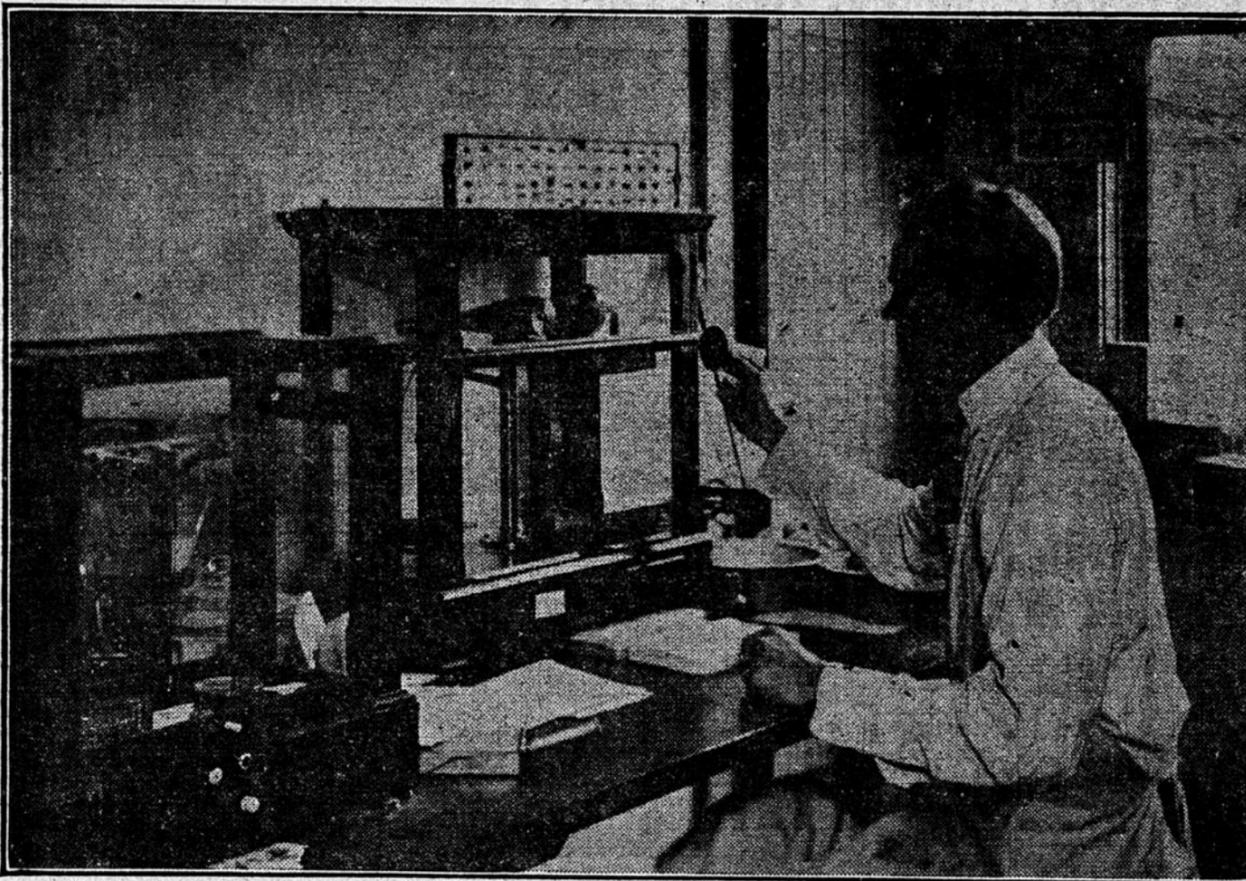


The truth about milling values and trust prices as discovered by the North Dakota Agricultural college test mill should rouse the wheat growers of the entire northwest as they never have been roused before. The amazing details of the market robbery at last are being laid bare.



W. L. Stockham, state cereal chemist employed in the wheat testing laboratory at the North Dakota Agricultural college at Fargo. He is shown using one of the delicate balances which are constantly utilized in making the accurate tests and calculations for government and state data. Under the cooperative agreement between the United States and North Dakota, the government furnishes two men (sometimes three), the state two, and half their joint time is given to each. The government sends to Fargo from all over the country the grain that is being tested with a view to establishing national wheat grades.

have been considered, and the kind of bread its flour will actually make, has been determined.

This rejected Pembina county wheat produced, besides 66.4 percent of flour, 17.7 percent of bran, and 17.46 percent of shorts. To make a barrel of flour it requires four bushels and 55 pounds.

But what kind of bread did it make? Was the bread light enough? Was it so dark it would disgust a careful housewife or a wide-awake baker? Was it so coarse in texture that it was all bubbles, or so heavy that it was like lead?

Not at all. It produced a loaf of bread of 2590 cubic centimeters volume, which is at the top in this respect. Flour that produces loaves of 2200 centimeters is of standard quality, and no housewife or baker would turn it down for failing to produce 2500. Twenty-two hundred is standard. In color it scored 92 per cent. Any flour that scores 88 per cent or upwards is standard. Some of the finest wheat samples ever milled go only three or four per cent above this rejected one in color of loaf. As to texture it was 97 — 11 points above standard! Most housewives don't make bread as light, even, and smooth in texture as 97 per cent by millers' and bakers' standards. In fact a vast amount of the flour that they buy will not make bread as good as that.

#### WHAT THE MILLS MAKE AND WHAT THEY SAY

But in spite of this showing for rejected wheat (and never forget that the millers in their big, modernly equipped laboratories know every item of this down to a fraction of a cubic centimeter, and a fraction of one per cent) farmers are confronted daily with such little flashes as this: "The spring wheat crop shortage intensified by the small percentage of millable wheat, laid the foundation for the present price level," and by statements that the mills are unable to buy any good wheat as most of it is of feed quality; or that the mills are forced to buy from Canada or Kansas in order to keep up their quality.

Wheat of this grade was worth \$1.75 a week ago to the miller who bought and converted it into flour, bran and shorts, ignoring the value of the screenings, or if the screenings are added, it was worth two cents more. It is well established that the cost of cleaning and milling amounts to about

18 cents per bushel. But raise this to 30 cents, which Dr. Ladd says means a big profit from the trade value of the manufactured wheat, and \$1.47½ left.

Did the mills pay the farmer \$1.47½ for this rejected wheat?

Every farmer would smile at the thought. Rejected wheat on September 18 was quoted in the Minneapolis Miller at \$1.18½ per bushel. The difference between what the farmer would get for this wheat and \$1.47½ is exactly 29 cents—so much pure "velvet" for the miller's pocket. And yet they are industriously circulating the hint that the 1916 wheat is not millable.

#### "NOT MILLABLE" THE MINNEAPOLIS STORY

The Minneapolis Journal seldom misses an issue in which it does not in some way lay stress upon the assertion that the mills can not get flour-making wheat in the Northwest and have to scour the remote corners of the country for it.

But they are getting it right here in the Northwest, and as long as they can pile up such easy profits by keeping the farmers in ignorance, by discouraging them with their crop, they will not share a penny of it with the farmers. For the week ending September 16, flour in Minneapolis was quoted at \$8.10 to \$8.60 for best patents, down to \$6.50 to \$6.90 for first clears. Taking the minimum and maximum quotations on fancy and second patents, fancy and first clears, and striking an average the price of flour that week was \$7.50 per barrel. The reason that an average for the week is taken, is so that no extreme conclusions will be drawn, so that the figures will be fair, and be within the facts rather than outside. It is more likely the flour made from this kind of wheat goes into the fancy grades.

It has just been shown that the value of one bushel of this rejected wheat of the 1916 crop is worth to the miller for making flour, bran and shorts, and for its screenings, \$1.77½ per bushel. Dr. Ladd's experiments showed that it would take four bushels and 55 pounds to make one barrel of flour, or to produce a flour value of \$7.50 if the average is used. Four bushels and 55 pounds would be worth to the miller \$8.72. In other words the miller could take this kind of rejected wheat and convert it into flour, and without mixing any more expensive wheat with it,

produce an excellent flour of fine color, fine texture, and fine loaf-volume, sell it at the present high market prices for flour and have left over besides \$1.22.

So much for the "millable" quality of the 1916 rust-shriveled wheat.

#### NORTH DAKOTA NO. 4 IS A HIGH GRADE WHEAT

While this is figured on the poorest sort of wheat—rejected, there are telling figures for the better grades. For instance another sample on which

the complete figures have been worked out was graded as No. 4 and weighed before cleaning 52.5 pounds per bushel and three pounds more per bushel after cleaning.

Figuring out milling and cleaning losses, this No. 4 produced 63.03 per cent of flour, which is above the percentage considered standard. Its loaf-volume was 2400 cubic centimeters, its color score 92, and its texture 93, all high above the standard limit. This wheat figured out a value to the miller of \$1.80 per bushel including its screenings, or one-half cent less without the screenings. Deducting the 30 cents per bushel for cost and profit, \$1.50 is left.

But on September 18, this grade of wheat was quoted at only \$1.39½, the miller after milling it, reserving about 11 cents in "velvet" and still keeping up the hue and cry about the poor mill quality of the 1916 wheat.

Another sample of this season's light-weight wheat graded rejected, which has been milled, but for which complete figures have not been compiled, yielded before cleaning only 34 pounds per bushel (after cleaning 43.5) but it gave 52.15 per cent flour, 21.12 per cent of bran and 25 per cent of shorts. What kind of flour did this shrunken, feather-weight stuff produce? Perhaps the ordinary farmer would think by looking at it that it would be no good for flour—and that is what the millers want him to think. But the big millers who are buying this kind of wheat in Minneapolis and elsewhere know exactly how much and what kind of flour it makes. This grain gave flour 90 per cent perfect for color, and a loaf that was 95 per cent perfect in texture, and had a volume of 2340 cubic centimeters. This is a record that every baker and miller would acknowledge is above the standard—and it was made from wheat of such shriveled up berries mixed with so much straw and chaff that the buyer would have no trouble in convincing the grower that it was worth practically nothing.

#### MILLING TESTS AGAIN PROVE INJUSTICE OF THE GRADES

Facts being newly gathered again on this season's crop simply corroborate (Continued on page 20)



Here are the two electric ovens where the bread is baked, and a row of the tins are shown lying between them. Bread making for scientific purposes at the A. C. is conducted more carefully than in any ordinary household. Exactly the same weight of flour, yeast, salt and sugar is used for every loaf, and uniform tins are used for baking. It is all "raised" from the same brand of yeast in an electric warming oven of uniform temperature throughout. The only variant is the amount of water necessary to make the dough, this differing with different varieties of flour. After baking, the loaf is put into a standard container somewhat larger but similar in shape to the baking tin, and pure flax seed is poured around it, and leveled off at the top. Then this flax seed is accurately measured, and its volume subtracted from the total volume of the container. What is left is the space occupied by the baked loaf, and gives the "volume." Flax seed is used because it settles better and more uniformly than any other substance.