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**Farm Dairying**



A Typical Head

**XI.—Churns and Other Dairy Apparatus.**

By LAURA ROSE,  
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If possible a building, or at least a room, should be fitted up and used exclusively for dairy work. It should be well lighted, well ventilated, convenient and easy to keep clean. It should be well supplied with pure cold water and should have a good drain. One great trouble around our farm homes is the lack of a proper sewerage system, causing very insanitary conditions. This menace to the senses and health may be overcome by installing a septic tank and filter bed at a cost of about \$50. Provision should be made for heating the dairy in winter and, by choice of location and shade trees, having it as cool as possible in summer.

I have used many different kinds of churns, but so far have found none so satisfactory as the plain barrel style, revolving end over end and having no dashers or breakers inside. The earthenware revolving churns have much to recommend them.

**Large Churn Recommended.**  
In buying a churn be sure to get a large size. If more than two cows are kept buy nothing smaller than size No. 3. It has a churning capacity of from two to seven gallons, though I prefer not putting over five in it. Multiply the usual number of gallons of cream you have by three, and it will give you the capacity of the churn you should get. To do good work it is best to have the churn only one-third full.

Get a churn with a strong stand and the upright bars well braced. It should be convenient to get a pail under to draw off the buttermilk, etc. The plug hole should be nearly level with the bottom of the churn as possible. The lid should be large, the fastenings convenient and safe and the sight glass in the lid large.

There should be two means of making the churn revolve, or, rather, it should be so that two persons may work at it together. I have a preference for the overhand bar.

**Farm Dairy Equipment For From Four to Eight Cows.**

Prices will vary in different localities and according to quality:

- One No. 3 barrel churn..... \$7.00
- One floating thermometer..... .25
- One lever butter worker..... 4.50
- Two butter ladles or spades..... .30
- One butter printer for pound prints..... .25 cents to 2.50
- One large strainer dipper..... .40
- One large plain dipper..... .25
- One long handled dairy brush..... .15
- One small fiber brush..... .20
- One five gallon covered cream can..... .75
- One shotgun can..... .60
- One cream stirrer or ladle..... .20
- Two large pails (good quality, 14 quarts), each..... .60
- Two shallow tin pans..... .20
- One bottle butter color..... .25
- Five yards cheesecloth..... .25
- 100 pounds dairy salt..... .50
- 1,000 parchment wrappers, printed..... 2.50
- 240 pound Union scales..... 6.00
- 500 pound cream separator..... \$5 to 7.00
- Four bottle tester, complete with glassware for testing milk..... 5.00
- Tester for testing milk and cream..... 5.50
- Acidimeter (not necessary)..... 3.50

Before using strain about one-third of a pail of hot water into the churn to scald it and fill up the pores of the wood. Remove the plug after revolving the churn once or twice to allow the steam to escape; otherwise the steam may remove it without ceremony. After scalding rinse with cold water, likewise strained. It is always advisable to chill the churn and not put cream into a freshly scalded one. Chilling the churn closes the pores of the wood and prevents the cream from sticking. Moreover, the varying heat of a warm churn makes the churning temperature uncertain. It is easier to keep specks out of a churn than to get them out, and water from the well or the kettle is likely to have specks or scale in it. By placing a piece of cheesecloth over the strainer dipper it is an easy matter to strain all water that goes into the churn. It is better and quicker to pour the water out of the churn than to let it run through the bung hole. Floating dust will not then cling to the sides of the churn.

**Rinse Down With Hot Water.**

After using, the churn should be rinsed down with hot water, which should be allowed to run out as it is poured in; then thoroughly scalded with boiling water to which a little washing soda or other cleansing powder has been added. This should be followed by another rinsing of clear hot water. For the scald and last rinse the lid must be on and the churn revolved. Wipe well the outside, but do not touch the inside with a cloth. Rubbing the varnished part with an oiled cloth keeps it bright and new looking.

Never allow buttermilk or water to remain in the churn when not in use. Leave the plug out and the lid ajar and keep in a cool place to prevent warping.

The worker, spades and butter printer may be prepared just before needed. With a fiber brush, a dipper of hot water and a little salt give them a good scouring and cool well with cold water. Using the brush and the salt fills the pores of the wood more readily with water and prevents the butter sticking to it. The brush and salt diminish the need of a large quantity of hot and cold water. The salt also cleanses.

After using the utensils remove any butter with hot water. Again scour with salt, rinse with hot water and allow them to dry. Wipe only the varnished part of the worker. It is nice to have squares of cotton to throw over the churn and worker when not in use.

Lime is used freely in Danish creameries and dairies to clean and sweeten wooden utensils and is gaining favor in this country. After scrubbing the utensils with hot water, while the wood is yet warm, cover the surface with a thick lime wash and let them stand for awhile, then wash off well. It is not to be recommended every time of using, as it hardens the wood too much.

Applied in the same way, lime has no superior for removing oil or grease from floor. If the churn be washed occasionally with lime water it will keep it from getting an offensive smell.

While collecting sufficient cream for a churning it is best held in a good tin can or, for a small amount, a nice enameled pail. A can is better than a crock. It is very handy to have two cream cans.

**Keep Cream Can Covered.**

The cream can should stand in the coolest place in the dairy or cellar or in a tank of cold water in summer. In winter it may be kept in a room where the temperature ranges from 50 to 60 degrees. The surrounding atmosphere should be clean and sweet. The can must always be covered, not necessarily air tight.

Have a long handled ladle or tin stirrer, which reaches to the bottom of the can, and stir the cream thoroughly, right from the bottom to the top, each time fresh cream is added. The stirring motion should not be round and round, but up and down. When cream is ripened at a high temperature or held for too long a time there is apt to be an excess of acid, giving an old cream flavor to the butter. Always err on having too little rather than too much acid.

No fresh cream should be added within eight or ten hours of churning, and it is well to have the cream at churning temperature, preferably below it, for several hours previous to churning. This applies to sweet cream as well as to the sour.

When beginning to collect cream for a churning, if it is to be ripened, add to your first skimming a culture which you know has a clean, pleasant acid flavor and smell.

This culture may consist of a cup or two of the sour cream on hand for churning or the same amount of good flavored sour skim milk. I do not advocate the use of buttermilk as a culture. I prefer the sour cream. The object in adding culture is that the bacteria which you know produce a



BARREL CHURN.

fine flavored butter may take possession of the new cream before other germs, which might prove objectionable, gain control of it.

**Cream From Shallow Pans.**

Cream from shallow pans usually has enough acid without any culture being added, but butter made from it is not of such a uniform flavor.

Cream from the deep settling cans, owing to its being held all the time at a low temperature and thus checking bacterial growth, produces butter of fine flavor and good texture. It may be necessary in winter to heat the cream from deep cans to 55 or 60 degrees before adding it to the cream can in order to develop sufficient acid by the time a churning is collected.

Separator cream should have the foam well stirred in. Separator cream must be quickly and thoroughly cooled by being placed in cold water and frequently stirred, so as to quickly bring it to 55 or 60 degrees in winter and from 50 to 55 degrees in summer. Under no conditions should the warm separator cream be added to the cream can.

Cream ready for churning should have a clean, pleasant, slightly sour taste and smell, should be of the consistency of molasses and when poured be free from lumps and have a smooth, glossy appearance. It should have from 5 to 55 per cent acid and from 24 to 28 per cent fat if churned in a barrel churn. Cream of this richness yields about three pounds of butter per gallon.

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