JANUARY 16, 1908

X.

as

ge

is

ed

ıg-

ch

in

th

h.

to

ιw

nd

nd

is

el

et

n

et

rh

d

le

THE FARMER'S ADVOCATE.

that some of the whey which is sent home makes it al- owners of factories and with the stockholders of jointmost impossible to properly sterilize the cans with the facilities at hand at the average farmhouse. We hear < of large numbers of our cheese developing with age a whey flavor. Now, there is to my mind only two ways by which cheese will develop whey flavor. One is through uncleanliness at the factory, and wrong methods of making, the other is through the medium of the whey tanks. The first trouble is pretty well cleaned up now, consequently I think we are safe in saying that the majority of whey-flavored cheese are due to unclean whey sent home in the cans, and the cans not being properly sterilized. Again, there are certain gassy, yeasty and other flavors that seem to develop readily in old, sour, unclean whey, and there is no doubt that the plant life or bacteria that are the

ent places. Certain flavors due to bacteria may become present on one or more patrons' milk; these are brought to the factory, many times undetected, as they are not far hough advanced; they are not killed in the process of making; they pass into the whey tank, and are widely distributed through the milk cans among the other patrons. Thus, the entire number of cans may become contaminated through the medium of the whey. If not sterilized, their growth readily increases, and becomes present in almost all the cans.

direct cause of these flavors are carried in the patrons'

cans and finally become seeded in a great many differ-

Contamination of cans by whey. To minimize the contamination of the cans by returning whey, it becomes necessary to free the whey from these undesirable germs.

We may clean a whey tank every day, but unless the tank is thoroughly sterilized with live steam it is not clean from a bacteriological standpoint. In the case of wooden tanks, the wood being somewhat porous, will contain a certain amount of germ life impossible to dislodge with ordinary washing. #

HEATING WHEY.

If the whey is heated (by the introduction of steam in the tanks) to a temperature of 160° and 165°, and held at that temperature from one to two hours, it should put the whey in a much cleaner condition to go into the patrons' cans. Will it pay ?

Ordinary whey will have acidity of about 1% or over, depending upon cleanliness of tanks.

- Whey heated to 130°, acidity .5%.
- Whey heated to 140°, acidity .45%.
- Whey heated to 150°, acidity .4%.

Whey heated to 165°, acidity .25%, or practically Turn exhaust steam into tank and add suffisweet. cient live steam to raise temperature to 165°, and the whey will go into patrons' can at about temperature of 140° in hot weather, if tanks are covered. Steam should be distributed around the tank at bottom.

ADVANTAGES.

Keeps the whey sweet. Gives better feeding value

- Can be fed to young calves and pigs.
- Keeps the fat in the whey.
- Prevents the fat from rising in the tanks.
- Keeps the tanks cleaner.

Keeps the cans cleaner and makes them easier to

Practically kills all bitter, goosy or yeasty flavor, and gas flavors

Will inhibit the growth of all germ life. Does not have that old, sour, disagreeable flavor

that ordinary whey has. The cans will last lon stock factories in helping to bear the expense of these improvements. The patrons are the ones who will reap the greatest benefits, both in the improved quality demanding a higher price, and in the saving in shrinkage, and if they would come together and agree to pay onehalf of the expense of putting in cool-curing rooms, I believe hundreds of them would be put in in the near future. This is where a large factory again comes to the front. A factory making 100 tons of cheese usually has about 100 to 125 patrons. A modern coolcuring room will cost about \$600 to \$800. One-half of the expense borne by the patrons would only amount to about \$1 to \$4 each-a very small amount when the benefits to be derived are considered. Even if the patrons bore the whole expense of a modern cool-curing room for curing cheese, the cost to each would not be great. It is the joining together of all concerned that makes the burden light and the final cost of improvements a small item. It will pay to put in coolcuring rooms.

MAKERS' SALARIES.

I believe the cost of producing milk on the average farm has increased during the past few years, owing to increased cost of labor, increased value of feed, and, perhaps, other causes; but I do not think the cost of producing milk has risen by as great a proportion as the cost of manufacturing this milk or cream into cheese or butter. The cheese or butter maker or manufacturer is also up against the problem of increased cost of labor. His supplies have gone up 25%, while his price of making has not gone up, though the price of dairy products has gone up to meet somewhat the increased cost of production. It certainly looks as though the manufacturer should have more for making if he is to continue the improvements required by a more stringent market condition. By the patrons cooperating with the maker and paying him a few cents more per hundred for making, he will be placed in a

getting a little behind, and are not improving your methods as fast as our cheese and butter makers are? I believe the majority of our factorymen are spending all they can afford from year to year in improvements. But let me say this, that if we had palaces for cheese and butter factories, after all, the quality of the cheese and butter would depend to a great extent on the raw material-the milk or cream-and I believe the weakest link in the dairy chain to-day is the quality of the milk

81

GARDEN 龄 ORCHARD.

CRANBERRY CULTURE IN MAINE.

Among the industries of the State of Maine which may be classed as profitable to the agriculturist, the growing of small fruits is one of This has formerly inno mean importance. cluded currants, gooseberries, strawberries, raspberries and blackberries. To this list has been added the cultivation of cranberries, and, at no distant date, the propagation of blueberries may be included. Cape Cod cranberry bogs have for a long time furnished much of the product placed on the Maine markets in the fall of the year, and will continue to hold a prominent place in market economy, but Maine is in many sections adapted to the raising of cranberries, and has furnished considerable native fruit from bogs where the only attention the plants have received is the gathering of the berries. The quality of the fruit was fair, and in some cases, where a little attention was given the vines, a marked improvement in both size and quality was noted.

At the annual meeting of the Maine Pomological Society, recently held at Gardner, there was shown a half bushel of cranberries raised on

a bog, where special attention was given to cultivating the fruit for market, as a profitable business proposition. A short sketch of methods employed may be of interest to the Canadian public, and show that the care of a cranberry bog is no sinecure.

The cranberry is one of our native American fruits which has been cultivated and improved, until now it is an important commercial product, and can be raised in any of the northern States where conditions are suitable for its cultivation, the essentials being a level peat bog, good clean sand, near an ample supply of water controlled by a dam and available at all times. A bog where native berries grow will nearalv



Cost about 50c. or 60c. per ton of cheese for fac tory of 150 tons

Cost, about \$75 or \$80.

With 80 patrons would be about \$1.00 each. very small cost compared to the benefits secured.

It will pay to heat the whey from the standpoint, of the cans alone, as the sweet whey does not take

off tin as does sour whey.

Kills disease germs.

PATRONS GET THE BENEFIT.

The patrons get nearly all the benefit from having clean whey, consequently, if they will pay their share of \$1.00 or so towards the pasteurization of the whey, I am sure the makers would be willing to take the little time and trouble necessary to make it a success. It will be of no value if only half done. The temperature should not go above 165° or the albumen will separate, and the whey will be slimy.

It will pay to heat the whey from the standpoint of saving in cans alone, to say nothing of lessening the chances of having overripe and tainted milk, which may be due to the effects of unclean whey.

COOL-CURING ROOMS.

Then, again, I think it is generally conceded that cheese cured in up-to-date cool-curing rooms, at temperatures between 56° and 60° , are a great deal finer in texture, flavor and keeping qualities than cheese cured in the ordinary room in hot weather. If all cheese were cured in such cool-curing rooms, thousands of dollars would be saved the patrons in shrinkage in weight alone, to say nothing about the improvement in quality and greater price, and even now the percentage that are enting in cool-curing rooms are having marked effect on the consumption of cheese and on the market. There are sections where a number of cool-curing rooms have been established that are being paid ke, per lb, more for their cheese than some other sections where cheese cured in the ordinary hot room. Then, if cool-

White Rose 2nd 17841

Ayrshire heifer. Winner of first prize for heifer over thirty-six and under fortyeight months in the two days' milking test at the Ontario Winter Fair, Guelph, Dec., 1907. Record, 95.58 lbs. milk, testing 4.2 per cent. fat. Bred and owned by H. & J. McKee, Norwich, Ont.

position to improve his business, keep his plant in it is of utmost importance that it be arranged sanitary condition, and keep in the business the best so that this can be done when it is necessary to men, who are, undoubtedly, to some extent, going out of the business for reasons already mentioned. This small increase in the price of making will not be felt by the patrons, and they will, undoubtedly, get it back again in improvements made from the maker's end of the business

IMPROVEMENT OF FACTORIES.

There are 280 cheese and butter factories in Western Ontario, and this year they spent \$52,834.00 in improving their buildings and equipment, and taking the past five years, over \$250,000 has been spent by factory owners and joint-stock companies of Western Ontario in trying to put their factories in a better condition. As much and more has been spent in Eastern

Our makers are spending money and time in attending dairy schools, and the majority of them are doing everything they can to fit themselves for their business and improving their methods. The Departments of Agriculture of both Dominion and Provincial Governments are spending money in furthering improved transportation for dairy products, in getting better coldstorage facilities, employing expert instructors, and doing everything in their power to advance the dairy industry. I would like to ask the patrons of our cheese factories and creameries, Are you living up to your opportunities? Are you doing what you can to improve the quality of the milk or of the cream? Or. must you confess, some of you at least, that you are crop can be grown with profit.

cessful.

To set out beds, a ditch must be put around the whole piece, with enough cross ditches to take the water from the beds with dispatch, for

flood for frost, and pick the next day.

All the grass, roots and bushes are taken off. and the beds made perfectly level, after which the whole surface is sanded from three to four inches in depth.

Great care should be used in selecting the The Wellman Cherry cranberry gives plants. satisfaction in Maine, having good keeping qualities, and bringing a good price on the market. An early black variety is marketable about two weeks before the Cherry, but does not keep as well or command as high a price.

The cuttings for setting out a new bog should be taken from good vigorous plants. They should be from 12 to 15 inches long, and placed about ten inches apart in rows 18 inches wide.

While it takes about three years for a bog to come into bearing, once properly started, it will last many years, but its success entails much work and care on the part of the man in charge, and many nights without sleep is his lot.

A frost in June may destroy a large portion of the crop, or the early frosts of the fall damage the fruit, unless the water is turned on when the thermometer drops to the freezing point. There are also insects of various kinds that destroy both berries and vines, making constant watchfulness necessary. In spite of these hindrances, the

FUJI MICRO SAFETY -