

Making Buttermilk from Skim Milk.

Editor "The Farmer's Advocate":

It is no doubt the opinion of many dairymen as well as a great many consumers of milk that good buttermilk can only be produced from whole milk. But I am enabled to state from practical experience on my own farm, as well as the experience of others, that first-class buttermilk can be made from skim-milk, thus making better use of this valuable by-product of the dairy than is generally done. The quality of buttermilk depends chiefly upon the proper ripening of the milk or cream, and does not depend upon the fat content. In either case the good qualities, such as palatability and flavor, are not due to the development of the lactic acid fermentation.

In order to produce good buttermilk from skim-milk it is necessary, first, that the latter be aerated and cooled, for there is a considerable amount of air incorporated with the milk during the process of separation which causes it to foam, and as this air is warm it is necessary to remove it. When it is allowed to remain in the milk undesirable fermentation arises, and the milk will "wey" and form a tough, floating curd. If the milk is permitted to stand for a short time after having been separated the foam will all come to the top of the milk and can then be skimmed off with a dipper, or the milk can be drawn off from the bottom through a faucet or poured from beneath the foam. After this foam has been gotten rid of the milk should be run over a cooler of some kind, such as the ordinary drum cooler, but in case this is not available the milk should in any event be cooled thoroughly by setting it in spring water or in some kind of an ice box or even in a cool-cellar. It is very important that the milk be kept cool for at least 12 hours.

After the skim-milk has been kept thoroughly cool for 12 hours its temperature should be raised to 70 degrees F., which is the best temperature for ripening, and allowed to become sour. When it has reached this temperature it will not take the milk long to become sour, and in about 12 hours it will be clabbered but not yet ready to be churned. It should now be cooled to 60 degrees F. or lower. This should be done in the same way as it was cooled previously and the milk allowed to set at this temperature at least 24 hours longer before being churned, thus making it from 36 to 48 hours old when put on the market. It is better not to break the clabber up until ready to churn.

Prior to churning it is very important that the maximum development of lactic acid take place. If a small amount of whey rises on the top of the milk no harm will result. The damage is done by a floating curd and whey at the bottom. Hence in successful buttermilk making it can be seen that the proper cooling and ripening of the milk are both very important features.

The process of churning can be varied to suit local conditions. The wood dasher, the same as is used in a common dash churn, can be used to thoroughly break up the clabber while it is yet in the "shotgun" or cooling cans. This is a fairly good method where only a small amount of buttermilk is made. Or the milk can be put in the churn and churned for 20 or 30 minutes. In any event the clabber must be thoroughly strained to remove all lumps of curd and to make it smooth. The consumers should receive the milk as soon as possible after it has been made, because of the fact that they wish it fresh. Keeping it cool from the time of making until it is delivered is a very important factor. In hot weather the receptacles should be wrapped in wet blankets or have ice cylinders in them.

Cleanliness in all things and at all times in making and handling the milk is quite essential. It may be supposed that because the buttermilk is already sour it is not necessary to exercise so much care in keeping the utensils as clean as possible, but buttermilk of good quality cannot be made from skim-milk without cleanliness in all things pertaining to it. Unclean vessels will cause the milk to sour too rapidly, the milk will "wey" badly, and tough, gassy curds will form which will be difficult to break up during the process of churning, and the resulting product will have an undesirable flavor and not be easy to dispose of. Good buttermilk is very popular and is in great demand, especially among people in cities and large towns. The supply is not always adequate. It is a splendid food for invalids as well as a healthful one for those who are well.

Johnson Co., Ill.

W. H. UNDERWOOD.

An old fence row is unsightly, and is a fine breeding ground for weeds and harmful insects; such places have harbored the army worm this season. No farmer can afford to leave such places alone. This fall is a good time to commence cleaning them out. Begin early.

POULTRY.

Conveniences and Details in Poultry Work.

Editor "The Farmer's Advocate":

Possibly nothing turns our attention more to easy ways of doing our work than the exceedingly warm weather, which absorbs our energy most rapidly. I doubt whether there is any other means of doing our work easily, and still doing it thoroughly, than to have proper and modern conveniences. It lightens labor like many hands.

Let us consider a number of conveniences to be had at small cost in work amongst poultry. First, the young chicks may be fed with much less work and time than is the rule, and still it may be done in a way that is just as thorough. Good drinking fountains may be had for about thirty-five cents apiece, and two of these will do one hundred chickens well. They are easily kept clean, and may be filled every morning with fresh water. One advantage of these is no water is wasted or dirtied and the smaller chicks cannot drown. There is no reason, if these fountains have reasonable care, why they should not last for years. A good large feed chest means wonderful saving of time, and is also a thorough way of feeding. It can be large enough to hold three or four bags of feed. All kinds of dry feed can be mixed in these boxes, or better still, light partitions can be placed to separate grain, grit, etc. The box should be placed on a slant with a water-proof top, and an opening one inch wide made along the bottom of box on lower side. As the birds take the feed more is supplied from above. The writer has tried this plan and finds it excellent. A cheap way to secure a good chest is from a dry-goods merchant. The merchant with whom you deal will generally be very reasonable.



Primrose Gift.

Champion Dairy Shorthorn at the Royal.

For hens brooding chicks always use bottomless coops. One has no idea how handy this is until it has been tried. They can be lifted each morning onto clean grass, making them fresh and sweet without any changes being necessary. Of course, when such coops are used the hens must be taught to lead the chicks into a tight building at night, ventilation being made only through top part of building. No chicks are safe at night, save in such a building, from their many enemies. Such coops are also convenient for broody hens during summer, after the breeding season is past. Broilers and table fowl to be fattened for ten days or so may be kept to advantage in such coops.

Proper and convenient tables must be placed under all chicken roosts, and always should be used in winter houses. We realize, only after we have tried it, how wonderfully clean this method keeps houses. It saves much time to have large boxes convenient to houses, in which a quantity of grain can be kept at a time. It is absolutely necessary to have everything convenient if work is to be wholly satisfactory.

A variety of grain must be given in some form, whether whole or in a dry mash. It is very necessary, particularly in this hot, dry weather, to see that good water is always available. All houses must be kept absolutely clean. Vermin cannot exist where both birds and houses are as clean and sweet as possible. Nothing is perhaps better than lime or wood ashes. Great care must be taken to know that ashes are thoroughly cold before using, as there is very great danger of fire, especially in winter, when litter of straw or shavings is kept upon the floor. Mites flourish only in fitting surround-

ings, but work great mischief. Insect powder will surely destroy vermin when dusted into the feathers. So much has been said and so much has been written that one feels timid about mentioning this matter in these pages, but those in position to know consider that in many places vast improvements must be made in this particular before any great success may be attained. If one wishes to sell eggs to give perfect satisfaction in exceedingly warm weather, have eggs infertile and keep clean and in coolest possible place, remembering of course such place must be dry. It is to be regretted that so little attention is paid by the majority to the removal of male birds when breeding season is over in June. Until this practice becomes common poultrymen and farmers must continue to lose money on eggs during summer weather, not only because wholesale dealers pay several cents per dozen less for eggs injured in such ways, but the demand in the large cities is decreased when there is such uncertainty as to quality. In this respect the innocent must suffer with the guilty to a large extent. Some steps have been taken of late by which eggs are paid for according to quality, but as a rule prices are lowered for all. Probably the only people whose business is not injured in this respect are those who candle their own eggs before selling, and are in a position to have private custom in large centres. But this class includes but few of us. As far as local markets are concerned the man with a basket of choicest goods receives, as a rule, the same price as the man with a basket of stale and dirty eggs, or even worse in different stages of incubation.

Let us look ahead lest in our eagerness to grasp the shadow to-day we lose the substance to-morrow. Another point must be impressed upon the poultry-keeper; that is, be very quiet with fowls of all ages. Handle them when growing so that they may become accustomed to their keeper by the time the laying period begins.

This applies to all birds, especially to the Leghorn. Hens are nervous creatures. Never allow them to be chased or frightened. Nervousness checks egg production more than inexperienced people would ever believe. Frights are disastrous.

Allow as far as it can be made possible a separate place for birds of different breeds and ages, always allowing the growing birds a place by themselves, undisturbed by laying hens and male birds.

Lastly might I advise making a study of your work. Read all you may find that has been written by people well informed on the subject. Profit by the advice of those who have made a

success of their business. Strive to meet and converse with those who are recognized as authorities. Visit occasionally, even if at some expense, a well-equipped poultry farm. Let us not find ourselves falling at the same stumbling blocks where we have fallen before.

Durham Co., Ont.

M. H.

HORTICULTURE.

The Profitable and Beautiful English Walnut.

Editor "The Farmer's Advocate":

Cultivation of the English Walnut is not only one of the newest but one of the most rapidly growing industries in the United States; and, of course, the reason for this is readily traced to the fact that this country is producing only about one-half enough of these nuts to supply the demand.

The Persian Walnut, commonly called the English Walnut, was named "Nut of the Gods," nineteen hundred years ago, by the Romans, and by them was distributed throughout Southern Europe, where descendants of these original trees are now standing—some of them more than a thousand years old—lasting monuments to the men who conquered these countries. In many places these same trees are producing a large part of the total income; in truth the United States alone is importing more than five million dollars' worth of nuts from these trees every year, and about half a million dollars' worth of