

which is a different "pox" than we were used to some years ago. That is, we have had of late years what we may call a species of cow pox that is very similar to a boil. It forms a hard lump, and inflames the spot larger than an egg, and after a number of days it will gather and break. In the treatment of this, it is not well to go squeezing this lump before it is "ripe." It is something, in this respect, like a boil. Then, when it breaks, or is ready to break, the putrid stuff will come out, and there is a "core," as in a boil, that comes from it. This complaint will spread from cow to cow, and the best way to keep it out is to use disinfectants strongly about, nothing better than diluted carbolic acid to fill up the sore after the "core" is out, and rub around the udder for a few days. This complaint is not likely to be of any permanent injury to the cow, although it is very painful, and, to very nervous cows, makes them touchy to milk. Some cows it does not bother at all, or lower their milk yield.

The treatment for a shrunken quarter, as recommended by the Nebraska Experimental Station, of pumping it with a bicycle pump, might in some cases be of benefit. If the trouble with the udder has been so serious as to make the active parts of that udder practically dead, any treatment is not likely to be very effective. We have known cases, though, where a cow has nearly lost part of her udder, and has had this damaged part brought back to use by commencing on the cow a couple of weeks before she freshens with massage on that part of the udder, and stripping and bringing it to milk before the other parts of the udder have started. In some cases this has worked out all right, and in others it has been impossible to bring the part of the udder back to life again. It all depends, seemingly, upon how much injury to the udder has been done while the udder was in an inflamed state.

The most important point in case of any udder trouble is to act at once. Garget and similar troubles can be scattered—warded off—by giving immediately on the appearance a big dose of Epsom salts. If a cow trembles—appears in pain, with no apparent cause—it's garget coming, and give her a purge at once. Prevention is better than cure. Prompt treatment comes next.

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ALEX. HUME, Northumberland Co., Ont.—We think caked udders and diseased teats and quarters are on the increase, owing to several causes. The dairy cows are kept under higher pressure as to feed, close stabling, etc. Their blood is hotter, and, under the high pressure to produce to their utmost capacity, they are more susceptible to changes of weather, surroundings, or other conditions. The greatest care and attention should be given them to note the first symptoms of any of these troubles; in fact, to foresee the causes of these troubles, as only the born cattleman can. Do not allow them in draughts or cold weather, and keep them clean. We do not know from experience the treatment advised by the Veterinarian of the Nebraska Experimental Station.

JUDGMENT FALLIBLE WITHOUT FIGURES.

Editor "The Farmer's Advocate":

We have been keeping individual cow records since last March. We were anxious to find out not only which were the best and poorest cows in the herd by actual test, but also to determine just how far wrong we might be in our judgment of each cow's production. We wished, also, to find out the difference, if any, in total yield between cows which milk well for a short season and those which give a smaller yield for a longer period.

For weighing, we used a spring balance, procured from the Department of Agriculture, and the weights were recorded upon milk sheets prepared and furnished free by the Department. If the balance is hung in a convenient place in the stable, very little time indeed need be lost in taking the weights, and, after a milker has become familiar with the usual yields of his cows he can milk and weigh several before stopping to record the weights.

As a result of one season's work, I am convinced that no one can judge the merits of his cows individually without keeping actual records; that one is very liable to be mistaken in his judgment of a cow's total yield by guessing at the amount in the pail, and that the cow that keeps up her average for nine or ten months of the year will make a much better showing at the close than might at first be supposed.

If a man is already caring for his herd to the best of his knowledge, the establishment of an individual milk record would, I feel quite safe in saying, be still another step in advance. When it has been in operation a short time, it soon creates a lively rivalry among the milkers as to which can make his cows do the best, and when this feeling exists the owner may rest assured that his cattle will not be neglected by those in charge.

It is possible, by this means, to increase the yield gradually, and to know just when the limit

of profit has been reached; and so long as an increase in the feed is repaid by a proportionate increase in the pail, one may know he can safely continue.

Hastings Co., Ont.

H. S. TUCKER.

OBJECTS OF CHEESE-FACTORY INSTRUCTION.

In view of the change in the system of dairy instruction in Ontario, whereby it is taken over this year and administered directly by the Department of Agriculture, the following summary of the objects of this instruction work is of special significance and importance:

OBJECTS OF INSTRUCTION.

In the production of high-class cheese, it is essential that the milk be clean, sweet and free from foreign flavor upon reaching the factory. Both the quantity and the quality of the product will suffer when the raw material is inferior. Unless the patrons supply milk of good quality, they cannot in justice hold the maker responsible for the quality of goods made therefrom. The health of the cows, the water supply, the quality of the food, the condition under which milk is drawn from the cow, the care used in seeing that it is not exposed to dirt or dust of any kind, proper handling, etc., all require unceasing watchfulness and care.

In order that the maker may receive instruction regularly and periodically, and that the producer may be directed wherein he may improve in the production and care of milk, the Department of Agriculture has employed a staff of instructors to visit both the factories and the farms upon which the milk is produced. The instructor is not a detective, but a co-worker and educator. All tests for adulteration will be made at the factory, and action for prosecution left with some official of the factory concerned.

To dispel the misapprehension which exists in the minds of many as to the aim of the Department of Agriculture and the Dairymen's Association in providing instructors, a few statements as to the work they are doing will here be given:

1. To assist the makers in producing a high-class article by

- Pointing out defects in the cheese on hand, and suggesting to the makers means of overcoming these defects.
- Explaining to the makers as clearly as possible the quality of cheese required by the trade, so far as acidity, texture, color, finish, etc., are concerned.
- Following the different stages of manufacture from the time the milk is received until the curd has been put to press, and pointing out the importance of care, watchfulness, and a definite aim at all times.
- Suggesting needed improvements in equipment, drainage, methods of disposing of whey, etc.
- Examining the curing room, and instructing as to requirements so far as ventilation, degree of moisture, regulation of temperature, etc., are concerned.
- Drawing attention to the necessity for absolute cleanliness at all times and in all stages of manufacture.
- Making curd tests of each patron's milk, in order that foreign flavors and undesirable qualities may be detected.
- Testing samples of milk for butter-fat content.
- Doing anything and everything which will tend to stimulate both maker and patron to do their best.

2. To visit the farms of patrons, not in the capacity of a detective, but to see the conditions under which the milk is kept, and give instructions as to

- Most effective and simple method of cooling and caring for the milk.
- Best location and equipment for cooling purposes.
- Necessity for an abundant supply of pure water both for cattle and for cleaning purposes.
- The desirability of not allowing cows to have access to swamps, stagnant ponds, weedy pasture, etc.
- Suitable places for milking. Cows should not be milked where they are exposed to odors from hogpens or filthy barnyards.

NAMES OF THE INSTRUCTORS.

In connection with the above statement, we are able to announce the personnel of the instruction staff for 1907. In Eastern Ontario they are: Dr. C. A. Publow, at Picton; D. J. Cameron, Lindsay; J. B. Lowery, Bancroft; R. W. Ward, Peterboro; R. T. Grey, Campbellford; Hugh Howie, Belleville; Geo. Bensley, Napanee; H. Brentnell, Kingston; S. S. Cheatham, Gananoque; D. H. Wilson, Brockville East; P. Nilan, Brockville West; F. Singleton, Smith's Falls; W. G. Gardiner, Kemptville; J. H. Eclin, Perth; J. B. Larry, Finch; W. J. Ragsdale, Vankleek Hill; I. Villeneuve, St. Isidore; J. Charbneau, Plantagenet; W. Doole, Ottawa; R. Elliott, Ren-

frew; C. W. Norvell, Morrisburg; J. Buro, Cornwall; L. A. Zuefelt, Chesterville. Chief Instructor, G. G. Publow, Kingston.

At a meeting held at Guelph, April 1st to 5th, plans for dairy-instruction work in Western Ontario were fully discussed, and Chief Instructor Hearn announces the following appointments:

Jas. Burgess, Listowel, Listowel District; E. N. Hart, Woodstock, Woodstock District; Alex. McKay, St. Mary's, Stratford District; Geo. Travis, Tillsonburg, Simcoe District; R. H. Green, Cayuga, Brantford District; W. Hamilton, London, London and Western District; Fred Dean, Strathroy, Western Creameries; Mac. Robinson, St. Mary's, Eastern Creameries. Frank Hearn, Chief Instructor, will look after the factories not included in any of the above groups.

A COMPREHENSIVE ARGUMENT.

Editor "The Farmer's Advocate":

The keeping of individual milk records is a subject which has not received the attention by farmers that it should, owing, possibly, to the fact that they think it is not necessary, and that they think they know what their cows are doing, and need no further proof. I have talked to men on the subject of keeping records, and they would pooh-pooh the idea of a farmer taking the time to weigh the milk from each cow, and say they could not be bothered with such nonsense.

I started to weigh the milk from my cows because I wanted to know whether they were working for me, or I working for them and boarding myself, which I found to be the case with some of them, and not always the suspected one.

By weighing the milk from each cow, I have learned that, whereas I thought I knew which were the best, in fact I knew very little about them. We had some cows that when they freshened would do very well, but after a few months would shrink in their milk, but we thought, of course, that they were all right because they filled the pail at the start. We did not take into account what it meant for them to shrink later on, but when we put them to the test by the scale then we had our eyes opened to the fact that we had deceived ourselves. Another cow, which did not start out with a very great flow of milk, but which kept up pretty evenly all through the season, came out at the end with about 2,000 pounds of milk more to her credit than the other that gave such a great promise. It takes the scale to pick them out; figures do not lie.

When I started to weigh milk first, our average for the herd was comparatively low; but by the searchlight of individual milk records we have, in a few years, raised the average of our herd by 1,500 pounds per cow, which, for ten cows, amounts to 15,000 pounds for the season. Figuring that at 80 cents per hundred pounds, I find that I have, for one season alone, \$120 in hard cash as a result of keeping records.

Sell the poor cows to the butcher; keep the good ones and raise their heifer calves; buy a good one when you can, and you will soon raise your average. You ask, are milk records a benefit to a man who is already taking as good care of his herd as he knows how? Decidedly, yes. By referring to his record he finds how each cow responds to feed, and it is up to him to watch closely, and as they increase the milk flow, so increase the feed, and find how much she will stand. Some will take more than others; some will respond to feed and put the product in the pail, while others will not increase the milk flow but put on flesh, and that is a trait you do not want in a dairy cow. So, in conclusion I would say, find out what your cows are doing—whether they are paying or not. The surest way to do that is by keeping an individual record.

Perth Co., Ont.

THOMAS JOHNSON.

WORKING OUT THE SUNDAY CHEESEMAKING PROBLEM.

The letter from J. G. Shearer, published in the April 11th "Farmer's Advocate," calls attention to the application of the new Lord's Day Act to cheese-factory management. Under "work of necessity and mercy" not prohibited, are some two dozen classes specified, one of which (m) reads: "The caring for milk, cheese and live animals, and the unloading of and caring for perishable products and live animals arriving at any point during the Lord's Day." The following interpretive clause is given by the legal advisers of the Lord's Day Alliance:

"Hauling milk to factories and making cheese or butter, even out of Saturday night's milk, is not here allowed, only 'caring for' the things named."

Under the Provincial Act employees are liable, but under the new Dominion Act, Mr. Shearer pointed out that joint-stock companies or individual owners are subject to heavy penalties for violation. The chief trouble is with the Saturday night's milk, taken in that evening. The process of making it into cheese begins that night, and is completed some time during Sun-