

9-10 EDWARD VII., A. 1910

*By Mr. Currie (Simcoe):*

Q. You having been interested in this matter would have the advantage of studying the question from the bulletins that have been issued by the Department of Agriculture of the United States. Is it not Mr. Wiley who is the chief there?

A. Mr. Wiley is the chief chemist.

Q. Did he not give some reason for the ruling? He never does anything of that kind without giving ample reason for doing so.

A. The ruling was made I understand by the Secretary of Agriculture. I do not think that full and convincing reasons for it, based on careful investigation, have ever been given to the public.

#### BAKING STRENGTH OF DAMP WHEAT.

The last subject I wish to speak of is the investigation into the baking strength of wheat which has been damp or wet, and which appears to have been injured in that way.

In the last Annual Report of the Experimental Farms I published the results of the first series of tests, which lead to the following rather remarkable conclusions:—

‘The conclusion which must be drawn from this series of experiments is that dampness in wheat although very injurious to its appearance does not necessarily injure, but under some conditions actually improves the intrinsic value (to the baker) of the straight grade flour produced from it. No doubt injurious action of the moisture would commence earlier at higher temperatures than it did in this series of trials, but on the other hand it should be remembered that the amount of moisture present in the wheat in these tests was greater than that usually found in ‘damp’ or ‘tough’ wheat.’

I may say the wheat was stored under cold conditions (above frost, however), and kept extremely damp, and that the baking strength of the straight grade flour produced from it—(that is to say all the flour which could be considered good for bread making)—was greater in some of the samples which had been kept extremely damp than it was in the original wheat. A sample kept for twenty days so damp that it could almost be described as wet made distinctly superior flour to that obtained from the original sample. After twenty-seven days the wheat was quite musty and spoiled and made very poor flour. Some of the conclusions drawn from this series of tests were so unexpected that it was thought advisable to make further experiments. What we wish to find out is whether wheat injured in appearance by being wet in the stook will make good bread. Further tests are being made this winter and I am able to make a preliminary report this morning on one series of experiments.

I have a bright, hard sample of Red Fife from Indian Head which was soaked in water three hours every day, and then spread out and dried in an ordinary, heated room for 21 hours. This was repeated every day for eight days. After one day, two days, four days, and eight days portions were dried off, and ground and baked. I have brought for your inspection a sample taken after the fourth day. You will see that it is dull and soft looking—entirely different from its original condition. It weighs 4 lbs. less to the measured bushel than the original wheat. The baking tests of these samples are only half done, but the indications are that they will fall in line with last year’s tests. That is to say that the baking strength of this wheat has not been injured, but rather improved by a certain amount of wetting and drying. I must interject, however, this statement that in all my baking tests what may be termed ‘plain bread’ is made. Packers often add to the flour malt extract or malt flour as well as lard and other materials. In using such additional ingredients the results of the experiments might be altered. If this improvement in the flour from wheat which has been wet is due to the production of those products which accompany malting, then while we may have an advantage in the bread made from such flour when