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few rods of the factory, and in some instances adjoining it. Put in a steam boiler, with or without the engine, as you may require; if water is needed, it is much the cheapest way to pump by steam. You have it when you want it, which is not always the case when pumped by hand; besides, the hands generally have plenty to do without pumping water.

Use the gang presses. They are much more convenient and take much less room than the old ones. Lath and plaster the curing room on the sides and over head, making it as tight and warm as possible. Put good, large ventilators in the roof, with a number of small apertures through each floor, about a foot square, covered with a grate and slide, so as to be made close in cold and windy weather. Use tables for curing the cheese upon. They can be put in four tiers high; the upper ones will be much the warmest in cold weather.

We give below the plan of a convenient factory, the main building being 30 x 60, and large enough for the milk of 300 to 400 cows.

A—Making Room, 25 x 30 ft.; B—Boiler Boom, 10 x 30 ft.; C—Presses, 12 x 15 ft.; D—Curing Room, 35 x 30 ft.; F—Window and Platform for receiving milk; V—Vat; S—Sink. Ice House should be near Presses.

The making room is large enough for three vats, and the curing room will hold 300 to 400 cheeses, so that with the room above, there is ample room for 1,000 cheeses, as the building should be two stories high.

The following is a list of the principal articles and materials for a cheese factory of 300 to 400 cows:—

Boiler and engine, two 500 gallon vats, two gang presses, 8 to 10 cheeses each; one 600 lb. platform scale, weigh can, milk conductor, horizontal curd knife, perpendicular curd knife, curd sink, scoops, bandages, agitator, rubber mop, two rennet jars, two thermometers, set testing instruments, graduated measuring glass, milk book, tin pails, dippers, &c.

(To be Continued).

Line Breeding.

This is the term now applied to in-and-in breeding. The old theory of crossing has been so long in vogue and so highly commended, and such beneficial results have been shown on nearly every farm, that the new system of line breeding or in-and-in breeding has scarcely been thought of as anything but injurious. But the present high prices realized for Shorthorns and the results of recent practice have caused many an intelligent farmer to contemplate adopting this course. No doubt but hundreds of farmers in Britain and America will adopt this course for a time, and it will no doubt be brought into practice by the breeders of sheep, horses and swine.

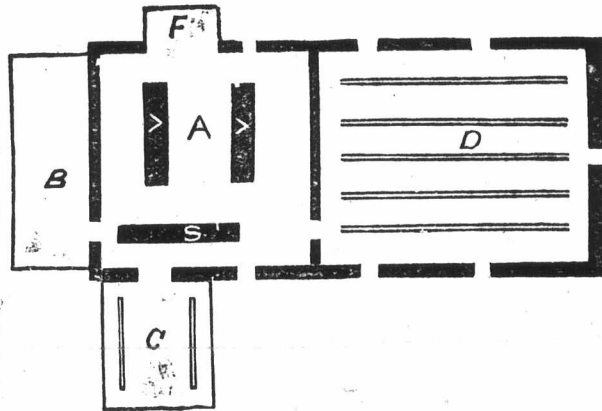
To what extent this practice may be followed time can only tell; many a farmer will try to establish a name and a particular breed. These high prices paid for Shorthorns that have been long in-bred will cause thoughtful farmers to consider this plan, and when they have stock as near perfection as they desire; they will try and keep to that class. There are fine cows and good milkers, that are seldom surpassed and not often equalled by animals with long pedigrees. Should any man now establish a herd of large handsome cows, with uniformity of color and noted for milking qualities, he would realize a good return, as some complain of the size of the Ayrshires and others as lacking size, and some complain that the Shorthorns do not yield as much milk as common stock. There is an opening for some good farmers to establish a reputation and a fortune.

Perhaps we may have patent cattle ere long, as a law passed the second reading in the American Congress to grant patents to protect parties that introduced new seeds, plants or fruits.

Breeding Horses.

In your January issue you ask parties to take part with you on the horse question. I also find one signing himself "Horace" has this month touched on the same topic. Now, sir, this is a subject worthy of consideration by every one who has use for that most valuable of our domestic animals, and one on which a volume might be written, as opinion differs on this as well as all other subjects.

I quite agree with you in your January number where you remark that if the number of our horses were lessened and the weight of the general stock increased, it would be much to the advantage of our farmers as a general rule. Now, in your February number you suggest the idea of exporting horses to England, and you remark on our farm horses that they should have the spirit of the race horse and the weight of the dray horse combined. Now, let me make a few remarks on this and offer a suggestion or two, for it is only by the interchanging of ideas that we may hope to arrive at anything like a proper conclusion.



PLAN OF A CHEESE FACTORY.

In the first place, we must take a look at the duty our horse is required to perform; is our land light or heavy? Do we intend breeding for exportation to England, the United States, or simply for our own farm work? If the former, we must be careful to ascertain the class of animals which will meet the best demand and bring the largest price, for you must remember that the freight is all the same whatever the animal may be, and if you send an inferior beast you will find that the freight at present will eat up the profit, if not more. The class of horse for the English and States' market which will bring the best return at present is the heavy draught, if of proper quality—a low, thick-set fellow, with large feet, wide heels and plenty of bone and hair. They do not like too much daylight underneath; a beast 16½ hands high is quite tall enough. But in Glasgow a lighter class is wanted, as very few are bred in the neighborhood; a beast fit for cab and omnibus work is in most request.

For our own farm work in general we do not want a horse weighing less than 14 cwt., but on stiff, strong clay land we must get them a little heavier. I do not mean in flesh, but in bone and substance, for if a horse has to go too fast in the plough, no one can do work with him, nor can you keep him in good condition. He must be master of his work, whatever you may want him for. Now, as you have stated, our horses, as a general rule, are too light. How can we do better than use heavy draught stallions on our mares? I would not say blood mares, as I am inclined to

think we should keep the blood horse in his purity for this reason—he has been bred with such care as to speed, endurance and spirit that we should spoil him for what he is intended if we begin crossing. He is adapted to the road and for fast and long journeys; his spirit will not allow him to be ruffled in the way our farm horses are at times by bad drivers, almost worried to death. So I think he is better left as he is and to those who have more money to spend than our Canadian farmers. If we are going to breed for sale in foreign markets we must use, as I said before, heavy draught sires on our heavy mares, as there is no danger of getting too much weight either in England or the States; and for our own use the heavy horse on heavy land and the light horse on light land. The present general purpose horse of this country is nothing more or less than a mongrel. The old Cleveland bay comes nearer to a general purpose horse than any other I know of, and he is now almost extinct. No matter what animal we are going to breed, we should use a pure-bred sire. This axiom I believe to be admitted as correct by all parties.

I will now offer one suggestion for the consideration of all horsemen in Canada, viz.: We find all classes but the horsemen to have an association; for instance, the dairymen have their society, and the poultrymen their's, and the wool-growers their's, and so on. Why do not the men who have risked their lives and money in abundance by importing horses from England and Scotland, band themselves together for protection and form an association, so that a register may be kept, for one thing, and then apply to the Legislature to put on a duty of \$100 at least on all stallions. Were this once accomplished, we should find our horses a very different lot in seven year's time, for this reason: A man starts with a broken-down, blemished old mare, and he will not or cannot afford to pay the price of a good horse, say \$12, but he takes her off to some runt mongrel and gets the use of him for anything he likes to pay. If the duty was put on that would not be, and soon all those old broken-down, worthless ones would in a great measure be done away with. And let me also add that no animal has done so much of late years to fill our farmers' pockets as the horse. Look at the numbers sent from Toronto city and the counties of Huron and Perth to the United States. The old saying—"What is every one's business is no one's business," is in this case truly verified.

I do wish some one better qualified than I would undertake to bring this very important matter before the public, and try if something could not be done to improve generally our farm horses.

Look at the Shorthorn men and their Convention held in the city of Toronto in December last; would that I could see one half the zeal in the horsemen of Ontario, and I well know what the result would be; we should soon have the best horses in the world! There is one thing we should do at any rate, viz., breed only from sound animals on both sides, and pay most particular attention to the feet and legs; these form the foundation of your horse, and if you have the best carcass in the universe and bad legs and feet, you have, in my opinion, only an apology for a horse. The old maxim that "like produces like" must not be lost sight of if you are breeding from a pure-bred sire, but if otherwise I think it is of very slight importance, as in cross-bred animals on both sides you cannot tell how far back they may go in the production of their offspring. They may go all as you would wish, and they may not; there is no certainty.

Now I must close for this time, but hope to send you another scribble on the management of our Fairs before long.

D. M.