Results of the KENTUCKY SOYBEAN PERFORMANCE TESTS—1965

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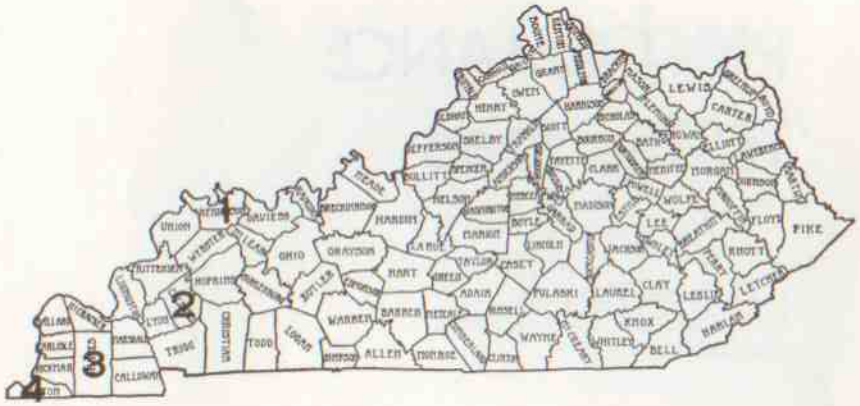
LOCATION OF THE 1965
SOYBEAN PERFORMANCE TESTS



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	Location	Soil Type	pH	Phosphorus	Potassium
1.	Henderson	Falaya silt loam	6.3	Medium	Low
2.	Princeton	Pembroke silt loam	7.5	High	Low
3.	Mayfield	Grenada silt loam	6.2	Low	Low
4.	Hickman	Commerce silt loam	7.8	High	Medium

RESULTS OF THE KENTUCKY SOYBEAN
PERFORMANCE TESTS - 1965

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 improved strains of soybeans in the U. S. Regional Soybean Laboratory Tests. Included in the testing program are herbicide tests, rate-of-planting and fertilizer tests, seed treatment tests and molybdenum tests.

Soybean production in Kentucky for 1965 was estimated at 6,864,000 bushels. Production in 1964 was 5,850,000 bushels and 4,915,000 bushels for the period 1959-63. Average yields per acre were 24 bushels for 1965, 22.5 bushels for 1964 and 23.6 bushels for 1959-63.

EXPERIMENTAL METHODS

Soybean tests were conducted at four locations in the major soybean-producing area of the state. The testing locations are shown on the map on page 2. The field at Henderson was planted on May 6, that at Princeton on May 4, Mayfield on May 13 and Hickman on May 14.

Field Design

Each variety and experimental strain was planted in three plots at all locations with individual plots being 4 rows wide and 19 feet long. The seeding rate was 10 viable seed or 12 seed per foot of row except in the rate-of-planting and fertilizer test where 6, 9, and 12 viable seed per foot of row was planted.

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.

Date Matured

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

Chemical Composition

Percent oil and percent protein content determined from a composite sample. Percentage composition is expressed on a moisture-free basis.

Purple Stain

The amount of purple stain is based on a scale of 1 to 5: 1 = no purple stain; 2 = 1 to 3%; 3 = 4 to 8%; 4 = 9 to 19%; 5 = over 20%.

Table 1. - Soybean Performance Test - Henderson, 1963-65

Variety	Yield Bu/Acre	Date Matured	Lodg-ing	Ht, In.	Seed Qual	G/100 Seeds	Protein %**	Oil %	Purple Stain
Kent	38.2	10-4	2.0*	41	3.1*	17.6	43.3	19.3	1.5*
Clark	34.2	9-29	3.4	44	3.0	16.1	43.4	20.4	1.9
Clark 63	35.9	9-28	2.0	44	3.0	15.4	42.6	20.6	2.0
Ogden**	27.9	10-25	1.5	41	2.0	15.9	---	17.4	1.0
Shelby	33.5	9-12	2.6	40	2.6	14.8	42.7	20.4	1.0
Lindarin 63 **	32.9	9-5	1.6	32	1.4	15.1	---	20.1	1.5
Wayne**	33.7	9-29	1.9	42	3.5	17.2	---	20.1	1.5
Scott	34.8	10-6	2.2	43	2.3	14.7	41.4	19.9	1.6
Hill	35.1	10-17	2.5	35	1.4	13.9	40.9	19.8	1.0
Dorman**	29.5	10-21	3.0	42	2.0	13.8	43.0	18.8	1.0

* See text for explanation of scales used.
** Two-year data.

Table 2.- Soybean Performance Test - Henderson, 1965

Variety	Yield* Bu/Acre	Date Matured	Lodg-ing	Ht, In	Seed Qual	G/100 Seeds	Protein %	Oil %	Purple Stain
Kent	35.8	9-30	2.0	36	3.7	18.4	44.8	19.7	2.0
Clark	30.6	9-28	2.7	38	4.0	16.2	44.6	19.4	2.7
Clark 63	29.6	9-28	2.0	38	4.0	16.3	43.1	20.5	3.0
Ogden	33.6	10-26	2.0	38	2.0	17.0	45.8	16.9	1.0
Shelby	28.0	9-9	2.3	37	2.7	14.0	45.4	19.3	1.0
Lindarin 63	28.9	9-9	1.3	28	1.7	14.6	45.4	20.2	1.0
Wayne	26.8	9-28	1.7	38	4.0	16.8	45.8	20.0	2.0
Scott	33.2	9-28	2.3	42	2.7	15.2	43.0	19.0	1.3
Hill	36.2	10-14	2.0	34	1.3	14.1	41.2	17.9	1.0
Hood	30.0	10-28	2.0	34	1.7	17.3	44.7	17.0	1.0

* Difference required for significance:.05 = 4.7 bu.

Table 3.- Soybean Performance Test - Princeton, 1964-65

Variety	Yield Bu/Acre	Date Matured	Lodg-ing	Ht, In.	Seed Qual	G/100 Seeds
Clark	29.7	9-17	2.5	41	2.6	15.6
Clark 63	30.2	9-17	1.0	42	1.9	13.3
Kent	36.0	9-25	1.0	38	2.8	16.2
Scott	35.9	10-7	2.0	46	3.2	14.5
Hill	35.9	10-5	3.5	39	2.3	15.4
Hood	36.5	10-21	3.0	40	1.7	16.2
Ogden	37.9	10-22	3.0	43	2.0	17.5
Lindarin 63	22.9	9-11	2.0	29	3.5	15.5
Shelby	27.3	9-16	2.5	40	2.5	15.8

Table 4.- Soybean Performance Test - Princeton, 1965

Variety	Yield* Bu/Acre	Date Matured	Lodg-ing	Ht, In.	Seed Qual	G/100 Seeds	Protein %	Oil %	Purple Stain
Clark	19.9	9-19	1	42	2.2	11.0	41.7	20.7	1.8
Clark 63	22.1	9-17	1	44	1.8	10.5	41.0	21.5	1.8
Kent	26.5	9-28	1	40	2.5	12.0	42.3	19.8	2.0
Scott	30.5	10-6	2	47	2.3	12.5	40.4	19.9	2.0
Hill	33.4	10-8	3	40	2.5	15.0	39.9	18.0	1.0
Hood	34.5	10-26	3	42	1.3	17.0	41.6	18.9	1.0
Ogden	33.3	10-26	3	45	2.0	15.5	42.3	18.4	1.0
Lindarin 63	19.3	9-12	1	35	3.0	11.0	42.4	21.9	1.0
Shelby	21.2	9-16	2	40	2.0	12.0	42.1	21.1	1.0

*Difference required for significance: .05 = 3.9 bu.

Table 5.- Soybean Performance Test - Mayfield, 1965

Variety	Yield* Bu/Acre	Date Matured	Lodg-ing	Ht, In.	Seed Qual	G/100 Seeds	Protein %	Oil %	Purple Stain
Clark	19.8	9-10	0	36	2.0	12.9	43.5	18.6	1.0
Wayne	23.6	9-10	1.2	38	2.0	14.7	43.2	19.5	1.0
Clark 63	20.0	9-10	0	40	2.0	12.3	43.4	18.5	1.0
Kent	19.1	9-30	1.7	38	2.3	12.8	43.6	18.3	1.0
Scott	15.0	**		29	3.0	12.5	44.5	18.2	2.0
Hill	20.5	**		29	2.3	15.5	43.3	18.6	2.3
Hood	26.0	**		34	2.0	20.3	45.8	18.7	2.0
Ogden	26.9	**		33	2.7	18.1	46.2	17.2	2.0
Shelby	24.8	9-10	1.2	40	2.0	12.5	43.6	19.0	1.0
Lee	29.4	**		33	2.0	14.2	46.6	16.8	2.0

* Difference required for significance: .05 = 4.1 bu.
** Harvested October 27 and stored.

Table 6.- Soybean Performance Test - Hickman, 1965

Variety	Yield Bu/Acre 1964-65	Yield Bu/Acre 1965	Lodging	Ht, In.	Seed Qual	G/100 Seeds	Protein %	Oil %	Purple Stain
Clark	25.7	28.8	2.0	33	3.0	14.0	44.5	18.1	1.0
Wayne	--	28.2	1.0	30	3.0	16.7	41.2	18.8	1.7
Clark 63	26.7	24.4	1.5	32	3.0	15.3	44.4	19.5	2.0
Kent	26.2	25.8	1.2	32	3.0	15.9	45.4	19.5	2.0
Scott	29.8	27.7	1.3	37	3.0	15.0	44.3	19.1	3.0
Hill	30.8	27.4	2.3	33	2.2	12.3	42.2	17.2	1.0
Hood	28.5	25.4	1.5	37	1.7	15.0	44.4	17.9	1.0
Ogden	30.2	27.5	1.3	38	2.2	14.5	45.0	16.1	1.0
Lee	26.8	26.5	1.7	33	1.5	12.5	46.0	15.4	1.0
Dorman	30.5	26.8	2.3	38	2.7	13.6	43.0	17.9	1.0
Bragg	---	23.3	2.5	48	2.0	14.9	43.1	14.7	1.0
Jackson	---	22.7	1.7	46	2.0	13.3	42.9	16.8	1.0
Rebel	15.6	17.8	2.2	46	2.3	14.9	46.4	14.8	1.0
Hampton	9.4	13.4	2.7	38	2.0	15.1	41.8	16.9	1.0
Semmes	---	19.5	1.8	41	2.0	12.2	46.0	15.5	1.0
Dare	---	27.8	1.5	35	1.3	12.4	40.4	18.8	1.0

LSD for 1965 = 5.5 bushels

Table 7.- Soybean Herbicide Test -Henderson and Hickman, 1965

Treatment	Henderson Bu/Acre*-Clark 63	Hickman Bu/Acre* - Hood
Check	20.0	18.3
Amiben	27.0	27.3
Vernam - incorporated	21.1	25.9
Weedbeads	24.1	20.9
Treflan - incorporated	19.9	20.2
Lorox	28.9	26.2
Alanap + CIPC	25.6	24.8
Ramrod	---	21.9

* Not significant statistically.

Table 9.- Soybean Arasan and Molybdenum Tests - Henderson, 1965

Variety	Arasan Bu/Acre	Molybdenum Bu/Acre
Clark untreated	26.7	35.9
Clark treated	33.9	33.7
Hood untreated	30.3	32.4
Hood treated	35.2	30.5

* Difference required for significance: .05 = 4.4 bu.

Table 9.- Soybean Rate-of-planting-Fertilizer Test, Henderson, 1965

Variety	Number of viable seed per foot of row 6	6*	9	9*	12	12*
	Bushels per acre**					
Clark 63	32.5	28.9	27.8	34.0	30.0	30.7
Hood	28.3	31.4	28.1	30.1	28.7	29.2

* 200# 5-20-30 special
** No significant differences.

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