

to consider. We are often asked the question, "Which pays best, to sell milk, or to sell cream?" This, of course, depends upon the relative prices of milk and cream, the value placed on the skim milk, and the labor or power available for separating the cream. Average milk, testing 3.5 per cent. fat, is worth about \$1.12 per 100 pounds, when sold as cream, milk-fat being worth 32 cents per pound. Whenever the price of milk goes below \$1.00 per 100 pounds, it will pay to sell cream, as the labor of separating is more than paid for by the value of the skim milk, assuming there is young stock on the farm to which it may be fed.

To the man who raises live stock, and to the man who has poor soil, our advice is to sell cream to the creamery, city trade, or in the form of butter, where competent labor and suitable markets are available. Sell the cream on the basis of its fat content, and expect a good price—an average of 30 to 32 cents per pound fat is not unreasonable by the year. One gallon of cream testing 25 to 30 per cent. fat, is worth from 75 to 96 cents per gallon.

2. The Character of the Market Available and Nearness to Railway or Other Means of Shipping.—In some localities the cheese business is well established. Wagons pass the farmers' doors and lift the milk, with a minimum amount of labor and trouble to the farmer. This season, cheese is a good price. Patrons are receiving over one dollar per 100 pounds, net, at the cheese factory. To such, we should say, "stick to cheese."

Some are convenient to steam or electric railway; trams or cars run at suitable hours for shipping. The demand is great for milk to be used by the growing urban populations. By the purchase of concentrates, as food for the cows, soil fertility may be maintained, and the young animals are about all that are likely to suffer. This is undoubtedly the most remunerative line of dairying, but its exactions are such—and these are growing greater and more difficult each year—that none but the best dairymen are likely to succeed and be able to fulfil all the requirements of Boards of Health, milk inspectors and others whose duty it is to see that none but pure milk is sold to the dwellers in towns and cities. There is also some risk in not being able to get paid for milk sold to dishonest dealers.

I trust I may be forgiven for saying that, in my judgment, the milk producer does not receive a fair share of the price paid by the consumer. I am safe in saying that the milk producer does not receive more than one-half the price paid by the milk consumer, except where the farmer sells directly to customers. The cost of preparing and delivering milk to consumers is altogether too great, and some means must be devised whereby these expenses can be lessened, and those at the two ends of the milk business be relieved of their burdens. How this can be done, is a problem worthy the best efforts of scientific and practical dairymen.

3. The Amount and Kind of Labor Available.—Here, as elsewhere on the farm, labor is a limiting factor in the kind of dairying to be followed. On some farms, the production of milk for direct consumption or for the condensary is out of the question, for the simple reason that the labor available can not or will not give the necessary care to the milking and caring for the milk, which is essential in the production of milk for critical markets. "Cleanliness," in the modern meaning of the word as applied to dairy work, is as unfamiliar as Greek on some dairy farms, and it would be useless to try to produce either milk or cream for a fancy trade. The milk must be sold in a less critical market, which usually means "sending to the cheese factory," selling cream to the local creamery, or making "store" butter. This is not fair to the patrons of cheesery or creamery who do look after milk and cream properly; neither is it fair to the store-keeper, but what is to be done? A market must be found somewhere, and that "somewhere" is along the line of least resistance. Eventually, the cheesemaker, the buttermaker and the store-keeper will refuse to buy or accept the poor milk, cream or butter, and then such will have to go out of the business—or "Go West."

In conclusion, the answer to the question, "What Shall I Do With My Milk?" depends upon the person and the circumstances in which that person is placed. It is a question which each one must, to a large extent, decide for himself. Study the markets, study the cows and their surroundings, the general character of their milk, facilities for cooling or separating, shipping convenience, market demands, nature of the help available; and, having done all this, market the milk with three objects in view:

1. Direct cash returns as large as possible.

2. Live stock for renewing and increasing the herd must be bought or reared, and, if the latter, then milk in some form is necessary.

3. Maintaining soil fertility or increasing it. We would add a fourth: Study the labor problem, and try to eliminate, so far as possible, incompetent help and the slavery more or less found in all branches of dairying. H. H. D.

Cow Stable Cleanliness.

Thousands of babies are killed every year in cow stables. Bald and startling as that statement sounds, it is capable of most conclusive proof. The agency of death is common everyday uncleanness—dirt. Ask your doctor, and if candid enough to tell the truth, without fear of offending a good client, he will confirm and emphasize these statements. Medical health officers, boards of health and eminent physicians in general know these things only too well, and have been seeking, by education, by agitation, by regulation and by legal enactment to remedy some of the worst conditions and minimize the needless annual toll of sickness and death. They have done some good, but their efforts have been only in small degree successful, because they have usually failed to convince, to impress and to secure the co-operation of the man beside the cow. There the great problem lies.

About this stage we expect someone indignantly to arise and ridicule such a line of argument, telling about the great families of boys that have been raised on milk cared for without any over-particularity of method, and arguing stoutly that milk, even with all its impurities, is better for babies than no milk at all. All of which is perfectly correct, but signifies nothing. Of course, milk is the ideal and all-but-indispensable infant's food, but, because impure milk may be better than none, it does not follow that impurity is safe. The long, sad annals of medical practice prove the contrary. Because certain ragamuffins have been raised to healthy manhood amidst squalor is

milking, which may be suggested by questions:

How would you like it if your wife kneaded her bread and pastry, handled the butter and set the table without ever washing her hands, no matter how tainted? Would you think of sitting down to the table, meal after meal, without washing your own hands or requiring the children to wash theirs? What would you say if the milk picher were regularly swarming with flies which had just come in from barnyard and privy? Or, if someone carelessly sprayed drops of urine and flecks of cow manure over the table, dropping them on bread, butter, meat, desserts, and, worst of all, in the milk? What would you think of a neighbor at whose table these things were a regular occurrence?

And yet, ignoring the appearances and the thoughts of the thing, these habits of uncleanness would be much less unwholesome than the habits of carelessness daily perpetrated in all but a few of the very best dairies. Milk is the most delicate of all human foods, and one of the most susceptible to deterioration through neglect or carelessness. Being an opaque liquid, it conceals many impurities. And so manure and dust by the ounces are swallowed up in its frothy whiteness, carrying with them millions of bacteria which almost immediately begin to multiply, bringing about putrefactive and other injurious changes. Fortunately, the lactic-acid bacteria usually get the start of others, holding them measurably in check until they themselves have brought about souring—the most normal and about the least unwholesome change which can take place, undesirable as this is in the case of milk for direct human consumption. Considering, therefore, how long milk may have to stand before it is consumed, there is urgent reason for at least the same degree of cleanliness in its extraction and handling that would be demanded at a respectable table. Custom has long staled the average milk producer in these matters, but scientific knowledge of dietetics, bacteriology and hygiene is demanding new standards of stable cleanliness, and, excepting, perhaps, a few of the most faddish dairies, the best is still none too

high. It is only a matter of time till many of these practices now freely permitted, will be absolutely prohibited by law. Rules scarcely cover the point, for more is demanded than perfunctory observance of rules, but here are a few which should be universal:

A wash dish, a clean towel, soap dish and supply of pure water should be kept in every cow stable or adjoining dairy.

Every milker should wash his hands carefully before commencing to milk. If a wet-hand milker, he should give them a quick rinse and hasty drying between the

milking of each two cows. If a dry-hand milker, he should wash often enough to keep them as clean as they would need to be if sitting down to a meal.

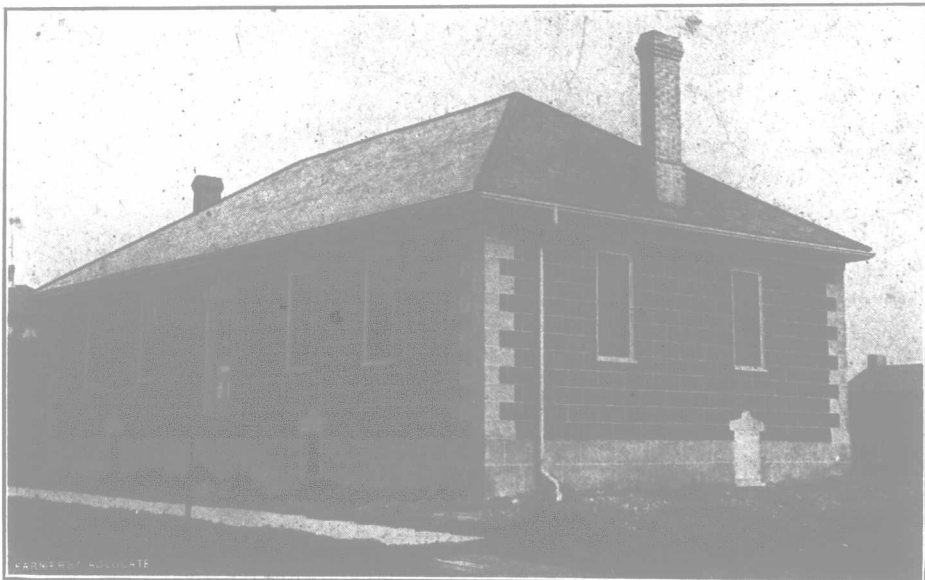
Every milker should, while at the operation, wear a reasonably clean white apron.

Every cow's flanks and udder should be dampened before milking with a cloth rung out of clear water, the water being changed for every cow. In winter it will usually be necessary to brush off flanks and udder before dampening. Any cow whose flanks, udder or teats have been soiled with manure or urine should have the soiled parts washed, and then roughly dried.

No milker should think of continuing to milk while his cow is passing excrement, either liquid or solid. The pail should be held to avoid any dirt spattering into it.

In everything, scrupulous cleanliness should prevail.

Of course, it costs a little more to take pains, but really not so very much, and we would place this upon a plane higher than money. Is it not a duty? Suppose your child's life were depending on that milk at a point ten or twenty miles away, and in a home where its nurse did not know any too much about milk. Supposing you knew, as doctors know, the alarming danger of impure milk, especially in hot weather, would you not be careful then? And if for your own child's sake, then what about the Golden Rule?



A Limburger Cheese Factory, at Baden, Waterloo Co., Ont.

scarcely an argument for dirt, with its countless dangers which weed out the less robust. The Spartan mothers, it is said, deliberately exposed their weak children to privation. Many of us would be dead if our mothers had imitated their example. So of this matter of milk supply. The fact that many children have thrived on milk, despite its impurity, does not guarantee the safety of such milk. What one withstands may easily kill another.

Remember, too, that the evils of impure milk are multiplied by the length of time which elapses between production on the farm and consumption in the city home five, ten or twenty hours later. What applies to children applies likewise to invalids, and in somewhat less degree to healthy adults.

Now, what do we mean by stable cleanliness? Just a few rational precautions conscientiously observed. Wholesome food, pure water, well-ventilated stables, regularly cleaned and white-washed at least once a year; cows groomed occasionally, and kept as free as practicable from dust and manure tags, with tails kept out of the gutter urine by straw, shavings or other absorbents—these, and a few simple items of pains in