

barnyard or hog pen. Some may say it is quite unnecessary to mention such places as these. No one would think of leaving milk in a place of that description. But I have seen lots of cans left over night in just such places, and in places where you would expect the people to know better. Still, they did not apparently think it would do the milk any harm.

Pails and Cans—Only tin pails and cans should be used, and they should be washed well and thoroughly scalded as soon as possible after using. After scalding do not use a cloth to dry them. If the water is as hot as it should be they will dry off themselves. Place them where they will get plenty of fresh air and sunlight. Never use soap on any vessel used in the dairy, as it is apt to leave a soapy flavor. Salt will do the work just as well and gives better results.

Preparation of Cream for the Churn.

[Compiled from a paper by T. C. Rodgers, Guelph Dairy School; read before the Cheese and Butter Makers' Convention.]

To have success in manufacturing the finest quality of butter it is important to possess a knowledge of the chief factors employed in the cooling, ripening, and preparation of the cream for the churn. This commences with the separating and continues until the cream is transferred to the churn.

With regard to the temperature of ripening cream, we have learned from our own and the experience of others, that the lower the temperature at which cream can be ripened so as to develop sufficient lactic acid within a reasonable time, the better will be the texture of the butter. To this end the use of ice and a proper cooling vat having a surrounding space of seven inches for ice water are necessary. Cream ripened and churned at two high a temperature will produce butter of a soft, oily texture, that will diminish its value.

The most satisfactory temperature at which to ripen cream is 60° in winter and a little lower in summer, as the milk at that season contains more lactic acid when separated. At these low temperatures enough starter should be used to produce sufficient ripening to cause it to turn thick six or eight hours before time of churning. We advise the use of a "starter" because it controls flavors and gives uniform ripeness and flavor to the cream from day to day.

The starter should be put into the cream vat when separation commences, in order to control flavors. The quantity to use varies from two to ten pounds to 100 pounds of cream, according to the ripeness of the milk and the time allowed for the cream to ripen. When the cream is to be held for two days before churning, it should be cooled to 52° in winter and 50° in summer, about half the usual amount of starter being used. The cream should be stirred frequently during the first six hours, and temperature kept uniform. Our starter is made as follows: Take one gallon of skim milk or whole milk, of good, clean flavor, for each ten gallons of cream to be ripened. This is set in a vessel of boiling water and heated to 160°, stirring constantly; then remove from the hot water and let stand for twenty minutes, after which cool to 75° or 80° and add about a quart of the old starter, having a fresh, clean flavor, together with six quarts of clean water at the same temperature, to each ten gallons of the pasteurized (heated) milk. Then mix well and set in a clean, warm place. Do not stir until ready to use it, then break up fine by pouring or dipping before straining into the cream.

The cream should be cooled to churning temperature at least one hour before churning, to harden the fat globules. The lower the temperature at which cream can be churned in from 40 to 60 minutes, the better will be the texture of the butter. The richer the cream up to a certain point, the lower the temperature can it be churned. The best results are obtained when the cream contains about 30 per cent. of butter-fat, when it can be churned at about 52° to 54° in winter and 50° to 52° in summer.

Cream that has been lowered below the desired churning temperature should be very carefully warmed by surrounding the cream vessel with water at a temperature not higher than 65°, and then the cream should be constantly stirred.

Buttermakers must adopt low and uniform ripening and churning temperatures to obtain a firm, uniform quality of butter.

Advanced Cheese Dairying in Quebec.

The FARMER'S ADVOCATE had a call a few days ago from Messrs. E. Bourbeau, General Inspector, and J. A. Plomondon, Assistant, representing the Quebec Dairy Association. They have been visiting the best dairy districts of Ontario, collecting information as to factory management, cheesemaking, selling, etc., and also with regard to road improvement. One of the defects in the Quebec dairy system is the smallness of many of the factories, which better roads would tend to correct. The syndicate system is growing steadily, and is giving good results, each syndicate being under a local inspector or instructor, of whom there are now some thirty-eight. All these are in turn subject to the inspection and instruction of the General Inspector and his assistant, above named. The

local inspectors, both in theory and practice, have to be thoroughly qualified, and must hold diplomas, based not only on dairy school training, but actual results in factory work and management. Their salaries amount to about \$500 each (one-half of which is paid by the Government) and board per year. Messrs. Bourbeau and Plomondon are also engaged in the Dairy School at St. Hyacinthe, through which now pass some 300 or more pupils each winter. When the excellence of the Quebec grasses and water and the general richness of the milk are taken into consideration, together with the thoroughness of their system of instruction and inspection, it need not be wondered at that cheese dairying in that Province is steadily forging ahead. The fact that the above gentlemen, who are keenly observant and practical, have been delegated to gather the best points of Ontario practice shows that the Provincial authorities there are wide-awake to the dairy necessities of the times. The tendency in Quebec is to make white cheese, the quantity of colored growing less each year. Most of their April make was sold at 7½ cents per pound. Far more factories pay for milk by percentage of butter-fat, according to the Babcock test, than in Ontario, and the number is increasing with gratifying results.

Parchment Paper for Butter Packages.

Dairymen were not slow to appreciate the merits of parchment paper for pound prints of butter, and it is coming into more general use for larger packages. Australia uses it for lining the butter boxes, bottom and sides, as well as covering the top, and we notice in the New York Produce Review that one butter house in that city recently gave an order for enough paper to line 30,000 packages. The advantages in its favor are a great saving of loss in weight of butter, protecting the butter from the air, preventing its sticking to the wood, and preserving the outer portion from taking up a "woody" flavor. If the tub be properly soaked and the paper wet there is no great difficulty in lining the sides smoothly, just like hanging paper on a wall.

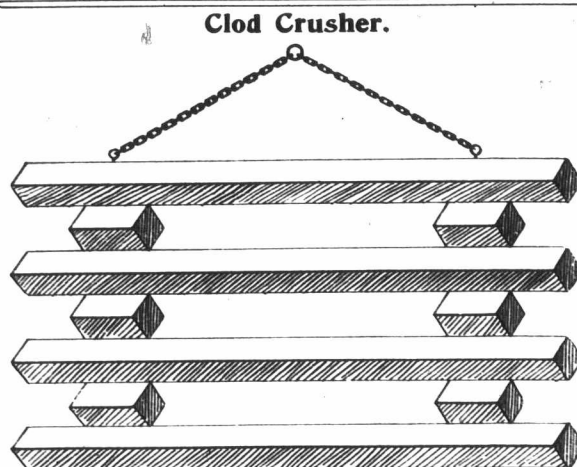
Alfalfa Will Improve the Flavor.

To the Editor FARMER'S ADVOCATE:—
SIR,—In the ADVOCATE of May 15th I noticed E. D. Ault asking if alfalfa would flavor the milk. We have grown alfalfa for a number of years; this year are using it as a soiling crop for milch cows, and as they get very little else we have a good chance to tell if it does flavor the milk or butter. We could never yet detect any, but, on the contrary, think it improves the flavor.

Huron Co.

F. C. ELFORD.

THE HELPING HAND.



JOHN TAYLOR, JR., Waterloo Co., Ont.:—"The scanning drag or clod crusher herewith illustrated we have found to be a most useful home-made implement. Take four 4x4-inch oak scantlings eight or nine feet long, also six blocks of the same stuff about six inches long. About twenty inches from each end of the scantlings bore ½-inch holes from corner to corner; the same with the six blocks. Put a long ½-inch bolt through each end, as shown in illustration, with a ring or hook on one end to attach draw-chain to. The draw-chain should be of sufficient length to keep the whiffletrees three and a half or four feet off the drag, so that you will get the full benefit of the drag and not raise the front side off the ground. An old box with a couple of cleats on the bottom may be set on top to furnish a seat for the driver. We find it a most useful implement to run over the ground with to grind down the small clods, level the surface, and thus make a fine seed bed. It has many advantages over the plank clod-crusher. It is easier made; will not 'choke up'; if it becomes a little warped or worn it can be turned upside down or a set of holes can be bored at right angles with the present ones and the rods put in them and it is as good as new; by taking off the nuts at the end of the two rods it can be taken to pieces and stored away. Ours is nine feet long and a four-scantling one. Were we making another we would make it about six or seven feet long and put in five scantlings instead of four."

Colorado has a woman for dairy commissioner, and it is said that she discharges the duties of her office to the entire satisfaction of those interested. —Creamery Gazette.

POULTRY.

Fertilizing Eggs.

The breeding of fowls on the farm is perhaps the most haphazard and least understood portion of the whole stock breeding operation. When it is desired to obtain chickens from a certain male, he should be allowed to mate from four to six days before the eggs should be set. This time varies according to the vigor and stamina of the fowls. A fairly safe course to follow is to separate the hens to be bred from any male for a period of six days; then admit the male, and at the end of four or five days the eggs may be kept for hatching.

DISCARD THE MALE.

It will not be long until the hatching season will have passed, when the males and females should be separated permanently for the season, for good reasons.

First: A male bird, or any other that is of no use, consumes food that laying hens and growing chicks require. The question may arise, What is to be done with him? Well, upon pure-bred poultry breeding farms there are always separate pens in which the cocks may be kept, and on the ordinary farm there is no advantage in keeping the same male or males longer than one season, or in breeding will result. Would it not do, then, to behead the cock at the end of the breeding season and make a pot-pie of him? The hens may miss him, but they will lay just as many and better eggs when his presence is not in evidence.

The second reason for his separation from the flock is that already mentioned—the eggs are of better quality. Added or off-flavored eggs are pretty well known on every farm during the hot summer months, and perhaps the greatest loss from this source is found in the marketing. Not only is the consumption of eggs in the cities and towns much lessened by the uncertainty of how the so-called "fresh" eggs will break, but for baking purposes it is found necessary to buy perhaps 18 eggs, as offered upon the average market, to get a dozen fit to use. This sort of thing disgusts people to the extent of causing them to use comparatively few eggs. Now, an unfertilized egg will keep fresh and in first-class order for weeks, even in the hottest weather; in fact, they may be used for baking purposes after having been set beneath a hen for the three weeks. We will venture to say that if unfertilized eggs are regularly supplied to any first-class grocer for one season he will willingly pay a price considerably above what the market offers in following years rather than do without them. There is a large class of consumers in every large town or city who are willing to pay the price for a positively unmistakable superior article of food.

Young Turkeys.

While there are advantages in having early hatched fowls, there is usually not much gained by having young turkeys before the summer has made a fairly good start. Newly hatched turkeys are so very delicate that the least adversity at the beginning of their career is certain to bring about serious loss. Even in the most favorable weather the less they are handled or fussed with during the first 24 hours of their existence outside the shell the better for them. It is altogether wise to allow nature to take its course, when the mother turkey will in all probability remain on the nest for about 24 hours, at the end of which time she should be cooped in a large, clean coop, with a board floor covered with sand. If the young poults are hatched in the morning it will be wise, however, to place them in custody during the evening or she may have rambed to the fields by the next morning. Wet is particularly fatal to young turkeys.

As young turkeys make such rapid growth of feathers when young they require constant care and liberal feeding to enable them to withstand the great demand upon their system. Boiled egg, chopped finely, answers well along with other food, such as stale bread crumbs mixed with a small amount of new milk. Onion tops or lettuce chopped up finely and mixed with their food occasionally will keep their system in fine growing condition. Sweet milk should be given them occasionally, and fresh water should be always before them.

As soon as the brood has all feathered out they are very hardy and can usually take care of themselves if allowed the run of the fields. It is well, however, to have them housed at nights to prevent their destruction by skunks, foxes, and other fowl destroyers.

Col. Harris, the well-known Shorthorn breeder, of Kansas, points out the folly of breeders sinking their individuality to the point where it was held that any strain of cattle must be forever bred squarely "in line." He has no patience or sympathy with those who insisted that the Cruickshank strains must be bred "pure." He had not hesitated to use upon his best Sittyton cattle bulls that carried a dash of Bates, and he believed that it had been of substantial benefit to them. He regarded pedigree merely as a means to an end, and that end in this case was good cattle. He had endeavored to preserve as the first essential good constitution, and submitted the cattle at his recent successful sale in evidence as having been refined at both ends without expense to their middles.