

the canal formed between them. As soon as it gets a good swallow of the milk gradually withdraw the fingers. If young and hungry the calf will usually learn to drink in one such lesson. With refractory individuals a little patience will be required.



A Model English Creamery.

Ten pounds of milk a day is sufficient for the calf the first week. At two months it should be fed about twenty pounds. Twenty-five pounds a day is about the maximum quantity of milk to feed any calf. If the slightest tendency towards scouring is noticed, reduce the feed and give a couple of raw eggs with the shells.

The calf will do better on milk containing $2\frac{1}{2}$ per cent. fat than if fed 5 per cent. milk, and in some cases it may be best to give half skimmed milk from the start. For the first two weeks no solid food should be given in the milk. After that a tablespoonful of flax seed or Indian meal cooked may be given. The quantity may be increased as the appetite and digestion indicate, until a quarter of a pound is fed at four months.

BULKY FEEDS.

The calves should be allowed the run of a small pasture when the season will permit, and at other times should be fed some early cut hay and grain. Encourage them to eat bulky foods, ensuring a capacious stomach and good digestive ability.

It will be better to feed the calves separately, and to keep them separated for a short time after feeding. Pure water should be where they can help themselves at all times.

All the nipples and other devices for feeding that I have tried I have soon discarded, on account of the tendency to clog with solid food, and the difficulty of keeping them clean.

Butter and cheese makers should insist on having sound milk to work with. Where the patron supplies it he has a right to demand that the skim milk be returned sweet, and the whey in a satisfactory condition for feeding.

Breeding to the best dairy sires available, the selection of the best calves and their proper feeding are the three important steps in improving the character of the herd, and increasing the returns per cow per acre.

Cheese and Butter for Export

By H. H. Dean, Professor of Dairying, O.A.C., Guelph.

Cheese is still foremost among the many branches of the dairy industry, and may be placed first in any article on dairying, but the revival of the live stock trade and the demand for Canadian creamery butter in Great Britain are creating an interest in butter-making which will doubtless cause it to forge ahead of, or at least be not far behind, the cheese industry of Canada.

Owing to the great variety in tastes, common to Britishers the world over, it is very difficult to establish a standard in these two articles of food. They are unlike tea, sugar, bread or other staple foods in that there is more demand for variety. Again, cheese and butter are products of fermentation, which we have not yet learned to thoroughly control; hence, in spite of the greatest care, it is very difficult to get a uniform quality for special demands. No two days' make of cheese or butter are exactly alike. They may appear to be, but close examination reveals differences which the maker cannot entirely overcome.

In general, however, we may say that a good Cheddar cheese is made up of good flavor, firm, waxy, meaty, close body and texture, *even* color and a real attractive appearance. The English language fails in terms to describe flavors, hence each person must learn for themselves, by contact with a number of cheeses, what is meant by good flavor. The other qualities are more easily described and learned.

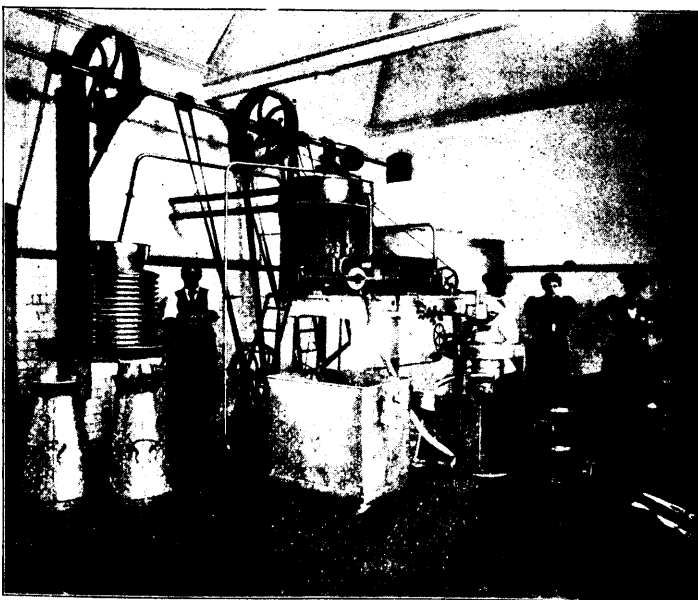
FLAVOR.

The chief things which affect flavor are the cow, the food fed to the cow, the care given the milk, method of manufacture and time and temperature in curing. With reasonably good milk and ordinary care in the making, temperature in curing is the most important factor affecting flavor, body and texture. So far our experiments at the O.A.C. dairy indicate that a higher temperature, 65 to 70° , gives more satisfactory results for spring cheese, and a lower temperature, 60 to 65° , is better for summer and fall cheese. Owing to the difference in seasons and the different character of milk in various places, much work needs to be done in this connection before we can speak very definitely. There would seem to be a balance of testimony in favor of the principle: the lower the temperature at which fermentation will take place the better will be the flavor, though local and special circumstances may modify this to some extent.

BODY AND TEXTURE.

Closeness, body and texture are affected by the per cent. of fat in the milk, rennet, and temperature in cooling and curing, handling of the curds, salt and pressure. Some experiments made by Prof. Lloyd, of England, indicated that liming the soil pastured by cows gave a firmer body and texture to the curd as compared with curd from the milk procured on soils to which no lime had been applied.

A large quantity of rennet tends to produce a weak-bodied cheese, too much acid a harsh texture, too low a



Interior of a Model English Creamery.

temperature in cooling produces weakness, and too high a temperature stiffness. 96° to 98° is generally considered about right—though curds from milk containing four per