

Best Mile of Road in Vicinity.

Editor "The Farmer's Advocate":

I used the split-log drag last year on a mile of road in the spring and early summer, but I didn't use it last fall on account of dry weather. I used the drag after each rain, before the road got too dry, when it was just moist enough so the earth did not stick to the drag, and I venture to say that this is the best mile of earth road around here. I was not allowed any compensation for the good work I have done. No action has been taken on this reserve to insure the systematic dragging of the roads, and I cannot say anything as regards the township. I think there should be something done to secure the systematic dragging of all roads, to save the needless expense that is put on them every few years to get them in shape; and, also, that the statute-labor system should be done away with; it is a curse on the roads on this Reserve.

Lambton Co., Ont. NICHOLAS PLAIN.

Rothamsted Report.

The annual report of the Rothamsted Experiment Station, in England, gives many details of the 210 experimental plots at the farm. The wheat yield last year was above the average, and of excellent quality. The unmanured plot, on which was grown the 65th crop in succession, without manure, yielded 12.4 bushels of wheat, weighing 63.5 pounds per bushel, and 7.7 cwt. of straw. Barley was a poor crop, suffering from late frosts. The permanent grass plots, now in the 53rd year of the experiment, produced crops rather above the average. Interesting comment is made on many laboratory experiments recently begun.

THE DAIRY.**Farm Separator Problem.**

Many who have the interests of Canadian dairying at heart claim that the general introduction of cream separators on the farm has tended to impair the quality, and thereby the reputation and price, of our creamery butter. Carelessness in the care, and particularly in the washing, of the farm separator, together with infrequency in the collection of the cream, are a set of conditions which result in the delivery of much cream from which the most skillful creameryman cannot produce a fancy article of butter. That the farm separator is here to stay, there seems little reason to doubt, notwithstanding much ominous shaking of heads at the prospect of the patron's tiring of "crank exercise." That, properly cared for, it is a decided advantage in the raising of calves and pigs, is universally acknowledged. That it is a necessary hindrance to the making of A-1 creamery butter, we are reluctant to admit. Still, the warning of buyers, makers and experts is not to be ignored, and, if conditions can be improved, it is important that the actual state of affairs be realized, and suggestions sought looking to such improvement. With this end in view, "The Farmer's Advocate" has corresponded with a number of leading makers, instructors and others whose opinions are of value. Below will be found replies from several of these, and what they have to say merits careful attention.

Hand Separators and Creamery Butter

Editor "The Farmer's Advocate":

It is a well-known fact that the reputation of our creamery butter does not stand as high in the markets of Great Britain as it did before the advent of the hand separator and the cream-gathering system. The question naturally arises if either or both of the above are factors in the depreciation of the quality of our creamery product.

Before the advent of the hand separator there was a double incentive for the farmer to send his milk to the creamery. It relieved the women of the work of caring for the milk and of making up the butter, and more butter could be made out of the milk by the use of the factory separator than by the deep-setting or shallow-pan methods. There was no question as to the superior quality of the butter made under the factory system, but the system had its drawbacks, viz., the poor quality of skim milk returned to the patrons, and the limited area which could be covered.

The poor quality of skim milk returned to the patrons had more to do with the disappearance of the factory separator than any other factor, because the farmer has not been slow to realize that the hand separator gave him a much more valuable product in his skim milk than he could possibly get from any other way of creaming his milk. When the farmers realized this fact, and separators became somewhat numerous, it was seen that the factory separator system was doomed at no distant date, and those who had our butter industry at heart warned farmers of the dan-

ger they were forcing on the industry; but it was of no avail, as there were immense interests behind the movement forcing it along, and it soon swept all objections out of its path. The farmers were repeatedly told that they would be compelled to take a lower price for their butter if the cream-gathering system had to take the place of the factory-separator system, but they seemed satisfied to accept the situation, and the factory separator in Ontario is now almost a thing of the past, as far as creamery butter is concerned.

The question now is, "To what extent is the hand separator responsible for the depreciation in the quality of our creamery butter, or is it at all responsible?" Theoretically, butter made from cream which is taken from the milk while it is fresh, and in the very best condition for producing a first-class grade of cream, should naturally be of the finest quality, if properly handled from the cow to the finished product. Unfortunately, however, this does not always work out in actual practice, but it is quite evident that the fault does not lie with the separator.

If the milk is clean, and the separator is also clean, the resulting cream cannot be otherwise than of good quality, and up to this point everything would indicate first-class butter. But it is right here that the trouble often commences.

In the first place, most cream is separated too thin, and it is often mixed right away with the older cream, or, if allowed to cool till the next milking before adding to the older cream, it is usually not sufficiently cooled, and is cooled too slowly. To be of first-class quality, other things being right, cream must be cooled quickly, if it is to be held for two or three days, either by running over a cooler or by setting into cold water—ice-water preferred.

We do not wish to be advertising to the world the conditions under which much of our cream is produced on the farm, but we are compelled to say that many separators are left in a condition from one milking to another which makes it simply impossible to produce cream which is going to make a first-class-keeping butter. Dirty separators, thin cream, and lack of proper cooling, are the principal causes of poor cream.

No other utensil left unwashed will cause half as much trouble as will the separator, and any woman who is careless with her separator is liable to be careless all the way through. A rich cream, say 35 to 40 per cent., will almost invariably reach the creamery much better in flavor than will a 20 to 25 per cent. cream. A rich cream has less milk in it, and, as it is the sugar of milk which changes the lactic acid, or sours, we cannot get much acid in a rich cream, because there is but little sugar there to produce acid.

We have three methods of getting the cream from the farm to the creamery, viz.: Large tanks, the jacketed cream cans, and the small individual cans. The latter are undoubtedly the best, especially where the patrons deliver their own cream, as the cream goes direct from the farm to the creamery, and will arrive ten degrees lower in temperature than where it is carted around the country for hours on a hot day. Each patron's cream coming in separate, gives the man at the creamery a chance to inspect the cream and point out the faults, if any.

The tendency is to gather less frequently than formerly, as the cost is thereby decreased. Everything in connection with the business has increased in cost during the past five years, but the charge for making remains the same, and the only way the proprietor of a creamery sees out of the difficulty is to gather the cream twice a week, instead of three times, and we all know that this does not tend to improve the quality.

With the factory separator, the butter is made

within 48 hours from the time the milk is drawn from the cow, during the summer months, but in the cream-gathering system the cream is often four days old before it is churned, which seldom produces butter of first quality. Cream can be kept in first-class condition for buttermaking for four days, but everything must be kept scrupulously clean, and the cream submerged in ice-water.

Under present conditions, farmers in Ontario are losing from one to two cents per pound on their butter, but are they not making it up in other ways by the use of the hand separator? That answer, however, is not satisfactory, because the hand separator should give the best results of any system, if all conditions are right. If farmers could be induced to keep cows enough to make it profitable to gather the cream every day, and no sour cream taken at the creamery, we would then have no cause to complain about poor cream and the hand separator would have a chance to vindicate its superiority over its rival at the creamery; but under conditions in vogue in most creamery sections, it falls lamentably short of giving the best results of which it is capable.

About fourteen years ago, the Moody Creamery, of Iowa, purchased a large number of hand separators, and distributed them among a portion of its patrons, and the cream from those patrons was collected every day. In the creamery then there were three systems: Cream gathered every day from the hand separators; milk taken in every morning and separated at the factory, and cream gathered three times per week from the farm. The best quality of butter was made from the hand-separator cream gathered every day, the next best from the whole milk separated at the creamery, and the poorest from cream gathered three times per week.

If we are to have best results from the hand separators, the farmers must go back to the old method of putting in ice, or providing some way of cooling with well water; separators must be washed after each using, and the greatest possible care taken of the cream by every patron of a creamery. The cream-wagon must go after the cream as often as necessary to prevent loss of quality in that direction.

Ontario Co., Ont.

J. STONEHOUSE.

Makers Can Remedy Matters.

Editor "The Farmer's Advocate":

Our experience with our own butter has not led us to believe that the farm separator has made it necessary for us to accept a lower price for our butter; it has enabled us to more than double our make. If all cream were handled the way we handle it, as good butter can be made from gathered cream as from whole milk; we don't accept any but sweet cream. This is delivered by the farmers themselves. If the butter-maker does not take the cream unless it is sweet, and of good flavor, there is no reason why he cannot make good butter out of it.

As far as we can see, it is the fault of the makers, for the patrons will only bring cream as good as they have to. The average farmer will produce cream that the maker will take. Our patrons know, if they bring cream that is not right, we will send it home; so, if their cream is not sweet, they do not bring it. A new patron sometimes does not know just how to handle his cream, but we tell him the way we want it, and he tries to make it suit. We don't know that we have lost more than two or three patrons by enforcing our rule of accepting only sweet cream. We have to compete with Toronto creameries, and also the Toronto milk business, and are gradually increasing our make.



A Snug Country Residence.

Farm home of C. N. Hagerman, York Co., Ont.