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**SPECIAL.**

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## MAKING FARM BUTTER IN THE SOUTH.

Prepared in the Dairy Division of the Bureau of Animal Industry.

A large percentage of the milk and cream produced in the Southern States is made into butter on the farm. The butter produced is variable in quality and color and is marketed in packages of all shapes and sizes, and for these reasons does not find good markets. Better markets could be secured for southern-produced farm butter if it were properly made and put into attractive packages. The following practical suggestions will be of assistance in improving the quality and appearance of the butter:

### SKIMMING THE MILK.

Experience has shown that in general practice the churning of whole milk results in butter of poorer quality and in greater losses of butter fat in the buttermilk than if cream is churned. It is therefore best to skim the milk and churn the cream. The best way to skim the milk is by means of a separator. A farmer who has only two or three cows but no separator may put the milk into deep, narrow cans (shotgun cans) and set them in cold water, and when the cream rises it can be removed with a shallow spoon. Where this system is used it usually takes about 12 to 18 hours for all the cream to rise. Care should be taken to keep the milk cold, in order to make the cream rise rapidly. The old method of setting the milk in shallow pans should not be used, as the cream does not rise so completely as when set in deep cans in cold water; furthermore, the quality of the cream is not so good and there are more vessels to wash and care for.

### QUALITY OF CREAM.

To produce farm butter of good quality it is essential that the cream be clean. Another publication, *The Production and Care of*

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NOTE.—Intended for farmers in the cotton belt who desire to diversify their farming because of the economic crisis which adversely affects the cotton crop at this time.

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Milk and Cream, tells how to produce clean cream. The cream should be held as sweet as possible until time for it to be ripened for churning.

#### RIPENING THE CREAM.

As soon as the cream is skimmed it should be cooled and kept cool until enough has been collected for churning. In adding cream from time to time the newly separated cream should be cooled to the temperature of the old, as warm cream causes souring to set in. Cream ripening or souring for churning should begin 18 to 24 hours before churning time. When ready for ripening or souring the cream should be warmed and held at a temperature of about 70° F. until it has a mild, sour flavor and a smooth velvety appearance when stirred. This cream can be either warmed or cooled by setting into a basin of hot or cold water, as the case may be. Sweet cream should never be added to cream that is ready to churn.

#### STARTER.

In cold weather and at times when it is difficult to get the cream to sour, the addition of sour cream, or sour buttermilk, may be made to hasten souring. The milk used to hasten souring is known as a starter. Care should be taken not to add sour milk of bad flavor to cream, as it will cause the butter to have the same bad flavor.

#### COLORING THE BUTTER.

The natural color of butter varies considerably from almost white to a deep yellow, but a light golden yellow is usually preferred by consumers. During fall and winter, and in some instances during the entire year, it may be desirable to add artificial butter color to insure a uniform color. The material used for coloring should be a vegetable product which is perfectly harmless; this can be obtained at or through drug stores. Color should be added to the cream just after it has been put in the churn. The proper amount to use can easily be learned by experience.

#### CHURNS AND THEIR CARE.

Some form of churn having no dasher, such as the round or barrel-shaped type, should be used. Churns of complicated make should not be used, as they are hard to keep clean and have no advantage over other types of churns. Before use the churn should be rinsed in boiling water and then thoroughly cooled with cold water. After churning is completed it should be rinsed with cold water, thoroughly washed in hot water, and then scalded and set in a clean

place, exposed to sunshine and air until needed. All utensils such as ladles, molds, and bowls, or workers used in connection with churning should receive similar treatment.

#### CHURNING.

For different conditions the best temperature for churning can be obtained only by experience. The temperature should be such that the butter will come in about 30 minutes after churning begins. When churned for a shorter time than this a large part of the butter-fat is left in the buttermilk. Churns advertised to require only three to seven minutes of churning should be avoided. Hot or cold water should never be put into the churn for making the cream colder or hotter. When this is necessary the cream should be set in a basin of hot or cold water and frequently stirred. The churning should be stopped when the butter is in particles about the size of a pea. These particles should not be gathered, but the buttermilk should be drawn off through a strainer. Cold water should then be added to the butter granules, the churn gently agitated, and the water drained off. This should be repeated until the water is clear as it runs from the churn. Buttermilk is washed out and not worked out of butter.

#### SALTING AND WORKING THE BUTTER.

Butter may be salted and worked in a butter bowl. If several pounds are made at each churning, a hand worker is desirable. Salt should be added to the butter at the rate of about 1 ounce of salt to each pound of unsalted butter, although the amount of salt depends upon the demand of the consumer. Butter should be worked until the salt is evenly distributed. If any grittiness is noticeable when tasted, it is evident that the butter is not sufficiently worked. The butter should be worked and handled with a ladle and never touched with the hands.

Another evidence of insufficient working is a streaked or mottled appearance a few hours after the working has been completed. Overworking should be avoided, as it makes the butter greasy or salvy.

#### PREPARING BUTTER FOR MARKET.

Butter should be molded into square prints and wrapped in parchment paper. In addition to this, placing the butter in pasteboard boxes or cartons, which can be obtained at small cost, will protect it from bruises and finger prints. Round molds should not be used, as in that form it is inconvenient to wrap and handle the butter. The name of the butter maker placed on the wrapping paper or cartons is a good method of advertising.

Methods of marketing farm butter are described in another circular which may be obtained on application to the Department of Agriculture.

#### EQUIPMENT FOR MAKING BUTTER ON THE FARM.

Churn.

Butter worker or butter bowl.

Butter printer (1-pound square print).

Scales or spring balance for weighing butter and salt.

Dairy thermometer.

Parchment paper.

Pasteboard boxes or cartons.

Butter ladles.

Strainer.

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