

The water is pumped to this tank by means of the engine in the boiler house which furnishes also the power required to operate the machinery in the canning factory.

THE PRODUCTION OF MILK

It is Mr. Trethewey's intention to make the production of milk one of the chief sources of the farm's revenue. At present he has about 50 head of grade milk cows. This herd was started last fall. Most of the cattle are dual purpose cows. They were bought when fresh and will be sold when they are through milking. Mr. Trethewey does not intend to take up the breeding of pure bred stock as he believes that the land on his farm, which is worth about \$300 an acre, is too valuable to be used for such a purpose.

The barns are not so elaborate as some others that we have seen but they are commodious and laid out in a convenient manner. The floors slope gradually towards the north end of the barn. The liquid manure runs down the gutters and out at the end of the barn into a tank sunk in the ground where it is caught. From this it is pumped into a wagon, like a watering cart, that is used to apply this manure to the land.

There are two large stave silos capable of containing 200 tons of ensilage each. A large root cellar in connection with the barn holds about 2,000 bushels of roots. After the cows have been milked, the milk is removed to a milk house that adjoins the barn where it is separated by steam power. The milk cans are cleaned by live steam. The milk house is provided with an ice house and an ice water tank, so that it is possible to keep the milk and cream in the best possible condition.

THE FARM CROPS

This year the farm crops are as follows: to-matoes 60 acres, corn 35, grain 40, roots 10, potatoes 5, hay 20 and pasture 40. The farm buildings and canning factory occupy another 10 acres. The crops were noticed to be in excellent condition, particularly the peas and potatoes. The corn was a very good catch but was not far advanced. About 25 Yorkshire hogs are kept.

About 30 people are employed on the farm all the time. When the canning factory is in operation Mr. Trethewey expects that 150 employees will be required.

When asked what it was led him to decide to take up farming Mr. Trethewey replied, "I like farming because it brings me nearer to nature. In operating a farm like this I feel that I am doing more good with my money than I could do in any other way. I am furnishing work for a considerable number of people, which is better than giving my money away in charity. So far I have invested about \$140,000 in the farm and I expect to go behind this year a few thousand dollars more. My income from the farm this year would amount to about \$35,000. Next year and succeeding years I should obtain at least \$50,000 a year from the farm." Mr. Trethewey expects ultimately to make his farm pay him for his investment.

The average farmer, who has to earn the money with which to improve his farm, is unable to attempt things on such a scale as here described; nevertheless, there are few farmers that could not learn some lesson of value from a visit to Mr. Trethewey's farm. Men like Mr. Trethewey, who have the means, are able to try experiments that are beyond the reach of the average farmer, but the average farmer reaps the benefits derived from such experiments. A few years from now, when Mr. Trethewey has had greater opportunity to work out his plans, his farm should provide object lessons that should be of great value to the farmers of the country.—H. B. C.

Breed the Dual Purpose Cow

S. M. Tierce, Elgin Co., Ont.

In discussing the "dual purpose cow," let us look at it in a practical way. To what herds would we go when out to buy such a cow? Would it be among any of the dairy breeds? Any one who has fed dairy-bred steers, or even steers from dairy cows got by beef bulls, knows how unprofitable is such feeding. Good milkers, such as the cows of dairy breeds are, can never be classed as "dual purpose."

Coming next to the beef breeds, do we find good milkers among the Galloways, Aberdeen Angus or Herefords? No, they are essentially beef. But let us go to the Shorthorn herds. In almost every herd we find one or two and perhaps more cows that are good milkers. They give a good flow of milk when first freshening and continue it nine or ten months and much longer if not coming in soon. Is this not the dual purpose cow? It is hardly necessary to say that the male calves of such cows develop into the best of steers. That is generally recognized.

GRADE SHORTHORNS HAVE DETERIORATED

Let us next go to the grade Shorthorn herds of cattle found in Ontario, west of the strictly dairy sections. There we find cows that milk profitably and whose calves mature into good export steers at three years of age. These cows, however, do not milk as good as they did a few years ago. The reason for this must be that the stock bulls have been purchased from breeders whose only ideal was beef form. Originally these cows were common stock crossed with bulls of English breeding. In addition to that, they were milked for profit. That is, they were not allowed to rear their own calves, but were milked carefully as long as could be done without harm to the foetus.

The usefulness of a cow depends largely upon the way she is treated when young. They should have their first calves when about thirty months old. Then milked carefully and fed liberally (so as not to retard growth) for about fifteen months. They should have their second calf about eighteen months after the first one. This practice should be followed especially with pure-bred Shorthorns, because of their tendency to quit milking and go to laying on fat.

GRADES AN INDEFINITE QUANTITY

In speaking of grade Shorthorns we are mentioning a very indefinite quantity, simply because there are no records of their ancestry and we do not know how they are bred. Why not then take the good milkers of pure-bred Shorthorns, and taking utility as our ideal breed a class of cows of great substance having strong constitutions, great digestive capacity, and well developed udders, cows that will milk well and flesh up quickly when dry and whose calves are profitable to feed? Such a cow is a little hard to describe on paper. A record of her performance at the pail, and also, her record as a stock cow describe her best. Such cows are in existence and more of them can be raised if people are only alive to the situation. The beef breeders have gone to extremes for beef, sacrificing milking qualities. The dairy breeders have gone to extremes for milk and have lost sight of beef and constitution. Then why not breed a class of cattle that are profitable for both beef and milk, cattle that will entail less labor than special dairy cattle and giving larger profits than purely beef herds?

There will be discouragements in the way of producing such cattle. A number of heifers will revert to the beef form. That must be expected. It is one of the laws of breeding. But the way the calves are raised has something to do with their usefulness at the pail in after years. The best authorities on dairying tell us that

heifers kept very fat from birth never make good milkers. Heifers should be fed a great deal of coarse food so as to develop great digestive capacity. Then if an occasional one does turn out to be purely beef they are good property, commanding the best of prices. Breed those that promise well and care for them properly and success is assured.

Treat your Cows for Flies

Most farmers acknowledge that a large shrinkage in the milk flow annually results from the attacks of flies upon their dairy cows. Yet the few of them take any steps towards protecting their cows from this plague. The reason of this seeming indifference on the part of our farmers, to what is probably one of the most perplexing questions which they have to face, is that most remedies have but little lasting effect. They have to be applied regularly and daily to be of any service. As a result the average farmer prefers to give the problem a wide berth and allow his cows to fight the flies and withstand their attacks as best they may.

It is a grave mistake to take this view of the matter. Neglect to provide the cows with protection from the flies is costing the dairy farmers large sums in hard cash, much of which could just as well be saved.

The following preparations have been thoroughly tested and have been found to give relief when applied regularly: Mix one quart of fish oil with a tablespoonful of zinc oxide. Apply it to the cattle every day or so with a brush. Another remedy more easily applied and that has given good results is zinc oxide one part, linseed oil four parts, water 40 parts. Mix thoroughly and apply with small hand sprayer.

We should not let the fact that these remedies must be applied often and regularly, keep us from making such applications, as the cost of such treatment is small compared with the shrinkage that is sure to result if the cows are left to fight the flies for themselves. Even a small daily shrinkage in the milk flow from each cow will soon amount to large sums. Get after those flies this season. Your cows will well repay you for any such attention.

Stumping the Land

Ed. Webster, East Assiniboia, Sask.

Previous to purchasing a stumping machine, we pulled our stumps in the ordinary way by means of a team. This was not only a heavy strain on the horses, but resulted in considerable breakages, besides the larger roots invariably had to be cut, and left in the ground. We did considerable work with a machine grubber last year, and it gave us the best of satisfaction. With the stump puller, every root is pulled out and there is no need to cut the roots. It is comparatively easy work on one horse and there are no breakages.

The scrub in this district is mostly poplar and red willow. We cut poplars 18 inches from the root and take the work off before starting to pull. By doing it in this manner, the work can be done more quickly and there is less difficulty in handling the stumps while pulling. With willows, on the other hand, it is better not to cut them as they can be pulled in bunches. The stumper never fails to do the work. The main point in operating the machine is to have a good, smart man, that will not lose time, to handle the cable. The number of stumps pulled in a day will depend largely upon the man in charge of the work.

It is difficult to estimate the cost of clearing land by this method. On my land, which is part bluff and prairie, the cost by contract is \$1.50 per acre when I furnish the machine. I am well satisfied with the stumper, and if I had land to clear would not care to do without it.