

which they furnish. These aspects of nature have all had their influence in raising up new ideas and fresh feelings in man's soul. The physical character of a region, the nature of its surface, whether flat or hilly, its soil and minerals, the size and flow of its rivers, the mountain chains which cross it, and the bays of the sea which indent it, the clearness or cloudiness of its atmosphere—all these have moulded to some extent the physical peculiarities of man, and determined his tastes, his pursuits, and his destiny.'

OUR ADVANTAGES AND RESPONSIBILITY.

"We ought never to forget that the advantages we possess entail on us grave responsibility. Our responsibility keeps pace with our privileges. We must not be content with our present status. Every consideration of honour and duty demands that we should do all in our power to reclaim the waste places of our land, and to till better what we have under culture. There can be no limit to progress in agricultural science; finality is out of the question. How much has been done during this century in the elucidation of laws which formerly were hidden from man's observation, and how wonderful and varied their practical application has been! And who can estimate what will be the condition of our country and its people by the close of this century? Progression is geometrical: and we have the great part to play in the material development of the country. The requirements of the age, and above all, our duty to God, demand that we should go forward. The important question then is, do the majority of the farmers and mechanics of Canada really love their professions, or do they pursue them simply as furnishing the means for subsistence? If the latter be the actuating motive, little progress will be made. Men do well what they take pleasure in doing; a man cannot be proficient in business which he does merely in a perfunctory manner. The supply of daily wants in America, as compared with the struggle for existence in many parts of the old world, is an easy task. Here nature is very bountiful in her gifts, in proportion to labour bestowed. Were our farms tilled and manured as they are in the best parts of Europe, what would the products be! And, although in a new country, where there are many hardships to be encountered, it is a wise and beneficent provision of God that the means of subsistence should be easily procured, still it often proves one of the hindrances to agricultural improvement. When men get what they need easily, they are apt to aspire no higher. *Incrementa mentis*, as Quintillian says, are needed to lead to greater earnestness in the work of agricultural improvement.

VALUE OF FARMERS' CLUBS AND ASSOCIATIONS.

"Much good has been done in Britain by meetings for discussion—chiefly by the instrumentality of Agricultural Societies and of Farmers' Clubs; during the last half-century, whole counties have been transformed. And even there, much yet remains to be done. Nothing, even in Yorkshire, astonished me more than the large tracts of land still unreclaimed. It shows how slow is the march of improvement, even with all the skill and appliances of our times. Great Britain annually imports large quantities of food, yet much of the deficiency might be supplied by agricultural improvement. We do not need to import food, but by better tillage we could add very largely to our exports.

REDUCTION OF OUR GRAIN PRODUCING POWER.

"My conviction is that we have lessened, *most materially*, the grain-producing power of the country, by the excessive drain which we have made on it for so many years. There can be no question that the most direct and economical recuperative process is in increasing the number of acres of grass, and diminishing the number of acres of grain—in other words, by *more and better stock*, and *less grain*. After all we should not say that the result will be *less grain*. The acres in grain would be fewer, but the gross product would be much larger, while we should have more beef, mutton, and pork, and of better quality. It is also of the greatest importance to economize food for stock as much as possible because *labour is money*, and labour costs a good deal of money in Canada.

EXPENSIVENESS OF INFERIOR STOCK.

"There are two ways of doing this—by improving the quality of the stock, and by economy in the mode of giving them their food. Some years ago I was much struck by the truth of a remark made by a farmer at a meeting of a farmers' club in Yorkshire. The subject under discussion was the kind and quality of stock which farmers ought to keep. He said, '*I cannot afford to keep inferior stock, it is too expensive.*' This is true to the letter—inferior stock is too expensive to be profitable; that is, food, which has cost a great deal to produce it, is given to animals which, from their nature and conformation, give the poorest possible returns; there can be no

economy in that. I do not wish to be understood as insisting that every farmer ought to keep a thoroughbred herd; that is a business by itself, for as Thomas Bates once said with entire truth, 'There are twenty men fit to be premier for one that is fit to be a breeder,' yet, every farmer who breeds cattle, or sheep, or pigs, ought to have pure bred males, and to use no other if he can get them, because it is only in this way that he can cheaply raise animals which will give the largest return for the food they get. Much may also be done in the way of economizing food by the mode in which it is given. Of course food will go much further when it is prepared in such manner as will give the digestive organs as much aid as possible, such as by cutting and steaming, and by crushing grain, &c.; but I specially refer to a practice which is becoming more common than it was, namely, giving stock a portion of grain or other condensed food while on pasture, and by soiling. Many recent experiments have been made which show that a very large saving can be effected by this process. The most extensive Canadian experiment has been made at Bow Park. Mr. Brown has expressed himself to me in terms of high commendation of this mode of feeding, as proved by his experience; the results of which, it is to be hoped, he will make public.

AGRICULTURAL EDUCATION—VALUE OF DR. RYERSON'S MANUAL.

"When I had the honour on a previous occasion (15 years ago) to address you, I alluded at some length to the great necessity for more thorough and systematic agricultural education. So much does want of it still appear to me to be urgent, that I feel it to be my duty again to refer to the subject. The question is, what can be done to supply the deficiency? We have an agricultural class in University College, and an able, experienced teacher, but few students. My conviction is that the work must be more radical; it must begin in our common schools; that is, elementary, agricultural and mechanical instruction should form a leading part of the teaching. Dr. Ryerson has published a valuable little work on agriculture, which I hope to see made a text book in all the rural districts. Unquestionably, the result of giving elementary instruction would be not only to impart much important scientific and practical knowledge, but to make the farmers' sons of the country feel the importance and dignity of the profession of agriculture. Dr. Ryerson has done good service to the country by compiling the manual to which I have referred, and I hope that he will see to it that the benefit which it is so well calculated to confer shall not be lost to the country. It is a good thing for the cause which we desire to promote that we have so able a coadjutor as the Chief Superintendent of Education. I feel convinced that he will soon make agricultural and mechanical instruction a leading feature in our common school teaching.

ONTARIO VETERINARY COLLEGE.

"The Council of the Association have continued the pecuniary grant to the Ontario Veterinary College, which was given by their predecessors in the Board of Agriculture. This is a branch of education having special relations to agriculture, which, in terms of the powers and duties conferred on them by the Agricultural Art, the former Board of Agriculture felt it to be their duty to establish and foster. The idea originated with that able and efficient friend of the agricultural interest, the late Honourable Mr. Ferguson, of Woodhill. In 1862, when Mr. Smith came to Canada, through the strong recommendation of Prof. Dick, late Principal of the Edinburgh Veterinary College, a course of veterinary lectures was given annually to a somewhat miscellaneous audience, extended in 1864, and in 1866 three students passed final examination, and received diplomas from the Board of Agriculture. In 1867, four students obtained diplomas. The range of studies became gradually extended, and in 1868 eight students passed. In 1869 the same number (eight) passed, so that the college has turned out twenty-three well qualified practitioners. The total number of students attending the veterinary course for the past three years has varied between 25 and 32. Some of them were agricultural students and did not take the whole veterinary course required of those who study for the practice of the profession. All veterinary students attend the lectures of Prof. Buckland on the Breeding and Management of Farm Stock.

"Dr. Bovell and other resident physicians have rendered important service gratuitously, as have also two or three veterinary surgeons in Her Majesty's service, both as teachers and examiners. The success which has attended the College is very gratifying, and leads to the sanguine expectation of still more extended usefulness. Its importance to the agricultural interest of the country can hardly be overrated. Before its establishment, well-qualified veterinary surgeons were very few, and in many parts of the country whole counties were almost wholly destitute of professional skill. Apart