

tional conditions named, all the varieties sown ripened prematurely. Red Fyfe and White Russian in 84 days, and White Fyfe in 88 days."

The quality of the Ladoga wheat is another very important consideration. The very high character of the Red Fyfe wheat grown in the Northwest, and the excellent quality of the flour prepared from it, has created a demand for this wheat at the highest market prices, and it is of the utmost importance to the whole country that this good reputation be maintained. The Northwest of Canada, the Northwestern United States and the Northern provinces of Russia, appear to be the only countries in the world producing those high grades of hard wheat required by the best millers everywhere to mix with the softer grain from other countries; and the introduction of any wheat of a manifestly inferior quality, which would tend to lower the standard of Canadian wheat, would be highly impolitic. The object in view in introducing the Russian wheat referred to, has been to combine, as far as possible, good quality with earliness of ripening. The original importation of Ladoga is a hard wheat with an admixture of a few softer grains. It has been submitted for opinion to a number of experts, the majority of whom place it in a grade known as "No. 1 Northern", one grade lower than "No. 1 Hard;" and estimate its value as about four or five cents per bushel less than the best Red Fyfe, but some of the samples grown from this seed have improved so much in quality and weight as to entitle them to grade with grain of the highest quality.

The influence of climate is no doubt an important factor in the production of these high grades of wheat, and the excellence of quality is believed to depend on the presence of an increased proportion of gluten, but the relative quantity of this can only be determined satisfactorily by chemical analysis. For some months past, the chemist attached to the staff of the experimental farm, Mr. F. T. Shutt, has been engaged in making such analyses and a full report of the results he has obtained will shortly be published. The work is sufficiently far advanced to enable me to say that, although the relative proportion of gluten does not in all cases correspond with the grading of the different samples by experts, the results are very interesting and show that the Ladoga wheat, in this respect, compares favorably with the best varieties. Mr. Shutt's work shows that variations occur in the proportion of gluten, in the same wheat grown in the same climate, to an extent which would lead one to infer that soil also is an important agent in bringing about these modifications. The Ladoga wheat is not so bright in colour as the Red Fyfe, but whether this will be regarded as an objection by millers can only be determined by submitting a sufficient quantity of the grain to be ground into flour.

The following samples are submitted for inspection:—

- (1.) The original importation of Ladoga wheat, which weighs $61\frac{1}{2}$ lbs. to the bushel, and is graded as about equal to "No. 1 Northern."
- (2.) Sample of the same grown at Binscarth by Mr. G. L. Smellie, weighing 65 lbs. to the bushel, and graded by Mr. W. Ogilvie, of Montreal, as "Extra No. 1 Hard."
- (3.) Sample of the same grown on Poor Man's Reserve, Touchwood Hills, N. W. T., by Mr. H. Keith, weighing $64\frac{1}{2}$ lbs. to the bushel, and graded by the same expert, as "No. 1 Hard."
- (4.) Sample grown at Wolseley, by Mr. Wm. Gibson, who raised the largest crop of any person in the Dominion, 236 lbs. from three pounds of seed. Mr. Ogilvie regards this