

most of the land in the Province of Ontario, that crop has been in many instances so often repeated, sometimes even for years in almost unbroken succession, that it has become, in some places, the most uncertain and precarious of all the crops of the farm. It is more than probable that, with a more thorough system of cultivation, and less frequent cropping with the same kind of grain, and with the observance of other salutary measures which modern science and improved practice now distinctly recognize, we should have comparatively little rust, mildew, smut, &c., which have of late years so alarmingly increased. Efficient draining of wet land, of which there is more or less to be found in all districts, is the beginning and basis of all agricultural improvements. On wet and heavy lands, deep culture even, and liberal manuring are almost thrown away. The introduction, therefore, of a judicious system of under-draining, wherever required, would aid in an astonishing degree all other appliances for developing the natural resources of the soil. This work of amelioration, however, in a new country where capital is scarce, labour dear, and produce often low in price, must necessarily be slow. But it is most obviously the interest of farmers and of the community to push this important movement on as fast as possible. All capital judiciously expended in draining will never fail of making a profitable return. Where tiles or stones cannot conveniently be obtained, boards or even boughs, or old rails might be advantageously employed. Before, however, underdraining is largely adopted in a new country, the scouring out of obstructed creeks and little streams, which are the natural channels of drainage, to improve the outfall, should be the first or preliminary operation. It is astonishing how a little sound attention to such matters, in some places, will relieve many acres of land of superfluous water lying on the surface during the heavy rains of autumn, or from the melting snow of early spring. It is pleasing to observe that drain tiles and pipes are now being manufactured by machinery in various places in the Province, of good quality and at reasonable rates.

If farmers in general were to reduce the proportion of arable land and cultivate a smaller quantity more thoroughly, with proper attention to manuring and the rotation of crops, they would produce as much, and in some cases probably more, than they now do, and have a larger breadth for the purpose of pasture, in which state it is well known that soils reduced by too severe cropping, slowly, but certainly, become renovated. Now, it is, in my estimation, to the extending of productive pasture, in connection with the breeding and fattening of stock and of the dairy, that we must mainly look for the means of renovating our exhausted arable lands, and of securing the advantages of an improved system of farming. Within the past year or two a great impetus has been given, in various parts of the country, to the production of cheese on the co-operation principle.

We regard this movement, if judiciously conducted, as a sign of healthy progress. The increase and improvement of pasturage will act beneficially on the growing of grain, for the more animals we keep the more manure we make, and manure is the farmers' sheet anchor; hence the chief motive to increase and preserve it from deterioration, a matter sadly neglected in this country. In order, however, to reap the full benefit of cheese-making, either in factories or private dairies, it will be essential to produce an article of first quality, which will always command a price more or less profitable, according to the well understood principle of the relative amount of supply and demand in accessible markets. Inferior butter or cheese will hardly ever bring a profit in any market; and to export such articles to England would injure our character for these products, and entail upon us an inevitable money loss. Skill, perfect cleanliness, and systematic attention, are essential qualifications for the successful carrying on of the dairy business; which is also naturally affected by the quality of the pasture and the different breeds of cows. A cross from a pure-bred Ayrshire or Durham bull and our best native cows, will be generally found to answer well. It is much to be desired that our domestic consumption of cheese should be increased, as it contains a large amount of strengthening and wholesome food in a small compass, specially adapted to people who undergo much physical exertion. If the people of this continent could be got to consume cheese at all in proportion to those of Europe, there never could exist the slightest danger of over-stocking the market. The consumption of cheese is, we believe, steadily on the increase, both here and in the United States, where its production is rapidly assuming gigantic proportions.

The improvement of live stock is among the chief objects which this Association seeks to promote, and those who are acquainted with its history need not be told, that in this, as in other important respects, its mission has been eminently successful. Much,

however, indeed, very much, remains to be done in this direction, both by the Provincial Association and its kindred societies throughout the Province. We have already, thanks to the public spirit of a few enterprising importers and breeders, as fine animals as can anywhere be found, whether horses, cattle, sheep or swine; which, if our farmers would more generally avail themselves of, the money value of the live stock of this Province would speedily be doubled. The surest and most practicable way of accomplishing this object seems to me the general use in all the more advanced parts of the country of pure-bred male animals, a thing now comparatively easy to what it was but a few years ago. Societies and individuals should do their utmost for the practical and speedy accomplishment of this most valuable object. As an evidence that something has already been done in this important direction, I need only refer to the Canadian Herd Book, a good, portly volume, just on the eve of publication, containing the pedigrees of several hundreds of short-horned cattle. It is a source of devout thankfulness that the European cattle plague has hitherto been kept from our shores; and although the prohibition which the Government saw fit to make in regard to importation has, no doubt, prevented a number of infected animals coming into the country, yet it must be felt that the imminent peril to which we were exposed fully justified the measure. Happily the plague has been stayed, and is now almost extinct in the mother country, where its ravages have been protracted and tremendous; the greatest caution, however, should be exercised for a considerable time to come in regard to importations, and a modified prohibition will have probably to be continued, till all chances of danger have passed away.

I may mention as a sign of progress, in connection with the improvement and enhanced value of farm stock, the Veterinary School that has been established in Toronto by the Board of Agriculture, for the benefit chiefly of the agricultural interests. You will be pleased to learn that its progress, though slow, is, nevertheless, constant and healthy. At the end of last term four pupils passed their final examination, conducted on the same principles, and embracing the same subjects, as those of Victoria College of London and Edinburgh, and obtained the Diploma of the Board. These young men, with the three that passed the previous year, are located in different parts of the Province, and have, I am happy to learn, already attained to useful positions. As our live stock increases in amount, and improves in quality and value, the services of men specially educated for their profession becomes every day more needed in cases of serious accidents or disease, and the owners of stock will find that in the end it is far cheaper to employ well-tested professional talent, than to trust to good luck or ignorant empirics. Last year there were fifteen young men in this school studying professionally. I may also observe that the Board has, with the assistance of some of the Professors in the University College, provided a certain amount of instruction in anatomy, diseases and breeding of live stock, and the scientific and practical principles of agriculture, specially adapted to young men intended for, or engaged in, Canadian farming. As this course occupies only six weeks in the depth of winter, and the instruction is free, it is to be hoped that more will avail themselves of so valuable an opportunity.

The establishment of an Agricultural Museum has been for some time in contemplation; but from one cause or other but little has yet been actually accomplished. It is much to be desired that such active measures should be adopted as will secure the speedy realization of so interesting and useful an object. A capacious hall is already provided for the purpose, which might be filled, in addition to agricultural productions, with specimens of our mechanical, manufacturing and artistic skill, in connection with the Board of Arts and Manufactures. These interests are already incorporated with those of Agriculture in this Association, and the arts and manufacturing products of the country have, for a long time, formed a most useful and attractive department of our annual Exhibitions. In this important respect, our Association exactly resembles the oldest organization of the kind in England—"The Bath and West of England Society, for the promotion of Agriculture, Manufactures and Fine Arts," whose operations and reports are widely known and appreciated. The blending of the results of our various industries in our Annual Exhibitions, greatly enlarges the sphere of their attraction and usefulness, and affords a practical illustration of the mutual connection which exists between all the great interests of a civilized and progressive people.

Nature, it is true, has adapted, in a special manner, this section of our Dominion for agricultural pursuits, and this great interest will probably continue the principal source of our wealth and prosperity for generations to come. But it should not be forgotten

that there is, perhaps, no country on the globe that possesses such magnificent water communication and power as are afforded by our numerous and extensive lakes and rivers, which constitute such a striking physical feature of the surface. The mineral resources of the vast, and at present a most unproductive tract of land, stretching north of the St. Lawrence to the shores of Lakes Huron and Superior, will in time, according to all human probability, become exceedingly rich, extending through the whole of British America to the distant shores of the Pacific. By developing their mineral resources, the agricultural capabilities of the country will, in due course, be brought out (and these are in many cases anything but insignificant), manufactures and commerce will spring up, so that what is now but an inconceivably vast wilderness, will, in time, become the scene of comfort and busy industry, and the home of a numerous and thriving population.

Fruit culture is a branch of rural economy that is beginning to receive more enlightened attention. There can no longer remain a doubt that, in sections of country bordering on the St. Lawrence and the great lakes, many of the choicer sorts of apples, pears and plums, can be successfully raised; and even the peach can be produced in favorable localities of a superior quality. The culture of grapes has of late years been rapidly extending, and experience has already decided that both our soil and climate are well adapted to the growth of this luxurious fruit in great perfection. Indeed, facts at present seem to indicate that Canada is destined to become a wine-producing country. The recent report of the Jurors on the sample of wine sent to the Paris Exhibition by the proprietors of the Clairville vineyard, is of a very encouraging character. There are awards, I understand, not yet made, or at least not announced; but from what has already transpired we may, I think, justly congratulate ourselves on the respectable position which Canada has taken in the unprecedented collection of the world's industry and skill. France will thereby occupy a proud page in the history of modern civilization, in which this magnificent event will be recorded as a characteristic epoch in the enlightened and happy reign of Napoleon the Third.

As a Canadian farmer of many years' standing, I have lamented to see, more particularly of late, an increasing disposition among our country youth to abandon the homes and pursuits of their fathers to increase the already crowded lists of trades and professions in our towns and cities. Within certain limits, a movement of this sort is right and proper; there is no reason why the sons of farmers should all follow their fathers' pursuit. But I am afraid that not only is this restless desire of change among our rural youth carried to an injurious extent, but that it arises from a radically false notion of things. Farming, I fear, is thought by many to be a comparatively inferior calling, characterized by hard, rough work, and small gains; whereas that of the merchant and professional man is regarded as much more clean and agreeable, attended by far greater profit, and altogether more desirable and respectable. It is, in great measure, to these low and erroneous views of the status and gratifications of the farmer, which are unfortunately so prevalent, that the increasing evil is to be ascribed. In a new country like ours, where many of our farms not long since had to be hewn out of the primitive forest, but little opportunity was afforded the first settlers either for mental improvement or the practice of anything approaching to systematic agriculture. At that time it was literally farming in the rough, and the same may be said, though not to a like extent, of those who commence new settlements in the present day. But there is, in most cases, a great difference between the condition of the earlier settlers of the country and that of those who now undertake the work of opening new settlements. Such have been the changes for the better in later years, by the construction of roads, the extension of commerce by means of improved facilities of inter-communication, that settlers now-a-days in the back country have comparatively few difficulties and hardships at all compared with those experienced by their predecessors.

With reference to the fact of so many of our country youth evincing an indisposition to follow agricultural pursuits, it is of importance to inquire into the causes, and how the evil may, in some measure at least, be arrested. I answer, first, we should clear away much which at present greatly mystifies the subject, by forming correct views of the proper status of farmers in a country like this, where almost every man owns the land he cultivates—a circumstance which enables him to cherish feelings of independence. Then, it is important that we should form a correct estimate of the kind and amount of knowledge which it is necessary for a farmer of the present day to acquire, that he may follow his pursuit intelligently, improvingly and profitably. In a word, agriculture is the noblest and most indepen-