

An Engine to Consider.

Last year, owing to the continued heavy rains throughout the period from the first week of July on to the after-harvest season, many found difficulty in getting their grain cut. The ground got so soft that the main drive wheel of the binder, loaded with the weight of the machine and the work of driving all its mechanism, would clog in the wet places and skid, stopping the cutting, the elevating and the tying. Many, to overcome the difficulty, purchased a small, light, gasoline engine and attached it to the frame in the rear of the binder and utilized its power to drive the machinery. These engines weigh less than 200 lbs., and some of them supply four horse-power. Relieved of the work of running the machinery necessary to cut, elevate and tie the grain the big wheel of the binder had only the weight of the machine to carry, and a great load was also taken off the horses. Many wet fields were cut which otherwise would have been a loss. The binder engine is in more common use in the West. By having an engine attached two horses will handle the binder quite easily in an ordinary season in place of three or four. All they have to do is draw the weight of the machine, the engine cuts and ties. These engines are now made so that they may be quickly detached for other use around the farm, and a three or four-horse engine is a handy helper on the farm. Where the engine is attached to the binder cutting goes on even though the big wheel does skid, but, without the work of the machinery, the big wheel is not so likely to skid. These engines may come into quite general use in ordinary years as well as in wet seasons, for it is much easier to handle two horses than three or four on a binder. The engine is a saving in horse-power, and should prove an all-round handy and profitable device.

Cheap Power.

While travelling through York County, Ontario, a few days ago we called on a progressive farmer who makes use of a cheap form of power. He has a big Holstein bull which he exercises by placing on a treadmill by which he is able to operate root pulper etc. This is a class of power which many farmers could put to good use. Properly connected up, the treadmill could be used to cut hay, straw and corn stalks, to pulp roots, to pump water and to grind grain. The power is cheap and the exercise is a fine thing for the bull.

THE DAIRY.

Dairying in Dundas County.

Of the many branches of agriculture, dairying is predominant in Dundas County, Ontario. The county over, there are probably more cows kept per square mile of territory than in any other part of the Province. It is said that there is not a single herd of beef cattle in the county. The soil is fertile, and the climate permits of growing any or all of the rough fodder and cereal concentrates which make valuable raw material for feeding that living manufacturing plant, the dairy cow. Summer dairying is generally followed, but as markets are opening up for winter milk many dairymen are gradually departing from the prevailing custom and are aiming at having a number of cows freshen in the fall and winter months. In the county, which is 25 miles square, there are at present 65 cheese factories. This averages a local market to every 10 square miles. Large quantities of whole milk are also shipped to Montreal. The dairymen are well supplied with a home market. The by-product from the factories is utilized as hog feed. The prevailing high price of cheese makes milk worth close to \$1.50 per hundredweight, and to this must be added the value of whey, which is around 20 cents per hundredweight, although some are inclined to place a higher value on this by-product when it is sweet, clean and pasteurized.

There are many pure-bred herds in the county, some of which are making noted records. While the average milk yield per cow may be above that for the province, the maximum is by no means reached. By continued selection and careful breeding the herds are being gradually improved. Many dairymen in the district do not consider they are farming unless they have from 20 to 25 cows on a 100-acre farm. On some farms there are as many as 35 cows besides the young stock that is being raised. In order to produce roughage to winter this large stock and supply feed for the summer, crops that produce the largest yield in the district are grown. From 12 to 15 acres of corn are planted on almost every farm. Although the season is comparatively short there is seldom a failure of the corn crop. It may not mature but it makes excellent silage for dairy cows. Silos are common. On many farms there are two and on some three, as the aim is to have silage the year round. The herds would have to be materially decreased were it not for the abundant yields of corn and the silo to preserve it for use at all seasons of the year. In the average season red clover does well, consequently there is usually a supply of clover hay, which, in combination with silage, comprises the roughage part of the ration. On some farms alfalfa has been tried, but it proves to be an uncertain crop. Oats and mixed grain are the only cereals grown. Even with silage to furnish succulency to the winter ration



On An Ontario Road.

the winter supply of fodder is not complete unless two or three thousand bushels of roots are in storage. For producing a heavy flow of milk or when cows are on test the dairymen like to feed quite heavily on roots. Large quantities of millfeed are fed. No attempt is made to get along without it. It is claimed that it pays well to feed a certain amount of shorts, bran, linseed meal, cotton-seed meal or gluten meal in conjunction with ground oats and the rough fodder previously mentioned. If they depended on growing sufficient concentrates to properly feed the stock on the farm the acreage of corn and clover would necessarily have to be reduced, consequently fewer cattle could be kept. By growing what the farms will produce most profitably and balancing the ration with purchased concentrates, the net returns are greater than if only such feeds as could be grown on the farm were fed. One organization with 120 members purchases on an average two carloads of millfeed per week during the entire year. This will give an idea of the amount of feed purchased.

W. McElroy, of Dundas County, keeps about 30 head of cows, besides his young stock, on his 100-acre farm, which is of clay loam soil. Starting with run-down land it has been brought to its present productive state principally by growing plenty of clover or alfalfa. One-quarter of the farm is seeded

The amount of concentrates is governed largely by the milk flow. Some cows may get as high as 20 pounds per day. There are a number of cows freshening at different seasons, which tends to keep the amount of milk for sale fairly uniform throughout the year. Milk is produced more cheaply when the cows are stable fed than when they depend entirely upon grass. Although the cows are turned out all summer they are also fed heavily in the stable. There appears to be no trouble to get them to take a feed of silage and hay night and morning when they come direct from the pasture. Some grain is also fed. When the cows get a feed in the stable they rest a good portion of the day in a shady place. Under this system a small acreage of pasture suffices to supply the needs, and there is always good picking. All through the county the pasture is supplemented by hay, silage and grain. This accounts for the large number of cows kept per farm. Mr. McElroy believes that with sufficient help to increase the acreage of roots and corn, and with a good stand of alfalfa from which two or three cuttings per season could be made, that it is possible for a farm to supply all the roughage and some of the concentrates to carry one cattle beast to the acre. This would be intensive farming. A little more planning of the crops so that the maximum returns might be secured from each

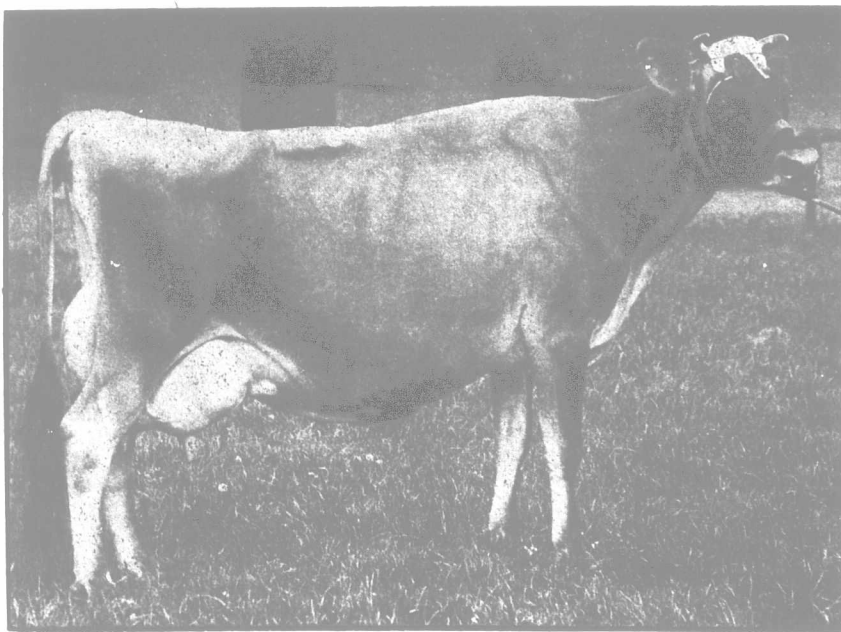
acre would tend to increase the returns of many farms.

The present herd was started 6 years ago by buying several head, and at present there are 5 cows which give around 20,000 pounds of milk each in a year. A sire of high quality and with good breeding has always been used, and the heifers raised are proving even more productive than their dams. Whole milk is sold from this farm, but the calves do not suffer. They are given first consideration for a month or two in order to give them a start, then the milk is gradually reduced as the calf learns to eat.

There are many richly-bred and record-making herds in the county. These herds have been brought to their high state of efficiency by their owners realizing the value of selection in breeding and by paying attention to details in feeding and caring for the animals from the time they are dropped.

Knowing how to feed is a big step on the road to successful dairying. The writer was surprised to learn the amount of feed some cows were capable of consuming and turning into milk day after day. In one herd where cows were giving over 100 pounds of milk each per day, they were consuming as high as 24 pounds of concentrates and 150 pounds of roots, besides silage and hay. While silage is an excellent feed for dairy cows, many dairymen who are endeavoring to get the most out of their herds like to have mangels or turnips to feed in conjunction with silage and other feeds. There appears to be something about roots that has a beneficial effect on the animal system.

Practically all the milk produced in the county finds its way to cheese factories, which are handy to nearly all patrons. Each patron draws his own milk to the factory and secures his share of whey.



Augerez's Golden Maid—First at Dublin, 1916.

to clover each year, and a field is left in alfalfa as long as it will stay. However, the past winter proved too severe for this valuable plant, and the stand is poor this spring. From 2,500 to 3,000 bushels of grain are produced annually, and sufficient corn to fill one silo 20 by 26 feet and another 18 by 24 feet. Besides this, four or five acres of roots are grown which yield about 1,000 bushels per acre. This leaves a portion of the farm to supply summer pasture. After bringing the large herd through the winter in prime condition there are about 10 tons of alfalfa still in the barn. A considerable quantity of bran, oil cake and gluten meal was purchased to supplement the home-grown feeds.

Cows giving an ordinary quantity of milk are fed about 30 pounds of silage, a bushel of roots, 12 to 15 pounds of concentrates, and what hay they will eat.

Where hogs are raised, high value, but some and many hundred no patron is far from to deliver his milk as if one man was route. A year ago the fact that about produced per year town of Chesterville manufactured into gradually working this spring about shipped daily. That the farmers as cars. As the train 9 o'clock in the morning work on the farm. Three men can start. This works so that need not lose the condensary is un which will open a cheese factory season months, which are being bred to fresh milk are gradually which will, no doubt require a uniform year. Only enough herd to keep it up for veal when through.

The stock are put. Only two or three the county. It is drier and more healthy. The stables are for the comfort of choring. Many st carriers, and water meter drops low Ontario, but the portable.

Dundas is full opportunities. Many crops are produced stock can be secured mate of the average to increase the yield one-half. Using a behind him and cows would soon in many other sections and tester more good.

Holsteins

It would be difficult to hold a picnic Stock Farm, where Breeders' Club meeting day, June hours those present good stock and of

Prof. Dean, of Guelph, was the speaker at the address he the dairy cow of humanity, and in the The yearly value about \$150,000,000 cows and the sale practically doubled ing and intelligence three enterprising on the quality of order to be a good man must be able breeds of stock, but lar breed. The out for all dairy products weather condition hay and grass, wh of milk, promises are opening up for fancy cheese proving that sp made with milk. slogan, "Drink tained that at 10 cheapest kind of quart was equal i Milk has a high used.

Prof. Dean e ing, claiming tha he has in the s As yet less than using scales and although both s Only a few y produce 2 pounds be the exception, as high as 115 average cow doe in a year. Good speaker advised business and to on their farms.

A good deal of class conducted discussing type a ture cows was placings.