

## SOYBEAN PRODUCTION IN ILLINOIS

BY

W. L. BURLISON

*University of Illinois, Urbana, Illinois*

## ABSTRACT

Six hundred and seventeen thousand acres of soybeans were produced in Illinois in 1932 with a crop that amounted to over 6 million bushels. Because of the potential importance of the soybean in Illinois, the Illinois Agricultural Experiment Station has conducted through more than a quarter of a century investigations on the production and utilization of this crop. The present paper is intended as only a very brief resumé of certain phases of our studies.

*Varieties.*—Definite studies on soybeans in Illinois were first made by the Illinois Agricultural Experiment Station in 1897. From that day to this, literally scores of varieties and types have been under observation and trial. Superior varieties have been discovered from time to time which, naturally, have largely supplanted those of earlier domination. For example, varieties of outstanding promise recommended in 1923 were Manchu and Virginia, and in 1932 were Illini, Dunfield, and Mansoy.

It is interesting to note the range in yield of the varieties. They vary upward from 16 bushels per acre to approximately 35 bushels. Yield has always been considered an important factor in choice of variety, but present-day industrial requirements have shifted emphasis to quality as well as yield.

A selection by the method of plant breeding made by Doctor C. M. Woodworth of the Department of Agronomy here at this Station, called the Illini, was distributed in 1928 and has averaged 40 bushels per acre for a period of ten years. About half of the beans now grown in Illinois for commercial purposes are of this new variety.

*Date of Seeding.*—Experiments carried on for the past six years have brought out the fact that date of seeding soybeans is an important matter in production, especially when quality is considered. Varieties have been seeded at ten-day intervals from May 1 through and including June 20, and the results show that there is practically no difference in the yield of the first three seedings; namely, May 1, May 10 and May 20, but from the June 1 planting yields declined until the last seeding June 20.

*Rate of Seeding.*—Five years' results on the effect of rate of seeding on yield have changed opinion in regard to this matter. Years ago, when seeded in rows, it was thought that 30 pounds an acre were quite sufficient. Now a larger amount (50 to 70 pounds) is commonly used. In seeding beans "solid," as in the case of planting with the 3-inch grain drill, a higher rate of seeding is required than where the beans are seeded in 24-inch rows. The yields, however, from the solid seedings were distinctly lower than the yields for the 24-inch rows. The labor item and available equipment are of considerable importance in determining this practice.

*Longevity and Storage.*—The matter of storage and longevity, as it affects yields are, of course, closely related. Studies on longevity of seed of five varieties stored under favorable conditions show that there is a steady loss in the yield of beans when stored for a period of from one to five years. Rapid deterioration in the germination for the first year is not necessarily true. After a two-year period, however, there was a distinct loss in germination and yield although varieties differ materially in the length of time they remain viable and in the ability to produce vigorous plants when seeded.