THE KENNEBEC POTATO in North Dakota

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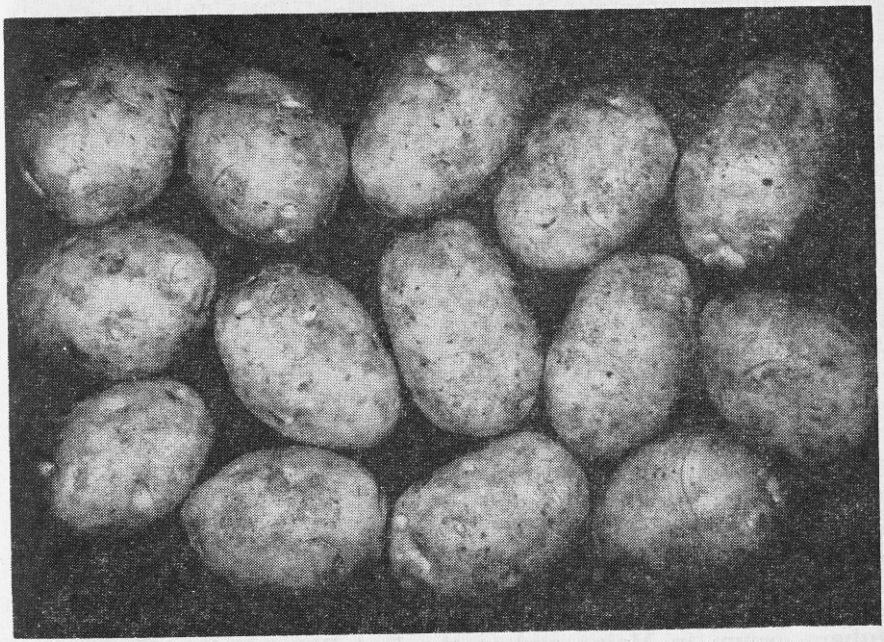

Kennebec tubers grown in the Red River Valley during 1950

Within the last 15 years the North Dakota Agricultural Experiment Station has tested most of the new varieties of potatoes. Many potato growers have also tried these varieties but Pontiac and its redder mutation, Red Pontiac, have been the only ones grown extensively in this state. Of the recently introduced varieties, Kennebec has shown the most promise. It has been tested at various locations in the state during the last four years and, because of the interest in this new variety, it was thought advisable to publish all the available information regarding its performance in North Dakota.

Kennebec was released by the United States Department of Agriculture and named (1) in 1948. Previous to this time, tests conducted throughout the United States and in some foreign countries indicated its wide adaptation. It has more resistance to late blight than any other variety released by the federal government.

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This is one of its most important features, especially when growers are trying to reduce their production costs. Until a strain of the late blight organism that can cause appreciable damage to Kennebec vines and tubers appears, it will not be necessary for North Dakota growers to apply fungicides for control of late blight on this variety. Although Kennebec is susceptible to early blight, it is questionable whether fungicidal control is necessary in North Dakota. Cultural practices and crop rotation will help reduce early blight infection. Dusting or spraying for insect control may be all that will be necessary in growing this variety.

Kennebec has also been reported (1) as being resistant to mild mosaic and net necrosis, but typical leaf roll symptoms do appear in the vines. Field exposure experiments in the Red River Valley have shown that only a low percentage of Kennebec vines become infected with virus Y. Plants grown from infected tubers, however, show the severe virus Y symptoms. Kennebec is also susceptible to the common latent mosaic caused by virus X and to spindle tuber.

One disadvantage of this new variety is its susceptibility to scab. It was not released as being scab resistant, but observations in the Red River Valley have shown that it does not scab any more than Cobbler, Triumph, Pontiac, and Red Pontiac. In fact, there have been instances where Kennebec did not scab as badly as these common varieties.

Kennebec has a vigorous vine that remains green until late in the season or until killed by frost. Reports from some North Dakota growers and observations on experimental plots indicate that it is resistant to drouth. The white tubers were originally described (1) as being elliptical to oblong with shallow eyes. A comparison of tubers grown in Maine and in the Red River Valley has shown that they are smoother and more uniformly shaped when grown in Maine. Since the skin bruises as easily as that of the other common

A field of North Dakota certified Kennebecs

varieties grown in the state, the tubers should not be harvested until the vines have been dead for several days. Fusarium dry rot has been observed on tubers improperly handled at harvest.

Like all other varieties of potatoes, Kennebec varies in quality according to the environment in which it is grown and the cultural practices of the growers. Reports from Maine (1) have shown it has excellent market and cooking quality. Favorable reports have also been received regarding the quality of Kennebec tubers grown in North Dakota. Extensive tests (3) on the chipping quality of 33 potato varieties indicated that Kennebec was one of the best.

In North Dakota (2) Kennebec yielded at the rate of 377 bushels per acre in a test of 10 potato varieties in seven experiment station trials in 1950. This yield was not significantly more than the yields of Pontiac and Red Pontiac but significantly above the yields of the white tuber varieties Canus, Cobbler, Essex, White Cloud, and ND 457 and of the red tuber varieties Progress and Triumph.

Kennebec tubers were large, being similar to those of Pontiac and Red Pontiac in size and average weight. These three varieties ranked above the other varieties tested in average tuber weight. Kennebec was higher in specific gravity than Pontiac and Red Pontiac and was more like Cobbler and Triumph in this measure of quality.

When Kennebec was received from the United States Department of Agriculture in 1947 it was indexed to be certain it was free of all virus diseases. Virus free seed has been given to 12 growers and is being increased under contract with the North Dakota Agricultural Experiment Station. The 1950 certified acreage amounted to 85.5 acres.

LITERATURE CITED

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2. Mattson, Harold and R. Johansen. Potato variety trials in North Dakota —1950. (See page 165 of this bulletin).

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NORTH DAKOTA TOP SUNFLOWER STATE

In 1950 North Dakota produced 3,900,000 pounds of sunflower seed, reports C. J. Heltemes, federal agricultural statistician at Fargo. This is slightly more than half of the 1949 production of 7,500,000 pounds.

The 1950 sunflower seed acreage was 4,700 acres, averaging 830 pounds per acre, compared to 10,000 acres with an average yield of 750 pounds per acre in 1949.

North Dakota sunflower seed production is chiefly for oil from dwarf-type varieties. Ranking next in importance in sunflower seed production are California with 2,300,000 pounds in 1950 and New Mexico with 100,000 pounds.