

Ensilage and Dehorning Approved.

I feed ensilage mixed with cut straw or chaff morning and evening, two parts ensilage and one part straw or chaff, with a feed of clover hay at noon when I have it. Oats, barley and peas (mixed meal), about seven pounds a day, a small quantity of bran sprinkled on the ensilage mixture, which is prepared some time before using, and a few mangels night and morning. I feed the meal morning and evening, but have never fed meal heavily, but all the other fodder which they will eat. The cows are watered once each day, which seems sufficient when ensilage and roots are used.

My stables have an overhead connection with a large manure shed, which modifies the air very much. I would prefer to have the air admitted by underground pipes to prevent frost and taken out by ventilator pipes to the roof of the barn.

I have the ordinary kind of stall—plank floor and gutter. I am of the opinion that some such device as Hoard's stall would be a distinct advantage. We bed the cows with cut straw.

The manure is put in a manure shed and drawn directly to the field once each week. The liquid is run into a tank and drawn out in barrels on a boat every few days. I have some cement floor and it gives entire satisfaction. Would certainly put in cement if flooring again. Have had cows dehorned for some years. They are quieter and much more easily handled, especially when drinking. The custom of dehorning is almost universal in this locality. We use a small quantity of ice for the purpose of keeping Saturday night's and Sunday morning's milk, which is sent to the cheese factory Monday morning.

Only using eight or ten loads in a year, our ice house is not very expensive; about twelve feet square, partitioned off the pigeon, on the north side. The sides are double boarded and filled in between with eight inches of sawdust. The ice is packed with sawdust, pea straw below to allow drainage, and a light covering of sawdust and straw. There are some improvements which I would like to have, especially the water in the stable. WM. MOUNTAIN.

Perth Co., Ont.

**Decided Approval of Cement Floors --
Lucern Beats all Other Fodders.**

We are feeding this winter corn, millet, green oats and peas, lucern and oat straw, at different periods, mixed and separately, with and without grain, bran and roots. Our opinion is the same as it has been for the past year or two, namely, that well-cured lucern beats them all; it appears to be the cheapest all-round ration, the cattle thrive and milk best on it, and are very fond of it as well. A grain ration of ground peas and oats keeps the milch cows in better condition, but does not pay for itself in milk, while we cannot find much, if any, return for bran and roots. We feed five times per day: at 6 and 8 a. m., feed of straw at noon, and feed again at 4 and 6 p. m. We water just once a day as a rule—at noon. Have made no special study of ventilation, but are anxiously awaiting to learn the experience of those who have.

Our stalls are the old style—two cows tied together and an open crib 2 feet wide by 1½ feet deep, but find it very wasteful; this is another point we intend improving, and want information. We have a drop behind the stalls 14 inches by 6 inches deep, but do not find it sufficiently large to receive the manure for one day. If we were building again we would have the gutter at least 20 inches wide and 8 inches deep. I think the majority of our cows then would keep comparatively clean. The gutters and passages behind stalls are made of cement, and serve the purpose admirably. With litter enough to absorb the liquid manure spread directly on the ground the loss is minimized. We have had cement for four years, and would not think of flooring with anything else. We are cementing the stables as fast as the plank and block wear out. The material costs about the same as plank, and instead of our floors lasting from four to six years, we expect them to remain as long as we live, or for the next 100 years if they are needed, as they grow harder and harder every year. We had our cattle all dehorned a year ago, and think it a great convenience; have seen no ill effects, but plenty of good ones. F. C. ELFORD.

Huron Co., Ont.

Favors Ensilage, Dehorning, and Cement Floors.

To the Editor FARMER'S ADVOCATE:

SIR,—My cow fodder consists of ensilage from well-eared corn, straw, and dry fodder made from sweet corn. Hay is too expensive as a rule. As grain food, I have had the best results from feeding pea meal, from six to ten pounds a day, according to the animal; we mix the grain food with ensilage or cut straw, and feed and water twice a day. Our stable is ventilated by chutes running from the basement up through the roof of the barn. Our cows are tied two in a stall with chain around the neck; the chain slips up and down on a stanchion. We use plenty of bedding, and clean stables twice a day in order to keep them clean. We keep plenty of absorbents, either straw or sawdust, in the gutters. Am in favor of cement floors for saving the liquid from loss. I had ten of my dairy cows dehorned about a year ago; most of them were milking at the time, and only one out of the ten shrank in her milk, and she recovered in a couple of days. I am much in favor of the practice of dehorning.

We store a large quantity of ice every winter, as we raise all our cream by setting the milk in ice water. We store our ice in the end of a shed, part of which is partitioned off for that purpose and lined up and packed with dry straw. The cost was very trifling, as we did the work ourselves. We cut our ice in blocks twenty inches square, and pack as closely as possible in the ice house, filling in all spaces between the blocks with broken ice, as a great deal depends on this. Around the sides of the ice we leave a space a foot wide, which is well packed with either sawdust or dry straw packed tight. The ice is covered the same way, but we are careful to have plenty of ventilation over the top of the ice, as this is of the greatest importance. Brant Co., Ont. R. S. STEVENSON.

Winter Dairying.

To the Editor FARMER'S ADVOCATE:

SIR,—There are certain difficulties in winter buttermaking on the farm which seem to return annually in spite of all that is said and written on this subject, and with your permission I will try and say something which may be of some help to those who are still laboring under difficulties with their butter.

First I will take up the shallow-pan system for winter buttermaking. It has been the experience of those who have used the shallow pans that but little cream will rise on the milk when set in a cold cellar in the winter time, and almost invariably the pans are set in the pantry or in some other room near the kitchen where the milk is allowed to absorb the kitchen odors, and the cream crock is usually allowed to stand in the same place, and by the time churning day arrives the cream will have absorbed a variety of odors, and will have that old, unpleasant flavor so often found in winter dairy butter.

Another objection to the shallow pan is the large loss of butter-fat from imperfect skimming; the old-fashioned skimmer is responsible for the loss of thousands of pounds of butter annually, and no doubt our mothers and grandmothers used to think they were the very best thing ever gotten up for the purpose. In making some tests with the shallow-pan setting at the Guelph Dairy School last winter I adopted the plan of running a knife around the edge of the cream next the pan and then ran the cream off into a pail, blowing off any small particles which remained behind. One of the lady students objected to the method as not being as good as the skimmer, so I procured a skimmer and requested her to skim a pan, and we would see if there was any difference in the results from the two methods. I then took a sample from each pan and tested them for butter-fat, with the result that the milk skimmed with the skimmer contained six-tenths of one per cent. of fat, while the other sample contained only three-tenths or half as much fat. The lady was astonished and said she would try again, and be more careful the next time. We afterwards repeated the experiment with practically the same result. The reason is plain when we look at it. Every time the skimmer is filled with cream a portion of the thin cream on the under side of the cream layer runs through the holes and immediately mixes up with the milk and is lost, while by running the layer off whole the cream has no chance to become mixed up with the milk. Taking the above loss as a basis, a farmer having a herd of eight cows, each giving 5,000 lbs. of milk annually, would lose 120 lbs. of butter-fat, or 135 lbs. of butter.

The deep-setting system is the best for winter as well as for summer dairying; but we must have ice at all times, otherwise I would prefer the shallow pan for summer, but in the winter any one can usually have ice. The tank or barrel to hold the cans will do in the wood shed or back kitchen, as a little freezing of the water above the milk will do no harm if the cans are weighted down so that the milk is below the water line. The milk should be warm when put into the ice water, and I think it advisable to pour a little hot water into the milk and raise the temperature up to about 100 degrees.

Properly caring for the cream is what is worrying a good many buttermakers at the present time, for what is right in summer may be entirely wrong in winter.

I liked the tone of the letter from the lady "Esme," Ontario Co., for it showed that she has been reading up on the subject and was on the right track until cold weather overtook her operations. The way she went at the "starter" business was the proper thing to do under the circumstances, but I think there is a better method, for there is danger in keeping cream in a cold cellar at this time of the year, as it is liable to turn bitter if kept at too low a temperature for several days. I have found excellent results from the following plan: Take a pint of good starter, either sour milk, buttermilk, or sour cream, and put into the cream vessel with the first lot of cream, which should be at a temperature of 70 to 80 degrees, and set it in the cellar or other cool, sweet place, and add each skimming of cream at the same temperature, which will start the acid to develop slowly, and by churning day it may have acid enough without any further trouble. If it seems to be developing too much acid the cream should be added at a lower temperature, as that will depend upon the temperature of the place where the cream is kept.

If those whose cows are fed turnips will follow the above plan and heat their cream up to 100 degrees by putting it into a tin pail and setting the

pail into a pot of boiling water and stir until the above temperature is reached, then let it stand twenty minutes and cool down to 80 degrees before putting it into the cream vessel, I think they will be surprised at the improved flavor of their butter, for it will effectually remove the turnip flavor and perhaps some other flavors too; but don't attempt to heat the cream without a thermometer, for if the temperature goes above 100 degrees it is liable to have a scalded flavor after it is cooled down. This method is called "pasteurizing," and is being practiced largely in the leading dairy countries. Another difficulty at churning time is in having thin cream and then attempting to churn at too low a temperature. By thin cream I mean cream that has a low percentage of butter-fat in it. Cream may be as thick as molasses in winter if well ripened and still be poor or thin in butter-fat, and such cream must be churned at a high temperature or it will froth and break into very small granules and will refuse to gather any larger. Still another difficulty is in having cows that have been a long period in lactation.

Most farmers will have one or two cows that are farrow, and which they want to milk all winter, and the longer they are milking the harder their milk is to cream, and the more difficult their cream is to churn. The milk from such cows often gives no end of trouble, and it is sometimes advisable to either churn their cream alone or use it for other purposes, rather than have the cream from other cows spoiled by it. J. STONEHOUSE.

Perth Co., Ont.

Milk of Holstein-Friesian Cows.

I am requested to write of my experience and observations in testing the milk of Holstein-Friesian cows. Having been connected with the Agricultural Department of the State of New York for the last five years as agent and milk inspector, I have had ample opportunities to determine the quality of milk produced by these cows, and to compare this quality with the quality of milk produced by other breeds.

I have found the milk of Holstein-Friesians uniformly above the New York State standard, not only by the lactometer but also by the Babcock test. In all my five years' work I have never made a case against a registered Holstein-Friesian herd or cow, and I have never retained a sample of their milk after testing for such a purpose. I have watched the milkings closely and tested the milk carefully, for I have been aware of reports against its quality that have been circulated. I am now satisfied that such reports have had very little foundation in fact.

I have recently tested several entire herds with the Babcock machine, and I am very glad to lay the results before you. The milk of one herd of 17 registered cows, fed hay, weak silage and a ration of equal parts gluten meal and wheat bran, tested an average quality of 3.6 per cent. fat. The milk of no cow of this herd fell below 3.2 per cent.; the milk of several of the cows tested 4 per cent., and that of one cow tested 5.4 per cent. Nearly all the cows of this herd were fresh in milk at the time of testing. The milk of another herd of 18 registered cows tested 3.7 per cent. fat. The milk of six of these cows tested 4 per cent., and the milk of the remaining 12 ranged in tests from 3 to 3.8 per cent. fat. This herd was fed but little better than the herd above reported. A third herd consisted of two-year-old heifers, all fresh at time of testing. Their milk averaged 3.2 per cent. fat. As I learned that these herds were fed gluten meal and bran with hay and inferior silage (I mean by inferior silage such as is made from corn not heavily eared), I confess I was surprised at the results. Upon such light feed I found these cows giving milk that would make from three and a half to six pounds of butter per 100 pounds of milk. I am prepared to assert without fear of successful contradiction that no breed that I have tested would make a better showing under similar conditions. When we bear in mind that large butter records are made under conditions of careful and judicious feeding we can better appreciate these results. The owners of these herds are producing milk for New York City market, and sought to produce quantity rather than quality of milk.

I will add an account of observations of three other herds, the cows of which were not tested in detail. The herd of J. W. Coley, of Madison County, this State, consists of 27 cows. The superintendent of New Woodstock cheese factory informed me that this herd averaged 16 per cent. cream. This is a heavy per cent. for any breed. The herd of A. F. Cole, also of Madison County, has been tested by me several times; that is, the milk. The lactometer readings have averaged 108 specific gravity at a temperature of 60 degrees. Mr. Cole delivers his milk at a shipping station, where the milk of other breeds and grades of cows is also delivered. The milk of Mr. Cole's herd tested the best of any delivered at that station. The herd of Mr. S. L. Hoxie, also of Madison County, gave the same lactometer reading as the milk of Mr. Cole's herd. I have found that the general averages of lactometer readings of the milk of cows of this breed range from 104 to 110 specific gravity at a temperature of 60 degrees. I have found the general averages of milk of no other breed to range higher.

CHAS. F. NASH,
N. Y. State Milk Inspector.