EFFECT OF SPACING ON THE DEVELOPMENT OF THE FLAX PLANT

A. C. DILLMAN and J. C. BRINSMADE, JR.

It is a matter of common observation that the growth habits of plants are modified by the space available for their development. Numerous experiments have been conducted to determine the effect of spacing on the plant development and yield of cotton, corn, tobacco, beets, potatoes, and other row crops, and of the small grains. The spacing of flax grown for fiber also has been studied extensively because of the close relation between the stand of plants and the yield, length, and quality of fiber. Few such investigations have been conducted with varieties of flax grown for seed production.

In 1920, Clark reported on the yield and agronomic data of 49 varieties and strains of flax grown at Mandan, N. D., in 1914 to 1916, and Klages, in 1932, reported the results of spacing experiments conducted at Brookings, S. D., in 1930 and 1931.

The experiments herein reported were planned to determine the effect of spacing on the branching habit, height, time of maturity, and yield of seed per plant and per unit area of typical varieties of seed flax.

THE FLAX PLANT

The flax plant has three distinct types of branches, namely, (1) basal branches which arise in pairs (i.e., as opposite branches) from the crown of the plant; (2) panicle branches which bear the seed bolls; and (3) adventitious branches which occasionally occur on the main stem. In close spacing the basal branches may be partly or entirely suppressed, whereas, in wide spacing several basal branches may occur. The panicle is formed by the dichotomous branching of the upper part of the stem, each small branch usually terminating in a seed boll. Adventitious branches seldom occur in close stands. They occur most

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2 Associate Agronomist and Assistant Agronomist, respectively.
