

The situation in Kansas, a state noted for quality wheat production, shows what might happen in North Dakota if proper and stringent standards were not adhered to in evaluating the quality of new wheats developed in the program for combatting stem rust 15B. In their search for genetic material carrying resistance to Race 15B, wheat breeders are compelled to use wheats of abnormal milling and baking quality for crossing with varieties of good quality.

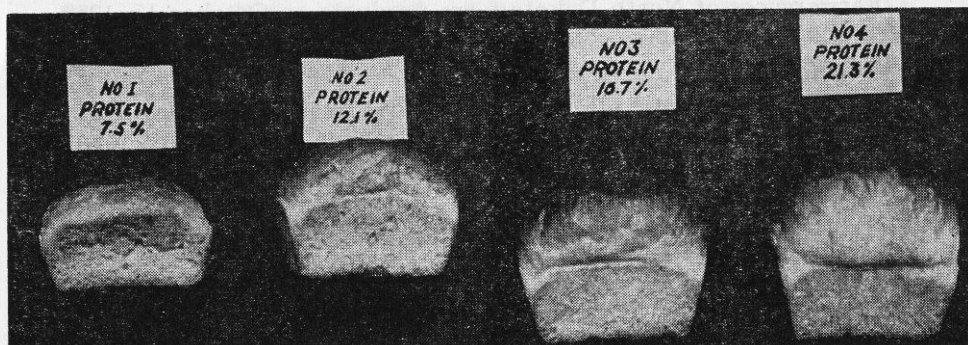


FIGURE 1.—These pictures of actual test loaves from wheats of different protein content illustrate the relationship of protein content to baking quality.

From these crosses emerge lines varying greatly in rust resistance and quality. One variety, for example, which was tested by this laboratory possessed excellent rust resistance and good yielding ability, but was very poor in milling and baking quality. This wheat can be crossed with other wheats to sort out or segregate the factors responsible for resistance and yield and combine these with satisfactory milling and baking quality. Other hybrids of both hard red spring and durum types have yielded promising results in preliminary tests and are being increased for further testing and possible release later. These wheats are also resistant to Race 15B of stem rust, offering promise of escape from future damage from epidemics of this race of rust yet at the same time maintain the high reputation of North Dakota wheat for quality.

The description of the current wheat quality picture in Kansas was condensed from the *Northwestern Miller*, issue of May 31, 1955.

Let no one try to lull your conscience with the tragic old chestnut: "People always have starved and always will." We could have abundant food. The problems are many and difficult. The big question is: How badly do we want it? The technical problems with soils, plants and animals, great as they are, are small compared with the economic, social and political ones. What soil science says is that if the people want an efficient agriculture producing abundant food on a sustained basis, and are willing to develop necessary social institutions, they may have it.—Dr. Charles E. Kellogg, Chief, Division of Soil Survey, USDA.