

**THE FARMER'S ADVOCATE & HOME MAGAZINE**

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**To Prevent Horses Eating Too Rapidly.**

Horses that eat their grain very rapidly get far less good of it than a slower feeder that takes time to masticate more thoroughly. Among the many plans advocated as a preventive to this both harmful and wasteful habit, one of the best is to add a few handfuls of dry shorts to the grain ration. This applies more particularly to road horses, which crushed grain is apt to render too loose when being driven. Some feeders resort to the plan of keeping the bottom of the manger covered with stones two or three inches in diameter, among which the oats are thrown. This plan has the desired effect, but it must be hard on the animals' teeth. For farm horses there is no better way than to feed crushed or whole grain mixed with chopped hay. Mastication will then of necessity be accomplished, which will prevent colic and fit the grain for being thoroughly digested and assimilated.

**Sugar Beets and the Beet Sugar Industry.**

The cultivation of sugar beets for the manufacture of sugar has been tried sufficiently in Canada to indicate that a fairly remunerative industry is awaiting development. True, the refining plant is costly; a certain and large supply of beets is necessary to the successful carrying on of a business, and to fully realize profits the residuum products must be properly utilized in stock feeding, etc. Foreign countries have been allowed to outstrip us. In Europe, during the last 40 years the production of beet sugar has increased 22 times, the actual output for 1893-4 being: In Germany, 1,393,374 tons; Austria-Hungary, 841,809; France, 579,111; Russia, 660,000; Belgium, 325,000; Holland, 75,015; and other countries, 111,000 tons. In 1887, we notice that the United States produced only 600,000 lbs. of beet sugar, but in 1893 (the last return at hand) this had swelled to nearly 45,000,000 lbs. A bimonthly periodical is issued in the interests of the industry, and Nebraska supports a "Sugar School," where instructions are given upon the whole subject, from beet growing to beet analysis and refining. All this is surely evidence that as a branch of Canadian agriculture and manufacture this industry should receive more attention. The Canadian Government, by statute, was required to pay a bounty of \$1 per 100 lbs. of beet sugar produced, with an additional 3/4 cents for every pound testing over 70 degrees. The time for such bounties was limited to 30th June, 1895, but this has been extended to July 1st, 1897, the bounty now being 75 cents per 100 lbs., with one cent for each degree or fraction of a degree over 70 degrees. During the year ending June 30th, 1895, the bounty paid amounted to \$29,449.

So far as suitable soil and climate are concerned, many portions of Canada compare favorably with foreign centers of beet culture. In fact, the sugar beet does not differ from other plants in requiring certain conditions of climate to yield favorable results.

The subject of temperature has been pretty carefully studied, and it is found that an average of 70° Fahr. for June, July and August is about the proper heat for successful beet culture.

The most suitable soil is a light loam, preferably containing some lime, but heavy soil will answer if well drained. The beet gets the greater part of its food from the ground at a depth of eight to twelve inches; hence freedom from excess of water is necessary. The preparation of the land for the crop is much the same as for mangels. The land should have been plowed in the fall, and as soon as it can be worked in the spring it should be again plowed to the depth of about twelve inches. (A deep soil is therefore a necessity.) Allow the ground to lie about one week before the time of seeding, then plow once more, to the depth of four or five inches, and work the soil up into a fine, light condition. Plant the seed after allowing the land to lie five to seven days. No manure should be applied unless in the shape of well-rotted compost put on in the fall. In ordinary soil the rows should be eighteen inches apart; in very rich, less; and in poor, a greater width. The object should be to prevent the beets attaining to a greater weight than two pounds each. The seed should be planted one-half to one inch deep and about sixteen pounds to the acre. The plants come up in about ten days if the seed has been soaked over night before sowing. They should be singled out (four to six inches apart) early, to prevent plants growing spindly. Hoe like turnips and keep clean. A hoe should be run through the drills and thus keep the soil well up to the necks of the plants when hoed for the last time. The best beets are deep in the ground. If any artificial manure is to be applied it should be borne in mind that the end for which the crop is grown is not the production of the largest roots, but such as will yield the greatest quantity of crystallizable sugar. For this purpose medium-sized roots, hard grown and well ripened, turn out best. A large amount of stimulating manure tends to too much leaf growth and to keeping up the growth when the roots should be ripening, in September or October.

European growers have made great progress in the saccharine quality by testing chemically the growing beets and raising seed from those testing highest. The farmer grows them for the factories at so much per ton, and whether profitable to him or not will depend on the cost of production, yield per acre, and the price received, just as in the case of any other crop.

**Appreciated Abroad as Well as at Home.**

Mr. John Allan, of Aberdeenshire, Scotland, in renewing his subscription to the FARMER'S ADVOCATE for another year, writes: "THE ADVOCATE always comes with the utmost regularity, and it always brings something new."

The prospects for more than a light hay crop in a large portion of England are very slim, owing to a very dry May. At the end of May the ground was dry and cracking and the pastures were badly scorched; in fact, the showing is little better than it was in 1893, when a water famine was experienced on much of the clay and chalk soils. The weather, too, has been cold and backward.

**STOCK.**

**Live Stock Interests.**

We notice that South American buyers have been attending cattle sales in France, paying handsome prices for bulls and other breeding stock. This recalls the address delivered by Mr. Richard Gibson before the annual meeting of the Dominion Shorthorn Breeders' Association in February last, in which he drew attention to the attitude of the South American buyers in the English market—not only to the quantities they have taken, but to the qualities of their purchases also. Nothing has been too good for them nor price too high—for instance, the purchase of Sir Lionel Studley, a Booth bull, for \$3,500—and whenever they could hear of or see an extra good animal the agents of the breeders in Buenos Ayres or the Argentine were after him. The very best of English, Scottish, and Irish stock that could be bought have been expatriated. Price has not stood in the way, providing the animal was good enough. The numbers exported have been enormous. We do not wonder, therefore, that Mr. Gibson asked, "Is there no means of reaching this market by our breeders?" That they have invaded French herds shows in addition that the demand is yet strong. United States breeders have been attracted by the possibilities of this trade for their bulls and other breeding stock, the practicability of which would doubtless depend largely upon the transportation facilities available. It should certainly be looked into. This and scores of other subjects of vital interest to live stock husbandry—by all odds the most important department of Canadian agriculture—but recall the serious need existing for a good, practical live stock authority in connection with the Experimental Farm staff, where, as an advisor to the Federal Department of Agriculture in such matters, his services would also be of very great value.

Now, it is well-known that when U. S. breeders require an infusion of really first-class, fresh blood for building up their herds and flocks, they come to Canada to get it. The World's Fair accentuated, though it was not required to show, the superiority of Canadian breeding stock. The herds of Canada should certainly furnish valuable drafts for the South American, or, for that matter, any other trade. We trust Mr. Gibson's suggestion will yet be made the subject of proper enquiry.

Still more important matters requiring attention are the ninety-day cattle quarantines between Canada and the States, which so seriously hamper the trade of breeders and the original utility of which disappeared with the embargo requiring our cattle to be slaughtered within ten days of landing in Britain. Our cattle quarantine regulations are also a hindrance against securing fresh breeding stock from British herds.

**Ayrshire Matters.**

(Paper read by Mr. H. E. Eyre before the Dominion Ayrshire Breeders' Association.)

The kindness with which you received a paper of mine in 1892 has induced me to offer you again a few thoughts on Ayrshire matters. Were it necessary for me to give an excuse for presenting another paper to this Association, I would give an excuse similar to the one given by the late Sir John Macdonald for keeping the N. P. alive so long. "I ought," said the veteran statesman, "to do something for the N. P.; it has done so much for me." This, gentlemen, is my feeling towards the Ayrshires.

I shall not waste your time by speculating upon the origin of the breed, neither shall I give you a list of the breeds said by their promoters to be akin to the Ayrshires. Suffice it, then, to say that with the espousing of our favorite cattle there dawned upon the then poor, discouraged, ill-clad and ill-fed people of Ayrshire an era of prosperity that has increased in intensity as well as in magnitude, until its light and heat of comfort have permeated the whole of the land of the harebell and heather. They have also crossed the billowy Atlantic with the animals that produced them, and we enjoy in our bosoms the fruits of over a century's care and labor in selection and development.

That broad-minded political economist and philosopher, Henry George, has said that "Land and labor are the prime factors of wealth." If we grant this hypothesis, we are immediately confronted by the question, how best to utilize these elements?

Experience in this country answers by the propagation and development of the dairy industry. The first step in this direction is to decide on the cow that will give the best returns for the time and labor expended on her. The writer of this paper spent years in solving this problem. He visited good herds of different breeds, closely observed their treatment and its results, found that each breed had its merits and its fancies, and that all breeds had furnished to the annals of the exhibitions some phenomenal animals. He was finally compelled, when he had exhausted all means available to him, to conclude, contrary to his best impressions, that the animal that will best suit all classes and conditions of farmers in this country is the Ayrshire cow. Not yet content, he consulted a number of successful dairymen who were not married to any breed, but had tried specimens of different breeds, and their consensus of opinion strengthened the former conclusion. Indeed, one farmer and drover who lived in the suburbs of a smart little town, and was breeding another kind of cattle, said con-