THE FARMER'S ADVOCATE.

## butter worker, whatever that may be. I think too much working spoils the grain of the butter and makes it greasy ; too little does not take out all the buttermilk, and it won't keep, so that a little judgment and skill is required here to do it just right.

Whether the butter be in a bowl, on a plate or on a board, don't spread it, bruise it, or squeeze it. If in a wooden bowl I press it with a wooden ladle and turn it over and cut it up in long, narrow strips, and press the milk out of it gently, pressing each strip by itself. If it is on a board, take a common bread roller and roll the butter out thin, turn and fold it a few times, but don't squeeze or spread it, but roll it out.

When all the milk has been dressed out of it, wash it with clean water with a little salt in it. Experience will soon tell a careful observer when the butter is purged of all the milk and ready for salting. Don't do any guesswork. I weigh the butter now and allow one half ounce of fine dairy salt to the pound of butter. Some prefer more salt. If the butter is for my own use, I salt to please their taste, but if for market, I never use more than one half ounce to the pound for present use. Cut the butter into thin slices and spread it over the plate and shake over it about one third of the salt, put them together, double and press them together, turn it edgewise and do the same, and press it down flat and repeat the same, adding a little more salt till finished. When finished, I fill the bowl with water or put the butter into some other vessel, where it can be covered with water or a wet cloth to keep it from the air; let it stand an hour or two. If a board and roller is used, the same process can be carried out on the board.

In preparing for market, I always see that the scales are properly adjusted, and weigh the butter into one-pound pieces, giving good weight. I weigh it all before doing anything else. When the butter is all weighed, set to work and put it up as desired, either into prints or into rolls. If rolls are neatly done up and tidily finished, they sell as well as in any other form.

When you get to market with a fine article, seek for the best customers, and give them a taste of your nice clean, gilt-edged butter : two or perhaps four cents a pound more will be your reward. Don't trade it off for groceries-you can get cash for it. Good pure butter should be found on every farmer's table, but I am sorry to say it is sometimes lacking in flavor

FARMER'S WIFE.

## Butter Increasers in the Light of Science.

We know as a scientific fact that the ordinary methods in use in our dairies and creameries, if rightly conducted, practically abstract all the butter-fat, and we also know that there are no means for increasing the butter-fat in cream by the addition of foreign materials, by absorption of oxygen, or by conversion of the albuminoids, as claimed by many of those having methods for sale. Any addition to the weight of butter by artificial means must come from the admixture of curd or water, or both-and such, as we have already stated, do not yield either a legal or marketable butter, but a product which will bring trouble and loss to the maker.

## How the High-scoring Cheese at the Pan-American Were Made.

In August 1st issue we published the list of exhibitors and scores of Canadian cheese at the Pan-American, in competition with the export cheese of all America. The victory then recorded is a matter of great importance to the chief dairy export of Canada, and will tend to more firmly establish our claim to premier place among cheeseexporting countries of the world. Unfortunately, all Canadian cheese is not of the same superior quality as that shown at the Pan-American, so in order to help the whole cheesemaking industry onto a higher plain, we asked the Canadian exhibitors at Buffalo the following questions regarding the making and curing of their exhibition cheese:

1. What precautions did you observe when taking in the milk?

2. Did you use a "starter"? If so, what kind, how prepared and used?

3. Did you wash the curds? If so, how, at what temperature of water, and at what stage or stages of the curd?

4. At what temperature did you put to press, how long was the cheese pressed, and how often was it turned in the press?

5. (a) At what temperature was the cheese cured? (b) Describe your system of ventilating and coolingi

(c) How long was cheese held in curing room?

(d) How often was cheese turned on the shelves? (e) What per cent. of moisture was maintained in the curing room

Let it be remembered that these makers, while they follow the standard rules for Cheddar cheesemaking, also have picked up many little methods and practices for improvement by reading dairy literature and observation and experiment, so that the lessons they teach in their respective letters are the results of keen effort anxiously and wisely pursued, and their cheese tells the tale of the wisdom of their practices.

GEORGE E. GOODHAND, PERTH CO., ONT.

1. No extra care was taken in selecting milk or making cheese. They were taken from the shelves, and represent our average quality. Have always instructed patrons at the annual meeting how to take care of milk, which they have carried out carefully, always giving us a first-class quality o

No starter was used.

Yes, by pouring water over curd, with pe 3. just after grinding. Average temperature of wa from 94 to 98 degrees, according to condition

curd, using plenty of water. 4. Put to press from 80 to 85 degrees. Pre-from 18 to 20 hours. Turned each mornin from 18 to 20 hours. hoops

5. (a) Cured at from 65 to 70 degrees.

(b) Double windows, both frosted on outs ad double doors. One ventilator in each 14 inches in diameter, reaching from ceilir agh roof about six feet, with a cowl on top. (c) One month.

(d) Every morning.

(e) From 80 to 90 per cent.

can, as I did not make up my mind until the 20th of June, so I just picked two out of my shipment. I am quite safe in saying any of my cheese would have scored fairly high. I object to all sour and tainted milk.

2. No starter was used. If I had, I would have picked the best-flavored milk and heated it to a temperature of 100 degrees, and let stand for 20 minutes, and then cooled it down before adding the starter.

3. I always wash my curds, let them be good or bad, till the whey starts to run clear, and only after milling. For gas, I use water at 108 degrees; for 100 degrees. taint,

4. The curd was put to press at 88 degrees, and aired well before hooping. Cheese remained in press 24 hours. Turned once in press just one hour after being put to press.

5. (a) I have a very warm curing room. Those cheese were cured at a temperature between 70 and 80 degrees, and a few days 84.

(b) My system of ventilating would be to have at least two air passages to project up through the roof, and have a cold-air duct at least 100 yards from factory, and deep as possible, and to have the airreceiving pipe as high as possible, so as to catch pure air, and also to have those pipes to enter room in two different places. And I would also recom-mend to dig out and fill in, so as to have a cement floor, and not have it higher than the surface of the ground, and also have the room boarded with matched (c) Cheese was cured 30 days.
(d) Turned on shelves every morning.
(e) Per cent. of moisture was high.

(e) Fer cent. of morstnee was high. I would just like to say, I find the greatest fault in cheesemakers is that they do not properly cook their curds. The old system is from 98 to 100 degrees. This is not always enough. This year I am cooking to 104 degrees and allowing three hours from time of the transmission of the properties for setting to removal of when have made cheese for nine years, and Lam of can \$50 would cover all my losses, and meet of that was through my thermom-eter being wrong. I am longita, to see the fay that there will be a classemakers union, and could the afacfarmer to put the makers a fair price MEGO , that the maker can his ouring tured cheese, s room to stand the heat. Considering the compe ces making at present, the maker can tion in c ais curing room. For my part, I am afford to fit ower of a factory, and I give my patrons a hille are on those points at my fall meetings.

B. DINWOODIE, MIDDLESEX CO., ONT. In replying to your favor of recent date, I take such pleasure in answering the questions you equested.

I was careful not to take in any tainted milk. 2. I took a quantity of nice night's milk and put it in a can and set it in hot water heated to a temperature of 86 degrees, then added a little of the starter from the day previous. I put in about 10

quarts to 6,000 pounds of milk. 3. Yes, they were washed after dipping and also after milling. Temperature of water, 98 degrees, and then kept thoroughly stirred till ready to go to press

4. They were put to press at a temperature of about 84 degrees; kept in the press about 15 hours; turned twice.

5. (a) The cheese was cured at a temperature of 70 degrees.

(b) Our room was cooled with the aid of a sub-

FRANK T. SHUTT, Chemist.

Central Exp. Farm.

I know of no recent investigation in relation to the formation of fat from albuminoids in the ripening of cream or cheese, but am certain that the general opinion among investigators is that there is practically no change of fat through the fatty degeneration of albuminoids in either cream S. M. BABCOCK, Chemist. or cheese. Exp. Station, Wisconsin

I would say that we have paid special attention to the possible formation of fat from albummoids during the ripening of cheese and we have yer found any evidence whatever that such takes place.

L. L. VANSLYKE, Chemist. tion, Geneva, N. Y.

Superintendents and judges of live stock at the exhibitions can, by a little thoughtfulness, greatly increase the interest to onlookers by ordering a parade of the cattle and horses in each section in the ring, by arranging them in various positions, and by placing them in order of precedence when they have decided the awards. A final parade in this order before leaving the ring would also be an interesting feature. Some mople attend the fairs to learn, and all to be intertained, and their pleasure and profit in these egards ought to be considered and catered to. The judges, too, would probably make fewer mistakes if they saw the animals walk.

The cheese exhibited by Mr. E. N. 98.25 points, were also made in my fac the same method. I would strongly adv makers to cook the curds firmly in the give sufficient acid, and stir good and dr Grind early, wash liberally, mature w, salting, salt as light as condition of cur will permit, give plenty of time before pupers, and press slowly at first and give provide them neatly, using plenty of good clear results are press as long as possible, and date and results are pressible when putting in curring means r with cheese when putting in curing room.

R. W. STRATTON, CHEESEMAKER, O. A. C., GUELPH.

1. No extra precautions used, other than the sense of smell, when receiving the milk. 2. Yes, O. A. C. bacteriological department cul-

ture. The culture was prepared according to the directions given in dairy bulletin No. 114. One-half of one percent. is the quantity used.

3. No.

4. Eighty-three degrees. About 46 hours. Once.

5. (a) Average temperature of 66 degrees for 21 days, then put into cold storage two days, at a temperature of 40 degrees.

(b) Sub-earth air duct.

Twenty-three days old when sent away.

(d) Every day (Sunday excepted).

(e) Eighty-two per cent.

In making the exhibition cheese, I did not depart from the system or standard rules for Cheddar cheese as taught in the O. A. C. dairy school, apart, probably, from the one exception of leaving the cheese in the press two days. Formalin was sprayed in curing room to prevent mould.

JAMES CRAIGHEAD, PETERBOROUGH CO., ONT.

It is certainly a pleasure to reply to your ques-

tions. 1. There was no extra care taken with the milk for the cheese which I exhibited at the Pan-Ameri-

C air duct.

(c) The cheese were made June 11th; shipped July 4th.

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(d) Every morning. (e) I had no means of registering the degree of isture in the curing room.

Builds T. MORRISON, SPRING CREEK FACTORY, OX FORD CO., ONT. The Your letter of inquiries received a few days ago.

I will try and answer your questions as well as I can:

1. I only take in milk that is sweet and of good flavor.

2. I did not use a starter, but when I do use one I make it out of good milk-two parts milk and one part water-and before I use I skim off the cream that rises.

3. I always wash my curds just after the curd is ground, using water at a temperature of 98 degrees. Sometimes if a curd is bad flavor or working fast, I wash when the curd is dipped.

4. I try to put my curd to press at about 85 to 88 degrees. The cheese are pressed from 14 to 16 hours. and are turned in hoops every morning.

5. (a) The cheese were cured at a temperature of 64 to 72 degrees, but mostly about 67 degrees.

(b) Our system of ventilating and cooling is not by any means the latest, but we have a good cool room. It is double ceiled and lathed and plastered on walls, papered and boarded inside, and boarded again outside. We have no ice, and have holes in walls, just above the floor, and at night we open them and the windows.

(c) The cheese were cured about a month.
(d) They were turned every morning.
(e) I do not know about the moisture, as I have no register for it.

The cheesemaker must be careful in taking in milk, and then watch the acid, as I consider that it is the first stage of the work that either makes or spoils the cheese.

(To be continued in next issue.)

CUPY POOR