

FARMER'S ADVOCATE

AND HOME MAGAZINE

* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.*

VOL. XXXIII.

LONDON, ONT., AND WINNIPEG, MAN., FEBRUARY 15, 1898.

No. 448.

EDITORIAL.

Agricultural Possibilities.

It is calculated that some \$10,000,000 will be brought out of the newly discovered gold fields of our Yukon country this year, and the world has gone wild over the prospect. Millions will be spent in the mad rush for more, with the certainty that to the great majority failure will be their fate. But supposing the most hopeful calculations are realized, what does it amount to when compared with what is within easy reach upon the farms of the Dominion and is assured to the worker in perpetuity as long as the seasons continue to revolve and seed time and harvest meet the willing and faithful husbandman? The Province of Ontario alone on its eight and a half million acres of grain-growing land produced last year one hundred and fifty million bushels of grain, worth, at a moderate estimate, \$40,000,000. The grain crops of Manitoba last year would probably run up to nearly as large if not a larger amount, besides what all the other provinces contribute, making a total of probably \$300,000,000. Our exports of live stock and live-stock products, including cheese and butter, in 1896 were valued at nearly \$35,000,000, and the value of our exports of other agricultural products was \$14,000,000. These figures, it is safe to say, were largely exceeded in 1897, and the prospect for the present year is that all former records will be broken, since prices of all farm products have substantially advanced.

That it is in the power of the farmers of this country, under ordinary conditions, with little outlay, to increase the yield of their crops from ten to twenty-five per cent. by the use of well-selected seed of the best varieties and better cultivation is practically certain. Dr. Saunders' letter in this issue gives a useful epitome of Experimental Farm experience. The returns of the Bureau of Industry of Ontario for 1897 give the average yield in bushels of the different cereals as follows: Fall wheat, 25; spring wheat, 15; barley, 26; oats, 35; peas, 18; and the season was a good average one. Does this showing leave the impression that our farmers, occupying as good land as lies under the sun, are living up to their privileges? We trow not. Is it not reasonable to claim that the average yield of farm crops could be increased ten per cent. by sowing only the best selected seed of the best varieties and another ten per cent. by improved cultivation, making a total addition of twenty per cent. to the grain yield, which applied to the Ontario returns would be equal to \$10,000,000 in value? Multiply these figures by the grain acreage of all the other Provinces in the Dominion and the sum total will be found to be equal to the brightest dreams of the gold miner. There are in Ontario six million bearing apple trees, which, owing to inferior varieties and insect pests, yield only an average of fifty cents per tree. By top grafting with good varieties and spraying for the destruction of insect life and fungous growth, at a cost of five cents per tree, an average of two dollars per tree might well be reached. By the application of improved methods to grain-growing, dairying, poultry and fruit raising the returns from the farms of Ontario might be increased by twenty millions annually, or double the amount of the estimated output of the Klondyke gold mines.

The value of the live stock on the farms of Ontario, at a moderate estimate, judging by the returns of the Bureau of Industry, is over one hundred million dollars. Over fifty per cent. of these animals are ill-bred and of inferior quality and scarcely pay for the cost of raising. By the introduction of good blood, by the use of pure-bred sires, the value of our live stock could be increased by two dollars a head, at a moderate calculation, and the product of our cows by breeding and selection is capable of being increased by twen-

ty-five per cent., and by liberal feeding will more than pay for the extra feed and at the same time enrich the farms and make them produce still larger crops to feed more cattle, to make more money, to buy more land, to feed more cattle, and so on *ad infinitum*.

Farmers' Meetings in Quebec.

Hon. Sydney Fisher, Dominion Minister of Agriculture, has inaugurated during the present season in the Province of Quebec a series of meetings of which fifty or sixty will be held at intervals on the Farmers' Institute plan. Our readers will remember that at the session of Parliament a year ago Mr. Fisher's proposal to bonus creameries putting in a cold storage plant on plans approved by the Department was authorized and provision made therefor. In Quebec these arrangements did not appear to be understood thoroughly or appreciated, very few taking advantage of them. Consequently, the Minister felt that their importance should be more thoroughly emphasized in this particular way. Mr. J. C. Chapais, Assistant Dairy Commissioner, being French, takes a leading part in these meetings, assisted by Mr. Peter Macfarlane, Inspector of Cold Storage for the Agricultural Department, who also speaks French fluently. They give addresses upon stock-keeping and other agricultural topics as well. Mr. V. T. Daubigny, V. S., who is charged with work for the Minister in connection with bovine tuberculosis, attends some of the meetings, discussing that subject and the hygiene of stock, and Mr. Castel, Secretary of the Provincial Dairy Association, represents that body on the delegation and illustrates the addresses of Messrs. Chapais and Macfarlane with magic lantern views. Mr. Chapais has general charge of the work and holds meetings in the most important places where audiences of farmers can be got together.

The Law of Specialization Applied to Agriculture.

BY J. M'CAIG, PETERBORO' CO., ONT.

In these days of intense scientific curiosity it is a fashionable practice to investigate the condition of institutions in the light of their past progress and development. There is no subject to which the idea of evolution is not being fitted and applied. Certain laws are found to be constantly illustrated in evolution. In following the development either of life or of institutions it is found that the attainment of higher ends is always accompanied by a specialization of energy, or, stated conversely, higher and more complex products result from specialization. The jellyfish is a lower form of life than the insect. Organs are attained by the performance of functions, and the performance of different functions means a complex animal. The growth of manufactures has led to a specialization of the functions of men and has made a finer and higher and more complex and perfect product possible.

One would not be conveying startling information in saying that the product-in-chief of Canadian agriculture twenty years ago was grain, ten years ago beef, and at the present is cheese. One cannot tell the farmer any better than he knows himself that he could get a good price for wheat at one time, for beef at another, and for cheese at a later time. But if it could be shown that these changes illustrated the operation of a scientific law that perhaps would continue to operate it might prompt investigation into the probable changes, and so ideas might be acquired for future guidance.

In viewing the progress of agriculture even within the short period indicated it will be readily seen that grain production is simple and primitive in character compared with beef production, that beef is a higher and more complex product than

grain, because, from being the end in itself, grain has descended into a means simply for a higher end. It will be seen likewise that beef is built up on grain, that grain is the foundation for beef. Again, in the third stage cattle are the foundation for another product. They are not grown for themselves, but for what can be made through them, viz., cheese. This is exactly parallel to the attainment of the previous stage. It will readily be seen that milk is a higher and more complex product than either grain or beef, as grain and cattle are simply means to its production. Milk is a product of a special character compared to the other two. We have reached the stage at which agriculture stands at present. The question that naturally arises is: "Is it possible to make any forecast of the development following present conditions; is there any product obtainable from what we have now that would be in the direction of specialization?" Cheese consists principally of butter-fat and casein. Is it possible to make a more special use of milk than that of yielding these products? The finer of these two constituents is butter-fat, and it is found to be the chief constituent of butter. It is evident, then, that butter is a finer product than cheese and that the production of butter from milk is making a higher and more specific use of it than is made of it in the production of cheese. Accordingly, the natural thing to expect is that butter will supplant cheese as the product-in-chief of Canadian agriculture.

The theorist is always subject to more or less ridicule. Some years ago the writer was told that butter would never supplant cheese and that the theory advanced above would have to take a back seat in the face of stubborn facts. At present the stubborn facts seem to be falling in with the theory, though some years behind it. It is generally thought that though all cheese that is produced in Canada has not reached as high a point of excellence as it might (though still of high standard), that it has reached about to its height in profitability. Heavy production in the West and in the States is destined to reduce profits to a minimum. As soon as an article becomes a staple profits decline, except in the places of cheapest production. It seems that the time has come for Ontario to pioneer new fields, and the opening for this seems to be in the direction of butter production instead of cheese. The fact is that this tendency is already being shown in our exports for the present year. Cheese exports reach a value of fifteen million dollars, butter exports over five, which shows both a relative and absolute increase over previous years in favor of the latter product.

It may be urged by some who can never get rid of the idea of the practical that we must produce what the English market calls for. Many say an Englishman uses cheese with his bread and does not make much use of butter. It is true that cheese is a very important part of his diet. It is likewise true that in England, and in every other country under the sun, that each age is more discriminating and nice in its choice of foods than the age preceding it. From this it would appear that fine production and fine living are complementary and mutually dependent laws. It is, besides, evident from stubborn facts that the Englishman has become very fond of bacon of late years, and in such circumstances he will require less cheese. It seems a very apt time to notice that one of the best foods for producing lean bacon is skim milk, the part of it that is especially valuable in this respect being the casein or curd saved in the milk by making butter instead of cheese. So in sending the Englishman our butter and bacon we are keeping his diet much like it was when he got the butter-fat and casein combined in his cheese.

On the whole, it would seem that stubborn facts, together with the laws of specialization and selection that govern both production and consumption, point to a decided rise in the butter industry. The change from the production of cheese to that of butter is not a difficult one. In any change, however, it is well to be pioneers, as first profits are always best. There is no reason to look for a return to beef breeds of cattle, but rather for the cultivation of the breed or breeds of milk cattle yielding the greatest amount of pure butter-fat.