

Now that haying is almost upon us, it is well to have everything in readiness before commencing to cut. Be sure that the mower is in perfect running order, with new sections in the knives where necessary, and a few to fall back upon in the shed in case some are broken. See that the old guards are pointed up and set properly. Inspect the horse-rake, tedders and loader, that no delay may occur when wanted because of needed repairs. Take a look at the horse-fork track and rope to be sure they are ready for action when the first load comes in. Get all the broken pitchfork handles replaced by new ones carefully chosen. If it is your practice to salt the hay, have a barrel on hand in good time.

We are sorry to realize that the hay harvest promises, at this writing, to be a light job because of the May frosts and lack of rain in some sections; there is, therefore, the greater reason for saving every forkful in the finest possible condition. The legumes, which come first, are more difficult to cure than the grasses. Now that men are becoming more and more enlightened as to the value of the clover-plant, we expect more will be grown each year. C'over is the only plant which leaves the land upon which it grows in better condition than before it was sown.

In curing hay the aim should be to preserve the natural color, as far as possible, by leaving it exposed to the sun, dews and rain as little as possible.

When clover is barely in full bloom, cutting should commence. As soon as it has wilted down fairly well, the tedder should be run over it to shake it up, thus allowing the wind to get beneath and through it to hasten the drying process. It seldom occurs that it is fit to rake up the same evening it is cut. After the dew is off the following morning again stir it up with the tedder. As soon as the rake will work with freedom, without clogging and tangling up, it is fit to draw into windrows, where it may remain beneficially for a couple of hours. Then it should be cocked and allowed to remain so till it has gone through the sweating process. A few hours before drawing in the cocks should be turned out to the sun and air. Never run any risk of a shower upon the windrows, else much of the aroma, green color, palatability and digestibility will be lost.

At the last annual convention of the Western Dairymen's Association, Mr. Everett, of Wisconsin, a very prominent dairymen and farmer, advocated his method of curing clover.

He said:—"I am called a crank on clover over in Wisconsin, mainly, I suppose, because I adopted a method of curing clover hay which has proven perfectly successful. We cut our clover when it is in full bloom, commencing on the early side so that we may get through before any of the clover is over-ripe, because it has then passed its best stage for feeding purposes and has become indigestible. We use hay-caps and we find them very useful. These hay-caps are made of cotton, and we find them just as good for our purpose as though made of the best canvas. The web is 1½ yards wide, and we wear it up in squares. We use ordinary cobble stones of about four ounces, one in each corner of the cloth. We tie the pebble into a piece of cloth not as large as an ordinary handkerchief, using hemp twine to tie it in, leaving an end of about six inches. Then we tie the cloth containing the pebble to the corner of the hay-cap. This lets the pebble hang down about three or four inches from the cap as it rests on the hay. With a weight at each corner the cap weighs something over a pound. We commence cutting in the morning as soon as the dew is off, and cut enough to make two hundred cocks of hay. After dinner we rake the hay and cock it up. We want it to wilt a little. We put it up in medium-sized piles—don't get them too large—and immediately cover the cocks with the hay-caps. Next day we cut two hundred cocks more, treating the same way, and the next day two hundred more. Now we have six hundred hay-cocks under caps. On the morning of the fourth day we start the mower again to cut the same quantity as on each previous day. An extra man is sent to take the caps off the hay cut the first day, to be used on that we are now cutting. You will find the hay, on which the caps have been, heavy, soggy and damp. It is not cured, and you would say that it would be impossible to cure it. But if you loosen it up you will find that in a couple of hours the air has dried it, and that you have the best clover hay you ever had. You will find that you have saved the foliage, the head and the leaf, which is the valuable part. Not only that, but you have saved the flavor, the aroma which makes clover hay especially desirable. The fifth day you cut the same quantity as before, covering it with caps taken from that cut the second day, and so on until your clover hay is all cut and cured. Hay put up in that manner holds its color because you avoid heating. Clover hay cannot heat in the mow or stack without loss of feeding value, and when there is a loss of feeding value there is a loss of manurial value. I was the first man to describe and advocate this method of saving clover hay, and to-day there are thousands of hay-caps in use in Wisconsin. The cap is used not only for clover, but for barley and many other things. Hay-caps made in this way will last as long as you live. The Secretary of our Agricultural Society has used them for twenty-five years, and those he made at first are as good to-day as when they were new. They are used only for a short time in the summer, and if taken care of and kept away from rats and

mice, need not be injured at all. The clover will not reheat in your barn if you are careful to air it before putting it in. It will retain its green color, the heads being pink."

Timothy is much more easily cured than clover. It should be cut immediately the first blossom has fallen, so that it will not be dusty, nor will it have become hard and woody at that stage. When the weather is dry it can be mown in the morning, tedded soon after noon, and raked up towards evening. If there is no danger of rain, it may be left in this condition over night and hauled to barn or stack the following day. If the weather is showery the hay should be cocked to obtain the very best results, though many farmers have almost entirely discarded the "hay cocking" process.

Take a piece of hardwood board, 1x3 inches. For an eight-foot door the upper and lower pieces should be 4 ft. 4 in. each. Half way up is a lever 4 ft. long. Bolt lower piece at end of lever, and upper piece 6 in. from it. Then put a bolt exactly



through the middle between the two, and through the door; then a staple over the uprights at upper and lower ends. The door-cap and sill should each have a mortis cut to receive the ends of the fastening. Raising up the lever handle removes both uprights simultaneously. The other door can be fastened by a sliding bar or other convenient latch arrangement, of which there are many. These fastenings are in use in many Canadian barns, and our illustration shows how they are constructed.

SIR,—A cheap, light and effective corn and potato harrow can be made out of three eight-foot inch ash or elm boards, 5 or 6 inches wide; three cross-pieces $2\frac{1}{2}$ feet long, of same material, and about 50 heavy six-inch wire nails. The three boards and three cross-pieces should be bolted together in a form resembling a hurdle, 8 feet long and $2\frac{1}{2}$ feet wide. Bore holes 6 inches apart along the boards to receive the nails, which serve as harrow teeth. The teeth in the centre board should not come opposite the outside rows, but between them. Hitch the horse one foot either way from the centre so that it will draw angling. This harrow can be used among corn and potatoes until they are eight or nine inches high. Where the ground is hard it may be necessary to weight the harrow. It is especially adapted to lightish land destitute of heavy stones.

CULTIVATOR.

First Season in Buttermaking.

SIR,—In compliance with your request, you will find inclosed a statement of the business done at the Mapleton Creamery during the first winter, which gave entire satisfaction to the patrons. I was pleased myself with the undertaking, though not so much financially, however, as one might like, but the effect has been a deeper interest amongst the patrons in dairy work, and we expect a large increase next winter. The Mapleton Cheese and Butter Factory is situated near the village of Mapleton, Township of Yarmouth, County of Elgin, Ontario. We finished cheese-making for the season of 1894 on December 7th, and commenced the winter creamery on December 8th, and continued until March 30th, 1895. Milk was received three times a week. Following is a tabulated statement of the results:—

Results:—	
Total lbs. of milk received.....	216,074
" of butter manufactured.....	10,202
" money received for butter.....	\$2,040.40
" lbs. butter-fat received.....	9143.11
Average price received per lb. of butter.....	20c.
" " paid for one lb. of butter-fat.....	17.55c.
" lbs. of milk to make 1 lb. of butter.....	21.17
Highest average per cent. of butter-fat by the Babcock.....	4.49
Lowest average per cent. of butter-fat by the Babcock.....	3.77
Average for the season.....	4.23
Highest paid patrons for 100 lbs. of milk.....	.82c.
Lowest.....	.69c.
Average.....	.76c.
	JOHN PROCTOR

JOHN BRODIE.

The Kentucky Stock Farm commends the project of having a few canneries working to use up for food the inferior grades of horses.

SIR,—Please allow me space in your valuable paper to answer the recent letter from Mr. J. W. Wheaton. He seems to take it badly that I should criticise Mr. Millar's article. Well, in my opinion the politician or dairyman who cannot stand a little criticism don't amount to much. Mr. Wheaton admits that the elevated whey tank is a good thing, and that heating the whey to boiling point would keep it pure in cool weather. Why not adopt my plan and empty the tank and scald it every day after the patrons have delivered the milk, and for all practical purposes it would keep sweet, thus enhancing its feeding quality? Mr. Wheaton says I must surely have had reference to the condition of the factories in my own district as being in an unfit condition for a cheesemaker to turn out A 1 cheese. I take it that Mr. Wheaton speaks from observation. He must have seen unclean factories in his district. I may say in regard to the factories in my district that some of them are models of neatness and cleanliness, and some of them should be reported to the health officer. Now, as to Mr. Wheaton's plan of conveying the whey away in pipes for half a mile, it would need a caretaker to attend the hogs or calves; and as pork is not made by whey alone, and some patrons would provide provender or shorts and some not, difficulty would arise, besides the extra expense involved. A simple way out of the sour whey difficulty would be to sell it to one or two patrons for what it is worth, and divide the proceeds among the patrons; or at the annual meeting make a rule for each patron to use their old cans or barrels for taking the whey away, and the patrons who could not do so to get none. This would not be any inconvenience in our section, as the patrons draw their own milk. We used to have difficulty with milk thin and in bad condition from some patrons, but thanks to the Babcock tester, both the morals and the milk of a good many have been improved.

There is another thing in connection with our cheese industry which will do more harm to the cheese trade than sour whey: that is the tendency to branch into small, one-horse factories. It must be plain to every man that has given the subject any consideration that it will do injury; for, among other reasons, no factory turning out only three to four or five cheese per day can pay a competent maker sufficient to do the work properly. Being pinched financially, there will be the temptation to give light weights. Next is the difficulty of grading a car lot and filling an order, so that the patrons of such factories will have to sell to the travelling buyer, not always the most reliable. I would like Mr. Wheaton and other dairymen to give their views on this subject, for whatever differences we may have as to the mode of procedure in cheesemaking, we are all one in being deeply interested in the welfare of the industry.

J. MELDRUM, Dundas County.

Dairying, although being given the undivided attention of some of the most skilful scientists, has yet questions that are not understood. These difficulties, it seems, will not be overcome until the comparatively new science of bacteriology has been more thoroughly investigated. Milk, being an organic product, almost destitute of antiseptic properties, is one of the most susceptible materials to the influence of putrefying organisms we have to deal with. It is pretty generally admitted that difficulties in churning are caused by one or other of the many forms of bacterial life. We know this to be true from the fact that when milk is taken from the cow in thoroughly clean surroundings, then sterilized and kept free from every form of germ life, then treated with a pure culture, nothing but positive results follow.

Now, when trouble in churning results there is certainly a cause for it, which may or may not be satisfactorily accounted for. We know that even yet, after all that has been written and spoken about the use of a dairy thermometer, etc., there are many private dairies being guided only by the "rule of thumb," which will account for many of the difficulties experienced, though not all of them. When butter refuses to come, a general and often good advice is to raise the temperature. This does not always suffice, however. A common accompaniment of long churning is that of foaming, which generally gives trouble in gathering after the butter has reached the fine granular stage.

When, after churning half an hour in a small churn, the cream is quite frothy, and, though broken, shows no tendency to gather further, it has been found good practice to commence warming up by adding water, a few quarts at a time, 10 to 12 degrees warmer than the cream. The whole bulk may safely be raised in this way 8 or 10 degrees, and even higher if necessary. Proceed with caution, churning all the time. When it has gathered sufficiently to float let it stand for a time; then draw the milk off pretty thoroughly, after which a few minutes' churning will gather it.

Now, just what is the cause of foaming cream and long churning is more difficult to understand. It has been noticed from careful observation that nearly all cases come from cream held for a long time at a low temperature, thus developing the troublesome fermentation.