

Results of the **KENTUCKY SOYBEAN PERFORMANCE TESTS—1968**

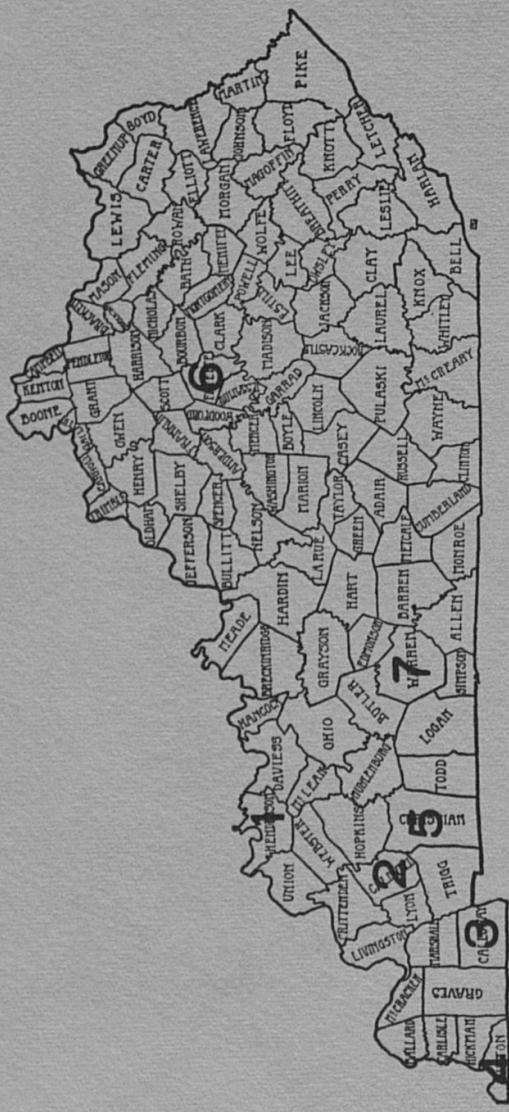
J. F. SHANE, CHARLES TUTT,
S. H. PHILLIPS, J. W. HERRON,
and STUART BRABANT



PROGRESS REPORT 178

**UNIVERSITY OF KENTUCKY
AGRICULTURAL EXPERIMENT STATION
DEPARTMENT OF AGRONOMY
Lexington**

LOCATION OF THE 1968 SOYBEAN PERFORMANCE TESTS



ACKNOWLEDGMENT

Acknowledgment is made to the Owensboro Grain Company, Owensboro, and the Ellis Elevator Company and the Henderson Elevator Company, Henderson, for their cooperation in the soybean tests at Henderson; also to area agents and others who assisted in conducting the tests. Special acknowledgment is made to farm cooperators Allan and Joe Toy, Henderson; Bun Hughes, Murray; Robert Sanger, Hickman; Harry Young, Hopkinsville; and W. H. Stroube, Western Ky University, Bowling Green.

| <u>Location</u> | <u>Soil Type</u> | <u>pH:</u> | <u>Phos- phorus</u> | <u>Po- tassium</u> | <u>Fertilizer Applied</u> | <u>Date Planted</u> | <u>Row Width</u> |
|------------------|----------------------|------------|---------------------|--------------------|---------------------------|---------------------|------------------|
| 1. Henderson | Sharkey silt loam | 5.6 | Low | Medium | None | May 21 | 40" |
| 2. Princeton | Crider silt loam | --- | --- | --- | 2 T manure | May 22 | 40" |
| 3. Murray | Hymon silt loam | --- | --- | --- | 13-50-50 | June 10 | 38" |
| 4. Hickman | Commerce silt loam | 7.5 | High | High | None | May 9 | 38" |
| 5. Hopkinsville | Hagerstown silt loam | --- | --- | --- | None | May 21 | 20" |
| 6. Lexington | Burgin silt loam | 6.1 | High | High | 0-125-250 | May 3 | 36" |
| 7. Bowling Green | Pembroke silt loam | 5.8 | Medium | High | 2 T Lime | None | 36" |

RESULTS OF THE KENTUCKY SOYBEAN PERFORMANCE TESTS - 1968

The objective of the Kentucky Soybean Performance Tests is to provide an estimate of the relative performance of standard soybean varieties and to provide information on the performance of experimental strains of soybeans provided by the U.S. Regional Soybean Laboratory. Included in the testing program are herbicide tests, row-spacing tests and fertilizer tests.

Soybean production in Kentucky for 1968 was estimated at 12,349,000 bushels. Production in 1967 was 10,638,000 bushels and 7,750,000 bushels for 1966. Average yield per acre was 26.5 bushels for 1968, down 1.5 bu from 1967.

EXPERIMENTAL METHODS

Soybean tests were conducted at five locations in the major soybean-producing areas of the state and at Bowling Green and Lexington. The testing locations, soil types, soil test results, pounds of N, P and K applied per acre, date planted and row width are shown on page 2. Varieties and experimental strains tests were planted with each entry in three plots (replications) at all locations with individual plots being 4 rows wide and 19 feet long. The seeding rate was 10 viable seed per foot of row. In the row-spacing test the planting rates were 7, 8, and 10 viable seed per foot of row with rows spaced 20, 30, and 40 inches apart.

In a herbicide test conducted at Henderson the plot size was 4 rows 40 feet long.

The herbicide test at Henderson was planted May 22 and the herbicides were applied with a tractor mounted boom sprayer. Chemicals were applied uniformly by using a constant pressure at 40 psi. All chemicals were applied in water at the rate of 25 gal/A. Treflan was applied as preplant treatment and double disked immediately into the soil.

Yield

A 16-foot section from each of the 2 center rows was harvested for yield. Plants were cut by hand and threshed with a small nursery thresher. The yield of the varieties is reported as bushels per acre at 13.0 percent moisture.

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 a standard variety.

Lodging

Lodging was based 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%-50% down; 4 = all plants over considerably or 50%-80% down; 5 = all plants down badly.

Seed Quality

Quality was also based on a scale of 1 to 5: 1 = very good; 2 = good; 3 = fair; 4 = poor; 5 = very poor.

Seed Size

Seed size is expressed as the weight in grams of 100 seed.

Purple Seed Stain

The amount of purple stain, a disease caused by the fungus Cecospora kikuchii (T.Matsu and Tomoyaau) Gardner, is expressed as the percentage of seed which was stained. Development of the disease is apparently influenced by weather conditions existing during pod formation.

RESULTS

Variety Trials

Performance data for the variety tests are presented in Tables 1-13. Tables 1, 3, 5, 7, 9 and 11 are periods-of-year summaries for Henderson, Hickman, Murray, Princeton, Hopkinsville and Lexington. Tables 2, 4, 6, 8, 10 and 12 are annual summaries for the same

respective locations. Bowling Green data is presented in Table 13. Shattering is scored 14 days after maturity on the border rows and is based on estimates of the percent of open pods as follows:

1. No shattering
2. 1% to 10% shattered
3. 10% to 25% shattered
4. 25% to 50% shattered
5. Over 50% shattered

Row-spacing and Fertilizer Experiments

Yield data for the row-spacing test at Henderson are presented in Tables 14 and 15. The 30 inch spacings were higher yielding than the 20 inch or 40 inch spacings. Amsoy and Clark 63 were significantly higher yielding than Hood at all spacings.

Yield data for Princeton are presented in Tables 16 and 17. In 1968 Hood was higher yielding than Amsoy or Clark 63. For the 3 year period, 1966-1968, Clark 63 and Hood averages were 39.8 and 40.9 bushels per acre respectively.

In a fertilizer test at Henderson, finely ground lime was applied at a rate of $2\frac{1}{2}$ tons per acre and P₂O₅ and K₂O at the rate of 200 pounds per acre. Yields were: 0-0-0, 43.8 bushels per acre; 0-0-0 + Lime, 45.2 bushels; 0-200-200, 46.7 bushels; 0-200-200+ Lime, 47.5 bushels. No statistically significant differences existed.

Date-of-Planting, Irrigation, and Variety Experiment

This experiment was conducted in 1967 and 1968 at Lexington. Very little moisture stress was observed in either year. In 1967 yields from plantings made April 28 and May 26 were significantly higher than from the June 27 planting. Yields of irrigated plots were significantly higher than non-irrigated plots for the April 28 and June 27 planting. The Wayne variety for the May 26 planting produced higher yields on the non-irrigated plots.

In 1968 the April 17 planting was significantly higher in yield than the later plantings. The May 17 planting was significantly higher yielding than the June 18 planting. Wayne produced higher yields on non-irrigated plots for all dates of planting and Kent produced higher yields on irrigated plots. Data are presented in Tables 18 and 19.

Weed Control Experiment

Data for the weed control ratings for the herbicide test at Henderson are presented in Tables 20 and 21. Ratings are given as the percent control for both grassy and broadleaf type weeds. The test was planted May 22 and ratings taken on June 21, July 15, and at harvest.

An area known to be heavily infested with most weeds, except johnson grass and wild cane, was selected for the test. Most treatments gave satisfactory control of grassy weeds.

Heavy rainfall early in the growing season may have reduced full season control of weeds on some plots.

Beans from plots where good weed control was obtained were much easier to thresh than beans from plots with no treatment or those with poor weed control.

Table 1. Period-of-Years Summary of Soybean Varieties Grown at Henderson, Ky.
1965-1968

| Variety | Yield, 4-yr 3-yr | Bu/Acre 2-yr | Date Mature | Lodg- ing* | Ht., In. | Seed Quality* | G/100 Seed |
|----------|------------------------|-----------------|----------------|---------------|-------------|------------------|---------------|
| Wayne | 39.1 | 44.9 | 42.9 | 9/20 | 2.2 | 42 | 2.5 |
| Clark 63 | 39.7 | 42.8 | 38.5 | 9/25 | 1.9 | 44 | 2.2 |
| Custer | -- | -- | 29.3 | 9/21 | 2.5 | 49 | 1.7 |
| Kent | 41.7 | 43.6 | 40.5 | 9/30 | 1.5 | 43 | 2.2 |
| Scott | 35.0 | 35.6 | 29.8 | 10/5 | 2.3 | 46 | 2.4 |
| Dare | -- | 37.2 | 35.8 | --** | 2.5 | 40 | 1.3 |
| Dyer | -- | -- | 33.4 | -- | 2.0 | 33 | 1.7 |
| Hill | 36.6 | 36.8 | 30.1 | -- | 2.7 | 37 | 1.6 |
| Hood | 28.8 | 28.4 | 28.8 | -- | 2.6 | 39 | 1.5 |
| Ogden | 31.6 | 31.6 | 32.5 | -- | 2.4 | 43 | 2.1 |

Agronomic data, other than yield, is for four years except for varieties that have been in the test for a shorter period of time.

* See text for explanation of ratings

** Harvested after killing frost.

Table 2. Annual Summary of Soybean Varieties Grown at Henderson, Ky., 1968

| Variety | Yield, Bu/Acre | Date Mature | Lodg- ing* | Ht, In. | Seed Quality* | G/100 Seed |
|---|-------------------|----------------|---------------|------------|------------------|---------------|
| Wayne | 40.3 | 9/18 | 2.0 | 47 | 2.0 | 15.0 |
| Clark 63 | 37.3 | 9/20 | 1.7 | 46 | 2.0 | 12.8 |
| Custer | 31.8 | 9/21 | 2.0 | 49 | 2.0 | 12.5 |
| Kent | 41.6 | 9/26 | 1.3 | 46 | 2.0 | 15.1 |
| Scott | 33.7 | 9/28 | 1.7 | 50 | 2.0 | 12.6 |
| Dare | 38.7 | -- | ** | 2.0 | 39 | 1.5 |
| Dyer | 36.2 | -- | 2.0 | 33 | 2.0 | 13.9 |
| Hill | 32.2 | -- | 2.7 | 33 | 2.0 | 11.3 |
| Hood | 32.0 | -- | 1.7 | 38 | 1.8 | 15.0 |
| Ogden | 33.6 | -- | 1.0 | 41 | 2.3 | 16.1 |
| Varieties grown in adjacent test - not comparable to varieties listed above | | | | | | |
| Clark 63 | 36.7 | 9/19 | 1.3 | 47 | 2.0 | 16.9 |
| | 44.5 | 9/24 | 2.3 | 48 | 2.0 | 15.9 |
| Kent | 46.2 | 9/20 | 1.3 | 48 | 1.5 | 17.0 |
| Cutler | 33.2 | 10/15 | 1.3 | 37 | 1.7 | 18.6 |
| York | 34.5 | 10/2 | 2.0 | 45 | 2.5 | 15.4 |
| LSD (.05) | 5.1 bu | | | | | |

* See text for explanation of ratings.

** Harvested after killing frost October 25.

Table 3. Period-of-Years Summary of Soybean Varieties Grown at Princeton, Ky.
1965-1968

| Variety | Yield, Bu/Acre | | | Date Mature | Lodg- ing* | Ht, In. | Seed Quality* | G/100 Seed |
|----------|----------------|------|------|----------------|---------------|------------|------------------|---------------|
| | 4-yr | 3-yr | 2-yr | | | | | |
| Wayne | --- | 33.6 | 33.8 | 9/14 | 1.3 | 37 | 2.9 | 18.5 |
| Clark 63 | 30.8 | 33.7 | 31.8 | 9/20 | 1.2 | 41 | 1.7 | 15.3 |
| Scott | 31.7 | 32.1 | 29.6 | 9/29 | 1.2 | 42 | 2.6 | 14.3 |
| Kent | 34.1 | 36.6 | 36.4 | 9/27 | 1.1 | 39 | 2.4 | 16.5 |
| Dare | --- | 37.9 | 36.3 | --** | 1.3 | 38 | 1.1 | 15.6 |
| Hill | 34.7 | 35.1 | 32.6 | 10/14 | 2.6 | 37 | 1.9 | 14.5 |
| Hood | 38.8 | 40.1 | 40.0 | 10/21 | 2.2 | 39 | 1.8 | 16.9 |
| Lee | --- | 33.9 | 34.6 | -- | 3.3 | 41 | 2.6 | 15.6 |

Agronomic data, other than yield, is for four years except for varieties that have been in the test for a shorter period of time.

* See text for explanation of ratings.

** Harvested after killing frost two years.

Table 4. Annual Summary of Soybean Varieties Grown at Princeton, Ky. 1968

| Variety | Yield, Bu/Acre | Date Mature | Lodg- ing* | Ht., In. | Seed Quality* | G/100 Seed |
|-----------|-------------------|----------------|---------------|-------------|------------------|---------------|
| Wayne | 30.3 | 9/6 | 1.0 | 33 | 3.3 | 15.3 |
| Clark 63 | 27.3 | 9/9 | 1.0 | 37 | 2.7 | 14.0 |
| Custer | 33.4 | 9/15 | 1.0 | 47 | 3.3 | 13.2 |
| Scott | 29.3 | 9/17 | 1.0 | 41 | 2.7 | 12.4 |
| Kent | 34.3 | 9/16 | 1.0 | 39 | 2.3 | 14.8 |
| Dare | 36.3 | 10/10 | 1.3 | 38 | 1.3 | 13.7 |
| Dyer | 28.3 | 9/29 | 1.3 | 35 | 2.3 | 13.0 |
| Hill | 27.0 | 9/29 | 1.0 | 36 | 2.7 | 11.2 |
| Hood | 37.7 | 10/10 | 1.0 | 39 | 2.0 | 16.5 |
| Lee | 37.4 | 10/22 | 2.3 | 40 | 3.0 | 12.5 |
| LSD (.05) | 5.3 bu. | | | | | |

* See text for explanation of ratings

Table 5. Period-of-Years Summary of Soybean Varieties Grown at Murray, Ky.
1965-1968

| Variety | Yield, Bu/Acre | | | Lodg-ing* | Ht, In. | Seed Quality* | G/100 Seed |
|-----------|----------------|------|------|-----------|---------|---------------|------------|
| | 4-yr | 3-yr | 2-yr | | | | |
| Wayne | 34.6 | 38.2 | 36.9 | 2.4 | 38 | 2.1 | 17.7 |
| Clark 63 | 34.7 | 39.6 | 37.9 | 1.9 | 42 | 1.9 | 16.4 |
| Custer | --- | --- | 33.1 | 3.2 | 46 | 2.4 | 15.4 |
| Kent | 36.6 | 42.4 | 41.3 | 1.7 | 42 | 2.1 | 18.8 |
| Scott | 31.9 | 37.5 | 38.6 | 1.9 | 40 | 1.9 | 15.5 |
| Dare | --- | 38.7 | 40.0 | 3.1 | 38 | 1.1 | 15.3 |
| Hill | 32.2 | 34.2 | 34.2 | 3.7 | 34 | 1.5 | 14.7 |
| Hood | 32.1 | 34.1 | 34.1 | 2.3 | 36 | 1.6 | 16.5 |
| Lee | 32.3 | 33.1 | 33.1 | 4.0 | 36 | 1.9 | 14.1 |
| LSD (.05) | 5.4 bu | | | | | | |

Agronomic data, other than yield, is for four years except for varieties that have been in the test for a shorter period of time.

* See text for explanation of ratings.

Table 6. Annual Summary of Soybean Varieties Grown at Murray, Ky.
1968

| Variety | Yield, Bu/Acre | Date Mature | Lodg- ing* | Ht., In. | Seed Quality* | G/100 Seed |
|--------------|-------------------|----------------|---------------|-------------|------------------|---------------|
| Wayne | 40.1 | 9/12 | 1.3 | 37 | 1.7 | 16.0 |
| Philadelphia | 37.8 | 9/15 | 1.0 | 34 | 1.7 | 16.2 |
| Clark 63 | 41.5 | 9/18 | 2.0 | 41 | 2.0 | 16.0 |
| Custer | 34.7 | 9/19 | 3.7 | 43 | 2.7 | 14.3 |
| Scott | 40.2 | 9/23 | 1.7 | 41 | 1.7 | 14.7 |
| Kent | 39.6 | 9/21 | 2.3 | 41 | 2.3 | 16.8 |
| Dare | 37.6 | 10/15 | 2.3 | 36 | 1.3 | 15.0 |
| Dyer | 36.9 | 10/3 | 2.7 | 35 | 3.0 | 15.1 |
| Hill 12 | 27.3 | 9/30 | 3.0 | 35 | 2.0 | 12.2 |
| York | 39.0 | 10/15 | 1.0 | 37 | 1.7 | 18.3 |
| Hood | 36.7 | 10/15 | 2.7 | 35 | 2.3 | 15.4 |
| Lee | 34.7 | 10/17 | 2.7 | 34 | 2.7 | 12.4 |
| LSD (.05) | | | 5.4 bu | | | |

* See text for explanation of ratings.

Table 7. Period-of-Years Summary of Soybean Varieties Grown at Hickman, Ky.
1965-1968

| Variety | Yield, Bu/Acre | | | Date Mature | Lodg- ing* | Ht., In. | Seed Quality* | G/100 Seed |
|----------|----------------|------|------|----------------|---------------|-------------|------------------|---------------|
| | 4-yr | 3-yr | 2-yr | | | | | |
| Clark 63 | 34.9 | 38.3 | 37.4 | 9/9 | 2.3 | 38 | 2.4 | 15.3 |
| Custer | --- | --- | 38.7 | 9/26 | 1.5 | 44 | 2.1 | 13.3 |
| Kent | 37.5 | 41.3 | 42.0 | 9/25 | 1.2 | 37 | 2.3 | 16.8 |
| Scott | 35.7 | 38.4 | 38.0 | 9/23 | 1.4 | 40 | 2.4 | 13.8 |
| Dare | --- | 42.6 | 43.6 | ---** | 1.8 | 37 | 1.5 | 13.5 |
| Dyer | --- | --- | 39.3 | --- | 1.8 | 33 | 1.9 | 14.4 |
| Hill | 35.1 | 37.6 | 36.2 | 9/27 | 2.2 | 36 | 1.7 | 12.6 |
| Hood | 37.9 | 42.0 | 41.4 | -- | 1.5 | 40 | 1.4 | 15.2 |
| Ogden | 39.2 | 43.1 | 43.5 | -- | 1.7 | 40 | 2.1 | 15.8 |
| Lee | 33.5 | 35.8 | 35.0 | -- | 1.9 | 39 | 1.8 | 13.8 |
| Pickett | --- | 30.3 | 28.0 | -- | 1.8 | 40 | 2.1 | 13.8 |
| Davis | --- | 40.3 | 40.0 | -- | 2.7 | 43 | 2.0 | 14.7 |

Agronomic data, other than yield, is for four years except for varieties that have been in the test for a shorter period of time.

* See text for explanation of ratings.

** Harvested after killing frosts.

Table 8. Annual Summary of Soybean Varieties Grown at Hickman, Ky.
1968

| Variety | Yield, Bu/Acre | Date Mature | Lodg- ing* | Ht., In. | Seed Quality* | G/100 Seed |
|-----------|-------------------|----------------|---------------|-------------|------------------|---------------|
| Clark 63 | 32.1 | 9/10 | 2.0 | 40 | 2.3 | 13.9 |
| Custer | 30.9 | 9/24 | 1.3 | 44 | 2.2 | 11.5 |
| Kent | 33.7 | 9/19 | 1.0 | 36 | 2.7 | 14.5 |
| Scott | 30.8 | 9/18 | 1.3 | 41 | 2.0 | 11.3 |
| Dare | 38.6 | --** | 1.0 | 39 | 2.0 | 10.3 |
| Dyer | 30.9 | -- | 1.3 | 35 | 2.0 | 11.9 |
| Hill | 31.3 | 9/20 | 1.7 | 36 | 2.0 | 9.4 |
| Hood | 38.5 | -- | 1.0 | 40 | 2.0 | 13.4 |
| Ogden | 41.9 | -- | 1.3 | 40 | 2.7 | 14.6 |
| Lee | 31.6 | -- | 1.0 | 42 | 2.5 | 12.9 |
| Pickett | 28.3 | -- | 1.0 | 43 | 2.3 | 12.0 |
| Davis | 41.3 | -- | 1.7 | 44 | 2.3 | 14.2 |
| LSD (.05) | 6.5 bu | | | | | |

* See text for explanation of ratings.

** Harvested after killing frost October 25.

Table 9. Two-year Summary of Soybean Varieties Grown at Hopkinsville, Ky.
1967-1968

| Variety | Yield, Bu/Acre | Lodg- ing* | Ht., In. | Seed Quality* | Purple Stain, % |
|----------|-------------------|---------------|-------------|------------------|--------------------|
| Wayne | 39.6 | 1.0 | 37 | 2.2 | 1.0 |
| Shelby | 38.1 | 1.0 | 36 | 2.3 | 4.0 |
| Clark 63 | 37.9 | 1.0 | 38 | 2.2 | 1.0 |
| Kent | 42.7 | 1.0 | 39 | 2.0 | 1.5 |
| | | | | | |
| Scott | 40.8 | 1.0 | 38 | 1.8 | 1.0 |
| Dare | 50.5 | 1.5 | 38 | 1.5 | 0.3 |
| Hill | 44.3 | 1.5 | 33 | 1.5 | 0.3 |
| Hood | 52.4 | 1.5 | 37 | 1.5 | 0.3 |

* See text for explanation of ratings.

Table 10. Annual Summary of Soybean Varieties Grown Under Different Cultural Practices at Hopkinsville, Ky. 1968

| Variety | Yield, Bu/Acre | | | Height, inches | | | Shattering, %* | | |
|-----------|----------------------|-----------------|-----------------|----------------|----|----|----------------|-----|-----|
| | Conventional Tillage | Minimum Tillage | Double Cropping | CT | MT | DC | CT | MT | DC |
| Wayne | 33.4 | 28.3 | 32.9 | 29 | 33 | 34 | 5.0 | 2.3 | 2.0 |
| Shelby | 32.7 | 28.7 | 30.4 | 31 | 34 | 36 | 3.5 | 2.0 | 0 |
| Clark 63 | 30.0 | 28.1 | 32.3 | 31 | 36 | 38 | 0 | 0 | 0 |
| Kent | 37.3 | 46.7 | 41.5 | 35 | 39 | 39 | 0 | 0.7 | 0 |
| Scott | 38.4 | 34.0 | 44.5 | 33 | 39 | 38 | 0 | 2.0 | 0 |
| Dare | 57.6 | 60.3 | 49.1 | 32 | 36 | 42 | 0 | 0 | 0 |
| Hill | 39.3 | 41.2 | 46.1 | 30 | 36 | 42 | 0 | 0 | 0 |
| Hood | 53.7 | 57.8 | 48.5 | 35 | 37 | 42 | 0 | 0 | 0 |
| LSD (.05) | 6.8 bu | 10.7 bu | 8.0 bu | | | | | | |

* See text for explanation of ratings.

Table 11. Two-Year Summary of Soybean Varieties Grown at Lexington, Ky.
1967-1968

| Variety | Yield, Bu/Acre | Date Mature | Lodg- ing* | Ht., In. | Seed Quality* | G/100 Seed |
|----------|-------------------|----------------|---------------|-------------|------------------|---------------|
| Wayne | 41.3 | 9/25 | 2.3 | 45 | 1.7 | 17.5 |
| Clark 63 | 37.1 | 9/29 | 2.4 | 43 | 2.2 | 15.0 |
| Custer | 31.0 | 10/3 | 3.4 | 45 | 2.1 | 14.1 |
| Kent | 38.5 | 10/4 | 1.3 | 46 | 1.9 | 17.1 |
| Scott | 37.8 | 10/7 | 1.9 | 47 | 1.9 | 14.4 |
| Dare | 33.3 | --** | 3.0 | 40 | 1.8 | 14.0 |
| Hill | 27.5 | -- | 3.8 | 39 | 1.9 | 12.2 |
| Hood | 31.0 | -- | 3.4 | 41 | 1.7 | 12.7 |
| Lee | 17.0 | -- | 4.0 | 39 | 2.3 | 11.6 |

* See text for explanation of ratings.

** Harvested after killing frost October 4.

Table 12. Annual Summary of Varieties Grown at Lexington, Ky.
1968

| Variety | Yield, Bu/Acre | Date Mature | Lodg- ing* | Ht., In. | Seed Quality* | G/100 Seed |
|---|-------------------|----------------|---------------|-------------|------------------|---------------|
| Wayne | 40.0 | 9/14 | 2.3 | 45 | 2.0 | 16.9 |
| Clark 63 | 37.0 | 9/20 | 2.7 | 48 | 2.3 | 14.8 |
| Custer | 32.5 | 9/24 | 3.0 | 47 | 2.2 | 12.8 |
| Kent | 38.7 | 9/25 | 1.3 | 47 | 2.0 | 15.6 |
| Scott | 42.0 | 10/3 | 1.7 | 49 | 2.0 | 14.2 |
| Dare | 43.7 | --** | 2.0 | 39 | 1.5 | 14.2 |
| Dyer | 37.9 | -- | 4.0 | 36 | 1.7 | 14.5 |
| Hill | 31.3 | -- | 3.7 | 38 | 1.7 | 12.2 |
| Hood | 38.0 | -- | 3.0 | 38 | 1.7 | 13.8 |
| York | 42.2 | -- | 3.7 | 45 | 2.0 | 17.5 |
| Lee | 18.6 | -- | 4.0 | 39 | 2.5 | 10.5 |
| Varieties from adjacent test - not comparable to varieties listed above | | | | | | |
| Clark 63 | 41.3 | 9/20 | 3.0 | 48 | 2.0 | 15.0 |
| Kent | 42.4 | 9/27 | 1.3 | 46 | 2.0 | 17.1 |
| Cutler | 47.4 | 9/23 | 1.7 | 48 | 2.0 | 18.9 |
| Adelphia | 46.0 | 9/10 | 1.3 | 44 | 2.0 | 16.0 |
| LSD (.05) | 6.8 bu | | | | | |

* See text for explanation of ratings.

Table II. Annual Summary of Soybean Varieties Grown at Dowlingville, N.Y.
1968

| Variety | Yield Bu/Acre | Date Mature | Lodg- ing* | Ht., In. | Seed Quality* | G/100 Seeds | Shatter- ing* |
|--------------|------------------|----------------|---------------|-------------|------------------|----------------|------------------|
| Shelby | 39.2 | 9/3 | 1.3 | 37 | 2.2 | 17.0 | 1.3 |
| Philadelphia | 38.9 | 9/5 | 2.0 | 37 | 1.7 | 16.1 | 3.3 |
| Wayne | 45.3 | 9/7 | 1.0 | 36 | 2.0 | 16.8 | 2.3 |
| Clark 63 | 37.5 | 9/10 | 1.0 | 40 | 2.2 | 14.4 | 1.0 |
| Kent | 40.0 | 9/16 | 1.0 | 38 | 2.0 | 15.1 | 3.0 |
| Scott | 30.3 | 9/19 | 1.3 | 44 | 2.2 | 11.1 | 3.0 |
| Custer | 32.0 | 9/20 | 1.3 | 46 | 2.0 | 13.7 | 4.0 |
| Hill | 29.7 | 9/23 | 1.7 | 35 | 2.3 | 9.7 | 1.0 |
| Dyer | 29.8 | 10/1 | 1.3 | 35 | 2.0 | 12.1 | 1.0 |
| ✓ York | 38.6 | 10/2 | 1.0 | 40 | 1.7 | 14.9 | 1.0 |
| Dare | 38.2 | 10/4 | 1.3 | 38 | 1.7 | 11.0 | 1.0 |
| Hood | 43.3 | 10/8 | 1.7 | 39 | 1.5 | 13.6 | 1.3 |
| Ogden | 34.1 | 10/14 | 1.0 | 44 | 2.5 | 15.0 | 1.3 |
| Davis | 31.3 | 10/17 | 1.0 | 45 | 2.0 | 12.9 | 1.0 |
| Pickett | 31.1 | 10/25** | 1.3 | 38 | 2.5 | 11.4 | 1.0 |
| Lee | 34.5 | 10/25** | 1.7 | 35 | 2.5 | 11.4 | 1.0 |
| LSD (.05) | NS | | | | | | |

* See text for explanation of ratings

** After killing frost October 25.

Table 14. Two-year Summary of Soybean Row-Spacing Test,
Henderson, Ky. 1967-1968

| Variety | Bushels per Acre | | | Average |
|----------|------------------|----------|----------|---------|
| | 20" Rows | 30" Rows | 40" Rows | |
| Amsoy | 49.1 | 54.2 | 45.6 | 49.6 |
| Clark 63 | 44.3 | 46.6 | 40.1 | 43.6 |
| Hood | 27.8 | 31.9 | 28.1 | 29.2 |
| Average | 40.4 | 44.2 | 37.9 | 40.8 |

Table 15. Annual Summary of Soybean Row-Spacing Test,
Henderson, Ky. 1968

| Variety | Bushels per acre* | | | Average |
|----------|-------------------|----------|----------|---------|
| | 20" Rows | 30" Rows | 40" Rows | |
| Amsoy | 45.9 | 50.7 | 42.9 | 46.5 a |
| Clark 63 | 42.5 | 47.1 | 40.1 | 43.2 a |
| Hood | 30.9 | 40.5 | 31.3 | 34.2 b |
| Average | 39.8 b | 46.1 a | 38.1 b | 41.3 |

* Yields followed by the same letter are not significantly different for average or spacing.

Table 16. Three-year Summary of Soybean Row-Spacing Test,
Princeton, Ky. 1966-1968

| Variety | Bushels per acre | | | Average |
|----------|------------------|----------|----------|---------|
| | 20" Rows | 30" Rows | 40" Rows | |
| Amsoy | 36.2 | 36.4 | 37.2 | 36.6 |
| Clark 63 | 40.1 | 39.8 | 39.5 | 39.8 |
| Hood | 40.5 | 41.6 | 40.6 | 40.9 |
| Average | 38.9 | 39.2 | 39.1 | 39.1 |

Table 17. Annual Summary of Soybean Row-Spacing Test,
Princeton, Ky. 1968

| Variety | Bushels per acre* | | | Average |
|----------|-------------------|----------|----------|---------|
| | 20" Rows | 30" Rows | 40" Rows | |
| Amsoy | 32.2 | 40.2 | 34.9 | 35.8 b |
| Clark 63 | 35.9 | 38.1 | 36.4 | 36.8 b |
| Hood | 41.1 | 44.4 | 41.8 | 42.4 a |
| Average | 36.4 b | 40.9 a | 37.7 b | 38.3 |

* Yields followed by the same letter are not significantly different.

Table 18. Two-year Summary of Date-of-Planting, Irrigation and Variety Experiment, Lexington, Ky. 1967-1968

| Date Planted | Kent | | Wayne | | | Ave |
|-----------------|-----------|-------------------|-----------|-------------------|-------|-----|
| | Irrigated | Non- Irrigated | Irrigated | Non- Irrigated | | |
| April 22 | 56.2 | 49.7 | 52.4 | 52.7 | 52.8a | |
| May 22 | 48.9 | 50.0 | 47.8 | 51.0 | 49.4a | |
| June 22 | 43.2 | 37.8 | 36.8 | 35.2 | 38.2b | |
| Average | 49.4 | 45.8 | 45.6 | 46.3 | | --- |

Table 19. Annual Summary of Date-of-Planting, Irrigation, and Variety Experiment, Lexington, Ky. 1968

| Date Planted | Kent | | Wayne | | | Ave |
|-----------------|-----------|-------------------|-----------|-------------------|-------|------|
| | Irrigated | Non- Irrigated | Irrigated | Non- Irrigated | | |
| April 17 | 59.2 | 56.6 | 53.6 | 58.5 | 57.0a | |
| May 17 | 53.9 | 51.9 | 47.9 | 54.7 | 52.4b | |
| June 18 | 50.4 | 42.7 | 41.1 | 43.0 | 44.3c | |
| Average | 54.4 | 50.3 | 47.5 | 52.0 | | ---- |

Table 20. Period-of-years Summary of Soybean Herbicide Test, Henderson, Ky.
1966-68

| Trade Name | Herbicide Common Name | Herbicide | | | Yield Bu per acre 1966-68 1968 | |
|---------------------------|--------------------------|-----------------------|------|-------|---|--|
| | | 1b actual per acre | | | | |
| | | 1966-68 | 1968 | | | |
| Alanap Plus | naptalam + chlorpropham | 3.00 + 2.00 | | 39.1 | 34.1 | |
| Amiben 2E AS | amiben | 3.00 | | 36.1 | 35.1 | |
| Lorox | linuron 50W | 1.50 | | 37.8 | 41.4 | |
| Treflan 4E-disk, preplant | trifluralin | 0.75 | | 30.8 | 27.4 | |
| Vernam 6E - incorporated | vernolate | 3.00 | | 35.9 | 36.0 | |
| Ramrod 65W | propachlor | 5.00 | | 36.5 | 27.3 | |
| Londax | linuron + propachlor | 0.75 + 1.50 | | 39.7* | 43.2 | |
| Amiben 2E ME | amiben | 3.00 | | -- | 39.9 | |
| Sirmate | dichloromate | 6.00 | | -- | 33.2 | |
| Enide Dinitro EC | diphenamid + DNBP | 2.00 + 1.50 | | 34.1 | | |
| No treatment | | --- | | 21.0 | 12.9 | |
| LSD (.05) | | | | | 8.2 bu | |

Table 21. Annual Summary of Weed Control in the Herbicide Test, Henderson, Ky.
1968

| Herbicide | Percent Weed Control - Visual Evaluation | | | General Weed Control Sept. 30 |
|--------------------------------|--|-----------|-----------------|-------------------------------------|
| | June 21 | | July 15 | |
| | Grass | Broadleaf | Grass Broadleaf | |
| Alanap Plus (Alanap + CIPC) | 78 | 70 | 70 | 28 |
| Amiben 2E AS | 100 | 78 | 90 | 60 |
| Linuron 50W (Lorox) | 93 | 88 | 88 | 65 |
| Treflan 4E - disk, preplant | 65 | 63 | 73 | 43 |
| Vernam 6E - Incor- porated | 95 | 80 | 95 | 73 |
| Ramrod 65W | 95 | 60 | 85 | 25 |
| Londax (Ramrod-Lorox) | 98 | 80 | 88 | 48 |
| ²⁴ Amiben 2E ME | 95 | 88 | 95 | 50 |
| Sirmate | 88 | 83 | 75 | 48 |
| Enide + DNBP | 95 | 78 | 83 | 40 |
| No Treatment | 0 | 0 | 0 | 5 |
| LSD (.05) | 20 | 12 | 17 | 32 |