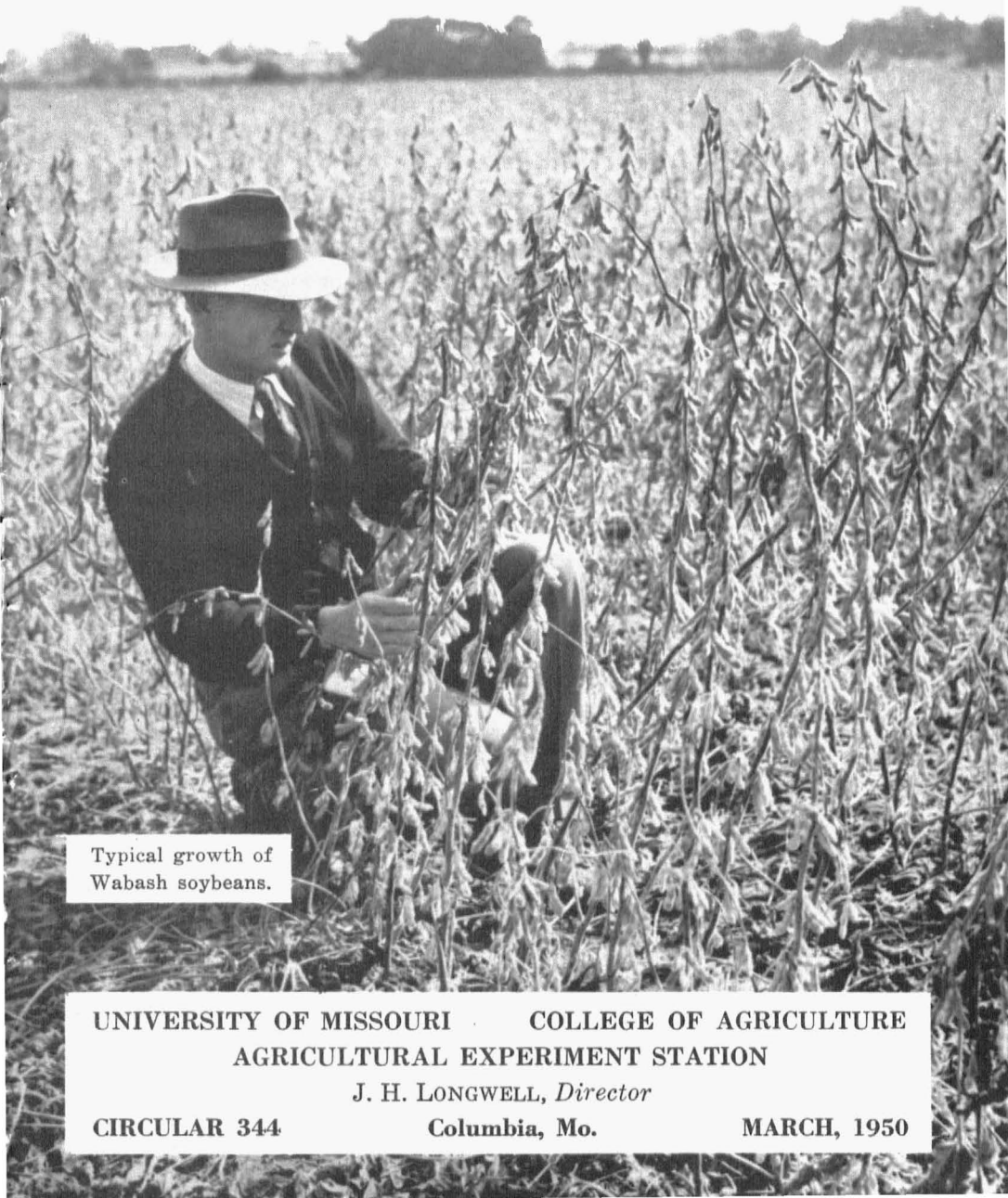


Wabash Soybeans for Missouri

By C. V. Feaster



Typical growth of
Wabash soybeans.

UNIVERSITY OF MISSOURI · COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION

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TESTING HAS SHOWN THAT -

Wabash is best adapted to soils of average or better fertility in the central half of Missouri.

Wabash stands up better than Chief, Boone or Macoupin.

Wabash yields higher than Chief, Boone or Macoupin on soils of average or better fertility but not higher than Chief on extremely light soils.

Wabash is earlier than Boone or Macoupin but later than Chief.

Wabash contains about one per cent more oil than Chief, Boone or Macoupin.

Acknowledgments

The photograph on page 1, showing a field of Wabash soybeans, was supplied by the Purdue Agricultural Experiment Station. Other experiment stations that cooperated in testing the Wabash variety were those of Illinois and Kansas.

Wabash Soybeans for Missouri

C. V. FEASTER¹

Wabash is a new variety of soybeans for Missouri. It is between Chief and Boone in maturity and excels both of them in yield, oil content, standing ability and seed quality. Wabash originated from a cross of Dunfield and Mansoy made by C. M. Woodworth of the Illinois Agricultural Experiment Station in 1935.

Selection and testing in the early generations was done at the Illinois Station by L. F. Williams of the U. S. Regional Soybean Laboratory. The final pure line selection was made by A. H. Probst and G. H. Cutler at the Purdue Agricultural Experiment Station in 1941.

The development of Wabash was cooperative between the Indiana, Illinois, Kansas and Missouri Agricultural Experiment Stations of the North Central Region and the U. S. Regional Soybean Laboratory of the U. S. Department of Agriculture.

Description of Wabash

The plant of the Wabash variety is similar to Macoupin in type of growth. The plants stand well for combine harvesting. They have good resistance to shattering. Flowers are white. Pods are borne well off the ground and are gray, medium sized and mostly three-seeded. Seeds are medium sized, light yellow with light brown hilum. On the moisture-free basis they contain about 21.5 per cent oil and 40 per cent protein. The oil content of Wabash is approximately one per cent higher than Chief, Boone or Macoupin.

Yield Test Results

The results of testing Wabash in Missouri are given in Tables 1 and 2. The locations and dates of testing are included in the tables. A summary of regional tests in Indiana, Illinois, Missouri and Kansas is given in Table 3.

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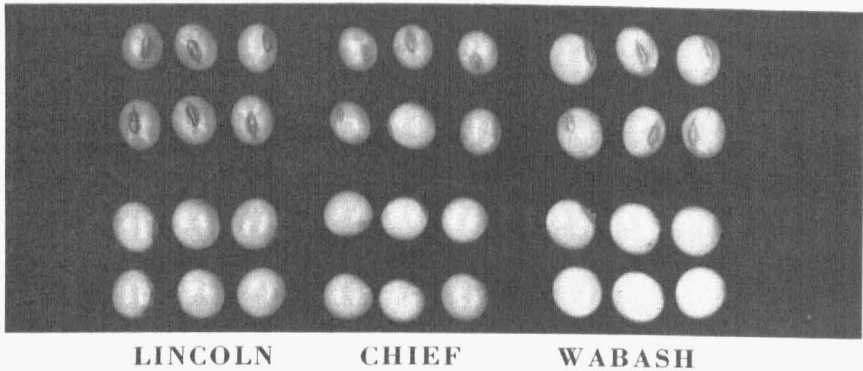


Fig. 2.—A comparison of seeds from the Lincoln, Chief and Wabash varieties of soybeans.

TABLE 1--COMPARISON OF WABASH SOYBEANS WITH OTHER VARIETIES GROWN IN CENTRAL MISSOURI, 1945-49.

AVERAGE FOR SIX LOCATIONS						
	Yield	Maturity ¹	Lodging ²	Plant ³ Height	Seed ⁴ Quality	Oil ⁵ Content
Wabash	27.7	-3	1.8	38	1.5	21.4
Chief	26.6	-7	2.9	43	1.6	20.6
Macoupin	25.1	0	2.5	39	1.8	----
Boone	24.3	0	2.7	40	1.7	----

AVERAGE YIELD AT EACH LOCATION IN CENTRAL MISSOURI							
	Average Yield	Columbia 1945-49	Shelbyville 1945-48	Lathrop 1945-46	Elsberry 1946&49	Norborne 1948-49	Ladonia 1949
Wabash	27.7	25.6	21.0	23.5	34.5	38.5	39.2
Chief	26.6	25.7	20.3	19.5	31.5	38.3	38.0
Macoupin	25.1	23.0	20.9	18.7	29.7	35.5	35.9
Boone	24.3	23.2	20.4	18.3	28.4	34.1	30.5

¹ Days earlier (-) or later (+) than Boone.

² Based on index of 1-5, 1-erect, 5-badly lodged.

³ Average plant height in inches.

⁴ Based on index of 1-5, 1-very good, 5-very poor.

⁵ Oil content was determined by the U. S. Regional Soybean Laboratory and reported on a dry basis. Data are based on a composite of 70 tests in the Midwest covering a period of 6 years. Boone and Macoupin not included in all tests. In tests in which Boone, Macoupin, and Chief were compared, oil contents of the three were similar.

TABLE 2--COMPARISON OF WABASH SOYBEANS WITH OTHER VARIETIES GROWN IN SOUTHEAST MISSOURI, 1946-49.

AVERAGE AT SIKESTON					
	Acre Yield	Maturity ¹	Lodging ²	Plant ³ Height	Seed ⁴ Quality
Wabash	30.9	-2	2.3	45	2.0
Chief	29.6	-3	3.3	53	2.4
Macoupin	29.4	0	3.2	46	2.2
Boone	30.0	0	3.3	47	2.1

¹ Days earlier (-) or later (+) than Boone.

² Based on index of 1-5, 1-erect, 5-badly lodged.

³ Average plant height in inches.

⁴ Based on index of 1-5, 1-very good, 5-very poor.

TABLE 3--A COMPARISON OF WABASH SOYBEANS WITH OTHER VARIETIES GROWN IN UNIFORM TESTS IN INDIANA, ILLINOIS, MISSOURI, AND KANSAS, 1943-48.

	Yield	Maturity ⁵	Lodging ²	Height ³	Protein %	Oil %
Wabash	28.8	-2	2.1	39	40.4	21.4
Chief	27.7	-4	2.7	44	41.0	20.6
Patoka	27.0	-2	2.2	33	43.6	20.3
Gibson	25.4	0	2.7	38	40.5	20.1

⁵ Days earlier (-) or later (+) than Gibson.

² Based on index of 1-5, 1-erect, 5-badly lodged.

³ Average plant height in inches.

Adaptation of Wabash

Wabash is best adapted to soils of average or better fertility in the central half of the state. On these soils, it is superior to Boone, Macoupin or Chief in yield, oil content, standing ability and seed quality. On the lighter soils where lodging is not a problem, the Chief variety is better adapted than Wabash. Chief is taller and yields slightly higher on these soils. Wabash should also replace Lincoln in central Missouri where the earlier maturity of Lincoln is of no advantage. Wabash is as resistant to lodging as Lincoln and averages higher in yield.

Wabash is suitable as an early variety in Southeast Missouri. It has averaged slightly higher in yield than Chief, Boone or Macoupin. However, these varieties are too early for maximum yields in the southeastern area. Their average yield is generally 3 to 5 bushels less than S-100 and 6 to 8 bushels less than Ogden.

Recommendations

Lincoln and Chief are generally the best varieties for the northern fourth of the State. Lincoln should be restricted to the highly fertile soils. On the good land, Lincoln is comparatively resistant to lodging, thus standing well for combining. Also, its early maturity permits the release of the land for timely seeding of fall grain.

Chief and Wabash are adapted to the central part of the State. Wabash is best on the more fertile soils, and Chief on the less fertile soils. Lincoln may also be grown in central Missouri, but it should be restricted to the very fertile soils.

Wabash and S-100 are adapted to the entire southern fourth of the State. Chief is recommended as an early maturing variety for the same area excepting the southeast lowlands.

Ogden and Ralsoy are adapted only to the southeast lowlands. Ogden yields the highest of the four varieties recommended for this section, but it has a tendency to shatter badly under certain condi-

tions. S-100 should be grown if medium early maturity is desired. It matures ten days to two weeks earlier than Ogden or Ralsoy and yields about the same as Ralsoy. For early maturity the Wabash variety is recommended.

The regions where the different soybean varieties are best adapted are shown in Figure 3.

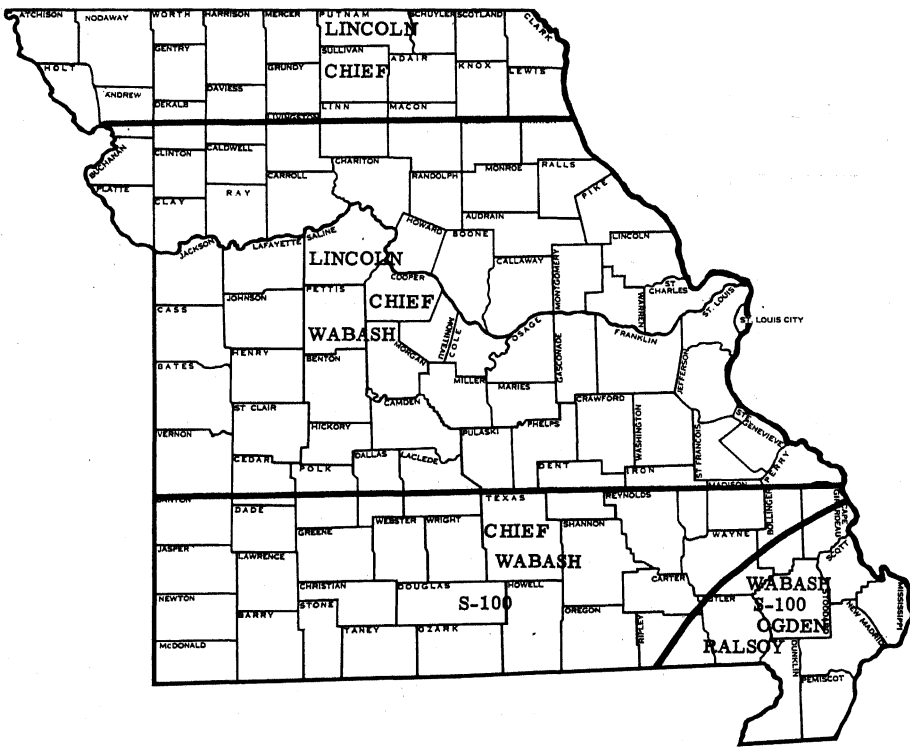


Fig. 3.—Recommended varieties of soybeans for the different areas of the state.