

where steam is not available sunning will give effective results 4. Invert in a clean, protected place when dry.—From American Cheese-maker.

Some Cost Items in Milk Production.

EDITOR "THE FARMER'S ADVOCATE":

While the committee appointed by Mr. Hanna is investigating the cost and profit in the production and distribution of milk, it might be well to summarize some of the facts having an important bearing on the points under discussion. It is well to note at the outset that the dairy cow of average capacity represents an invested capital of approximately \$100. At ten years of age she has usually depreciated in value to such an extent that it is necessary to dispose of her as a canner at \$25 or less. Being of the dairy type it certainly would not pay to feed her a lot of high-priced materials with beef production in view.

Beginning with the question of feed costs, the farmer is at once confronted with a factor that has a considerable bearing on production. As a matter of fact, conditions have so changed that it now costs upward of 125 per cent. more to produce milk than two years ago. Formerly, the farmer who planned to buy certain foodstuffs with which to balance up the ration for his herd, followed the principle of laying in the required supply during the summer months when prices were lowest. Last year's crop shortage, of course, makes this impossible at the present time; he considers himself lucky if he can secure a few hundredweight to last him from day to day. As a result, he is forced to pay a retail price for raw material, and at the same time sells his finished products at wholesale. What consumer, if placed under these conditions would consider he was getting a fair deal?

If the aforesaid consumer is sufficiently interested to investigate the matter he will find that the annual outlay for feed per cow will not fall far short of \$80, and in many cases will surpass that figure. But feed costs are by no means all that must be taken into consideration. After he has added interest on investment, cost of labor, service of sire, depreciation of plant, insurance and half a score of sundries, the cost of milk production reaches the neighborhood of \$140—considerably more than her estimated value.

Perhaps, someone who is more acquainted with the consumption of milk than its production will advise to proceed a little more economically, and so provide a means of letting down the cost to all concerned. As a matter of fact, the writer has learned from his own experience, as every practical producer has done, that the dairy cow is very much of a machine, and as such will not give something for nothing. Even during the pasturing season, except, perhaps a few weeks in June, she will not milk up to her capacity without a light ration of grain, which must be increased as the season advances. In making the foregoing statement as to annual feed costs I have estimated the value of pasture at \$2.50 a month per cow, hay at \$10 per ton, silage at \$3 per ton and roots at \$6. The grain figured on was confined to that which could be purchased at a reasonable price, and at the same time with a feeding value consistent with its cost. If any fault can be found with the prices quoted it will be that they are too low. Certainly they will be verified by those who Mr. Hanna's committee will call to throw expert light on the subject. When it comes to the question, "To feed or not to feed," it is a case of staying in the business at a reasonable profit or getting out of it as a failure.

Labor, when it can be procured, comes high. This may be very moderately estimated at 15 cents a day per cow. Hence, a man who has a herd of fifteen cows charges \$2.25 a day for his work and boards himself. The writer has done just that and does not consider that he over-charged for the work involved.

The item of interest is the very first thing that a manufacturer figures on when estimating his production

costs. Nine times out of ten it is entirely overlooked by the farmer. The total investment and equipment on the average 100-acre farm carrying say 15 cows may be fairly estimated at \$10,000. Assuming that one-half of this is devoted to dairying, half of the income should be charged as coming from that source. There would, therefore, be \$300 in interest charges to be divided over 15 cows, or exactly \$20 per animal.

Regarding the cost of bull service, I have based my figures on the fact that it will cost at least \$60 a year to maintain a herd sire in good breeding condition. This adds another \$4 to the cost of each member of the herd. To this must be added the cost of insurance, veterinary fees, cartage of milk, care and upkeep of utensils, etc.

Unfortunately, many farmers have signified their intention of selling off their fall-calving cows and going, at least, temporarily out of the business. This indicates that the problem of production costs is becoming serious. "AGRICOLA."

The Milk Flow Changes With Age.

Under ordinary conditions a heifer is expected to give considerably more milk and butter-fat the second lactation than she does the first, and more the third than the second, but a fairly uniform flow is maintained for a number of years after a cow reaches maturity. This fact influences a dairyman when placing a value on his herd, or when buying stock. If a junior or senior two-year-old has a record of a certain weight of milk, he estimates what that animal will do as a mature cow, and bases his value accordingly. Eckles and Warren, in "Dairy Farming," state that "on the average a well-grown two-year-old may be expected to produce 70 per cent., a three-year-old 80 per cent., and a four-year-old 90 per cent. of the milk and fat that she will when mature. The highest production for the year may come anywhere between the fourth and eleventh year." Pearl and Patterson, of Maine Experiment Station, have made a study of the question using records of Jerseys entered in tests. The results are charted and published in Bulletin 262 of University of Maine. They are to the effect that production changes with age in a definite manner. The chart shows a gradual rise in milk yield up to eight and a half years, then the line slowly recedes. From this it would be gathered that a cow was at her best at between eight and nine years of age. However, there are cows on record which have held to their maximum production until well over that age. It does not necessarily follow that a cow is past her usefulness when her milk yield declines owing to age. She has a value as a breeder. The offspring of a cow that has proven her worth is more valuable than the progeny of a heifer. It is unfortunate that failure to breed and udder trouble cuts short the period of usefulness of so many valuable dairy cows. A large number of cows are forced to the shambles from one or both of the aforementioned troubles, before they have reached their maximum production. Greater care should be exercised to keep the udder in good form and to prevent disease which might render the cow barren.

There is reasonable assurance that the heifer of high-producing ancestors will be a profitable cow, although there are exceptions to all rules. The heifer which only gives three or four thousand pounds of milk the first lactation is a doubtful proposition as a money-maker from the milk point of view, no matter how well bred. Of course, four thousand pounds of milk is well up to the average yield for the Province, but it is far below the possible, and every dairyman should aim at, at least, double this yield for every mature cow in his herd. At even \$2.00 per hundred for milk, a cow must give a good flow to pay for her feed, let alone give returns for labor and allow for interest, depreciation, etc. By careful breeding, selection and feeding the average milk yield could be materially increased.

Some High Records.

During the months of August and September there were fifteen Holstein cows and heifers accepted for entry in the Record of Merit. Lakeview Hengerveld Wayne was first in the mature class. Her seven-day record being 467.3 pounds of milk and 27.42 pounds of butter. Madam Posch Pauline has completed a full year under official test with 27,597.4 pounds of milk and 1,123.5 pounds of butter. This is the largest official milk record yet reported in Canada. Colony Beulah De Kol Korndyke was the only cow qualifying in the senior four-year-old class. Her milk yield was 433.9 pounds of milk, making 17.87 pounds of butter. Johanna Meg was first in the junior four-year-old class with a record of 521.8 pounds of milk and 23.04 pounds of butter. Colony Koba De Kol Newman, Colony Meta Shadeland, and Colony Poetess Korndyke 2nd won the senior and junior three-year-old class, and senior two-year-old class, respectively. The junior two-year-old class was headed by Het Loo Artis Korndyke with a record of 24 pounds of butter.

Twenty-six Holstein cows and heifers qualified in the yearly record of performance test during August and September. Desta was first in the mature class; her record of 27,128 pounds of milk is the largest yet reported for a cow qualifying in the R. O. P. test. Her butter record is 1,048.75 pounds. De Kol Korndyke was first in the four-year-old class, with a milk record of 17,577 pounds. The three-year-old class was headed by Maple Leaf Pontiac Girl, with 11,735 pounds of milk. In a class of eleven two-year-olds, B. C. Choice Walula was first. Her milk record was 9,396 pounds with 418.75 pounds of butter.

Condemn not that cow before you have tested her.

There is a vast waste of energy in keeping poor cows.

The scales and tester finally kill the boarder cows in the herd, but exalt those which turn their feed to good use.

Up to April 30, 1917, there were forty-one 20,000-lb. Holsteins that qualified in the R. O. P. Six of these have a butter record of over 1,000 pounds.

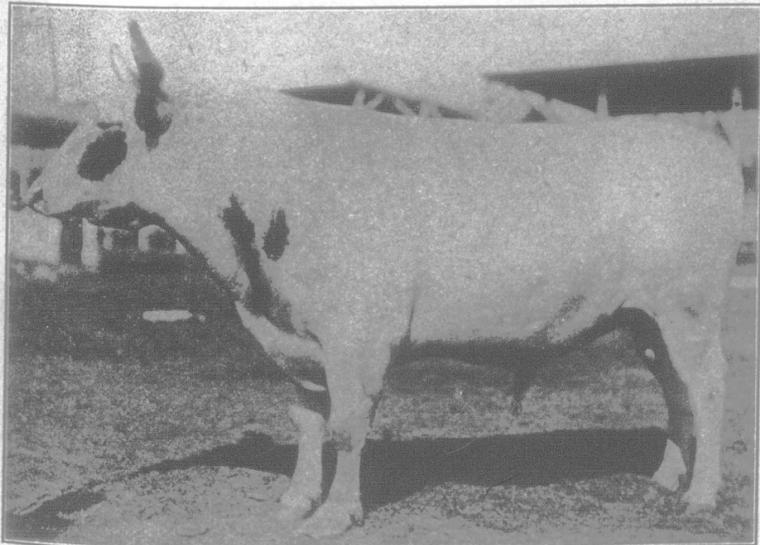
When comparing prices offered for milk, don't forget to allow for the by-products, as whey and skim-milk. They have a cash value when fed to hogs or calves.

Save the heifer calves from the most efficient cows. A heifer calf from a poor milker is an uncertainty at all times, and generally grows up to be an unprofitable proposition.

Is a grade bull good enough for your grade herd? We think not. There are many good, typey, registered bulls for sale, which, while costing a little more than a grade, will improve your herd and will prove to be the cheaper in the end.

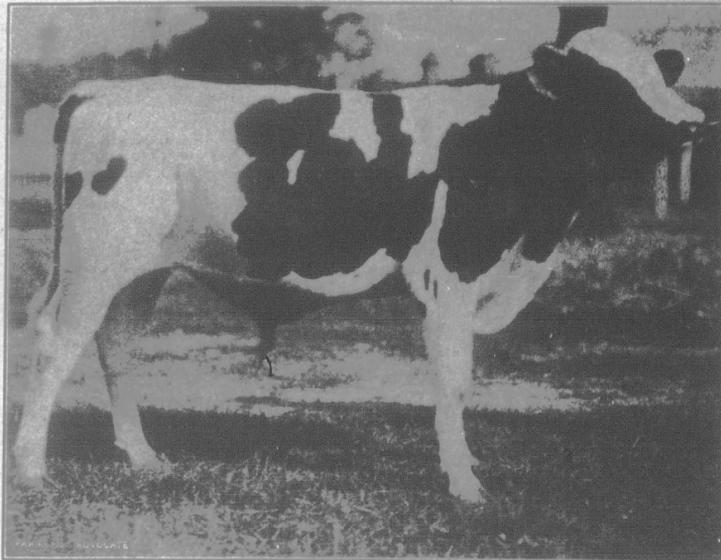
The spread of disease is being laid at the door of unpasteurized by-products from cheese factories and creameries. Pasteurization of dairy by-products from cheese factories or creameries aids in protecting your stock from tuberculosis and other diseases.

The results of an investigation made by Purdue University, relative to the cost of producing milk during six winter months, showed that feed and bedding required to produce 100 pounds of 3 1/2-per-cent. milk cost \$2.16. The labor cost was 51 cents and overhead expenses 47 cents, making a total of \$3.14 per 100 pounds. According to this the prevailing price for milk barely pays for feed and bedding, leaving the dairyman to work for nothing and carry overhead charges besides.



Hillside Peter Pan.

Senior champion Ayrshire male at Toronto and London for A. Hume & Co., Campbellford, Ont.



King Fayne Alcarten.

First senior Holstein calf at Toronto and London for M. H. Haley, Springfield, Ont.