

The Effect of Rates of Seeding, Rates of Fertilizer,
and Row Spacing on the Yield of Wheat

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Summary

Tests were conducted at Alameda and Yorkton for 2 years, 1966 & 1967. In one test 23-23-0 was applied with Manitou Wheat and in the other test 11-48-0 was applied.

Although the results were not consistent, a definite trend in the response to fertilizer was evident. The concentration of seed and fertilizer within the row did not influence the response as much as rate per acre. Without fertilizer the 9 and 12 inch spacing yielded higher than the 6 inch. When 50 lb 11-48-0 was applied the greatest increase in yield was obtained with the 6 inch spacing. The 12 inch spacing yielded the lowest with little difference between the 6 and 9 inch.

High rates of seeding were necessary to maintain a continuous increase in yield as the rates of fertilizer were increased. With a rate of seeding less than 1.5 bu per acre, the optimum rate of N and P_2O_5 was 20 lb per acre, but when the rate of seeding was increased to more than 1.5 bu the optimum rate of N and P_2O_5 was 40 lb. At least 2 bu per acre was required to obtain the highest yield when the rate of 11-48-0 was more than 50 lb per acre.

Rates of seeding must be considered when the response to rates of fertilizer are compared.