

were bred to calve at 26 months of age. They have freshened each year since and made creditable milk records, but they are small and shallow, with limited capacity for both feed and milk. Their mates were held and bred to calve at about 32 months of age, and to-day in placing with the developed cows our students just as readily reverse the placing of the same group.

This second lot of heifers that were bred late were inspected by a few Ayrshire men a short time before they freshened at about 32 to 34 months of age. These breeders criticized the heifers for being somewhat coarse, heavy in hide, thick at the neck and rough about the head. Two years later the same group of heifers was in the short course class and the refinement and character of the lot were repeatedly mentioned. Without exception they had developed into large, strong, capacious cows. A number of them have qualified for the advanced registry. With the exception of one that is of a poor strain, any of them could quite easily qualify with a creditable margin.

In the case of three other heifers that calved when immature, two of which were bred accidentally by a scrub bull breaking into the pasture, we milked one from the start and allowed the others to run without being milked. They suffered a little for a few days, but soon dried off. All three were bred in about six months time, thus giving them an extra run. One of those allowed to go dry died next winter, the other one calved in due time; while she developed considerably in her extra dry time she is still among the small class of cows and limited in her capacity for milk. Her mate, which was milked regularly except when she was given more time between first and second calves than in the case of others bred at a proper age, shows also some advantage in size, but she never overcame her first check.

Thus far we have noted 18 individuals of the four breeds mentioned. Our work is not conclusive, but certainly in our practice, with fairly liberal feeding yet no attempt to do any forcing, if an average heifer is bred to drop her first calf before she is at least 30 months old her development is seriously checked and she is not likely to reach her full capacity as a cow. Some individuals should be bred earlier than others; with those that develop quickly there is a tendency towards coarseness and bareness when breeding is unduly delayed. On the other hand a little grossness in a heifer at freshening is no objection.

I have found that many of our best breeders in this country, in England and in Scotland, share my opinion as to the advisability of early breeding, and thus our observations here seem justified.

A U. S. EXPERT TESTIFIES

Prof. E. K. Lewis of Missouri, investigated the same point, and in his book on Dairy Cattle, remarks: "Breeding too young undoubtedly results in small cows. It is impossible for a young cow to digest and assimilate a sufficient amount of feed to produce milk and growth at the same time. The production of milk on account of its relation to reproduction is a dominant function, and will not be materially checked to allow growth to continue. For this reason it can hardly be expected that a heifer calving young and immature in size will develop into a cow of nor-

mal size if she calves regularly each year afterwards."

With those who have the exceptions, who are satisfied with them and prepared to defend their practice there need be no quarrel. For those, however, who have followed one breed, who feed fairly liberally, practice early breeding and finish with second rate cows (and I believe there are many in this class) I make this suggestion



Note the Ideal Type of This Record Making Jersey

Sadde Mae, the pure bred Jersey cow here illustrated, made 13,049.85 lbs. of milk and 750 lbs. of butter in 365 days. She is owned by E. H. Gee, Haldimand Co., Ont. Note how closely the conformation of this cow approaches that of the other record makers of the Ayrshire and Holstein breeds published in Farm and Dairy recently.

as a probable aid—delay breeding a few months.

Last winter there was much complaint about the silage freezing. The freezing depends oftentimes on the surface. If the silage is kept dug down a little around the walls so that the surface is convex, it will not freeze nearly so much as where it is dug out saucer shaped.

If you can get around it, don't use barbed wire in constructing fences between pastures



Sheep Farming is Still Conducted on an Extensive Scale in New Zealand

Australasia, which includes New Zealand and Australia, has more sheep than any other section of the world. Ranching is still profitable in Australasia and sheep farming is done on a big scale. Our illustration herewith shows a few of the 1912 crop of lambs on a New Zealand ranch. They are good, pure breeds, too.

where horses are to be kept. They will be playing and pawing into it, and a ruined or dead animal is often the result. The price of a fair horse, as the mark: goes to-day, will buy more woven fencing than you probably think.

Why does the horse whinch when you put the frosty bit in its mouth? Just put it in your own mouth some morning when the temperature is down around zero, and you will understand. After that we predict you will carry a bucket of hot water down to the barn in which to warm up the bits.

Rid Clover of Buckhorn

T. G. Raynor, Seed Division, Ottawa

The seed of rib grass or buckhorn is dark brown in its matured color, and about the size and weight of a clover seed. It can easily be detected in the clover seed by close examination. Buckhorn is not so broad at one end as red clover and has a slight depression or dint in one side; something like the seed of a date. For this reason it has been called a "canoe." The other side is smooth and roundish. The seed has also a gelatinous or sticky feel when dampened with water, and this feature is now being successfully made use of to separate it from red clover seed.

The process in brief is to take the red clover seed in which the buckhorn is present and dampen it with a certain percentage of water. This will develop the mucilaginous nature of the buckhorn, but in the clover seed this substance is not developed. A certain amount of fine sawdust is added, and this sticks to the buckhorn seeds, making them much larger. With sieves of the proper size the operation is now quite easily made. If any farmer wishes to try the plan, and it would be quite practicable for small amounts of seed, such as individual farmers would sow, here are more explicit directions as given in a bulletin issued by the U. S. Department of Agriculture:

JUST HOW TO DO IT

"The red clover seeds infested with buckhorn are covered with water of about room temperature, and well stirred, in order to wet all the seeds thoroughly. The seed are allowed to stand in the water for five minutes if the latter is 65 degrees F., or over, for eight minutes if below that temperature. The water is then drained off thoroughly. This may be done with any common strainer or sieve of about 22 meshes to the inch. The moist seeds are then scattered into dry dust and thoroughly mixed until the seeds fall apart freely, and no small seed masses remain. This mixing may be done with the hands, with a rake on the barn floor, or with any suitable apparatus. It may be accomplished in two or three minutes, when it will be found that the sawdust has absorbed the free surface moisture from the clover seeds, and that all the mucilaginous buckhorn seeds have become coated with the sawdust. The proportion of dry seeds to sawdust should be as follows: Seeds, one part; sawdust, four or five parts (preferably five parts of resinous sawdust are used). Two screens are required to effect the separation of buckhorn seeds from the red clover seeds; an upper one of sheet zinc, perforated with round holes of one-fifteenth inch diameter, and a lower one of No. 22 mesh wire cloth." If the treated seeds are fed slowly the separation will be quite effectual.

In this way farmers who have this plant in abundance on their farms can to a large extent eliminate the danger of producing red clover seed with buckhorn in it, in the future.

It is very easy to over-feed the horses now that work has ceased. With prices of feed as they are, there is a great temptation to under-feed. Let us run betwixt and between and our horses will be in good health and ready for work next spring.