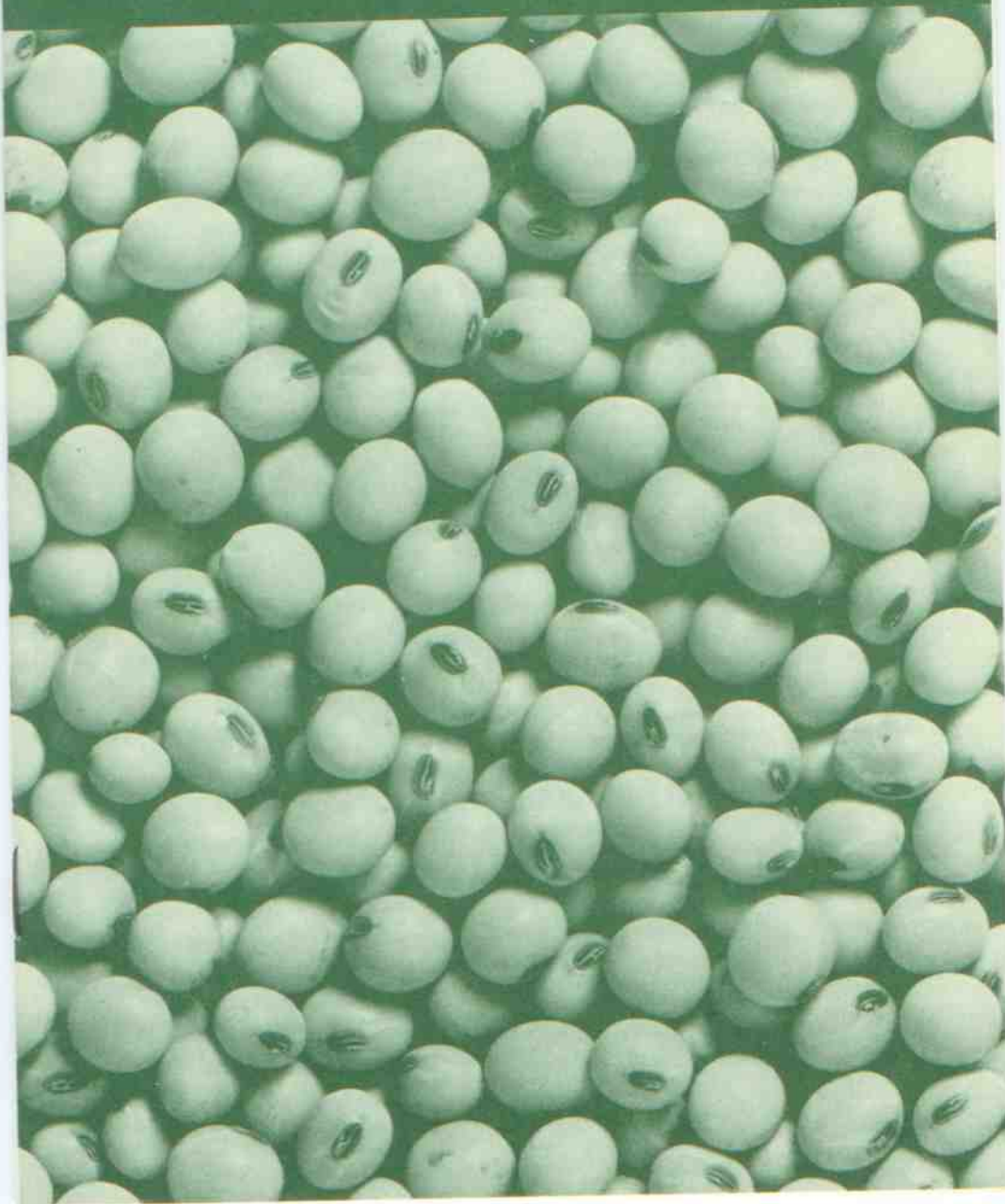


Progress
Report 252

Kentucky Soybean Performance Tests—1980

J.H. Orf, J.M. Wood, and Charles Tutt

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



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Kentucky Soybean Performance Tests—1980

J. H. Orf, J. M. Wood, and Charles Tuit

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 1980 were planted at six locations in the state. The testing locations, soil types, planting date, 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 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. 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.

LOCATION OF THE 1980 SOYBEAN PERFORMANCE TESTS

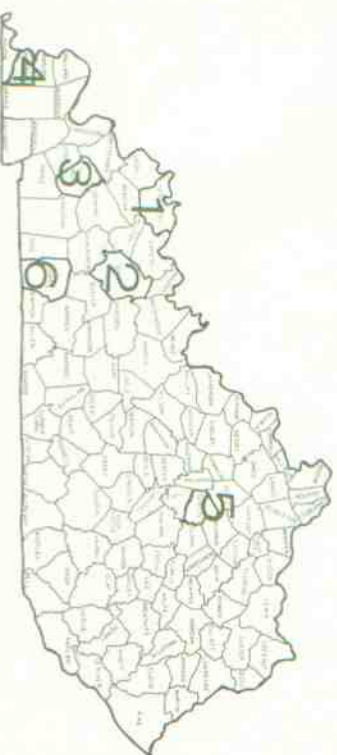


Table 1.—Location, Planting Date, and Climatic Data for the 1980 Soybean Performance Tests.*

	1 Henderson	2 Hartford	3 Princeton	3 Princeton Double Crop	4 Clinton	5 Lexington	6 Russellville Double Crop
Farmer cooperator	James McConathy	Dane Milligan	Exp. Sta.	Exp. Sta.	Junior & Wilson Workman	Exp. Sta.	W.L. & Charles Moore
Extension agent	William Hendrick	John Kavanaugh			Larry Reber		Rodney Haynes
Soil type	Wakeland silt loam	Melvin silt loam	Crider silt loam	Crider silt loam	Collins silt loam	Maury silt loam	Pembroke silt loam
Date of planting	6/3	6/4	6/5	7/1 ¹	5/29	6/6	7/2 ¹
Row width (inches)	30	30	30	15	30	30	15
Herbicides ²	2 pt Treflan	3 pt Treflan 2 pt Basagran	1½ pt Treflan 6 pt Sencor 5 pt Lasso	4 pt Lasso 1½ lb Lorox 2 pt Paraquat	2 pt Treflan	3/4 lb Lorox 6 pt Lasso	1 lb Lorox 6 pt Lasso 2 pt Paraquat
Soil test							
P	142	53	84	84	161	300+	48
K	384	177	456	456	270	245	443
pH	5.7	5.9	5.3	5.3	6.3	6.0	6.7
Fertilizer applied	None	80 lb P ₂ O ₅ 105 lb K ₂ O	None	None	None	None	None
50% chance fall killing frost ³	10/26	10/13	10/19	10/19	10/24	10/26	10/24

¹No-till double-cropped after wheat.

²Amount per acre.

³Based 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.

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.

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). Maturity dates were recorded at the Lexington 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.

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=more than 50% shattered. Shattering scores were taken at the Princeton location.

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 bulletin 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.

GROWING CONDITIONS for 1980 TESTS

The growing conditions for soybeans in Kentucky in 1980 were only fair. Rainfall was mostly inadequate and not well distributed throughout the growing season, and temperatures were considerably above normal. The Hartford and Henderson locations received adequate rainfall; however, periods of hot, dry weather may have reduced yields somewhat. Although the Clinton location received very little rain during most of the growing season and had quite high temperatures the yields from the plots were surprisingly good. The Lexington location was more adversely affected by inadequate rainfall. The Princeton and Russellville yields were greatly reduced by the hot, dry conditions; in particular, the double-crop tests received very little rainfall after they were planted.

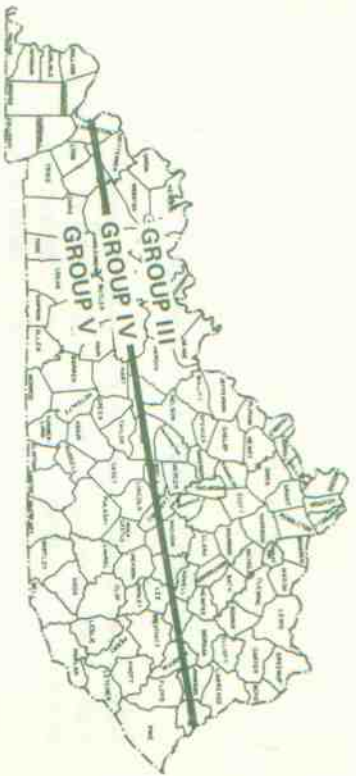
SPECIAL NOTES

Flooding in October 1979 prevented harvest of the Hartford variety test plots. Therefore, only data for 1978 and 1980 are presented for the Hartford tests.

Drought conditions at planting in 1978 prevented adequate stand establishment for yield comparison of the Princeton double-crop test. Therefore only data for 1979 and 1980 are presented for the Princeton double-crop test.

VARIETY ADAPTATION

Early-maturing varieties (Group III), such as Cumberland 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 (Group V), such as Essex and Forrest, are best adapted in areas south of the indicated line. Mid-season varieties (Group IV), such as Union and Franklin, 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-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.**

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				
2,600	60-80	60-80	54-67	50-60
2,800	56-75	56-75	50-62	47-56
3,000	52-70	52-70	46-58	44-52
3,200	49-65	49-65	44-54	41-49
3,400	46-61	46-61	41-51	38-46
3,600	44-58	44-58	39-48	36-44

*Germination assumed to be 100%.

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).

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 1980 and the components of the mixture.

Table 3.—Percentage Composition of Each Variety in the Soybean Blends Tested in 1980.

Name	Variety 1	Variety 2
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
Agrosoy 46B	50% Exp. 500	50% Exp. 794
Agrosoy 68B	50% Exp. 948	50% L-21
RA-16	50% Union	50% SB27
CB 550	50% York	50% Essex
Callahan 9400	50% 61914 PBR	50% 474AL

AVERAGE STATEWIDE PERFORMANCE

The performance data of varieties that have been in the Kentucky variety tests 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.)

SOURCES OF SEED

The seed planted in the 1980 Soybean Performance Tests was acquired from the following sources:

Entry	Source
A3659, A3860, A4268	Asgrow Seed Co., 634 E. Lincoln Way, Ames, IA 50010
1125, 1120	Jacques Seed Company, Prescott, WI 54021
Multivar 92, S4055	Northrup, King & Co., P.O. Box 49, Washington, IA 42353
RA-401, RA-480, RA-16, Mitchell, Mitchell 450	Ring Around Products, Inc., P.O. Box 1629, Plainview, TX 79072
SRF 350, SRF 425, Hobson, Matsoy	Soybean Research Foundation, Inc., Mason City, IL 62664
Voris 465, Voris 339, Voris 477	Voris Seeds, Inc., Box 457, Windfall, IN 46076
SB 4200, SB 4400	Stewart Seed Inc., RR 8, Box 227, Greenburg, IN 47240
Agrosoy 46B, Agrosoy 45, Agrosoy 68B	Bailey Seed Farms, Box 178, RR 6, Portland, IN 47371
VR Delta	V. R. Seeds Inc., P.O. Box M, Plymouth, IN 46563

Entry Callahan 9400,
Callahan 9460
CB 550, CX 380
Gold Tag 1380,
Gold Tag 1400
Wilstar 365, Wilstar 430
G-3443
FFR 335
Agrosoy 68
Victor
Migro HP 30-30,
Migro HP 40-40,
Agripro AP 350

Source Callahan Seeds, 700 W. 169th St., Westfield, IN
Pfizer Genetics, Inc., Box 367, Windfall, IN 46076
Ferry-Morse Seed Co., Box 24, Geneseo, IL 61254
Helena Chemical Co., 5100 Poplar Ave., Suite 3200, Memphis, TN 38117
Funk Seeds Int., 1300 Washington, Box 2911, Bloomington, IL 61701
Southern States Coop., P.O. Box 26234, Richmond, VA 23260
Uphoff Bro. Seed, Box 647, Charleston, IL 61920
Jim Schultz Seed Co., 106 Pine St., Dietrich, IL 62424
North American Plant Breeders, Route 2, Ames, IA 50010
Kentucky Foundation Seed Project, P.O. Box 11950, Lexington, KY 40579

Bay, Bedford, Cumberland, DeSoto, Douglas, Elf, Essex, Forrest, Franklin, Milles, Nathan, Pella, Pixie, Union, Will, Williams, Williams 79, York

TABLE 4.—AVERAGE PERFORMANCE ACROSS YEARS and LOCATIONS

Variety	Hartford, Henderson and Lexington ^a		Clinton and Princeton ^b		Princeton, and Russellville ^c		Double-Crop	
	Yield Bu/Ac 79-80	Loadg-Ing 79-80	Yield Bu/Ac 79-80	Loadg-Ing 79-80	Yield Bu/Ac 79-80	Loadg-Ing 79-80	Approx. seed/lb	Approx. maturity
Early (Groups II & III)								
Agrosoy 468	46.2	2.1	46.5	1.3	36.0	2.6	3400	+2
Agrosoy A3860	47.3	1.9	44.7	1.7	36.9	1.9	2200	+1
Cumberland	51.8	1.8	49.2	1.7	26.00	2.1	2600	-2
Elite	47.5	1.1	44.6	1.0	32.4	1.1	2600	0
Migro HP 30-30	47.4	1.6	44.0	1.0	33.7	2.1	2350	0
Migro HP 40-40	49.3	1.9	40.2	1.9	38.1	2.5	2500	-5
Pella	51.8	1.4	44.8	1.1	30.1	1.6	3000	-2
SNP-550	46.4	2.3	44.4	1.8	37.6	2.7	2600	0
Willi	48.4	1.5	45.2	1.4	34.8	1.6	2600	0
Williams	48.9	1.6	42.6	1.7	38.8	1.7	2600	0
Williams 79	48.8	1.9	42.6	1.3	35.2	2.2	2600	0
Mid-Season (Group IV)								
Agrosoy A3268	51.9	1.3	47.1	1.0	35.3	1.8	2800	+4
Delta	47.7	2.0	41.0	1.4	34.6	2.1	2750	+5
DeSoto	48.7	2.2	44.1	1.5	36.3	2.1	2700	+5
FFR 335	41.6	2.4	33.9	2.8	33.7	2.0	2500	+2
Franklin ^d	44.6	2.4	40.3	2.3	33.5	1.8	2600	+11
J-125	46.0	2.3	45.7	1.8	35.9	2.0	2740	+3
Miles	47.6	3.0	41.8	2.2	38.8	2.2	3000	+9
Mitchell	49.6	2.3	44.6	1.6	37.5	2.7	2900	+9
Mitchell 450	48.7	1.8	41.8	1.3	40.0	3.4	2600	+9
Multivar 92	48.5	1.8	41.1	1.3	33.1	1.9	2600	+2
N.R. 54055	47.1	2.2	41.9	1.6	32.6	1.9	3000	+2
RA-401	48.4	1.9	43.6	1.6	37.3	2.0	2600	+12
SNP-425	46.6	2.3	45.4	1.6	35.9	2.5	3200	+4
Union	50.5	2.7	44.4	2.8	40.3	2.4	2600	+3
Late (Groups V & VI)								
Bay	43.6	2.2	44.5	1.5	35.8	2.5	2800	+29
Bedford ^e	36.5	2.3	41.3	2.3	26.6	2.8	3500	+39
Basex	32.3	2.2	48.2	1.8	41.5	2.1	3500	+27
Forrest ^d	43.4	2.1	47.2	1.8	30.9	2.9	3500	+33
York	41.7	2.4	43.9	1.3	33.2	2.5	2600	+28
Grand Average	47.3	2.1	43.7	1.7	35.8	2.2		
LSU (.10)	6.3	0.3	4.5	1.0	5.5	0.8		

^a1980 data only for Hartford, b1980 data only for Clinton, cDave earlier (-) or later (+) than Williams. ^dResistant to soybean cyst nematode (Race 3). ^eResistant to soybean cyst nematode (Race 4).

TABLE 7.—SOYBEAN VARIETY TESTS—PRINCETON, KY.

VARIETY	YIELD		LSD ^b	HT ^a	M ^a	P ^o
	30/FAC	40/FAC				
	1980	1980	1980	1980	1980	1980
EARLY (GROUPS II AND III)						
A 3653	35.0	—	—	1.0	29	9/15
AGROBAY 45	30.6	—	—	1.0	35	9/12
AGROBAY 463d	42.5	50.9	—	1.5	31	9/11
AGROBAY 4 3650	41.2	42.2	—	1.0	33	9/15
CLYDELAND	47.0	47.8	1.7	2.0	36	9/10
CK 480	—	28.7	—	1.0	36	9/14
ELC	42.5	30.6	—	1.0	37	9/12
GOLD 146 1340	—	32.0	—	1.0	34	9/18
J 120	—	30.6	—	1.0	40	9/11
MIDCO HP 50-50d	—	43.5	—	1.0	35	9/13
MIDCO HP 40-60d	—	33.1	—	1.5	37	9/11
PELLA	42.2	41.0	—	1.2	30	9/13
RA-16d	—	30.3	—	1.7	38	9/13
SOF 530	42.1	29.3	—	1.0	35	9/11
VICTOR	—	22.3	—	1.7	36	9/23
VIGOR 539	—	29.2	—	1.0	35	9/12
WILLIAMS 45	41.2	32.9	—	1.7	37	9/11
WILLIAMS 48	39.3	32.9	—	1.5	37	9/11
WILLIAMS 49	—	39.4	—	2.0	35	9/12
WILLIAMS 565	—	33.0	—	1.5	35	9/19
MID-SEASON (GROUP IV)						
AGROBAY 463d	41.4	—	—	2.1	48	9/26
AGROBAY 48	30.8	—	—	1.0	36	9/19
AGROBAY 49-4d	—	28.9	—	2.3	38	9/19
AGROBAY 4825d	—	28.9	—	2.0	33	9/11
AGROBAY 4825s	42.4	51.1	—	1.0	35	9/11
CALL 480d	—	20.3	—	1.0	36	9/15
CALL 4850	—	20.3	—	1.0	36	9/15
DELTA	41.1	31.8	—	1.7	37	9/22
DESOTI	40.5	29.4	—	1.5	38	9/17
DOHRLAS	—	45.5	—	1.5	42	9/26
FRANKLIN	—	39.7	—	2.0	45	9/18
FRANKLIN	41.4	34.9	—	1.5	41	9/20
FRANKLIN	—	31.9	—	1.0	41	9/20
GOLD 146 1440	—	32.4	—	2.0	38	9/14
HOBSON	—	32.9	—	1.0	37	9/17
HOBSON	42.3	35.5	—	1.0	29	9/10
J 125	—	29.1	—	1.0	35	9/22
MATSOY	—	48.8	—	2.0	35	9/21
MATSOY	42.9	40.1	—	2.7	34	9/26
MILK	—	37.9	—	2.5	36	9/18
MITCHELL 331	48.3	42.5	2.6	2.1	35	9/25
MITCHELL 332	41.5	27.9	—	2.0	35	9/25
MITCHELL 333	—	39.7	—	1.5	37	9/30
MULTIVAR 14d	—	45.4	—	1.5	37	9/15
MULTIVAR 2d	—	42.5	—	2.0	36	9/15
MULTIVAR 92d	—	33.9	—	1.0	22	9/12
N.K. 34053	—	31.4	—	1.0	40	9/27
PIXIE	44.0	40.9	—	1.0	35	9/15
RA-16d	—	35.2	—	1.0	41	10/10
RA-16d	—	37.9	—	1.5	36	9/18
RA-16d	—	28.7	—	1.0	35	9/18
RA-16d	—	28.7	—	1.0	35	9/18
SOF 425	42.0	39.5	—	2.2	35	9/20
SOF 425	—	39.5	—	2.5	34	9/20
UNION	—	45.0	—	1.0	39	9/15
UNION	—	42.7	—	1.2	37	9/17
VORIS 475	—	26.8	—	1.0	35	9/17
WILSTAR 430	—	27.9	—	1.0	40	9/29
WILSTAR 430	—	27.9	—	1.0	40	9/29
LATE (GROUPS V AND VII)						
AGROBAY 48	49.1	34.4	—	1.7	35	10/11
AGROBAY 49	40.5	31.8	—	2.5	39	—
CA 550d	—	32.8	—	1.0	32	10/10
ESSEX	47.5	45.1	—	1.7	32	10/9
FORREST ^b	41.7	44.4	—	1.5	34	10/11
KATHAWC	—	39.1	—	2.7	39	10/9
YORK	41.8	42.5	—	1.6	31	10/10
GRAND AVERAGE	42.9	41.7	41.1	1.8	36	9/20
LSD (.10)	3.8	3.7	5.4	0.7	0.8	1.1

^aPlant height.
^bResistant to the soybean cyst nematode (Race 3).
^cResistant to the soybean cyst nematode (Race 4).
^dBlends, see Table 3.
^eNot mature when frost occurred on 10/13.

TABLE 8.—SOYBEAN VARIETY TESTS—CLINTON, KY.

VARIETY	YIELD		LSD ^b	HT ^a	M ^a	P ^o
	30/FAC	40/FAC				
	1980	1980	1980	1980	1980	1980
EARLY (GROUPS II AND III)						
A 3653	51.9	1.0	—	4.0	9/14	5.5
AGROBAY 45	45.5	1.0	—	4.9	9/18	6.7
AGROBAY 463d	50.4	1.5	—	4.5	9/17	4.7
AGROBAY 4 3650	48.2	2.0	—	3.9	9/17	6.0
CLYDELAND	50.5	1.8	—	4.3	9/11	5.7
CK 480	50.7	1.0	—	4.8	9/15	5.3
ELC	—	1.0	—	3.6	9/15	5.3
GOLD 146 1340	45.4	2.0	—	3.0	9/19	2.0
J 120	44.0	1.7	—	5.3	9/16	6.5
MIDCO HP 50-50d	48.4	1.0	—	4.4	9/16	5.7
MIDCO HP 40-60d	42.4	2.5	—	4.7	9/15	4.0
PELLA	48.1	1.0	—	4.0	9/11	5.0
RA-16d	45.0	2.0	—	4.3	10/4	5.5
SOF 530	45.6	1.7	—	4.9	9/15	5.5
VICTOR	44.7	1.0	—	5.0	9/18	4.7
VIGOR 539	48.3	1.0	—	5.0	9/15	4.7
WILLIAMS 45	45.0	1.0	—	3.6	9/7	5.0
WILLIAMS 48	43.9	2.0	—	4.6	9/11	5.0
WILLIAMS 49	47.0	1.9	—	4.6	9/12	5.5
WILLIAMS 565	48.9	1.5	—	4.9	9/16	4.0
MID-SEASON (GROUP IV)						
AGROBAY 463d	40.5	3.0	—	5.6	9/19	5.5
AGROBAY 48	45.7	1.7	—	4.9	9/16	4.7
AGROBAY 49-4d	43.4	2.7	—	5.1	9/16	4.5
AGROBAY 4825d	51.7	1.0	—	4.2	9/16	6.0
AGROBAY 4825s	43.6	2.7	—	4.8	9/16	5.0
CALL 480d	47.7	3.0	—	5.6	9/19	4.0
CALL 4850	41.0	1.0	—	5.8	9/19	5.5
DELTA	48.2	1.7	—	4.9	9/19	5.7
DESOTI	48.2	1.7	—	5.0	9/20	5.0
DOHRLAS	35.2	1.9	—	4.9	9/19	5.7
FRANKLIN	41.2	3.0	—	5.5	9/19	5.5
FRANKLIN	45.5	2.0	—	5.0	9/16	5.5
FRANKLIN	37.1	5.7	—	4.9	9/15	4.5
GOLD 146 1400	39.7	1.0	—	4.5	9/6	5.5
HOBSON	45.2	1.7	—	4.7	9/18	4.0
J 125	45.2	1.7	—	4.7	9/18	4.0
MATSOY	41.0	1.7	—	5.0	9/20	5.9
MATSOY	48.4	1.0	—	5.3	9/20	4.7
MILK	43.4	1.5	—	5.5	9/24	7.0
MITCHELL 330	43.4	1.5	—	5.5	9/24	7.0
MITCHELL 331	43.4	1.5	—	5.5	9/24	7.0
MULTIVAR 92d	41.4	1.0	—	5.0	9/17	7.0
N.K. 34053	41.4	1.0	—	5.0	9/17	7.0
PIXIE	48.9	1.0	—	3.6	9/26	6.5
RA-16d	48.5	1.3	—	4.6	10/4	7.7
RA-16d	48.5	1.3	—	4.6	10/4	7.7
RA-16d	48.5	1.3	—	4.6	10/4	7.7
RA-16d	48.5	1.3	—	4.6	10/4	7.7
SOF 425	48.0	1.0	—	4.8	9/17	4.5
SOF 425	48.0	1.0	—	4.8	9/17	4.5
UNION	43.7	3.7	—	4.8	9/15	5.0
UNION	47.7	1.5	—	5.5	9/17	6.0
VORIS 475	41.2	2.5	—	4.7	9/18	5.7
WILSTAR 430	40.1	2.0	—	5.5	9/25	6.5
WILSTAR 430	40.1	2.0	—	5.5	9/25	6.5
LATE (GROUPS V AND VII)						
AGROBAY 48	43.2	1.5	—	4.5	—	5.3
AGROBAY 49	43.2	2.5	—	4.6	—	4.7
CA 550d	48.4	1.0	—	3.7	10/4	2.7
ESSEX	48.8	1.7	—	3.6	10/4	4.5
FORREST ^b	50.0	2.0	—	4.1	10/2	4.0
KATHAWC	39.1	1.7	—	4.7	10/2	6.7
YORK	45.0	1.0	—	4.1	10/5	6.0
GRAND AVERAGE	45.1	1.7	4.7	4.7	9/19	5.4
LSD (.10)	4.9	1.0	3.0	1.4	1.0	1.0

^aPlant height.
^bResistant to the soybean cyst nematode (Race 3).
^cResistant to the soybean cyst nematode (Race 4).
^dBlends, see Table 3.
^eNot mature when frost occurred on 10/13.

TABLE 9.—SOYBEAN VARIETY TESTS—LEXINGTON, KY.

VARIETY	YIELD (BU/AC)		L00G	L00G	HT ^a	P00
	1942	1943				
EARLY (GROUPS II AND III)						
A 355 ^a	49.1	45.5	1.3	1.3	50	9/27
AGROSVY 45	48.1	42.7	1.3	1.7	45	9/25
AGROSVY 46 ^b	42.3	39.7	1.7	1.7	37	9/22
AGROSVY A 3950	47.6	46.1	4.0	1.7	58	9/29
CUMBERLAND	48.4	44.0	1.1	1.5	37	9/22
CL 380	39.2	36.2	1.3	1.3	37	9/22
ELF	45.9	44.5	1.3	1.2	25	9/29
GOLD IAG 1380	42.0	39.2	2.0	2.0	40	9/19
J 120	42.4	41.3	1.3	1.7	44	9/22
M1840 ^c 80-30 ^d	45.3	42.4	2.2	2.7	37	9/25
M1840 ^c 80-40 ^d	48.3	45.5	1.7	1.5	40	9/22
PELLA	45.9	43.3	2.3	2.3	44	9/22
RA-164	42.3	39.7	2.0	2.2	37	9/22
SFR 330	41.1	39.7	1.3	1.3	40	9/25
VICTORY	42.7	39.1	1.7	1.7	34	9/22
VORIS 339	42.6	39.4	2.0	2.0	39	9/22
MILLIKINS 19	45.2	43.1	2.0	2.0	40	10/1
MILSTAR 385	44.3	44.3	2.3	2.3	40	10/1
MID-SEASON (GROUP IV)						
AGROSVY 46 ^b	41.2	40.6	2.5	2.5	34	9/25
AGROSVY 48-4 ^d	40.6	39.7	1.9	1.7	35	9/22
AGROSVY 4825 ^b	46.3	41.0	2.2	2.2	39	9/22
CALL 4400 ^d	45.2	44.2	2.2	2.2	37	10/1
CALL 4450	40.7	40.7	2.4	2.2	40	10/2
DELTA	41.5	39.5	2.3	2.3	40	9/25
DESOTO	43.5	43.4	1.9	1.9	39	10/2
DOUGLAS	39.1	36.1	2.7	2.7	41	10/2
FPR 335	39.2	35.2	2.5	2.5	45	10/2
FRANKLIN ^b	37.9	37.9	3.0	3.0	43	9/29
G-34045	40.8	40.8	2.2	2.2	42	10/2
GOLD IAG 1400	36.9	36.9	3.0	3.0	36	9/22
HOBSON	42.3	40.4	2.3	2.5	34	9/22
J 125	39.5	39.1	2.5	2.5	34	9/22
MATSON	40.4	40.4	2.4	2.5	34	9/22
MILES	43.6	40.2	2.3	2.3	42	10/1
MITCHELL 430	41.5	40.1	2.2	1.5	42	10/1
MITCHELL 450	45.7	40.8	1.5	1.5	42	9/27
MULTIVAD 920	48.1	41.7	1.1	1.1	42	9/25
N.K. 34055	42.6	40.7	1.3	1.3	24	9/30
PIKIE	44.4	42.8	2.0	1.3	41	10/3
RA-401	42.8	38.6	1.3	1.3	45	11.0
RA-480	41.1	37.1	1.4	1.4	40	9/22
SA 4200	40.9	40.9	1.5	1.5	39	9/20
SFR 425	42.7	40.9	2.6	2.6	42	10/2
UNION	48.9	47.2	2.9	2.7	47	9/27
VORIS 485	41.7	41.7	1.7	1.7	45	9/29
VORIS 477	39.3	39.3	2.2	2.2	41	9/28
MILSTAR 450	39.6	39.6	1.5	1.5	40	10.0
LATE (GROUPS V AND VII)						
BAV	35.0	29.4	2.7	2.7	42	9.0
BEFOU ^c	23.0	19.5	3.6	3.2	3.5	12.0
CH 550 ^d	29.5	29.5	4.0	4.0	40	13.0
ESSEX	41.5	35.4	2.2	2.3	3.2	9.5
FORAGE ^b	30.1	25.3	3.2	3.7	45	12.0
FORAGE ^b	33.6	33.6	3.5	3.7	44	15.0
YORK	32.2	29.8	2.5	2.7	41	9.7
GRAND AVERAGE	41.0	34.8	2.2	2.1	40	9/27
LSD (.10)	2.8	3.8	0.3	0.4	0.6	3.3

TABLE 10.—SOYBEAN VARIETY TESTS—RUSSELLVILLE, KY.—NO-TILL, DOUBLE-CROPPED

VARIETY	YIELD (BU/AC)		L00G	L00G	HT ^a	P00
	1942	1943				
EARLY (GROUPS II AND III)						
A 355 ^a	38.0	34.1	1.0	1.0	26	2.7
AGROSVY 45	34.1	30.9	1.5	1.5	32	5.6
AGROSVY 46 ^b	40.4	40.9	2.8	1.7	27	9.0
AGROSVY A 1950	40.8	32.5	2.1	1.0	25	7.0
CUMBERLAND	40.6	29.8	2.3	1.2	25	9.0
CL 380	35.7	35.7	1.0	1.0	30	5.5
ELF	20.6	1.1	1.0	1.0	15	2.5
GOLD IAG 1380	29.9	1.5	1.5	1.5	50	5.0
J 120	33.5	2.3	1.0	2.7	5.5	5.0
M1840 ^c 80-30 ^d	39.5	29.5	2.3	1.3	31	5.5
M1840 ^c 80-40 ^d	43.1	34.5	1.7	1.2	28	5.5
PELLA	43.5	34.5	1.7	1.5	40	9.7
RA-164	30.0	30.0	2.6	1.3	20	4.5
SFR 330	32.9	32.9	1.0	1.0	39	2.7
VICTORY	35.0	35.0	1.0	1.0	40	2.0
VORIS 339	37.4	29.9	1.7	1.2	25	4.5
MILLIKINS 19	45.3	39.5	1.6	1.3	35	5.0
MILSTAR 385	41.2	36.0	2.5	1.5	35	5.5
MILSTAR 352	39.0	39.0	1.5	1.5	32	8.3
MID-SEASON (GROUP IV)						
AGROSVY 46 ^b	41.7	45.4	1.2	1.0	29	4.5
AGROSVY 48-4 ^d	41.1	39.5	1.3	1.2	27	5.7
AGROSVY 4825 ^b	39.5	32.1	1.5	1.2	27	5.7
CALL 4400 ^d	27.4	27.4	1.3	1.3	26	4.4
CALL 4450	31.3	31.3	1.2	1.2	30	3.4
DELTA	39.9	33.6	2.0	1.7	30	7.5
DESOTO	43.5	33.6	2.2	1.7	30	4.7
DOUGLAS	42.2	30.4	1.4	1.0	29	5.0
FPR 335	37.4	29.5	2.2	1.3	31	5.7
FRANKLIN ^b	41.6	33.5	1.9	1.0	32	7.0
G-34045	33.4	33.4	1.5	1.3	31	7.0
GOLD IAG 1400	27.9	27.9	1.5	1.5	27	5.7
HOBSON	41.9	41.9	1.2	1.2	31	4.7
J 125	40.5	40.5	1.5	1.5	30	5.0
MATSON	44.8	32.5	2.7	1.3	32	4.5
MILES	43.0	42.0	2.7	1.5	35	5.7
MITCHELL 430	50.2	47.3	1.9	1.3	35	5.5
MITCHELL 450	37.5	30.5	2.1	1.2	24	4.7
MULTIVAD 920	39.0	35.9	2.1	1.3	30	4.7
N.K. 34055	43.5	33.1	1.3	1.2	29	5.0
PIKIE	43.3	35.2	1.7	1.2	27	3.5
RA-401	42.0	42.0	1.0	1.0	35	5.5
RA-480	42.1	34.5	2.3	1.3	38	5.5
SA 4200	41.2	31.2	1.2	1.2	27	5.0
SFR 425	40.6	33.5	2.4	1.5	29	5.7
UNION	35.6	30.5	2.7	1.5	28	5.0
VORIS 485	26.5	26.5	1.0	1.0	30	5.0
VORIS 477	20.5	20.5	1.3	1.3	30	5.0
MILSTAR 450	29.4	29.4	1.2	1.2	35	3.7
LATE (GROUPS V AND VII)						
BAV	41.9	36.5	2.2	1.5	33	5.5
BEFOU ^c	32.3	25.9	2.0	1.2	37	10.7
CH 550 ^d	43.2	43.2	1.5	1.5	33	9.0
ESSEX	45.5	41.2	1.7	1.0	30	9.5
FORAGE ^b	33.2	33.7	1.1	1.8	38	7.0
FORAGE ^b	32.9	32.9	2.0	1.7	40	10.0
YORK	41.9	36.2	2.4	1.7	38	9.0
GRAND AVERAGE	41.0	34.8	2.2	1.3	30	5.6
LSD (.10)	5.3	9.1	0.5	0.4	4.2	2.0

^aPlant height.
^bResistant to the soybean cyst nematode (Race 3).
^cResistant to the soybean cyst nematode (Race 4).
^dBlond. See Table 3.
^eNot mature when frost occurred on 10/13.

^aPlant height.
^bResistant to the soybean cyst nematode (Race 3).
^cResistant to the soybean cyst nematode (Race 4).
^dBlond, see Table 3.

