1.0	—[7]
Dare	39.2	39.4	41.5	2.2	2.2	1.3	38	1.0	6 Oct
Essex	46.3	46.7	45.3	1.4	1.7	1.0	30	1.0	3 Oct
Forrest[4]	36.5	34.0	37.8	1.8	2.2	2.0	42	1.0	9 Oct
James	40.1	39.4	45.9	1.1	1.2	1.0	49	1.0	2 Oct
McNair 500	-	33.4	34.1	-	1.8	1.0	38	1.0	9 Oct
Multivar 100[6]	-	40.3	43.4	-	2.2	1.0	38	1.0	12 Oct
RA 501	-	-	44.6	-	-	2.0	47	1.0	9 Oct
SSF 503	-	-	53.0	-	-	1.0	31	1.0	4 Oct
York	43.8	44.3	42.4	2.1	2.2	2.0	39	1.0	9 Oct
FFR 556	35.9	33.4	39.1	2.3	2.5	1.0	56	1.0	—[7]
Average	45.0	43.0	43.7	1.7	1.8	1.3	40	1.1	-
LSD (.05)	7.6	9.6	10.8	1.1	N.S.[8]	1.0	5	0.3	

[1] See explanation in text.
[2] 1977 data only.
[3] Shattering score, see explanation in text.
[4] Resistant to the soybean cyst nematode (Race 3).
[5] Resistant to the soybean cyst nematode (Race 4).
[6] Blend, see Table 3.
[7] Not mature when killing frost occurred on 10/13.
[8] No statistically significant differences were indicated.

Table 8.—Kentucky Soybean Variety Tests—Murray.

Variety	Yield (Bu/Ac) 1977	Lodging[1] 1977	Ht (In)
Early (Group III)			
Agripro 27	51.2	2.7	35
Agripro 35	47.8	2.7	37
Asgrow 3585	54.6	2.7	37
CX 215	46.0	3.0	40
ELF	51.6	2.0	27
FFR 336	48.5	2.0	37
RA 31[4]	49.6	3.0	41
SRF 307P	51.4	3.3	41
VB 350[4]	49.7	3.0	40
Williams	46.8	2.0	40
Woodworth	48.2	2.0	39
Mid-Season (Group IV)			
Bonus	52.6	2.3	43
Custer[2]	40.2	2.3	49
Cutler 71	54.3	3.3	43
Franklin[2]	51.5	2.3	44
Kent	52.6	3.3	41
Mitchell	56.3	3.7	41
Multivar 91[4]	49.5	3.0	45
SRF 425	47.7	4.3	41
SRF 450	55.7	3.0	39
SSF 402	52.0	2.3	40
Union	57.7	3.0	44
VS 405	45.2	2.3	42
VS 465	57.6	2.3	41
Wilstar 430	51.2	3.3	43
Late (Groups V and VI)			
Bedford[3]	46.3	3.3	48
Dare	51.3	3.0	40
Essex	55.4	3.0	33
Forrest[2]	57.4	3.7	40
James	54.0	2.3	44
McNair 500	52.2	3.0	41
Multivar 100[4]	49.5	4.7	39
RA 501	49.3	4.3	47
SSF 503	56.3	2.7	33
York	55.5	2.0	41
FFR 556	52.8	2.7	45
Hood 75	51.2	4.3	34
Average	51.4	2.9	40
LSD (.05)	7.7	1.9	7

[1] See explanation in text.
[2] Resistant to the soybean cyst nematode (Race 3).
[3] Resistant to the soybean cyst nematode (Race 4).
[4] Blend, see Table 3.

Table 9.—Kentucky Soybean Variety Tests—Lexington.

Variety	Yield (Bu/Ac) 75-77	76-77	1977	Lodging[1] 75-77	76-77	1977	Ht[2] (In)	SS[3]	Maturity Date[2]
Early (Group III)									
Agripro 27	-	-	53.6	-	-	2.3	39	1.0	24 Sep
Agripro 35	-	-	56.7	-	-	2.5	41	1.0	26 Sep
Asgrow 3585	-	-	57.2	-	-	2.0	41	1.0	24 Sep
CX 215	-	-	47.3	-	-	3.0	40	1.0	23 Sep
ELF	-	-	61.4	-	-	1.0	25	1.0	26 Sep
FFR 336	-	-	51.9	-	-	2.5	34	1.0	22 Sep
RA 31[6]	-	48.4	57.8	-	2.4	2.7	44	1.0	26 Sep
SRF 307P	42.8	45.9	49.9	2.6	2.8	3.2	44	1.0	25 Sep
VB 350[6]	-	-	52.1	-	-	2.2	42	1.0	28 Sep
Williams	47.5	49.4	54.4	1.7	2.1	2.5	43	1.0	26 Sep
Woodworth	47.7	49.6	55.1	1.7	1.9	2.5	42	1.0	25 Sep
Mid-Season (Group IV)									
Bonus	47.0	46.0	53.3	1.7	1.8	2.2	48	1.0	1 Oct
Custer[4]	-	-	48.1	-	-	2.7	48	1.0	4 Oct
Cutler 71	42.1	45.8	52.4	2.1	2.3	2.2	45	1.0	26 Sep
Franklin[4]	-	-	52.2	-	-	1.7	49	1.0	28 Sep
Kent	42.5	46.3	51.8	1.7	1.7	1.8	45	1.0	1 Oct
Mitchell	49.7	54.4	62.1	2.6	2.4	2.5	43	1.0	2 Oct
Multivar 91[6]	-	-	55.4	-	-	1.7	40	1.0	26 Sep
SRF 425	39.3	42.1	49.7	2.8	2.8	3.0	43	1.0	27 Sep
SRF 450	43.4	47.7	54.1	1.9	1.8	2.3	45	1.0	3 Oct
SSF 402	-	44.7	55.1	-	2.8	2.8	46	1.0	26 Sep
Union	-	-	56.4	-	-	2.7	45	1.0	26 Sep
VS 405	-	48.4	51.2	-	2.7	2.7	51	1.0	30 Sep
VS 465	-	-	56.5	-	-	1.7	49	1.0	6 Oct
Wilstar 430	-	54.3	60.7	-	2.2	2.0	45	1.0	1 Oct
Late (Groups V and VI)									
Bedford[5]	-	-	38.0	-	-	4.7	49	1.0	[7]
Dare	38.9	39.1	47.4	3.2	3.3	2.5	41	1.0	[7]
Essex	47.2	49.0	53.6	2.1	2.3	2.5	36	1.0	[7]
Forrest[4]	41.8	39.0	52.0	3.7	4.3	3.8	41	1.0	[7]
James	36.3	40.4	44.8	1.7	1.9	2.0	52	1.0	10 Oct
McNair 500	-	34.4	54.0	-	3.0	2.7	38	1.0	[7]
Multivar 100[6]	-	40.8	50.4	-	3.5	3.3	38	1.0	[7]
RA 501	-	-	45.0	-	-	3.5	52	1.0	[7]
SSF 503	-	-	56.6	-	-	2.3	36	1.0	[7]
York	44.6	44.3	51.3	3.0	3.2	2.8	42	1.0	[7]
FFR 556	37.1	38.7	50.2	2.4	2.7	2.7	53	1.0	[7]
Average	43.2	45.2	52.8	2.3	2.6	2.5	43	1.0	-
LSD (.05)	7.6	N.S.[8]	10.2	0.9	1.0	1.0	5	N.S.	

1/ See explanation in text.
2/ 1977 data only.
3/ Shattering score, see explanation in text.
4/ Resistant to the soybean cyst nematode (Race 3).
5/ Resistant to the soybean cyst nematode (Race 4).
6/ Blend, see Table 3.
7/ Not mature when killing frost occurred on 10/13.
8/ No statistically significant differences were indicated.

Table 10.—Kentucky Soybean Variety Tests—Franklin, No-till, Double-cropped.

Variety	(Yield (Bu/Ac) 76-77	1977	Lodging[1] 76-77	1977	Ht[2] (In)
Early (Group III)					
Agripro 27	-	44.0	-	2.5	29
Agripro 35	-	43.4	-	2.7	30
Asgrow 3585	-	36.0	-	2.2	31
CX 215	-	39.2	-	2.5	29
ELF	-	43.3	-	1.0	17
FFR 336	-	43.1	-	2.3	27
RA 31[3]	-	43.1	-	2.5	31
SRF 307P	-	35.8	-	3.3	28
VB 350[5]	-	43.8	-	2.5	27
Williams	45.2	46.5	1.4	1.8	30
Woodworth	39.8	35.6	3.3	4.4	32
Mid-Season (Group IV)					
Bonus	39.0	39.8	1.9	2.5	33
Custer[3]	-	41.0	-	2.8	33
Cutler 71	39.5	42.0	2.4	1.8	30
Franklin[3]	-	43.4	-	2.5	33
Kent	34.8	36.1	2.0	2.3	33
Mitchell	48.0	48.0	4.0	3.7	33
Multivar 91[5]	-	42.5	-	1.8	31
SRF 425	43.7	43.3	3.3	2.3	31
SRF 450	34.0	34.1	2.9	2.2	32
SSF 402	37.8	35.7	3.0	2.6	31
Union	-	45.3	-	2.7	32
VS 405	40.3	35.6	3.2	2.3	34
VS 465	-	45.6	-	2.8	32
Wilstar 430	44.7	47.5	3.3	2.8	30
Late (Groups V and VI)					
Bedford[4]	-	24.5	-	2.3	35
Dare	38.8	40.6	4.5	4.3	32
Essex	39.1	39.9	3.7	3.3	28
Forrest[3]	31.9	32.2	4.5	4.0	33
McNair 500	27.4	31.4	4.1	3.2	33
Multivar 100[5]	35.3	36.9	3.8	2.5	30
RA 501	-	36.8	-	3.8	35
SSF 503	-	43.7	-	2.5	31
York	37.9	36.8	4.0	3.0	30
FFR 556	26.7	22.6	3.7	2.7	38
Average	38.1	39.4	3.3	2.7	31
LSD (.05)	7.3	13.5	N.S.[6]	1.8	6

[1] See explanation in text.
[2] 1977 data only.
[3] Resistant to the soybean cyst nematode (Race 3).
[4] Resistant to the soybean cyst nematode (Race 4).
[5] Blend, see Table 3.
[6] No statistically significant differences were indicated.

Table 11.—Kentucky Soybean Variety Tests—Princeton, No-till, Double-cropped.

Yield	Yield (Bu/Ac) 75-77	76-77	1977	Lodging[1] 75-77	76-77	1977	Ht[2] (In)	Maturity Date[2]
Early (Group III)								
Agripro 27	-	-	60.0	-	-	3.0	34	12 Oct
Agripro 35	-	-	55.4	-	-	2.0	33	10 Oct
Asgrow 3585	-	-	54.0	-	-	3.0	33	7 Oct
CX 215	-	-	51.5	-	-	3.3	31	3 Oct
ELF	-	-	52.6	-	-	1.7	21	11 Oct
FFR 336	-	-	52.5	-	-	3.0	34	5 Oct
RA 31[5]	-	-	59.7	-	-	2.3	35	12 Oct
SRF 307P	-	-	51.9	-	-	3.3	35	3 Oct
VB 350[5]	-	-	59.3	-	-	1.7	35	11 Oct
Williams	32.2	32.6	50.8	1.3	1.5	2.0	35	10 Oct
Woodworth	-	33.7	52.6	-	2.0	3.0	31	4 Oct
Mid-Season (Group IV)								
Bonus	32.3	34.8	53.7	1.2	1.3	1.7	37	8 Oct
Custer[3]	-	-	54.4	-	-	3.7	39	[6]
Cutler 71	-	39,2	55.1	-	2.5	4.0	38	12 Oct
Franklin[3]	-	-	56.3	-	-	2.3	38	[6]
Kent	36.9	38.6	50.2	1.6	1.8	2.7	38	[6]
Mitchell	-	32.8	55.5	-	2.0	3.0	37	[6]
Multivar 91[5]	-	-	56.7	-	-	2.3	38	[6]
SRF 425	-	38.8	56.1	-	1.8	2.7	36	12 Oct
SRF 450	-	-	48.8	-	-	2.7	37	[6]
SSF 402	-	37.4	49.2	-	1.3	1.7	37	13 Oct
Union	-	-	59.3	-	-	2.7	39	[6]
VS 405	-	43.1	59.8	-	1.8	2.7	41	[6]
VS 465	-	-	59.6	-	-	2.0	39	13 Oct
Wilstar 430	-	41.2	58.3	-	2.2	3.3	37	[6]
Late (Groups V and VI)								
Bedford[4]	-	-	23.1	-	-	4.0	46	[6]
Dare	-	33.9	44.7	-	2.2	3.3	38	[6]
Essex	33.8	33.2	47.0	1.8	2.2	3.3	35	[6]
Forrest[3]	26.2	21.6	30.3	1.9	2.2	3.3	39	[6]
James	-	33.2	44.3	-	2.2	3.3	39	[6]
McNair 500	-	24.0	32.5	-	2.2	3.3	39	[6]
Multivar 100[5]	-	35.0	51.7	-	2.0	3.0	37	[6]
RA 501	-	-	39.8	-	-	3.0	42	[6]
SSF 503	-	-	44.8	-	-	3.7	36	[6]
York	34.4	34.2	44.7	1.8	2.0	3.0	35	[6]
FFR 556	-	21.7	30.1	-	1.8	2.7	45	[6]
Average	32.6	33.8	50.2	1.6	1.9	2.8	37	-
LSD (.05)	N.S.[7]	N.S.	8.3	N.S.	N.S.	1.3	3	

[1] See explanation in text.
[2] 1977 data only.
[3] Resistant to the soybean cyst nematode (Race 3).
[4] Resistant to the soybean cyst nematode (Race 4).
[5] Blend, see Table 3.
[6] Not mature when killing frost occurred on 10/13.
[7] No statistically significant differences were indicated.

13M---1-78