EFFECT OF RATE AND DATE OF SOWING ON YIELD OF WINTER WHEAT.¹

W. M. JARDINE,

KANSAS AGRICULTURAL EXPERIMENT STATION, MANHATTAN, KANS.

The best rate and the best date to sow winter wheat in the various wheat-growing areas of the United States have been investigated for one or more years by many of the experiment stations. In all the older wheat-growing regions these questions are thought to be fairly well settled. The conclusions arrived at, however, have usually been based upon results secured from different rates sown on only one date in any one year, or from only one rate sown on various dates. As far as the writer is aware, experiments have never been reported in this country that included all the different rates under investigation sown on a number of dates the same season or that included a number of rates sown on all the different dates.

There are many conflicting opinions among the farmers of Kansas regarding the best rate and the best date to sow winter wheat. Until recently, advice given by the station was based upon results secured from rate-of-seeding and date-of-seeding trials conducted in the usual manner, which did not bring out the relation between the rate and the date of seeding on the yield produced. Not always did our advice prove satisfactory. In fact, unless it so happened that the farmer sowed his wheat about the same time of the year as that at which our results were obtained from a certain rate, our recommendations usually did not prove satisfactory. The station usually recommended a specific rate without regard to the time of seeding. Farmers generally are unable to sow their wheat in Kansas at the same time every year. It would be unwise for them to do so, even if it were possible, because of the fluctuations in the weather conditions and consequently in the fitness of their soil on the same date each year.

Wheat is sown in Kansas all the way from the last week in August to the second week in November, but the same rate of seeding is used whether the seed is sown early in September or in November. The station usually recommended from 3 pecks to the acre in western Kansas to 6 pecks to the acre in eastern Kansas, the rate increasing from west to east in proportion as the rainfall increases. About

¹ Revision of a paper presented at the annual meeting of the American Society of Agronomy at Berkeley, Cal., August 10, 1915.