

RED DEER CREAMERY.

a first necessity. In this country, where silage is hardly used at all in winter feeding, succulence may be gained by feeding roots. Clover and alfalfa hay, also, though no more succulent by nature than ordinary hay or green cut grain, seem to add something to a ration which other roughage does not. What they add is in part due to the large amounts of proteid nutrients they contain, but they seem to add something also in the way of succulence to a ration that is out of proportion to their moisture content. It is probable that some of the value of clovers as a winter fodder comes from their palatableness.

This question of the palatableness of the various grains and fodders in feeding opens up another field of inquiry, a much more difficult one than the mere question of the composition and digestibility of feeding stuffs. Two feeds may compare most favorably in regard to their percentage composition of the necessary ingredients and in regard to the digestibility of those ingredients, but the degree in which they are agreeable to the taste of the animal influences very largely their value to the individual for any certain purpose. Palatableness stimulates the appetite, relish for food is conducive to good digestion. The taste, therefore, of food tends to promote a state of vigorous activity on the part of the digestive organs. The agreeableness of a food's flavor is, without doubt, an important factor in successful feeding.

Balancing a ration does not necessarily mean that it is compounded of the best possible materials, and is in the best possible form for the economical production of milk or other animal products. Standards may be set up for the feeder's guidance, experiments more or less scientific and unrelated to actual feeding may demonstrate certain principle which it would seem proper to follow in the feeding of animals, of dairy cows especially, but, after all, it is the individuality of the animal, its capacity to consume and its ability to produce, the effects of food upon its health and condition, upon its appetite and taste, that are the real vital factors in the problem of feeding.

Average Farmer and Dairying

The person who could succeed in getting up some scheme of interesting the average farmer in the dairy business would be entitled to have his name enrolled among the benefactors of the human race.

While this may seem to be an extravagant statement it is not as much so as it might seem before it is examined into more closely.

The average farmer today is a dairyman just because he happens to be. He did not go into it premeditatedly, he just drifted into it. He found himself with a few cows and a little more milk and cream on hand than his family could consume and he sold it, and he probably gave no thought to whether it was a good product or not. He sold it simply because he found out he could, and he probably never took the trouble to look up the price, or the test.

As long as the average farmers are as indifferent as this, we can look for but little difference in the character of the raw material that is coming to the creameries.



CHEESE FACTORY AT ERSKINE.

Extensive farming and dairying don't go together. It takes small farms and intensive farming to make good dairymen. Just as long then as the average farmer wants to own all the land that joins him, and undertakes to farm it all, he isn't going to pay much attention or take much interest in dairying.

Occasionally there will be a farmer who appreciates what dairying means to his soil, to his family, and to his posterity and he will be interested in dairying. He will be a dairyman, and of all the farmers in his community he will be the most successful.

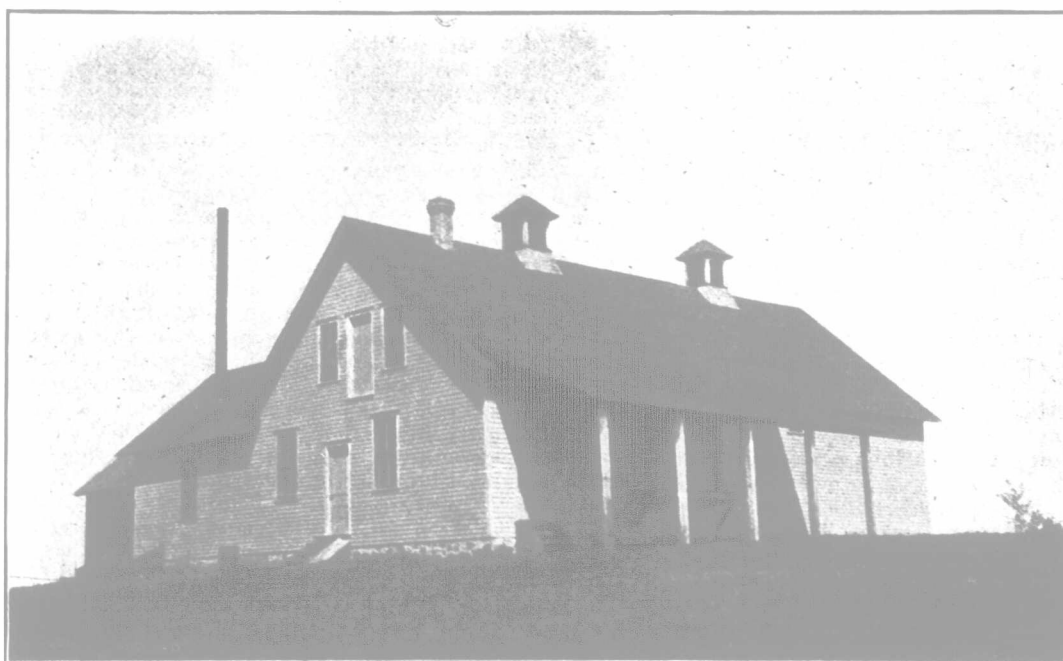
Just what is going to be necessary to interest the average farmer in dairying is pretty hard to tell. One thing is certain, he cannot be driven into it. It also seems that he cannot be persuaded into it.

The example of a successful dairyman neighbor doesn't seem to have any impression upon him.

Just so long as present conditions prevail—that is, so long as the present high prices of grain and meat products continue, he is going to be a hard man to interest in anything but the raising of these products; and if we can believe the economist who studies the future, we are never again to see cheap grains or cheap meat products.

Population, they say, is increasing so fast and is becoming so centered in the cities; our manufacturing enterprises are becoming so great, requiring such a vast army of workmen, all of whom are consumers of these farm products, that the consumption of them has outrun their production to the extent that it will never again catch up; and that the demand for these products will always exceed the supply.

If this should be the case there is but little danger that any person will ever have his name enrolled as a public benefactor for interesting the average farmer in the dairy industry.—*Chicago Dairy Produce.*



CREAMERY AT STETTLE, ALTA.

Winter Churning Troubles and how they may be Overcome

There are certain churning troubles peculiar to the winter season. These usually manifest themselves in a lengthening of the time required to bring the butter, and the maker is often a good deal perplexed to know exactly how to deal with them.

As a general rule churning trouble in winter is caused by the fact that the cows have been a long time in milk, the fat globules are consequently smaller in size than they were earlier in the lactation period, making it more difficult for them to coalesce and form the butter granules, and in addition, the fat of cows advanced in milk, or of farrow cows, is harder, and has a higher milking temperature. There may be some trouble in regard to ripening, though ripening troubles are less liable to occur in winter than in summer. It is easier to obtain the cream in good condition to start with, and further the low temperatures of the season are unfavorable for the development of the organisms that cause the most serious trouble in summer. When any reasonable care is exercised in handling the milk and cream, troubles due to improper ripening need not necessarily occur. To the cows and the character of the food from which milk is made, may be attributed most of the churning troubles of the fall and winter seasons.

Cows that are far advanced in lactation and fed on dry fodder give milk the fat of which is hard, relatively speaking. The cream becomes highly viscous, that is, it is sticky, adhesive, and glutinous in character. The natural course to follow is to feed the cows on a more succulent

diet, or something that will cause them to give more milk. Succulence may be added to the feeding ration in the form of roots, but in the majority of the cases where troubles of this kind occur there are no roots to feed. Neither is there much of anything else that will serve the purpose. About all the dairyman can do in the circumstances, is to attend carefully to the ripening of his cream. Of course if he has some roots, clover hay and bran, he can work up a feeding ration that will overcome winter churning difficulties pretty effectually, but if he can't get these feeds there is not much use explaining what might be done if he could.

The viscosity of the milk may be lessened by bringing about a vigorous lactic acid fermentation in the cream, and in extreme cases by diluting the cream with warm water or weak brine. Care must be taken not to carry the dilution too far, else trouble quite as serious may result from going to the extreme in the opposite direction, that is, by making the cream too thin. The cream as it is gathered should be mixed, placed in a can or crock until sufficient has been gathered for a churning, and then raising the temperature to about 70 degrees. It should be held at this point until there is a good acid development—until the cream is sharp and sour to the taste. Then by bringing it to a temperature of about 65 degrees or higher if it seems necessary, the butter should form in the usual time.

The attempt should not be made in winter, especially if the cream is from the milk of farrow

POULTRY

Poultry Keeping as a Business

A man may have one or several objects in view when he goes into the poultry business. If he is wise and has had any experience in poultry keeping, he will have only one object in going into the business, or at most two. This is the day of specialization in industries, in poultry keeping as well as in other things, and he who keeps his energy and means centered upon one line of work will likely attain better results than if he attempted to spread himself over several lines in the same business. A man going into poultry, if he is going into it for commercial purposes, for the production of eggs and for selling fowls, is well advised if he makes a specialty of the egg business, and does not try to keep a few chickens for his own stock. There is no room for both in poultry, and some men can