

allan and many other families, the females of which have been the foundation of some of the best herds in Canada. Of late we have the celebrated Bow Park herd to the front with a herd of females of wonderful excellence. The question is, How can we make breeding pay? My opinion is that if you succeed you must shun as many of the points or characters that I first referred to, in your purchases of sires, and, if possible, every one of them, as I call them all defects. Pure breds of any breed or family of cattle in the beef lines that have any of the defects are not so valuable in any of the markets of the world. Among Shorthorn, either in male or female, should they have one of the defects mentioned, it lessens their value \$25, if a couple or three \$50, should they only be slight. Therefore you cannot be too cautious in choosing a sire. Now, that we believe the cattle industry has reached the bottom, and the trade has come back to practical men, the men of the past are no more among us, who were operating in a gambling way regardless of intrinsic value. Men who are breeding for the love and honor of their profession, and for the great interest they take in maintaining and perfecting the breed they are interested in, as was done by their predecessors of yore, are the men who can and do make it pay. I maintain the skilled breeders can make fair profits at from \$100 to \$200 for calves and yearlings, if he can buy stock males of the right stamp for \$200 to \$300, and females from \$100 to \$400.

[TO BE CONTINUED.]

Our Pastures.

The most expensive manner of feeding stock on high-priced land, is the way pasturing is too often done, by having bad stands or by freezing out, as much of the clover does. It requires entirely too much land to carry a given amount of stock, and any grass that helps to thicken the bottom or add to the growth is what is required. Orchard grass on suitable soils will do much to assist us. The native grasses, in favorable seasons, do very well in some localities, but there are times when these fail entirely to head. A rapid grower, like orchard grass, comes on well, and should always form one of the sorts in the pasture mixture. When cut for hay it springs up immediately and makes a rapid growth a few days after the mower has passed over it. Mr. John Dryden, M. P. P., one of our most advanced agriculturists, thus writes:—"I have used orchard grass for some years in two fields for pasture. It is combined with other grasses, and has given excellent results. It has stood the winter well, grows rapidly in the spring, and provides pasture at least a week earlier than our common grasses. It will not only carry a heavy stock, but really requires to be kept down early in the season in order to give the best results later on. It not only starts early in the season, but readily and quickly recovers its freshness at any time when the stock are removed. No one who contemplates grazing the same pasture for a number of years can afford to be without it."

Mr. J. C. Snell, the noted stockman, speaks of it as follows:—"I think well of orchard grass only as a permanent pasture. It is very early in the spring, and should be grazed short in May and June and not allowed to grow strong, as it is coarse, and stock do not like it when it gets to that stage. Then if stock were kept off it till late in the fall and allow it to get well forward, it would make good, rough pasture in the months of November and December after other grass had failed. If used for hay, it should be cut very early before it gets strong and hard, or stock do not care for it."

Education of Farmers' Sons.

BY WM. J. NESBITT.

There is an idea that seems to prevail among people that farmers as a class are not as intelligent as other classes in the country, or, perhaps, as some of their city cousins, and the old idea that some of the pioneers used to retain is in some cases the presiding thought in their minds, viz., farmers do not require anything but a very meagre education, and were they to acquire it it would only make them pranky and egotistic. Such an idea as this is fast passing away; fathers and mothers, as well as young people, are commencing to see that in order for them to take their place and battle with the world, that is moving so rapidly, they must have a fair education. Yet, many farmers seem to have a very limited idea of what a farmer ought to know. The opinion in general is that a common school education is quite sufficient for one who is only to be a farmer. It is not strange, then, that in the minds of our young people to acquire a good education implies engaging in some other pursuit. Nor is it a matter for surprise that the bright, ambitious lads, who would give grace, tone, and a more honorable standing to farming, should leave the farm for other pursuits. There is a great number, in fact too many, who have imbibed the idea that to obtain a sufficient education to enable one to appear to advantage in public life his youth must be spent within classic halls. Though this should be of material and substantial benefit, it is not the great essential in making a man. A youth who, till he has reached the years of his majority, has been hedged within the immediate circumference of some college, is not possessed of that knowledge of men and things indispensably necessary to enable him to grapple with the real difficulties of life. He is liable to be imposed upon at every turn of life, and though he may have an extraordinary fund of rhetoric, science, mathematics and fine sense, if he lacks common sense he is like a ship without a rudder. Young men on the farm should know all that is to be known on the farm in regard to the proper utilizing of every means for the benefit and improvement of both farm and stock, and with such a periodical as the FARMER'S ADVOCATE so available no person can plead innocence or ignorance in this connection.

And if more refined studies can be worked between the branches absolutely indispensable so much the better, for all who may can drink at the pure fountain of knowledge, for ignorance is a voluntary evil.

By a proper improvement of time the farmer's son may lay in a stock of useful knowledge that will enable him to take a stand side by side with those who have grown up side by side, and in the full glow of far superior advantages. In the long winter evenings, in place of spending them around the post office, or, perhaps, in the hotel, as some are wont to do, but by a proper utilizing of the spare moments with a supply of books and an invincible determination a person can make surprising progress. With pertinacity like Godfrey Saxe, "I'll find a way, or make it," it's a very difficult thing he won't surmount. Of course, some think because they can't attain to this point in the course of a few days they grow disheartened and give up in despair, forgetting:

"The height by great men reached and kept
Was not attained by sudden flight;
But they, while their companions slept,
Were toiling upward in the night."

—Longfellow.

Hence in order for a farmer to keep pace with the agricultural world and retain his standing with the outside world, it is absolutely necessary for him to have a fair and profitable education in the different capacities a farmer may be placed in. It has been advocated very recently by learned as well as medical men that anatomy, physics and hygiene should be taught in our public schools. If some of these studies could be introduced into the farmers' homes they would be of material benefit to him. But laying down rules would only be entering into something without fundamental truth. And if some are to have their choice in the matter, they must attend to these requirements:—1. Abate the task work of labor. 2. Aim at raising the maximum of crops and securing corresponding profits. 3. Surround the work with the exhilaration of intellectual progress.

Let the country boy be as well educated in essentials for the farm as his city cousin for the bar, which will increase rather than hinder his success. Then, indeed, will farmers realize that for health and for substantial wealth, for rare opportunity of improvement, for long life and real independence, farming is one of the most worthy businesses in the world.

Lucerne or Alfalfa.

The uncertainty of pasture from the native pasture grasses in many sections teaches us the necessity of looking for some other means of adding to the food supply through the dry summer weather. Amongst those in high favor for soiling purposes is lucerne, and those who have given it a trial speak in its praise. The difficulty is in getting a stand, as it is delicate the first year and is very apt to be choked by stronger growing grasses. A perfectly clean piece of land, free from weed seeds, should be chosen. It loves a deep, rich loam, with porous subsoil; does not do well on heavy, cold clay. It should not be sown until the weather is fine and the land warm. After once getting a stand it does not heave with the frost as other clovers do, but when sown with other grasses it very much improves the quality for soiling, making a rich, succulent ration, on which all kinds of stock thrive. It is particularly good for the land as it draws heavily from the atmosphere, and its long roots go down deep in the subsoil, therefore it is not affected by dry weather. It is the only crop that can be grown for hay in California, Arizona and Utah. It is said to be as dangerous as clover in causing hoven in cattle pasturing upon it, as they eat greedily of it, and, therefore, requires due care when a full bite is to be obtained. An over feed when soiling with it has proved fatal, as stock are particularly fond of it. Mr. J. C. Snell, of Edmonton, says of it:—"I think highly of lucerne, and believe it is a valuable plant, as it is tenacious of life, will remain in the ground for many years, and if cut early makes first-class hay. I have some on a dry hill side that has been growing there for seven years, and in the driest summer it grows three feet long, and is vigorous yet. Stock is very fond of it. To get the best results with lucerne as a soiling crop, it should be cultivated in drills on rich land, when it may be cut from three to five times in a season, and there is no better green food for soiling purposes, especially for sheep, but cows are also very fond of it."

There is very little land that is not benefitted by underdraining. It is specially advantageous in clay soils.