

(5) Where the morning's milk has to be mixed with the night's milk it will be better to cool the night's milk to 65 degrees or else cool the morning's milk some before mixing.

(6) In keeping milk from Saturday night till Monday morning it should be cooled to below 55 degrees, and if the temperature of the atmosphere is above that of the cooled milk it is advisable that the milk should be covered.

(7) Milk being a rapid absorber of odors, it should be kept only in a place where the air is pure; and no rusty cans or utensils should be used as these are sure to cause bad tastes.

Farm Separators Have Come to Stay

By Prof. G. S. McKay, Ames, Iowa
The rapid increase of the hand separator in many places has revolutionized the dairy business. Seven or eight years ago when Moody established what is known as the Moody & Sharpless cream system at Nashua, Iowa, Moody conceived the idea that it was not profitable or desirable to haul milk to the creameries every day, especially when roads were bad, so a number of hand separators of the Sharpless make were placed with the

Another important factor was the value of the skim-milk to the calf. The feeding of some milk one day and perhaps sweet the next day resulted disastrously. This has been the cause of complaint against some whole milk plants. The intelligent farmer will necessarily take into consideration the value of the calf, and as skim-milk is in the best condition for feeding when it is warm, the hand separator seemed to fill a long felt want. The milk can be skimmed as soon as drawn from the cow, and a little oil meal substituted for the fat removed, and we have an ideal food for the calf.

RUNNING THE SEPARATOR

Various methods have been adopted for operating the hand separator on the farm, including the tread power operated by different animals, such as the bull, calf, sheep, horse and dog. Possibly the most successful way of operating a machine if tread power is used is by use of the horse, as the work is too heavy for the sheep, dog or calf. The writer recently discussed this subject with a very successful dairyman, who is operating a hand separator by power. He uses the gasoline engine, 1½ horse

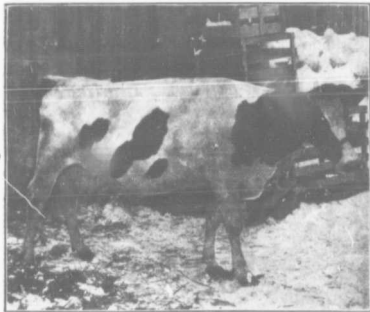
cleaned every time it is used and the cream is thoroughly cooled before being mixed with the previous lot, there is no reason why just as good butter cannot be made by this system, as any system.

We are receiving some cream that comes over one hundred miles by express and it is shipped every other day, and it is always in excellent condition, so that the highest grade of butter can be manufactured from it. Now, what is possible for this patron is possible for others.

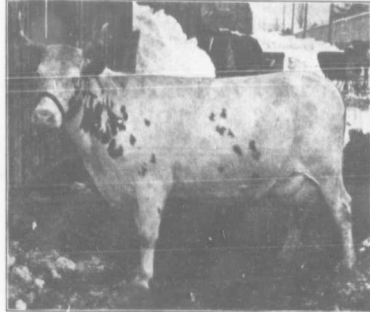
About a 40 or 45 per cent. is a desirable cream to skim. This leaves a larger quantity of milk at home on the farm, and less milk serum in the cream than if a 20 or 25 per cent. cream were skimmed. It is also economy in hauling. Such cream properly cooled will keep at least two days.

COME TO STAY

The hand separator has undoubtedly come to stay and it is up to the factory owners and dairy instructors to educate the patrons how best to care for the separator cream. The first cost of the hand separator was entirely too high. Some of the leading firms are putting down their prices owing to the severe competition from



First prize Holstein and second in total points, Ottawa Dairy Test, 1903. Owned by Neil Sangster, Ormstown, Que.



Grade Ayrshire cow, Champion Ottawa Winter Fair Dairy Test, 1903. Owned by T. A. Spratt, Billings Bridge, Ont.

farmers in the vicinity of Nashua. The name Sharpless raised the ire of the DeLaval Separator Company. The result was this company established a new creamery in the same town and the competition became so strong that Mr. Moody was forced out of the business and sold to the Sharpless Company. The contest between the two separator firms naturally attracted considerable attention, but very few dairymen expected to see this system spread throughout the state. I find today we have between thirty and forty thousand separators in Iowa alone and many of the factories claim they cannot supply the demand. The great central parts of the West and central West have practically all adopted this system.

A business that will prosper as rapidly as this must have some merit. The chief reason for the growth of the hand separator was the economy to the producer. It formerly cost the average producer twelve or thirteen cents per hundred to get his milk to the factory, and it had to be delivered daily, while now he separates his cream on the farm and sends it in every other day. Economy or cheaper production is the keynote of all successful business.

power, Fairbanks & Moree make. He maintains that he is able to skim the milk from eighteen Jersey cows and churn the butter with an expense of \$1.25 per month. This, he says, is cheaper and more satisfactory than any of the above powers mentioned, especially if you take into consideration the value of the time in getting the animal to the tread power and removing it. A gasoline engine is always ready for operation if it is a good one. There is no question about the economy of this system.

THE MAIN COMPLAINT

has been the quality of cream furnished to the creameries. This is due not entirely to the system, but to the agents, who in their endeavor to sell machines have told the farmers that it was not necessary to clean the separators every time used. The result was that undesirable bacteria remained in the slime of the separator bowl and inoculated the fresh drawn cream, thus tainting it before it was delivered.

No intelligent dairyman would think of using milk pails that were not thoroughly cleaned, then why should the milk be passed through a dirty separator? If the separator is

the wholesale catalogue houses, who are manufacturing machines of their own in connection with their other business.

THE Cream Gathering Creamery Makes Money for the Farmer

The cream gathering system of butter-making has made rapid progress in recent years. The number of factories operating under this system in Canada is increasing every year, especially in Ontario. Desirous of obtaining information pertaining to this system we submitted the following questions to a number of parties interested in the cream gathering system:

"Are the farmers satisfied with the system, and have the returns been satisfactory? Have you had to take a lower price because your butter was made on the cream gathering plan? Are the farmers buying hand separators? Any other information you may care to offer will be gladly received."

A number of replies have been received, several of which are given below:

FARMERS SATISFIED

I would say in the first place that