

of the swine that plough up our highways free of charge, and whose light hams sell in our markets at one dollar per hundred below the usual price, and we see it in the swarms of nondescript poultry, that are neither one thing nor another. It is thus apparent that the field for improvement is very vast. It is the great concern of agricultural writers in Great Britain, where the choicest of the choice are found, that the improvement is not more universal. How much more, then, should it be the concern of Canadians that not a day be lost in vigorously taking up the work.

The *methods* of improvement to be adopted are various. Most important, perhaps, is the adoption of improved methods of *breeding*, as without this, labor will be bestowed in vain—that is, the full results will not be obtained that would otherwise occur where the animals are properly bred, and with an eye to a definite end. The cheapest way of bringing about improvement here is by giving sufficient attention to the choice of a sire. It will not do though the females are what they should be, as an inferior sire will soon drag the progeny down to his own mean level. Parties who are penurious here, and who grudge the requisite outlay will, of course, reap as they sow. They must be content to witness no improvement while others have taken the forward march, and to receive but light returns when, the day of reckoning comes. We would sympathise more with those who are content with things as they are if females had to be secured as well as males, and while we feel that this is the short-cut to rapid improvement, we are convinced that the goal may be reached by the other course—that is, by using and persevering in the use of a succession of males of the right stamp.

But improvement of the breed will not avail without there is improvement in the methods of *keep*; indeed it is the necessary complement of the other. Good breeding will not put on flesh without hay and meal, nor will it fill the milk-pail if the fodder used is allowed to ripen before cutting. Nor, in the case of horses, can muscle of the right texture be formed without the growth of suitable grasses. Then if extreme cold is to be kept at bay by feed given in an open shed, instead of by the use of boards and mortar and stove, the former will be found a most expensive method. Fodder has always proved a most expensive substitute for fuel in warmer countries, but to use it for that purpose in our winters of low temperature means a shrinkage of pocket to the extent of emptiness.

But the great requisite, after all, that underlies all improvement, is a *knowledge* of the *requisites* and the *will* to apply this knowledge. Once furnish these to an average young man and the impetus of the current that will flow from them will soon clear the channel of improvement of all obstructions. This knowledge is to be obtained in various ways. It is partly to be obtained from reading, partly from observation, partly as the result of interviewing the successful, but more especially is it to be learned in the school of experience, where the truths thus gleaned are reduced to formulæ that bring the exact result sought after. The will to apply this knowledge must come from the hidden springs of inherent constitutional development, fed by the streams of continuous effort to keep these full to the overflowing. In some the springs of energy have been so well filled by inherent endowment, that, like the waters of a stream in spring, they overflow all their banks; the effort to improve in such a case is spontaneous, and such an one is perpetually on the forward march. But oftener inherent energy is a plant that requires most careful cultivation, and it is very cheering that it responds so well to the atten-

tions that may be bestowed in this way. The more we stimulate ourselves to activity within a degree that is reasonable, the more we enjoy it, till it becomes a part of our well being, so essential that we cannot live without it. We dwell upon a vital point here. Young men may pile their studies with useful agricultural works. They may follow the show-rings through the entire round of the seasons; they may interview the best feeders in the country, and they may practice after a fashion the truths they have gained, but, unless, like the strong man of the Hebrews, they awaken from the sleep that lethargy has bound them with, and go out and shake themselves, and throw their energies into stock improvement with a resoluteness worthy of the object, they will not attain to the first rank. It would be nothing short of a crime for our young men to be satisfied with the elevation of Mount Oxford when they might clamber to that rocky peak whence that unrivalled view might be obtained of which Professor Pantou speaks in terms so glowing.

Some young men may chance to read this article who may be strangely hindered from putting forth all the effort that they would like to make in the direction of improvement. Parents may take a different view, and prefer the old lines. We would say to such, "Honor your parents," but at the same time lose no opportunity of gaining useful knowledge, and bide your time patiently, for it will surely come. In the meantime make all the improvement you can. If you have but a scrub calf in possession, feed it to the full, and give it a comfortably warm bed to lie upon at night. The evidence that you make the best of present opportunities is the sure guarantee that you will make the best of future and improved ones, and they are sure to come.

Others may be desirous of adopting methods quite up to the times, but cannot, from lack of means. When the scales of old-time practice fall from the eyes of a stockman, he often finds himself in a strange plight. His buildings are wrong, his stock are not of the right kinds; his methods of curing fodder are wrong; the scorn of his neighbors no better than himself in the event of a mistake, when the forward march is taken, is to be considered, and it may be his present position has only been reached after one hard continuous struggle. We would say to such an one, do not be discouraged. There can be no serious risk in heading in a direction where the footing has been proved sure; but take care not to overstep your means. The loss of the gains of former years through advance that is made too hastily, would be a worse alternative than living and dying in the practice of old-time methods. Move only with a prudent haste, and as your means will allow. You will not incur any risk by cutting your hay in time. It will not cause much increased outlay to patronize males of the right type, while to put up expensive buildings at once might be too much for you. At all events do not sit still, nor remain one moment longer where you are. Let IMPROVEMENT be the watchword of 200,000 farmers in Ontario. Let them rise and go forward as with one mind; let the shout of their advance extend to the east and west till it is echoed from the ocean shore where men spread their nets on the Pacific and Atlantic main.

### The West Highland Cattle.

This breed has now its own herd book, and there fore commences, as it were, a new era of prosperity. It has become so general over the Highlands that its origination can be credited to no one individual. But the Macnells of Barra and the McDonalds of Balran-

ald have had large and pure herds from time immemorial. Mr. J. Stewart, of Ensay, and the Earl of Dunmore, have two excellent herds at the present time, and many good animals are to be found in the Island of Skye. The Duke of Sutherland, the Earl of Safford, in Inverness, and the Duke of Athol, in Perth, have also good Highland cattle.

The herd book claims for the Highlander the grandest and most picturesque head of the bovine tribes. It is broad between the eyes and short from the eyes to the point of the muzzle. The forelock between the eyes should be wide, long and bushy. The eyes should be bright and full, denoting, when excited, high courage. The muzzle should be short and very broad in front, with the nostrils fully distended. In the bulls the horns should be strong and come level out of the head, slightly inclining forward, and slightly rising towards the points. In the cows, as a rule, the horns come square out of the head, rise sooner, and are somewhat longer, preserving their substance and a rich reddish appearance at the tips, although some prefer them coming more level from the head with a peculiar back-set curve, and very wide sweep.

The *neck* should be altogether clear and without dewlap below. It should form a straight line from head to shoulder in the cow, but in the bull should have a crest, which should come gracefully down to the roots of the horns, and well coated with wavy hair. The shoulder should be thick and should fill out greatly as it descends from the point to the lower extremity of the forearm.

From behind the shoulder the *back* should be fully developed and fully rounded. Any slight sinking or hollow is objectionable. The ribs should spring boldly out and be both well rounded and deep. The breadth should be great across the hips, and the quarters exceedingly well developed from the hips backward. The thighs should be well developed and show great fullness. Viewed generally, quarters should be square between the hips and the tail; from between the tail down to between the hind feet and legs, both before and behind, should be short and strong; the bones strong, broad and straight; the hoofs well set in and large; and the legs well feathered with hair. The animal should be set wide between the forelegs, and should move with great dignity and style.

The *Hair*, of which there should be a great profusion, more particularly on the parts indicated, should be long and gracefully waved, as in wavy-coated retriever dogs. To have a curl is to possess a decided fault. The usual colors are black, brindled, red, yellow, and dun; and breeders are not agreed as to which is preferable. The true Highlander in his native domain is not usually housed in winter.

### The Shorthorn Herd Book Question.

AMALGAMATION COMPLETED.

The 12th of January was a red letter day for the Shorthorn breeders of Ontario, and one that we venture to predict will exercise an important influence for good upon the Shorthorn interest in the whole Dominion, for on that day the details of union between the hitherto rival books were decided upon.

The meeting was held in the buildings of the Agricultural and Arts Association. It consisted of the executive committees of the combined herd book associations, Mr. John Dryden, M. P. P., the president of the B. A. S. A., in the chair. The following members of the committee were present: Chas. Drury, M. P. P., Crown Hill; Geo. Moore, Waterloo; D. P. McKinnon, South Fiach; Henry Parker, Woodstock; L. E. Shipley, Greystead; Stephen White, Chatham; Lieut. Gordon, R. N., Cooksville;