

plants were thinned at the time when they had attained a height of about two inches. When the plants were left until they had reached a height of eight inches before thinning, the yield was about one-third less. The same is true with sugar beets and mangels. In thinning, it is good practice, especially with turnips, to knock the plant left over with the hoe. This does not aid growth, but it insures more careful thinning, as the man with the hoe is able to see the root easily, and can detect whether or not there are more than one left.

Next to be considered is distance apart. About ten inches has been found to give very large yields, but it is a question whether the extra yield is sufficient to pay for the extra labor in handling the larger number of roots than if they were left a foot or fifteen inches apart. The smaller roots usually contain a little more feed, compared with an equal bulk of larger roots, but they also carry in more dirt, require more time in thinning, and make much more handling at harvesting time, and the yield is very little more than when left a little farther apart. Quicker work can be done all round at twelve or fifteen inches apart.

Hoeing is particular work. It should not be done too deeply, baring the roots too much, especially with beets and mangels, which do not recover from such exposure as quickly as turnips. However, the hoeing must be done to a sufficient depth to remove all weeds. Every weed that is left means extra work later, and there is a chance that it may seed before the next hoeing. Do the work at the right time, and do it carefully.

It is important to keep the hoe clean and sharp. A sharp hoe also adds to the ease with which the work is accomplished, and it is more effective in both singling and killing weeds. A file at the end of the field is a useful tool to keep the hoe in good trim. A thin, keen hoe is required.

No Use for Loader or Side Delivery.

TIMOTHY.

Because of the fact that I specialize along dairy lines, timothy hay is a crop for which I have no use whatever, except only in a very limited quantity. I want only enough timothy hay to feed my work horses during seed time, and while doing the fall work, when an extra demand is made upon their strength.

For this purpose, I want hay fairly well matured and free from dust. To secure these ends, I allow the second bloom to fall before cutting. I cut in the forenoon, ted about noon, and coil in large, well-built cocks late in the afternoon. If the cocks are properly built, it is wonderful the amount of rain they will shed, without injury to anything but the top and outside. After the hay has been allowed to sweat thoroughly, which usually requires about two days, I open the cocks to the air and haul to barn. By thus allowing the hay to advance well on to maturity we get stored up in the plant the greatest amount of nutriment consistent with digestibility, and, by coiling and allowing to sweat in the cock, we avoid dust and bleaching, and secure palatability.

CLOVER.

I aim to cut my red clover when it is pretty much all in bloom, but before the bloom has started to turn brown. This may seem to many a trifle early, but there are two good reasons why clover should be cut green—yes, very green: (1) If clover be allowed to advance too far toward maturity, the stalks become woody and will not be eaten by the cattle, and the leaves, which are practically the only remaining part which is of value, are more likely to break off in the processes of harvesting, and become a total loss, whereas, on the other hand, if cut green, both these objections are overcome; (2) if clover be cut quite green, you can count with almost absolute certainty upon a second crop of equal—if not greater—bulk and weight as the first, and this second crop can be utilized with great profit and advantage for any of four different purposes, viz.: (a) To be allowed to ripen and cut for seed; (b) to be cut again for fodder; (c) to be utilized as pasture for dairy cows to supplement the original pasture, which by this time will have become too dry to induce a heavy milk flow—and just here let me say that, in my opinion, the after-growth from early-cut clover is less liable to cause cattle to bloat than is the after-grass from more matured clover, because the second crop partakes more of the nature of the first crop, and the first crop of clover rarely causes bloating; (d) then, lastly, but not necessarily least, the second crop, if desired, can often very profitably be plowed down as a fertilizer.

Now, these are my reasons for cutting red clover green, and, as to my method of handling, I want to say that it is more subject to variation than timothy-hay harvesting, because we usually have settled weather about the time timothy is

fit to cut, while the weather is more frequently than not "catchy" at the time red clover should be cut, which in this district is usually about the 20th of June. If the weather is suitable, I cut in the forenoon, preferably after the dew is off, allow to lie all the first day in the swath, without tedding (tedding would expose too great a surface to the dew the first night), then in the morning of the second day ted, and re-ted, if necessary, rake up just after dinner and haul to barn.

ALFALFA.

I aim to cut my alfalfa when one-tenth the bloom is on, if possible, but, as with red clover, the weather cannot always be relied upon at the time alfalfa should be cut first. One word just here with reference to my estimate of the value of alfalfa. From experience in the use of alfalfa hay as part of a dairy ration, I want to say that,

ding with care to avoid breaking off leaves, which is really a very important feature of alfalfa-curing.

Now, these are fair-weather methods. I don't think any man can lay down rules for curing and harvesting hay in catchy weather.

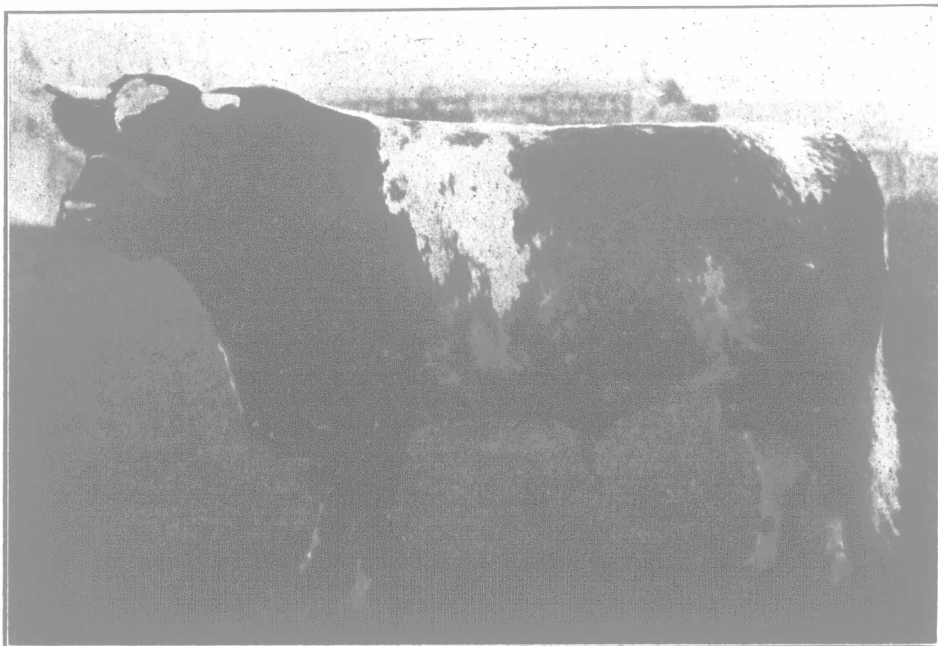
It is a heart-breaking experience to have a nice field of valuable alfalfa or red clover spoiled because of unfavorable weather, and I have often wondered if hay caps might not furnish a great measure of relief in such cases. If you, Mr. Editor, are in possession of any practical information on this point, you will greatly oblige me, at least, by adding hereto a foot-note giving details.

Now, as to machinery. In connection with the question of haying machinery, we are compelled to consider the farm-labor question. In this Province the operations of farmers are seriously

handicapped because of the lack of sufficient and efficient farm labor, and at no point does this lack touch the farmers so keenly as in haying operations. No crop that a farmer produces is made or marred in the curing and harvesting to such an extent as his hay crop is. Mr. Editor, I want to repeat that sentence, and I hope that every reader of this article will ponder it well: "No crop that a farmer produces is made or marred in the curing and harvesting to such an extent as his hay crop is." To cure and harvest hay so as to insure the greatest possible measure of nutritive value, palatability and digestibility, requires

good weather and lots of labor. We cannot control the weather, and apparently we cannot control the labor market, so in many cases we must resort to the use of fast-working machinery, such as the 7 and 8-foot mowers, the side-delivery rakes, hay loaders, tedders and horse forks. But, Mr. Editor, I am of the opinion that many farmers have too much of their land under hay crop. I had rather have a smaller quantity of properly-cured hay than a large quantity of hay cured improperly because of lack of help, or because of having been harvested by means of fast-working machinery.

In my judgment, it is absolutely impossible to properly cure hay without coiling, and, as it would be necessary to uncoil to use a hay loader, I would not use the loader, because there would be no saving of labor; and, in the case of clover and alfalfa, the loader would knock off too many leaves. If a hay loader be not used, then one might far better have a tedder than a side-delivery rake, because a side-delivery rake is not so effective in drying the hay as a tedder. I would avoid extremes in the matter of the size of mower. There are cases where the 7 and perhaps even the 8-foot cutter bar might be O. K., but under average conditions, I think the 6-foot cut the happy

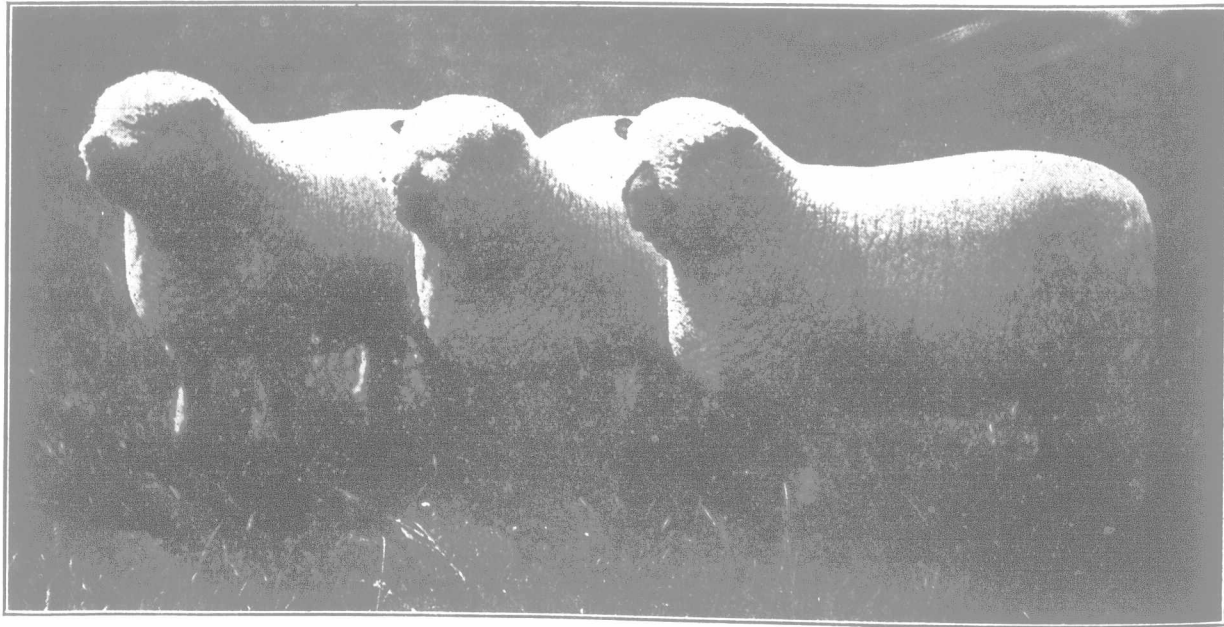


Pretender.

Champion Shorthorn bull at the Bath and West Show. Owned by Lord Tredegar.

as compared with other farm crops, alfalfa hay, if properly cured and cut at the right state, can hardly be overvalued. I am growing alfalfa hay successfully in a county (Dundas) that is supposed to be unsuited to that crop, but I am growing it on a part of my farm that is naturally though perfectly underdrained by means of a substratum of limestone quarry. I think that nothing but disappointment and loss awaits the man who attempts to raise alfalfa where the water-table rises too near the surface of the ground; but where natural drainage does not exist, it will pay any man well to tile-drain at least one field for alfalfa, if sufficient outlet can be had for effective tile drainage, as is the case on pretty nearly every farm in the country.

I cut my alfalfa in the forenoon, and before it has become too dry I ted and rake in small windrows. Alfalfa must not be roughly handled when dry, because, if so handled, all the leaves will drop off, and those leaves are worth, pound for pound, just as much as and more than bran. After the alfalfa has dried sufficiently in the windrow, I coil in medium-sized coils, and allow partial sweating in the coils, though this sweating need not be so thorough as with timothy hay intended for horses. Then I haul to the barn, always han-



A Winning Trio.

Best pen of Shropshire ewes at the Bath and West Show at Bath, the property of R. Milne.