



tion is cooperating in the state and nationwide potato breeding project. The new Minnesota variety, Warba, shows great promise and other new seedlings of great merit will be ready for release soon.

Potato Fertilizers

Comprehensive tests have been made between different fertilizing materials when used alone and in combination. The results obtained from the use of commercial fertilizers have varied from year to year due apparently to the availability of soil moisture. In years of ample rainfall, during the growing period, good responses have been obtained from fertilizing materials; however, during dry seasons the responses have been negligible. Conclusions from exhaustive trials of fertilizing materials when used alone and in combination on different types of rotations show:

1. That potash fertilizers are unnecessary on the heavy clay loam soil types.
2. Phosphate fertilizers in moderate amounts (basis of 250 pounds per acre of 20%) on the average produce a profitable return. The increased yields from phosphates

have varied from 5.15 bushels on a three-year rotation for an eight-year period to 13.3 bushels per acre over a five-year period.

Potato Disease Control

Combination sprays made of a fungicide (bordeaux mixture) and an insecticide (calcium arsenate) have been effective in controlling leaf diseases, potato beetles, potato leaf hoppers and flea beetles. Three sprayings have proved most profitable with yield increases averaging 16 per cent.

Extensive tests of home prepared and commercial seed treating substances have demonstrated that home prepared treating solutions of standard corrosive sublimate or acid mercury dip are superior to commercial brands in disease control and are cheaper in cost.

Depth of planting tests indicate a correlation between deep planting of potato seed pieces and rhizoctonia injury.

Potato Virus Diseases

Tests covering a four-year period have shown that there may be as much as 25 per cent spread of spindle tuber in fields through the use of contaminated cutting

