

GATHERED CREAM FOR BUTTERMAKING.

"Unfortunately, the hand-separator creamery business was started on wrong lines, and the separator agents are largely to blame for it. Plausible agents have been employed to push the sale of separators, and even to organize creameries. In order to promote business, the agents have represented that cream need not be delivered more than once or twice a week, and that once a day is often enough to wash the separator. As has been said, these men are plausible; they are selected on that account; they get close to the milk producer, and they have exerted considerable influence, to the detriment of the creamery industry, which it will take some time to overcome."

The foregoing paragraph, taken from Dairy and Cold-storage Commissioner J. A. Ruddick's 1906 annual report, is quoted in the introduction of a bulletin on "Gathered Cream for Buttermaking," recently to hand. The bulletin, which was prepared by Mr. Ruddick and his recently-appointed assistant, Geo. H. Barr, is available for free distribution among patrons of creameries, on application to the Dairy and Cold-storage Commissioner, Ottawa. We advise makers in cream-gathering creameries to take advantage of the offer.

There are large territories in Canada where the system of gathering cream instead of whole milk from the farms is the only practicable system of running a creamery, but in sections where the milk producers elect to adopt it, they must make up their minds to do one of two things: either cool the cream immediately after separating to 55 degrees or under, or else be prepared to accept a lower price for their butter than they would otherwise obtain. The former alternative is in every way preferable.

It is admitted by all authorities that finer butter can be made from cream which is sweet when delivered at the creamery than from cream which is sour and curdled. It is also well known that any taint that may be in the milk or cream will be, to some extent, carried into the butter. In the production of fine-flavored cream, the same precautions must be observed as those which are necessary in furnishing milk to separator creameries or to cheese factories.

After enumerating the conditions necessary for the production of fine-flavored cream, and describing the various methods of skimming, viz., shallow pans, deep setting, and hand separators, the bulletin discusses such points as care of cream, advantages of rich cream and cooling the cream, and concludes with the following summary of important notes:

FOR THE PATRON.

1. It pays to make cows comfortable at all times.
2. It pays to treat cows with invariable kindness. They should never be driven fast or worried by dogs.
3. Pure water should be provided for the cows, and they should be prohibited from drinking stagnant, impure water.
4. A box or trough containing salt, to which the cows have free access, should always be provided.
5. Care must be taken to avoid feeds that will taint the milk.
6. The udders and flanks of the cows should always be washed or brushed clean before milking is commenced.
7. Milk from a freshly-calved cow should not be skimmed until after the eighth milking.
8. Only cream from cows in good health should be sent to the creamery.
9. Tin pails only should be used.
10. Cream should be cooled as quickly as possible to 55 degrees, and kept at that temperature or lower.
11. Warm cream should never be mixed with cream already cooled.
12. All vessels, including separator bowl, used in the handling of milk or cream, should be thoroughly cleaned immediately after they are used by washing in lukewarm water and then thoroughly scalding with boiling water. A brush is preferable to a cloth for washing tinware.

FOR CREAMERY OWNERS.

1. Provide for cooling the cream quickly when delivered at the creamery.
2. Provide an abundant supply of good, pure water for the purpose of the creamery.
3. Provide cold storage that will keep the butter under 40 degrees.
4. Support your buttermaker in dealing firmly with patrons who send cream which is not in good condition.

FOR THE BUTTERMAKER.

1. Attend personally, as far as possible, to the taking in, sampling and testing of the cream.
2. Keep your creamery clean, bright and tidy; also yourself and assistants.
3. Be satisfied with only the finest quality of

butter, the cleanest and most attractive surroundings.

Copies of this bulletin may be obtained free for each patron of a creamery, by application to the Dairy and Cold-storage Commissioner, Ottawa.

TO PREVENT SELF-SUCKING.

Many devices have been recommended to prevent the habit of self-sucking in cows, but the following is perhaps the most effectual, is easily applied, and inexpensive: Insert in the cow's nose an ordinary bull ring. Just before inserting the ring slip on it two common iron harness rings, which, of course, suspend loosely after the bull ring has been inserted. The secret is that, by adding more than one loose ring, the animal can in no way prevent them from dropping into the mouth when it attempts to suck. Brass bull rings can be bought at almost any hardware store for twenty-five cents, and harness rings cost but a few cents per dozen. For piercing the nose, a three-cornered file, ground sharp on the edges, answers the purpose very well, though the trocar and canula, used for puncturing bloated animals, is the most complete instrument.

GARDEN  ORCHARD.**HISTORY OF APPLE INDUSTRY IN ONTARIO.**

In our issue of July 4th appeared an editorial review of the new bulletin, "Co-operation in the Marketing of Apples," by A. McNeill, Chief of the Fruit Division, Ottawa. Readers were promised that extensive quotations would be made from time to time, for every paragraph teems with matter of vital interest. We accordingly reproduce the subjoined paragraphs, tracing the history of apple-culture in Ontario, up to the crisis which gave birth to the organization of co-operative selling associations:

APPLE CULTURE IN ONTARIO.

Forty years ago the Ontario farmer found a ready sale for the fruit grown in his orchard in the local markets, and no part of the farm yielded a more profitable return for the money and labor expended. As new settlers came into the Province, they adopted the common practice of setting out trees, and eventually the planting of an orchard in the establishment of a farm became as much a matter of course as the clearing of the land or the erection of farm buildings. The varieties to be grown were selected with a view to covering the entire season, ranged from early harvest to late winter. A few novelties were almost always added at the instigation of tree agents, whose methods were frequently open to question. The result was a great admixture and confusion of varieties, but, nevertheless, there was an orchard planted on every farm.

In this manner originated, during a quarter of a century, the numerous small orchards that aggregate to-day from 6,000,000 to 7,000,000 bearing trees in Southern and Western Ontario. The varieties were not selected with care, nor were the interests of the individual owners sufficiently important to encourage them to become experts in apple-growing. Natural conditions, on the other hand, were very favorable; insects and fungous diseases were at first not numerous, and, as long as the local market absorbed the entire product, the multiplicity of varieties was found to be an advantage. About the years 1865-1870, however, the pressure of overproduction began to be felt, and in the following five years apples became almost wholly valueless, especially in the thousands of orchards that were somewhat remote from the larger cities.

BEGINNING OF THE EXPORT TRADE.

It was at this juncture that the export trade in Canadian apples, which now aggregates from \$4,000,000 to \$5,000,000 in value annually, began. The price received was at first very low, but the cheap fruit was quickly introduced into the British market, where it was classed with American apples and found ready sale. In a short time the trade became firmly established, and the buying of apples in Canada for the British market became a regular business with a large number of fruit dealers. The apples in the first few years of the trade were bought in barrels ready for the market. The inexperience of the farmer in the grading and packing of the fruit, however, and the difficulty of inspecting a large number of small lots, led, eventually, to a change in the method of buying. Henceforward the buyer bought the apples on the trees and organized gangs of packers, who proceeded from orchard to orchard, picking and packing as they went. The farmer at first furnished board and lodging for these gangs, and often did the picking; of late years this, in many cases, has been discontinued.

RESULT OF THE EXPORT TRADE.

The immediate result of the establishment of a profitable export trade in apples was that the orchard again became a very profitable portion of the farm. New plantings began to be made, more especially along the northern shore of Lake Ontario and on the shores of the Georgian Bay. These orchardists, profiting by the experience of their predecessors, exercised greater care in the selection of varieties, the industry being directed almost entirely with reference to the foreign market. The number of varieties was limited, in most instances to three or four, while at the same time the average acreage of orchards was increased from three or four to plantations of ten, twenty or even thirty acres. As the new orchards came into bearing, it naturally happened that the more accessible foreign markets began to feel the pressure of the increased supply. The result was that, when the phenomenal Canadian and American crop of 1896 was put on the market, the demand was again more than supplied; once more apple prices in Canada fell so low that little or no margin of profit remained for the grower, and thousands of barrels in the year named were fed to stock or allowed to rot under the trees.

THE DECLINE OF PRICES.

The extent of the waste of apples in 1896 and succeeding years will be appreciated when it is stated that the apple yield of the Province of Ontario was, on the authority of the Ontario Bureau of Statistics, placed at over 12,300,000 barrels in the year 1900; the exports from the entire Dominion for the same year were 678,651 barrels, and as it is hardly probable that more than 4,000,000 barrels were consumed locally, a total of over 7,620,000 is left to be accounted for. Doubtless the most of these were wasted. A feature of the situation which it is important to note, however, was that the waste of fruit was by no means evenly distributed over the Province, but was confined largely to the older orchards. The reason for this was not that the fruit of the older orchards was poorer in quality, or the yield much less abundant, but that the methods of harvesting and selling the crop were too expensive to enable the owners to maintain the contest with their competitors who owned newer orchards. As a result, reputable buyers practically abandoned all except very limited portions of Southern and Western Ontario, except in years of scarcity. The field was given over, instead, to irresponsible buyers, whose method was frequently to secure the confidence of the growers during one season and defraud them in the following year, many having in this way taken from a few hundred to thousands of dollars out of a single neighborhood. It is not a matter of wonder that many farmers chopped down their orchards, though, for the most part, wiser counsels prevailed.

INQUIRY INTO THE SITUATION.

An earnest inquiry was made at this juncture by both governmental and private authorities to determine why orchard-planting should go on with vigor in one part of the Province, while in other parts orchards were being chopped down. The conclusion reached was that the requirements of the foreign market were being met by the newer and larger orchards, where the industry was, in consequence, profitable, whereas it was impossible to fulfil these conditions in the older and smaller plantations.

The most important requirements for successful catering to the foreign demand were found to be four in number, namely:

1. Large lots of fruit.
2. Few varieties.
3. Uniform packing, grading and marking.
4. The employment of skilled labor.

HORTICULTURAL PROGRESS.

Prepared for "The Farmer's Advocate" by W. T. Macoun, Horticulturist, Central Experimental Farm, Ottawa.

Co-operation in the Marketing of Apples, by A. McNeill, Chief of the Fruit Division, Department of Agriculture, Ottawa.

This is a very opportune bulletin, published at a time when the value of co-operation is being impressed upon fruit-growers from every point of view. It is written in Mr. McNeill's lucid style, and covers the whole subject of co-operation very thoroughly. Almost every paragraph could be quoted in full, with profit, as the information is in a condensed form, and only the important points given. It would not be possible, in a review, to cover all the questions dealt with in this bulletin, hence "The Farmer's Advocate" will from time to time quote from it extensively.

About the same time that Mr. McNeill's bulletin was received, another, from Colorado, on the same subject came to hand. This was prepared by Prof. W. Paddock, of the Agricultural Experiment Station, Fort Collins, Colorado. It does not cover the field so completely as the Canadian bulletin, but those interested in co-operation may care to learn of its publication.