THE PREVALENCE OF MIXTURES IN MARQUIS WHEAT GROWN IN CENTRAL MONTANA IN 1926

KARL S. QUISENBERRY, J. ALLEN CLARK, AND B. B. BAYLES

For the past 12 years Marquis has been the variety of hard red spring wheat most commonly grown in Montana. Since its introduction in 1913 it has steadily increased in acreage. In 1919 about 40% of the total wheat acreage of Montana was estimated to be Marquis, and by 1924 it occupied about 72% of the total acreage.

The Marquis variety has short kernels which are easily identified, and the awnleted spikes and white glabrous glumes make identification in the field rather simple. Marquis now is grown in many sections to the exclusion of all other varieties, and it would seem that the variety as grown on Montana farms should be true to type and relatively free from mixtures. In recent years seed associations have been inspecting and certifying pure seed of the variety, which also should tend to keep the variety pure.

MARQUIS WHEAT MIXTURES

In spite of the factors tending toward varietal purity, it has been known that mixtures of various sorts are present in Marquis as grown in Montana, in other states, and in Canada. Bell and Cartter have studied plants grown from white kernels obtained in commercial samples of Montana-grown Marquis. They concluded that these white kernels were due to mechanical mixtures and possibly some natural crossing.

Harrington conducted an extensive investigation on 15 collections of Marquis wheat from various sources in Canada. Some of these samples were from pure-line selections grown experimentally, while others were from commercial fields. Nine of these samples proved to be typical Marquis, while six were not typical. One of the non-typical strains, which is widely grown in Saskatchewan, was given special study. The plants of this lot were divided as non-Marquis, Marquis, and an intermediate type, and further tested in...