

this demand, stock must be fed on a large scale. The feeding process implies the manufacture of manure, and as that increases, the productiveness of our soil will also increase. With heavier crops, the use of machinery will pay better, the burden of debt will grow lighter, and farming will become a more attractive and remunerative business—less a matter of toil and plod, more a matter of knowledge and good management. A better style of farming will take the place of the old slipshod methods; brains will be in requisition on the farm as well as in the city marts of business; it will be seen that a good education is not thrown away at the plough-tail; the exodus of our young people from the country will be checked; and agriculture will assert itself as the grandest of all the avenues to wealth and fame. Such is the agricultural outlook as beheld from the editorial chair of the RURAL CANADIAN.

WHEAT FROM THE FAR NORTH-WEST.

Hardly have the farmers of Eastern Canada and Great Britain fully taken in the truth as to the suitability of the great North-West for wheat culture, and the cheap rate at which the staple grain could be raised, than another startling fact presents itself for acceptance. Owing to the peculiar character of the climate for the purpose, it now appears that wheat-growing in Manitoba and the regions around and beyond, out-distances all competition in the quality of the product. A writer in *Harper's Magazine* for September puts this matter in a very forcible light by a comparison of the grades of wheat that found shipment at Duluth, the great shipping point for the Red River country, and at Chicago, where the more southerly districts pour in their grain product. At Duluth, last year, eighty-seven per cent. of the wheat was grade No. 1, and eleven per cent. grade No. 2, leaving but two per cent. of grade No. 3 and rejected. At Chicago, only one per cent. of the wheat was grade No. 1; fifty-three per cent. was grade No. 2; thirty-four per cent. was grade No. 3; and 12 per cent. rejected. But Duluth No. 1 was counted better than Chicago No. 1, for when they met in a common market at Buffalo, Duluth brought \$1.18 per bushel, and Chicago \$1.14. The same relative valuation was put on the other grades. Wheat grown in Northern Minnesota, Dakota, Manitoba, and the North-West Territory, makes a better article of flour than that produced farther south. Bakers and private consumers recognize its superiority, and are willing to pay extra for it. The bread made from it is not only whiter and more nutritious, but a given number of pounds will yield more loaves. These are important and significant facts, and they have only come out quite recently. Formerly the northern wheat brought a lower price than that grown farther south. But the Minnesota millers hit upon improved processes of manufacture. These processes have been adopted throughout North America, and have even found their way to England. As the result, the claim of the great North-West to be considered the wheat field of the world, is now generally admitted by all competent judges. A rivalry is established which will put Eastern and British farmers to their utmost stretch of agricultural skill, and were it not for the freightage charges, they would be practically out of the race. But the cost of transportation, especially under the tariffs of the Canada Pacific and other monopoly roads, will give Eastern and British farmers a leverage of advantage, over which the superior quality of north-western wheat will have all it can do to triumph. In this country, the force of circumstances will compel the raising of wheat only on our best soils; and will divert the energies of our farmers in the direction of stock-raising, dairying, and fruit-growing. The great law of division of labour will assert itself.

Under its operation the North-West will provide the world's bread, while other sections of this country will find the human family in cheese, butter, meat and fruit. Productive industry will discover its proper fields and work them, so that the world's great mouth may be filled with food.

NEW DEVICES FOR TESTING MILK.

The Feser lactoscope is one of the latest instruments to test the comparative value of milk. By the lactometer the purity of the milk is not definitely ascertained, hence it is not satisfactory. The Feser lactoscope—so called from Prof. Feser, its inventor—takes advantage of the fact that the greater the amount of butter fat in the milk, the greater is its opacity. A correspondent of the *Country Gentleman* gives this description of this device:

"It is a glass tube closed at the bottom, which is somewhat contracted and open at the top. A small tube of milk-white glass, closed at both ends, is fixed in the bottom of the large tube, so that there is a free space between the small tube and large one. The white glass is marked with dark lines. The large tube is graduated in its upper part so as to show cubic centimeters on one side and the per centage of butter fat on the other. A cubic centimeter of the milk to be tested is put into the contracted lower end of the large tube, and occupies the space between the sides of the large tube and the white glass of the inner tube. The black lines cannot be seen through ordinary milk. Water is added until the lines become visible, and the point at which the mixture of the milk and water stands on the butter fat scale shows the percentage of butter fat in that sample of milk.

"Dr. Voelcker, who has an article on this lactoscope in the *Journal of the Agricultural Society of England*, says: 'In most cases it shows without much trouble, in a few minutes, an approach to the real proportion of butter fat in milk, sufficiently near to enable an observer at once to form a pretty good estimate of the comparative value of different samples of milk.' Hon. X. A. Willard imported one of these instruments for his use, and he writes: 'I have tested the instrument since January. * * * So far as my experiments have been made, I have not failed in a single instance in getting satisfactory results, in all cases obtaining true indications, or a close approximation, of the quality of butter to be secured in setting any sample of milk.' Dr. Miles, in charge of Houghton Farm, brought back some of these instruments on his return from Europe last autumn, and has tested them thoroughly in his dairy. He tells me that with them a person can come within a small fraction of one per cent. of the amount of butter fat present, and it is so easily employed that any one can test milk in a very few minutes."

Another device, very simple and reliable, in showing the richness of milk, says the *Prairie Farmer*, is Heeren's Milktester, made in Hanover, Germany. We have seen this little device. It consists of a round, flat gutta-percha base, about two and a half inches in diameter, with a small circular space in the centre three-fourths of an inch across, on which a few drops of milk are placed. A circular piece of glass corresponding in size to the gutta-percha is colored in sections, and marked to correspond with color of cream, very rich milk, milk of normal quality, poor milk, and very poor milk. The centre of this circular piece of glass—which corresponds in size to the small space on the gutta-percha circle—is left clear so that the milk beneath it is visible. Through this clear circle the milk or cream is seen, and its relative richness in butter fat is determined by its colour through the clear glass. Cream gives the colour of cream, the dark colour of the gutta-percha beneath the sample not affecting its shade. Milk very rich in butter fat gives a darker shade, and the poorer the quality the darker its shade, as the background underneath it discloses its lack of density or richness. We have seen no one who has used either of these devices, but both of them seem practicable. The latter cost less than the former.

THE OLD FOLLY REPEATED.

The Portage la Prairie *Review* says:—

"Perhaps no more convincing proof can be given of the extraordinary fertility of the soil of this country than by the fact that although in many cases lands around the Portage have been cropped from twelve to twenty years in succession, the removal of the stable manure of the town is a matter of serious consideration for the Council. None of the farmers will have it, nor care to have it put upon

their lands, and it is being used to fill up hollows on the roads and highways, after large prices being paid for hauling away."

The above proves more than the extraordinary fertility of the soil in Manitoba. It proves also the extraordinary ignorance and improvidence of the farmers around Portage la Prairie. Time was when the same kind of folly was enacted in Ontario. Manure was left in unsightly heaps, or dumped into creeks, rivers, and lakes. Now it is the scarcest article of agriculture. The day is not far distant when Manitoba farmers will wish they had hoarded every speck of manure with miserly care, and used it to keep up the extraordinary fertility of their soil.

We wish specially to direct attention to the advertisement of Messrs. Warwick & Son, who are the Canadian publishers of several deserving English periodicals. No rural home in the Dominion, lightened by the presence of young folks, should be without the regular visits of the "Boy's Own Paper" and the "Girl's Own Paper." The other publications from the same house are first class.

WHAT IS SAID ABOUT US.

We have no doubt it will be well worthy the patronage of Canadian farmers, and we cordially recommend it to them. —*Lindsay Post*.

The good name of the publisher is a sufficient guarantee that the new journal will be equal to the best of its class. —*Strathroy Despatch*.

The price of the paper has been placed at the low sum of \$1 per annum which ought to be sufficient inducement for every farmer to subscribe for it. —*Peel Advocate*.

There is a guarantee of its value in the fact that the editorial pen will be in the hand of Mr. W. F. Clarke, one of the best authorities on agricultural subjects in Canada. —*Port Hope Times*.

It pays every farmer to take a good paper devoted to agricultural and kindred topics. Feeling that there is a field for such a publication in Ontario, Mr. C. Blackett Robinson, the enterprising publisher, has decided to shortly issue THE RURAL CANADIAN, a semi-monthly journal. —*Toronto Evening News*.

The journal will have a strong backing financially, and an able editorial staff has already been secured. A first-class fortnightly for Canadian farmers is sure to find a good constituency of readers, and at the low price of one dollar a year it can hardly fail to obtain a large circulation from the start. —*Toronto World*.

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Indispensable to every Farmer, and which only requires to be seen to be appreciated.

The *London Advertiser*, in noticing the book, says:—"So specific are many of the details entered into that each chapter may almost be considered a text-book or hand-book on the particular subject concerning which it treats. . . . Is profusely illustrated, and the engravings will no doubt be useful in guiding many readers to a clearer comprehension of the text than they would otherwise obtain."

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