

THE DAIRY.

A cow must produce about 4,000 pounds of milk and 160 pounds of butter-fat to pay for her feed and labor. This is the dead line: 5,000 pounds of milk, \$10 profit; 8,000 pounds of milk, \$40 profit—four times as much. Ten cows averaging 8,000 pounds of milk are as profitable as 40 cows producing 5,000 pounds. The cost of keep increases but \$35 per cow, from 2,000 to 10,000 pounds of milk given, yet the income increases \$115, over three times as rapidly.—[Prof. W. J. Fraser, University of Illinois.]

Calves, like other farm animals, get thirsty, even though milk forms a large part of their ration. Calves three months of age will drink as much as five quarts of water daily per head. They like to drink often, sipping a little at a time. A half barrel, cleaned and replenished twice daily, will serve nicely as a water trough. Another good device is an automatic waterer, which may be easily cleaned, situated a little above the floor to keep out the litter.—[D. H. Otis, in Wisconsin Experiment Station Bulletin.]

Hugh G. Van Pelt, Iowa dairy expert, who planned the trip of the dairy-special train through Northern Iowa, says that there are more than a million unprofitable cows in Iowa. He thus defines the kind of dairyman for whom the "special" is intended: "Those who are not testing their milk, who are not using a sire with a milk record, who are not breeding special-purpose dairy cattle, who are not feeding their stock properly, who are not the owners of a silo, and who are not selecting their cows with a definite type in mind."

Siberia, that supposedly frozen country, is becoming an important competitor in the world's butter, egg and poultry trade. The chief progress in Russian poultry-farming is in the more thickly-populated parts, but the butter exported is the produce of Siberia and of Northern Russia. In ten years butter exports have increased five-fold, having risen from 10,200 tons in 1899 to 52,800 tons in 1909. In value they have risen in greater proportion, from \$3,700,000 to over \$25,000,000. Egg exports have doubled in value, and represent an enormous trade. In 1909 2,845 million eggs were exported, valued at \$6,566,000, or over \$32,000,000. The trade in poultry is also continually expanding, 12,126 tons being sent out in 1909, worth \$7,500,000. The Trade and Commerce Weekly Report, from which these figures are taken, suggests that as Edmonton is in the same belt of latitude as much of Siberia, the possibilities of the Canadian Northwest in similar products should be equally great.

The Cash Profit of Milk-testing.

Editor "The Farmer's Advocate":

I have belonged to the Avonbank Cow-testing Association for two years, and have followed their rules, with the exception that we weigh every milking, instead of three days a month, and I think it pays to weigh every day, as one cow, or, in fact, the whole herd, might shrink in their milk flow pretty badly in ten days, either from change of feed, lack of salt, change in their pasture, or numerous other causes, and the shrink might not be noticed in time to avoid loss.

The way we keep the records is to put down the weights on a sheet provided by the association, and add up each cow's milk at the end of every month, and put the total down on another sheet. This is put in the box, along with the samples for testing, which we have taken out of each cow's milk on the 10th, 20th and 30th of each month, and send it to the man in charge of the testing. He puts on the test, and sends the sheet to the Dairy Department at Ottawa, and they do the calculating, and send us a monthly statement of each cow's milk, and the amount of fat in the milk. At the end of the year a statement is furnished for the full year, including the pounds of milk and the pounds of fat that each cow gave.

I have figured the time it takes for a milking period of 300 days for the weighing and sampling of one cow's milk to be one hour and forty minutes, and adding up weights 20 minutes, a total of two hours, at 25 cents per hour, 50 cents. Cost of outfit: scales, \$1.25; sample bottle each for 10 cows, at 5 cents, 50 cents; dipper for taking samples, 15 cents; box for holding samples, 75 cents; total, \$2.65. Allowing for the outfit for 10 cows to last 10 years, the cost per cow per year would be about 3 cents. The average increase in milk per cow for the year 1910 over the year 1909, was 384 lbs., at 90 cents per 100 lbs., would be \$3.45, which, after deducting the total expense, 53 cents, would leave a profit of \$3.92. But, apart from the profit in dollars and cents, the information gained by keeping daily records of each cow, and each separate strain of cows, and the effect of different

kinds of feed on the milk flow, is of far more importance than the money profit. I will give you one instance of the difference of feed on the milk flow: We found that wheat chaff, mixed with silage in equal bulk, produced 4 or 5 pounds more milk per cow per day than cut straw and hay mixed with silage, equal bulk, yet nine-tenths of the wheat chaff in this country is blown outside and wasted.

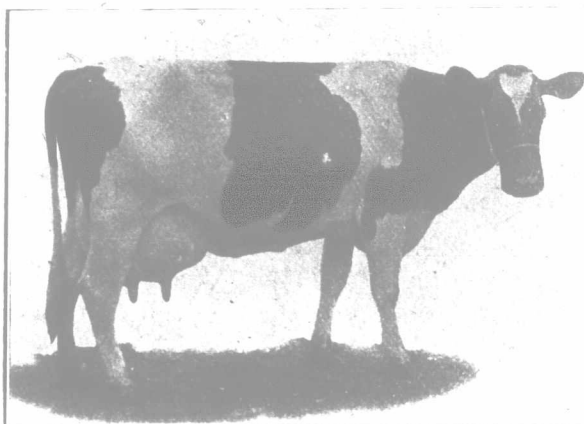
JOS. STANDEAVEN.

Perth Co., Ont.

Nine Cows Found Wanting.

Editor "The Farmer's Advocate":

Weighing twice daily the milk given by each cow through her whole lactation period, is the one method by which to determine just how valuable or useless each cow is at the pail. In my

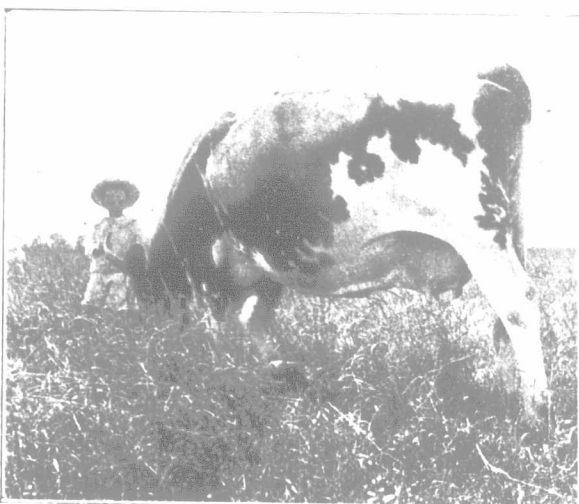


Katy Gerben.

Holstein cow, seven years old (owned by the Nebraska Experiment Station), which has completed a wonderful five-years record, giving in the last lactation period of 12 months 19,161.2 lbs. milk and 665.14 pounds fat. Average for five milking periods of 12 months each, 16,345 lbs. milk and 543.48 lbs. butter-fat.

three years' experience keeping records, I find that the Babcock tester is also invaluable; any farmer can afford one, and, by attending to a few important details, with a few weeks' practice, can make a correct test; and, by weighing and testing and feeding, can surely weed out the robbers.

In the spring of 1909 we had 13 cows in our herd; in the spring of 1910, only four of the original 13 remained; the scales and tester found them wanting. They were not offered for sale to neighbors, but were sold to shippers for what they would bring. I then went out and purchased a number of pure-bred and high-grade Holsteins, and, by the use of a pure-bred sire, the scales and tester, expect in a few years to build



The Youngest Herdsman in Canada.

Douglas Ness, Howick, Que.

up a first-class dairy herd. Four years ago we did not have two cows in the herd which would bring \$50, while this winter I have refused \$75 each for yearling grade heifers. Three of my herd, a four-, three- and two-year-old, are from a grade cow which sold in December, 1910, at the sale of W. M. Pearce, Tillsonburg, for \$195. Our milk yield for last year ran from 8,000 to 15,000 pounds per cow, the latter amount given by an eleven-year-old cow. Results due to better cows, better feeding methods, and an added interest taken in each individual, caused by the use of the scales and tester.

W. H. CHURCH.

Hollandand Co., Ont.

Not a Fad nor a Bother.

Editor "The Farmer's Advocate":

I had been reading of persons who kept accounts with their cows, and I put it down as a fad. Having a few days off about a year ago, I called at some of the different farms where records were kept, just to see what I could see. So I commenced to sit up and ask questions. I asked the foreman at one place what he thought of such a plan, and his reply was: "When I first came to work here, I thought it was a loss of time and a bother, but now, if I had but two cows, I would keep an account of them. You see that young cow there" (pointing to a small, ordinary-looking cow), "well, she never gave more than 30 pounds of milk per day when fresh, and I did not think much of her; so I told her owner that she was not much of a cow to keep for profit, all other cows of the herd giving from 45 to 50 pounds when fresh. But the owner said she would keep her, as she was well bred, and we would give her another trial before we got rid of her. What was my surprise, when the end of the year came, to find that cow the third best cow in the herd, and better than her mother, that we thought a great deal of."

Well, that set me thinking. As I was buying a cow, for which I paid \$75 to \$80, I decided to keep account of the herd. I got a set of milk scales and record sheets. I weigh the milk morning and night, and put it on record. What seemed a bother at first seems of no moment now, and the satisfaction of knowing what my cows are doing is worth more to me than the extra time it takes to weigh the milk. What a tale that sheet and scales tell: If a cow is not milked dry, if a cow is not feeling well, or if any change is made in the feed, it will be indicated by the scales. By a glance at the record, I start an investigation to find out what is wrong. And say, brother farmers, some of my best cows have lost prestige, and some ordinary cows have taken on value, while other have had to go to the butchers, as I cannot afford to keep them when I know what they are doing. The scales are also useful in finding the value of the different rations. I feel satisfied as to the results of keeping records of my cows, and I think if farmers once started the practice, they would not keep cows without it. The dairy cow is wielding a greater influence than she is generally credited with. She has always been in the front ranks of the march of civilization, and no agricultural country can do without her. She is a potent factor in building up a country financially and socially, and a wise people will appreciate her and encourage the industry of which she is the foundation.

Lanark Co., Ont.

J. C. MOIR.

Milking Machinery in Denmark.

Milking by machinery has gained some ground during 1909, and about 150 machines, mostly of the pressure and suction type, are in use. At the same time, it cannot be said that this question has yet found a satisfactory solution.

Experiments have lately been in progress at a well-known Danish dairy farm, under the superintendence of representatives of the Royal Veterinary and Agricultural College, of Copenhagen, with a view of comparing the relative values of hand milking and milking by machinery. The milking machine under observation was the Lawrence-Kennedy-Gillies patent milking machine.

The experiments were made on cows and heifers, a certain number of each being respectively hand milked and machine milked. In the concluding stages of the experiments, a trial was given to the new milking cup, "Thulekopen," by means of which all the milk is drawn from the cows, and subsequent milking by hand obviated. For comparative purposes, a course of hand and machine milking was conducted, extending over three to four months, with the ultimate result that nearly the same amount of milk was obtained by both systems. In the case of full-grown cows, a rather larger quantity of milk appears to have been obtained by hand milking, whereas heifers gave a larger yield when milked by the machine. The chemical composition of the milk does not appear to have been affected by the different methods of milking, nor was there any difficulty in the application of the machine, whereas it was observed that the animals behaved somewhat differently when milked by hand. A machine fitted with two double sets of apparatus performs about the same work as three hand milkers, being able to milk 50 to 60 cows in two to two and a half hours.

There are perhaps not yet sufficient data to prove whether, in the long run, machine milking will give better or less satisfactory results than hand milking, or even such good results as are obtained by the latter method, but undoubtedly it will be easier to form an opinion when the cows are more accustomed to being milked by machinery. It is, however, probable that, by the help of milking machines, properly used, a more thorough and complete milking will be effected, and that the loss now occasioned by careless milking will be avoided. The difficulty of milking