

After getting milk under such conditions, the next matter of importance is how to properly handle it until it is delivered to the cheese-maker. In the first place it ought to be cooled and aerated, which implies evaporation of the animal heat, and purification by the atmosphere. I know of no way to accomplish this so effectively and at the same time conveniently as by putting it through McLeod's Milk Cooler, Erator and Strainer. This machine has been recently invented and patented by Angus McLeod, of Napanee, Ont., and serves the purpose of cooling, aerating, and purifying milk better than anything I know of. The article consists of three parts, viz.: A receiver and strainer on top, a cooler-tank below it to hold ice or cold water over which the milk flows in a circuitous stream of about forty feet, and a pan under both to receive the milk. The milk is poured in at the top and flows through without further attention. After using and testing this "Cooler" I find that milk passed through it will remain sweet many hours longer than the same milk not so treated and set alongside in the same atmosphere and temperature, and will yield more butter and of a better quality than the latter. I shall tell the readers of the *ADVOCATE* more about this useful article at another time.

The milk, after being cooled and purified either by this process or any other, should be placed in a clean can in a cool place (not, however, near the swill-barrel, or hog-pen, or barn-yard), but in a pure atmosphere, until delivered to the "milkman" for the cheese factory.

[TO BE CONTINUED.]

#### Why Holsteins Did Not Compete.

This question is very easily answered, and should be quite clear to every dairyman who has been watching their progress with unprejudiced eyes. If we take a glance back into their history in this country, we find that, only as late as 1883, the first specimens of the breed were brought before the Ontario dairymen, and then only two or three herds of any importance were established, while single specimens were scattered here and there throughout a great part of Ontario.

When these heifers came to milk, they, in nearly every instance, proved themselves far ahead of anything that had yet come to the notice of our dairymen, and their great superiority was immediately acknowledged; hence, the demand was so strong that, in 1884, a number of herds were established, and yet the demand could not be supplied from their increase, and importation after importation had to be made. This stimulated breeders to pay more attention to the production of as many animals as possible, than to the testing of individual cows. And who will blame them for this? We believe they were fully justified to try and get some recompense for their great outlay. That they did not neglect the quality of their stock, is borne out by the many favorable letters of testimony the breeders are continually receiving from their customers. These statements are borne out by taking a look at the present herds. Taking our own as a case in point, we find that only two animals are left of all the earlier importations; and I think I can, without fear of contradiction, say that we have imported and handled as many as any other breeder in Ontario, but we never owned a cow long enough to really know what her full capacity was before she had to yield to the ever increasing demand, and went into other hands. And, with

but one or two exceptions, this has been the case with all our breeders. Under these circumstances, and with these facts in view, no fair-minded dairyman will wonder why Holsteins did not compete.

Our cows drop their calves and are bred as soon again as they come in; and I, for one, mean to continue this policy for awhile yet, even if a few croakers like Stockman should remain blind to the merits of the Holsteins. But we heartily invite all who are interested to visit our farm at any time and see for themselves what Holsteins are doing under every-day farmers' care. If we take a glance across the lines to our American brethren breeders, we find that they had to go through the same ordeal, and that they and their Holsteins had to take the same abuse as we are getting at present. But how gloriously have they come out of it, routing and defeating all their antagonists. The dairy test, at all the leading State and International fairs, tells the tale in gilded letters, and we feel confident that the time is not very distant when Holsteins will score the same record in our fair Dominion. Holstein breeders have no desire to attack other breeds continually, and pull down their merits; but they believe that, in this great country of ours, there is room for all breeds, and a sphere for them all to fill. But if the show-yard record, the public and private tests, are to be taken as a standard, they certainly have nothing to fear from any of them, and can fearlessly let their favorites fight the battle on their merits. I notice in your February issue that Stockman treats your highly respected readers with a very neat little story. Now, I must admit that I love to hear a good story, especially when it comes from such an intelligent and truth-loving pen as Mr. Stockman's; but a story only half told loses all its value, as is the case in this instance. He just got to tell your esteemed readers about the Holsteins being fed out of a two-bushel basket and then suddenly comes to an abrupt end. Of course, to tell the remainder of the story would not have suited his purpose. Undoubtedly he was so astonished at what he saw that, in his amazement, he forgot all about it. Now, I will endeavor to recall it to his memory. If it is the International Fair at Buffalo he refers to, he saw a cow that gave 73 lbs. 12 ozs. of milk in twenty-four hours; also a cow that, in twenty-four hours, produced 3.12 lbs. of butter. And no wonder he was astonished, for both of these cows were the, by him, so much despised *plebeian* Holsteins, and such doings he undoubtedly had never seen before. If Stockman wishes, we will follow him to all the other leading fairs, and expose what Holsteins have done there.

Stockman seems to have forgotten much of the valuable lessons he was taught by his parents. In my opinion it is impossible to hit the bull's eye if you hide behind the target. A man who so boldly attacks others should also be bold enough to show his colors, and come out under his own signature, and not hide behind the target of "Stockman." As to his chilled shot, he probably had better keep a stock on hand, for undoubtedly after all his eagerness for dairy tests we certainly expect him to come out this fall with his famous family cows, and show the public the best dairy cows in the world; but, in my opinion, the chances that his pet cows will desert him are very great, and he may then need several doses to cool his excitable brain.

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#### The Farm.

##### Preparation of Soil for Seed Grain.

I know of no business in Canada where the old adage "Whatever is worth doing at all is worth doing well," is so applicable as to that of the farmer. Yet the season for the accomplishment of our work is so limited, that great hurry is sometimes necessary in order to be on time. This frequently results in negligent and careless operations which always result in loss.

I am a strong believer in thorough tillage of the soil; I have seen land made to produce fully one-third to one-half more for no other reason than extra tillage. Few farmers in this country work the soil sufficiently; the second field seems to be waiting while they are tilling the first, and the time is so short there is always a temptation, before the work is fully completed, to say, "I guess it will do; we have not time for more." The man who succeeds as a gardener does not neglect this part of his work; he does not merely turn the land over, but he is careful to see that it is properly pulverized and put in such a condition that every plant will count in the general product. This ought to be the aim of the farmer in sowing grain in the field. We usually allow a large percentage for waste, that is to say, we expect only a percentage of the grain sown to mature fully and afford an abundant increase. But why should this be? Why should not the farmer aim first to sow seed from which is carefully taken all inferior grains, and then look for an increase from every one sown. This cannot be expected unless greater attention be paid to the preparation of the soil. In this as in other matters pertaining to agriculture, it is not wise for any man to lay down definite rules. The difference in soil requiring different treatment must always be taken into consideration. What would answer admirably on a light sandy soil could scarcely be followed with great success on heavy clay soils. Yet this one general rule may be applicable in every case: Let the soil be so thoroughly prepared, so evenly pulverized, that as nearly as possible every grain may count in the general increase.

Who has not seen fall wheat sown in the autumn upon land so lumpy and full of clods that it was quite out of the question to cover the seed, or if covered, to expect it to force its way from underneath these heavy clods. Would it not be wiser first to put on a heavy roller or crusher, and afterwards complete the tillage with other implements, rolling the second time if necessary. This would consume some time, but it would abundantly pay in the end. It is not enough to turn the soil over; it should be thoroughly mixed, and sufficiently tilled afterwards to give it some solidity. Better results will be attained by frequent harrowing to accomplish this end than by rolling, which gives you a solid surface, while underneath is still more or less porous and loose. Where sod is plowed in the spring for a crop, it will be more necessary to use the roller than in other cases.

A favorite plan which I have adopted is to roll immediately after the plowing. The better the plowing is done the less necessity perhaps for this work; but for the average plowman it will be found an improvement to follow immediately with the roller, which settles the furrows