

Erin Farmers Club: "Problem of Agriculture in Canada."

Under this heading Mr. Johnson, President of the Ontario Agricultural College, delivered the inaugural lecture of the winter series of meetings of the club. We omit his introductory remarks, wherein he explained the title given to his lecture. The distinction between production and exchange was shown and the equation of demand and supply making a market explained.

The foreign market was then brought under consideration. The costs of our imports was to be judged by two variables—the quantity of our commodities given for them, and the cost to us of those commodities. Our exported agricultural commodities were arranged under the heads of Live Stock, Dead Meat, Dairy Produce, Skins, Field Products, and Breadstuffs, and the lecturer gave by careful compilation and calculation from the latest returns the quantity with value of each of those classes, and showed the cost to us of those commodities. From the consideration of the problem in this respect it was clearly proved in the first place that it was to our advantage to trade as far as possible with Great Britain and the West Indies; that whatever might be the present benefit of trade with the United States, we were by it diminishing our competing power in the common market of the world; enhancing the cost of our own commodities—because in trade as well as in treaties, it was shown that they got the advantage; and that by sending such a large proportion to them of field productions in the shape of barley and rye, we were really exporting our power of future production, owing to the operation of the law diminishing return from an impoverished soil. And in the second place it was shown that our advantage lay in exporting less of raw material, and far more of animals and other produce.

The lecturer then proceeded to consider the subject as a problem of production, and stated it somewhat as follows:—How shall we increase the aggregate of our surplus produce for the support of a non-agricultural population at a proportionately less cost of production? The factors entering on the one side were three fold—a decreased fertility of soil, a change of climate, and the operation of the law of diminishing return. This law was explained as meaning that after a certain stage the application of increased capital and labour to the soil did not result in a proportionate increase of produce thus placing agriculturists at a disadvantage with all other industries in which an increase of capital and labour was applied. The great factor on the other side of the problem was shown to be the progress of agricultural knowledge, skill, and improvements. And the result of their progress was shown to be two fold, in the first place diminishing the cost of production by diminishing the labour and expense requisite therein; and in the second place enabling the land to yield a greater absolute produce without an equivalent increase of labour. Under the former was classed the value of the improved construction of tools, the introduction of all implements saving manual labor, improved means of transport, and improved processes of manufacture. Under the latter was shown the value of all elements in better farming, such as disuse of fallows, improved seeds, good rotation, application of better fertilizers, under draining, improvements in breeding and feeding cattle and experiments in agriculture. Here the great value of our new Live Stock trade came in as a factor in the problem of production by feeding the soil. And finally, the value of the individual was dwelt on as the last factor in this aspect of the question, showing the vast importance of greater energy of labor, greater skill and knowledge, superior intelligence and moral trustworthiness of the individual producer.

The Toad.

The whirligig of time brings about strange reverses, and among them may be noted the recent accession into favor of the long-despised and much-maligned toad. For centuries these harmless animals have been persecuted and reviled till their very name has passed into a by-word descriptive of disgust and loathing. At last, however, their unobtrusive virtues are obtaining recognition, and the value of the unsightly toad as an insect destroyer is now generally admitted. At the present time a "toad market" is held regularly in Paris, once a week, on an open space of ground in the Rue Geoffrey St. Hilarie, at the back of the Jardin des Plantes, whither the dealers in this novel article of commerce bring their wares, carefully assorted according to their strength and size, and packed by the hundred in baskets of damp

moss. Whence the supply may be derived is as yet a mystery, but it seems clear that they are not over-abundant, since those of moderate size find ready purchasers at prices ranging from seventy-five to eighty francs per hundred. By far the greater portion of them are bought up for the use of English market gardeners, and it is stated that orders are to hand at Paris for the purchase, at current rates, of every basketful sent to market. *London Farmer.*

Pedigree Seed.

Mr. F. F. Hallett, of England, the originator of the famous pedigree wheat, in describing his process of selection, says: "During these investigations no single circumstance has struck me as more forcibly illustrating the necessity for repeated selection than the fact, of the grains in the same ear, one is proved to excel all the others in vital power. Thus the original two ears contained together 87 grains, which were all planted singly. One of them produced ten ears containing 688 grains, and not only could the produce of no other single grain compare with them, but the finest ten ears which could be collected from the produce of the other 86 grains contained only 598 grains." That this process of selection need not deter any one from using it, from the slowness of the results, it is stated that Mr. Hallett had one field of seven acres sowed with the produce of a single grain planted two years before; but Mr. Hallett in his seed growing plants thin, in one case planting at the rate of but 10½ pints per acre.

Who will give the American farmer a pedigree wheat which can be depended upon to double the crop? The thought is a reasonable one, and the man who first succeeds will reap success for himself and others.

GOOD THINGS ABOUT RYE.—A writer in the *Chicago Times* says: "Rye will grow and produce fine crops far north of the degree of latitude where wheat will fail. It is, indeed, one of the most hardy crops that is cultivated. In regions where fall-sown wheat is almost sure to be killed, fall-sown rye is almost sure to survive and do well. Throughout the prairie region of Illinois very little wheat went through last winter without injury, but rye came out all right and generally produced good crops. In many places where wheat was ploughed up last spring, rye yielded twenty-five or thirty bushels to the acre. Rye will grow and produce very fair crops on soil so poor that little else will yield enough to pay for harvesting. It delights in dry, sandy soils, and will yield a return for the labor and seed on land that will produce little but white beans. There are many thousands of acres of land in different parts of the West, that yield hardly anything, that would produce paying crops of rye if it was sowed. Southwest of this city rye is grown on land that will produce no paying crop of any other grains. Rye is one of the best grains to sow where it is desired to seed the land down to timothy, clover, or other grasses. It has little foliage as compared with oats and wheat, and accordingly does not shade the ground so much. It allows sufficient sunshine to reach the soil to cause the young grass to grow very well. After the crop of rye is harvested the young grass is not likely to be burned up, as is the case when wheat and oats are cut. The change is too violent when wheat and oats are cut, and often the young grass is entirely lost."

The fields under fall crops, in stubble and in grass, will need to be ditched wherever water would remain on them. Standing water kills vegetation, running water enlivens it, and in running water should be included the rapidly percolating rainfall. Fields that are not tile-drained must be surface-drained by plow furrows made in such a way that the water is carried off gently and without such rapidity as would cause washing of the soil. Tile drained fields may be greatly benefited by occasional furrows from low spots between the drains leading to the surface over the drains where the water will rapidly sink away. These furrows should incline gently, in the form known as "hering-bones," from the head to the foot. Upon a hillside the furrows should pass diagonally down the slope, with very little fall, and the bottom of each furrow should be sloped back towards the hill, so that the water may not flow over the edge of one furrow and, running directly down the slope to the next furrow, cause that to overflow, and finally a "wash-out" be made, which will cost some labor to fill. In this a very little care may prevent a great damage.—*N. Y. Times.*

An English correspondent, writing on the 20th ult., remarks that the food trade between the Dominion and England is growing rapidly. He describes the shipments by that week's Dominion steamer as being one of the most varied and extensive "food" cargoes that has yet arrived in the Mersey.

The benefits derived from the labor of some insects should not be overlooked; some species feed only on noxious weeds, and others prey on still more noxious insects. One of the greatest friends of the agriculturist is the family of ichneumon flies, which lay their eggs in the bodies of living caterpillars, in which they are hatched, thus destroying them.—*London Times.*

REMARKABLE FERTILIZERS.—The agricultural experiment station at New Haven has just published a synopsis of its work from July 1st to October 1st. During that time it has examined and analyzed thirty-one different fertilizers, and among other interesting results, has discovered that two kinds of patent manures, which had been largely sold by a certain firm for \$32 per ton, cost but 90 cents and \$1.03, respectively, to manufacture. These "fertilizers" consisted chiefly of mud, which was dug up from the seashore at low tide at little or no cost.

CARTS.—We often wonder why farmers in this country do not use the cart more; it is far more handy for loading and dumping manure, soil, roots, etc., than the wagon, being more easy to load, and especially to unload. A cart can be quickly loaded and dumped, and only requires one good horse to draw it. In England carts are in constant use, being very popular in the harvest field. We are glad to see that dumping wagons are employed on many of our farms. This loading manure from a barnyard and hauling it by wagon a few hundred yards, to be unloaded fork-full by fork-full, is a waste of time and labor of both man and beast.

THE SOUTH AFRICAN INTERNATIONAL EXHIBITION.—Preparations for this exhibition, to be opened at Cape Town, on the 15th of February, 1878, are progressing. To intending colonial exhibitors it may be of advantage to state that the charges for space, per square foot, or fraction of a foot, in the main building, are as follows: Floor space, 30s.; wall space, 15s.; but the minimum chargeable to each exhibitor is fixed at £10 10s., how small soever the space actually occupied. The square foot only gives the right to one foot of frontage. All applications must specify the number of feet required in frontage and depth. The rates charged for space are based upon the expenditure involved in organizing and conducting the exhibition, as well as the cost of construction in England, and transmission and erection at the Cape of the building itself.—*Port Natal paper.*

SENSIBLE GRANGERS.—An interesting debate took place at Wallacetown on the evening of the 15th inst., between the members of the Iona and Wallacetown Granges. The subject chosen was:—"Resolved, That it pays the farmer better to use his surplus means in underdraining his land than in laying it out at 20 per cent. interest." The subject was thoroughly discussed by the leading men of both Granges, and was decided in favor of the affirmative, taken by the Wallacetownians.

DELIVERING GOODS.—The Manitoulin *Enterprise*, published in Gore Bay, says:—"Mr. Pontey, of the firm of Pontey & Taylor, St. James' Park Nurseries, London Ontario, has been on the Island for the past month delivering fruit trees. He delivered at this place several hundred trees, which gave entire satisfaction."

The superlative quality of our barley is becoming to be of universal celebrity, and its importance to the agricultural interests of this country has been heretofore considerably under-estimated. Not only in the United States is Canada barley preferred for malting purposes, but also in Great Britain, where it is beginning to be quite a favorite with some of the leading malsters and brewers of the United Kingdom. We have seen a private letter from Burton-on-the-Trent, England, which states that malt made from Canada barley has been used in a prominent brewery there, and has given such good satisfaction that in its subsequent brewing this article has alone been used. In New York to-day No. 1 Canada barley is worth from 15c to 20c per bushel more than the best six-rowed State. Last Tuesday 10,000 bushels of fancy Canadian sold in New York at \$1.05 per bushel. There has been considerable activity in barley at Toronto within the last few days, where it has advanced fully 8c per bushel, and the business in car and cargo lots continues at the advance.—*Morning Star.*