

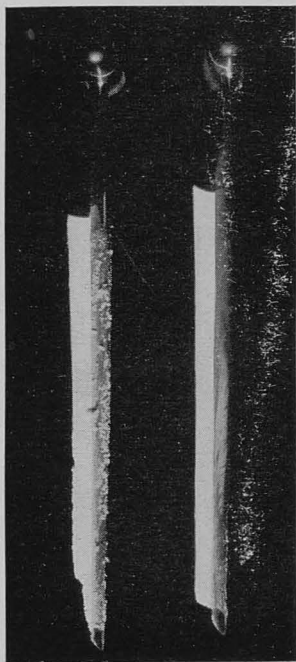
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Preventing "Sticky-Crumbly" Butter

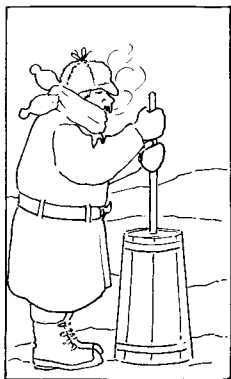
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ONE of the most common body and texture defects found in butter produced in the Northwest is that which perhaps may be most descriptively termed "sticky-crumbly." Such butter is sticky in that under normal conditions a clean trier cannot be drawn from it, and also is crumbly in that the particles of the butter mass lack cohesion. When butter is exceedingly sticky-crumbly it is impossible to draw a full trier, as the butter rolls on the trier, presenting a ragged appearance. The grader may describe this as "ragged

Winter Churning



The procedure recommended for use in manufacturing butter from cream produced in winter includes the following points:

1. Excessive cooling of the cream should be avoided. If the cream is to be held overnight, it should be cooled to the churning temperature or slightly lower and held at that temperature. (45 to 50° F. has been found to be satisfactory.)

2. The churning temperature should not be lower than necessary to secure exhaustive churning under normal churning conditions. Normal churning conditions may be defined as the operation of the churn at standard speed for the churn used, with the churn not more than half full of cream of average richness (25 to 35 per cent

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boring." Such butter resists the passage of the trier and much greater force is required to insert or withdraw the trier than with normal butter. The defect is very common in winter butter. In fact, little of the butter produced in the Northwest in the winter months is entirely free from this condition.

Work by the Dairy Division of the University of Minnesota has demonstrated that the defect can be prevented in the butter produced in this territory by proper control of the manufacturing procedure.

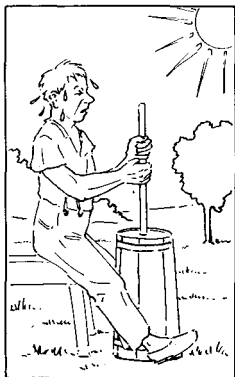
Summer Churning

The manufacturing procedure for butter churned from cream produced during the late spring and summer months differs from that outlined for winter butter. Summer churning procedure should include the following points.

1. The cream should be cooled to as low a temperature as practical, and held for at least two hours before churning.

2. The cream should be churned at a temperature as low as is consistent with a normal churning period.

3. If the butter granules are normally firm, use wash water 2 to 5° F. colder than the buttermilk (48 to 50° F. has been found satisfactory). Colder wash water may be used, but the butter produced will not be of maximum firmness.



butterfat). A churning time of 40 to 50 minutes should be sufficient to secure exhaustive churning under these conditions.

3. The water used to wash the butter should be 10 to 20° F. colder than the buttermilk. In some cases wash water as cold as 40° F. or lower may be used advantageously. If wash water this cold is used, it should be left in contact with the butter long enough to chill the granules thoroly. A procedure which has been used successfully is as follows: Use approximately the same amount of wash water as buttermilk. Revolve the churn in high gear for 5 to 10 revolutions after the wash water has been introduced, then work the butter in the wash water until the granules have been gathered into a roll, drain the wash water, and complete the working as usual.

A few creamerymen have objected to the use of cold wash water because of the increased firmness of the butter when removed from the churn. The butter will of course be somewhat firmer than if warmer wash water had been used, but if it has been worked properly it may be handled easily. It will require more working than if warmer wash water had been used.

Because of differences in the composition of the butterfat, the practices outlined above are not applicable to the manufacture of butter from cream produced during the late spring and summer months.

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