

The incorporation of large amounts of phosphate fertilizers as a means of pasture fertilization:- H. G. Zandstra, Melfort.

Rates of 25, 50, 100 and 200 lb P/acre of monoammonium phosphate, diammonium phosphate, and monocalcium phosphate were incorporated into the top six inches of the soil in September of 1964. In May of 1965 80, to 90 per cent of the added phosphorus was recovered in  $\text{NaHCO}_3$  - extractable form from the 0-6 inch soil layer. The percentage recovery was not affected by the rate of fertilization or the source of phosphorus fertilizer. In the spring of 1967, after two years of cropping, the percentage of available phosphorus recovered varied from 45 to 59%. Rates and sources again did not affect the percentage recovery. The increased loss of available phosphorus at higher levels of fertilization can partially be attributed to increased crop removal. The amount of phosphorus in the harvested forage differed by or as much as 12 lb of phosphorus per acre per year. This difference could, however, not account for the reduction of 70 lbs P/acre of available phosphorus which occurred at the highest level of fertilization.

This study is being continued to determine if incorporation of phosphorus fertilizers, in sufficient amounts to last the life of the pasture stand, is a practical solution to the problem of phosphorus fertilization of forage crops.