

### The Exhibitions.

The Industrial, which will be held in Toronto 10-20 Sept., bids fair to be quite as successful as any previous show. It has always drawn an immense number of exhibitors and visitors, and the managers are putting forth every effort to make the affair even more successful than any of its predecessors. The British Association, which will visit this continent in its official capacity, will attend the exhibition. This is probably the largest and most important body of scientists that has ever visited this continent, and it is expected that no less than one thousand members will leave Europe to attend the annual meeting at Montreal.

The Western Fair Board are making unusual exertions to make the London Exhibition more attractive than ever. It has always been one of the most popular agricultural exhibitions in Canada. Its convenient location and superior facilities have added greatly to its popularity. London is admirably situated with regard to railway conveniences, trains arriving and leaving from and to all quarters at all times of the day, and the city is in the centre of one of the best agricultural districts in Canada. Fuller particulars will be found in our advertising columns.

The Provincial to be held at Ottawa from the 5th to 13th Sept., will receive \$5,000 from the Dominion Government, and this amount judiciously applied, together with the Ontario Government grant, should insure grand success, and enable the directors to offer such a list of prizes as will create keen competition amongst exhibitors, more especially when it is considered that arrangements have been made for greatly reduced rates on the Grand Trunk Railway.

### How to Save the Manure.

NO. I.

One of the greatest losses which occurs on the farm is the prevailing practice of treating the farm-yard manure. Before the farmer makes up his mind by which method he should restore the fertility of his land, whether by an improved mode of manipulating the manure heap or by the use of special fertilizers, he should make a careful calculation as to the waste incurred, so that he will be able to form a guide as to the amount of expense he will be justified in incurring. Not many years ago the value of farm-yard manure based on chemical analysis was ignored by our farmers, but now that artificial fertilizers, if judiciously applied, have been proved to be a profitable investment, the chemical standard can no longer be rejected; for if the farmer allows so much nitrogen, phosphoric acid and potash to run to waste in the form of farm-yard manure, he must pay a marketable price, based on chemical analysis, for these identical materials in the artificial form. But the question to be settled is, Will the price of the extra labor incurred in saving the farm-yard manure pay for an equivalent in artificial fertilizers? This is what we wish particularly to introduce to the farmer's notice in such a manner that he will be able to make calculations to suit his own particular circumstances.

Analysts have found that the difference between the values of the solid and the liquid excrements of cattle is but a trifle, the small bal-

ance being in favor of the solid voidings. Farmers usually urge that farm-yard manure is the best kind of fertilizer, as it contains all the elements necessary for plant food. This would be sound logic providing none of the constituents were permitted to run to waste; but some portions being more soluble and volatile than others, it is plain that manure, under the existing mode of treatment, cannot preserve its well balanced character. The urine of our domesticated animals holds nearly all the nitrogenous compounds, with some phosphoric acid, potash and soda, and all the urine is usually wasted, so that our farm-yard manure is deficient in this most valuable part of plant food. The solids hold the phosphoric acid, lime and magnesia. It has been shown by analysis that a ton of liquid manure contains 17½ lbs. of nitrogen, 10 lbs. of phosphoric acid and nearly 16 lbs. of potash. Counting each at the market price, it will be found that a ton of urine is worth \$5.30; and a ton of solid manure, as before stated, has about the same value. A cow well fed will void four tons of liquid and ten tons of solid excrement in a year, which according to the above figures, would be worth \$42.40. At these figures it is no wonder that shrewd farmers are satisfied with the manure of their stock as clear profit.

It has further been estimated that three-fourths of the manure in this province, under the ordinary mode of management, is wasted. This stands to reason; for nearly all the urine runs to waste, and it is a low calculation to estimate that one-half of the remaining juices is washed away by the rains of an average season. Let us now reduce the average farmer's stock to its equivalent of cows, and suppose the number to be fifteen. These are usually stalled seven months in the year, and counting from the data already given, it will be found that the total loss amounts to \$278.

Should the farmer think this valuation too high, or the loss too great, let him make a comparison between the above figures and the market price of farm-yard manure. The average price which the farmer or the gardener pays for livery-stable manure is about \$1.00 per load or ton, and on the average of distances it will cost him .5c. to haul it. But he pays \$4.00 for a load of manure of which three-fourths of the substance has been wasted, making the original load worth \$4.00, without including the cost of teaming; and this amount is almost exactly \$1.00 per ton more than the chemical valuation, based on the analysis of the manure, reckoning a ton to be the solid and liquid portions mixed in the proportions in which they are voided. It will thus be seen that the farmer who purchases manure from town or city stables at \$1.00 per ton pays a higher price than its equivalent in artificial fertilizers would cost. In other words, a ton of barn-yard manure at 75 cents has the same fertilizing value as 75 cents' worth of chemical fertilizers, and the cost of carriage would almost invariably be in favor of the latter.

For the benefit of those farmers who can now calculate the profits that would accrue from an economic mode of treating their manure heap, we shall describe the different systems of treatment in our next paper.

### Private Dairies vs. Creameries.

The existing practice amongst country storekeepers of paying the same price for all classifications of butter from their customers has a most pernicious effect. Bad butter being more easily and cheaply made than good, the real competition is in the production of bad butter. The farmers who make the first-class article soon get to know that the storekeeper makes no discrimination in their favor, and they would be acting detrimentally to their financial interests if they continued making genuine stuff; but in some instances the storekeeper has made the desired discrimination, and the effect has been an elevation in the butter tone of the whole neighborhood.

Before the age of creameries many farmers had select customers in the surrounding towns or cities for the consumption of their butter, and in this way many a pound of gilt-edge butter was made for which fancy prices were received. This led to the establishment and improvement of many a private dairy on an extensive scale, out of which large profits were derived. The names of these private dairies soon became widely known, and their stamp was a guarantee of the superiority of the article.

This was the natural system of improvement, and there was then no thought of dishonest methods; indeed, the system did not admit of any trickery. Creameries, government interference, etc., are now destroying the natural channels of the trade. Creamery butter has a uniform quality, uniformly good, let us admit, and brings from two to five cents a pound more than privately made butter. Superficially considered, this appears to be a laudable result; but the objections to the system are almost insuperable. Under private gilt-edge butter-making there was a strong incentive to dairy improvements of every character, habits of cleanliness, quality of food and water, and many other items of a seemingly trivial nature, all having been of considerable importance in establishing the reputation and enhancing the profits of the dairyman, and the tendency was to make the manufacture of the inferior article a profitless pursuit. For all parties concerned this was the most desirable state of affairs that could be conceived. Under the creamery system there is a relapse to the shopkeeper principle. The tainted and the untainted cream is all one. There is a bidding for as many patrons as possible, and the farmer with the dirty, scrubby herd is usually the most anxious to become the leading patron, his milk or cream being put on the same footing as that of a superior quality, so that the tendency is again towards degeneration instead of improvement. Creamery butter being the boom, private dairymen receive no higher price even when their make is of superior quality, and the tendency is to degrade them to the level of their most reckless neighbor so far as the quality of their product is concerned.

Nor is this all. Both the system of selling cream and that of selling the milk to the creameries are attended with serious objections which would take a volume to explain in detail. In addition to the danger of obtaining unhealthy milk or cream from diseased, miserably fed cows, under the management of farmers of uncleanly habits in their dairy operations, there is