

Milking-Shorthorn Record.

Editor "The Farmer's Advocate":

I have been keeping milk records for four years. Began with grade Shorthorns, and, after weighing one season, concluded to try pure-bred Shorthorns, as I thought I could get as much milk and have better steers. In 1907 my best cow milked 5,716 pounds; my poorest, 4,574 pounds; best two-year-old heifer, 4,350 pounds. In 1908 sold all but four cows, and bought six pure-bred heifers. One two-year-old, milking, gave 2,822 pounds; best cow, 6,627 pounds; poorest cow, 4,831 pounds. In 1909 sold my poorest cows, leaving but three of original herd—three pure-bred and three grade heifers. Best cow, 6,650 pounds; second, 6,500 pounds; third, 5,000 pounds; pure-bred three-year-old, in seven months, 3,236 pounds, sold for beef Nov. 1st. Pure-bred three-year-old, first year, 4,886 pounds; pure-bred three-year-old, first year, 4,600 pounds. Best grade two-year-old, 3,700 pounds; second, 3,300 pounds. In 1910, the old cows gave: First, 5,763 pounds; second, 5,744 pounds; third, 4,766 pounds—to November 1st, when I sold all three. Pure-breds, four years old: First, 6,920 pounds; second, 5,205 pounds. One three-year-old gave 4,685 pounds, and one two-year-old gave 4,732 pounds. One grade four-year-old, milking eleven months, gave 7,374 pounds, and one three-year-old 5,300 pounds.

You will see, by comparing these figures, that, while I have definitely improved the breeding, I have also advanced the milking qualities. These cows received no grain, except from time of freshening until grass and green corn in the fall. I am well pleased with my method of weighing and the interest it gives to milking. As to cost of equipment and methods, may say I bought a 40-pound draw-scale, and a 5-cent slate, which I ruled with a nail, leaving a margin on left-hand side for cow's name or number, and made the balance into 14 squares for each cow. This gives me space for two weeks' weighing; and, by boring two holes on either side of slate frame, hang it on two nails in the wall. My scale hangs on a short rope from ceiling of stable. It takes about 5 minutes per day to weigh the milk of ten cows. This time is amply paid for by contests between milkers, and, also, it gives you a sure means of finding any slighting of work by hired help. I hope some time in the near future to be able to give you a summarized statement of a dual-purpose herd worthy of publication.

Elgin Co., Ont.

ROY CHARLTON.

"My Experience in Cow-testing."

Editor "The Farmer's Advocate":

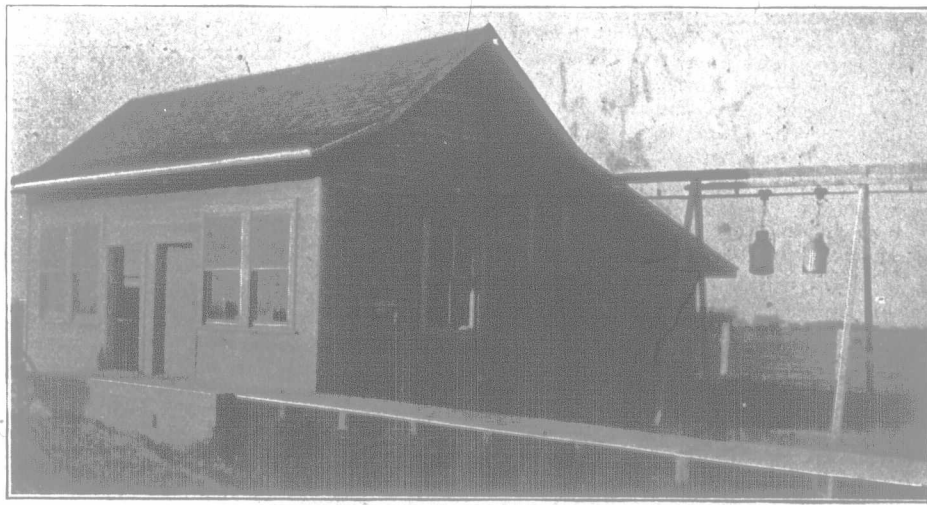
Two years ago, the Wallace Cow-testing Association was organized by Joseph Burgess, in connection with the Wallace Cheese and Butter Manufacturing Co. I became a member, having come to the conclusion that some of my cows, if not all of them, were not yielding reasonable profits. They were grade Shorthorns—a kind of dual-purpose cattle. The rules of the association were that each member weigh evening's and morning's milk of each cow three times a month, at fixed dates, and send samples monthly to the maker of the company, who takes the test and forwards the report sheets to the Department of Agriculture, where the total amount of milk and butter-fat is calculated, and a summary sent to each individual member in a sealed envelope. I did not think weighing only three times a month was a very accurate way of finding out the amount of each cow's production, although it involves little labor, and is better than not weighing at all, so I decided to take daily weighings of each cow's milk. To do it in the quickest possible manner, I adopted the following system: I procured a pasteboard file, with thumbscrew fastener at one end, and on this I place a pad of daily sheets, supplied by the Department; the thumbscrew fastener serves to keep the sheets in place. This and the scales are taken to the place of milking, and the weight of each cow's milk is marked down as we milk. On the sheets are spaces for name and number of each cow, and each sheet is ruled for one week. At the end of each week I total up the weights of each cow's milk, and at the end of each month it is a very easy matter to get the total yield of each cow for the month. I take samples of each cow thrice a month. The total yield of each cow for the month is marked on a sheet supplied by the Department for the purpose, and this, with the samples, is sent to the one who makes the test. Taking the daily weights of twelve cows under this system does not require three minutes at one milking, and I know it is a few minutes well spent, and I find, when once a person is in the habit of doing it daily, it is similar to any other fixed habit—hard to give up. We become interested, and anxious to know what each cow is doing, and it finally becomes an important factor in progressive dairying.

The first year I tested, the cows averaged 4,000 pounds each for period of lactation, and an average test of 3.8, under ordinary feeding, which average did not surprise me; in fact, they

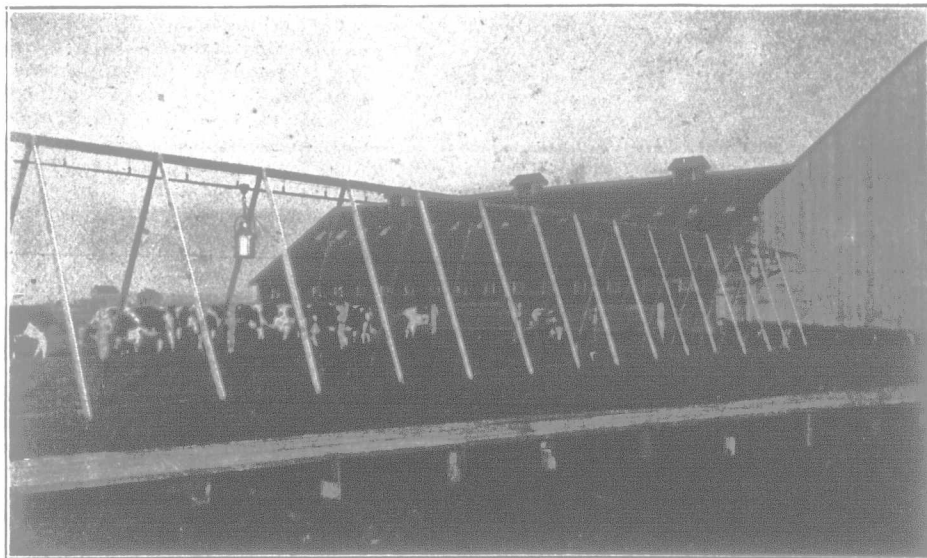
averaged better than I anticipated. The next year they were fed a little better, and, after weeding out one of the poorest, the average was 4,250 pounds, test 3.7. Had I weeded out four more, the average would have been 4,700 pounds. The highest individual average the first year was 5,800 pounds; the second year, 6,200 pounds.

Figuring the cost of feed per cow at about \$30, and milk worth 90 cents per cwt. at the factory, the profits, on the average, are not an enticing remuneration for time and labor involved in feeding and milking. A number of the poor ones are being fattened for market, as I believe this to be the right and proper way to dispose of them, and not attempt to sell them as fair, good milkers to neighbors and dealers, for they have poor cows enough. Am replacing the poor ones with pure-bred Holsteins with good ancestral records as to quality and quantity of milk, no leaking udders, and good quarters, headed by a pure-bred sire, whose dam and grandams were noted for large milk production. I firmly believe in keeping a well-bred sire; far too many scrubs are being kept, which only tends to deteriorate the stock, which I found by experience.

I do not believe in mixing the beef and dairy types to get a dual-purpose cow; have had all the dual-purpose cows I care for—cows that put a little on their back and a little in the pail.



Milk-bottling House.



Milk Track and Cows.

Feeding such cows in only an aggravation. Some cows will assimilate certain kinds of foods and lay it to their backs; this is the beef type. Another will assimilate the same food, and return it in the pail; this is the dairy type. Another will take the same food and, no doubt, assimilate it, but in what form I am at a loss to know, only that she helps to increase the supply of barnyard fertilizer. The latter type includes the majority of the dual-purpose cows.

The test and scales are the only accurate way of finding out the unprofitable cows, and it surprises me that so many intelligent farmers deem it too much bother to do a little systematic work in this all-important branch of agriculture; so they are content in working along in the same old rut, keeping cows that are only a bill of expense, thinking they know which are their best cows, when, in reality, they do not, as a thorough test would surprise them. Start right now and weed out the poor ones, but use first the test and the scales, for otherwise you might part with a good one.

Perth Co., Ont.

Unless at top figures, dairymen who understand their business are not likely to part with their best cows for the use of a milk-producer at the other end of the country.

APIARY.**The Anatomy of the Honeybee.**

Morley Pettit, Provincial Apiarist, O. A. C., Guelph.

I wonder how many people who have seen bees at a safe distance have had the courage to examine one of them at close range. In order to do this in safety, it is best to have what the naturalist calls a cyanide bottle, made by putting a little potassium cyanide in the bottom of a large-necked bottle and covering with a thin coating of plaster-of-Paris. A druggist will prepare it for you.

Now catch the insect, place it in the bottle, and close the bottle with the stopper. The fumes of the cyanide very quickly kill the insect. To examine it properly, one needs a small lens and a needle. Even many experienced beekeepers have not gone to this trouble to get a close acquaintance with the appearance of these little workers.

Contrary to the animal custom, the bee carries its skeleton on the outside of its body. It is not composed of bones, but of thin plates and rings fitted nicely together so as to form a flexible coat of mail. Almost every part of the body is covered with hairs, each one of which has a particular use. Like "All Gaul," the body of the bee is divided into three parts. These are called the "head," the "thorax," and the "abdomen."

The Head carries the customary organs for taking food, and for seeing, hearing, smelling, tasting and feeling. But beyond this the animal resemblance ends. The jaws work sidewise, not up and down, and, instead of having teeth, they are bevelled inside so as to form a hollow, when joined together, as two spoons would do. The bees use them to manipulate the wax, to grapple with a robber, or to tear a way rough fibres, and throw out refuse from the hive. Their food is mostly taken in liquid form, sucked up through the long tongue with the assistance of four appendages which surround it. It is not a tube, but it is easily rolled into that form at the will of the bee. Like our little companion the house-fly, the bee has a large eye on each side of its head, composed of thousands of little eyes crowded together like the cells of a honeycomb. There are also three simple eyes on the top of its head. The nose is used only for

smelling, and you would not recognize it at all; in fact, you could not see it without a microscope. It consists of "smell-hollows" located on these wonderful little feelers called "antennae." The substitutes for ears are also thought to be located on the antennae.

The Thorax, or middle division of the body, has a much harder shell than either the head or abdomen. It supports the legs and wings. When flying, a bee practically has but two wings; but when it comes to rest, these become four, in order that the hindmost and lesser pair may be tucked away beneath the foremost and greater pair. These double wings, when closed, are a great convenience in exploring flowers and moving about the crowded hive; but it would be disastrous if, when set for flight, they were to separate. This they never do, however, as they are locked together with ingenious little hooks which the bee can instantly fasten and unfasten at will. As convenience also requires the wings to be short in proportion to the load carried, they are geared up to an enormous speed, it having been calculated that during their swiftest flight they make upwards of four hundred vibrations per second. Powerful muscles are necessary to maintain such high speed, and the thorax is a mass of muscles, perhaps the most remarkable of its kind in the world. By listening