

Two Windmills on One Farm.

To the Editor FARMER'S ADVOCATE:

SIR,—I have a 14-foot Brantford Ideal power mill, and also an eight-foot pumper and Maple Leaf chopper. My power mill and chopper, everything complete (without stay-rods and mast), cost \$165. The power depends on the strength of the wind. In a strong wind it has fully 10-horse power. We used it two years for chopping and cutting feed. We feed fifty head of cattle for export each year, six horses, six cows and some pigs, which means about nine bags of chop per day. The cost so far has been slight, as the firm has used me right. As far as wear is concerned there is not much wear about it, except the gear and boxing for gear, which can be easily repaired. There are not many inconveniences or disappointments if looked after properly. You can do your work on days when it is not fit to be outdoors. I might state here how I run my chopper. I have it set up on granary, with hopper which holds about sixty bushels of grain, which is carried up by an elevator with light wind; so we are always ready for a good wind.

In regard to cheap power, wind is the cheapest a farmer can get. My mill will pay for itself in three years. Steam is the best power, but is too expensive. It would cost me a lot for wood to do my chopping with steam. I would rather take my grain to the mill than to chop with horse power. I would not recommend wind for everyday work, such as separating milk or pulping roots. We feed our roots whole. I know farmers, however, who pulp with wind.

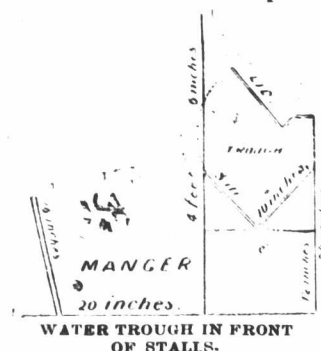
Brant Co., Ont.

ELI CRESSMAN.

DAIRY.

Uses Tank and Windmill and Waters all Stock Inside.

After two years' experience with my system of inside watering stock, I could not think of doing away with it, especially for milch cows and fattening cattle, as it is quite necessary to water at least twice a day. This can be done with comparatively little work, and without chilling the cattle. My experience has been mostly with dairy cattle, and chilling has a very noticeable effect on the flow of milk, and also on the percentage of butter-fat. For young cattle and other stock that are only housed nights and stormy weather, it will pay to water them about an hour before turning them out, and after putting them in they will drink regularly what they need without doing them any harm. I pump water by windmill into a galvanized tank that holds about twenty-five barrels, erected about the center of the stable, right above the well. It projects about five feet into the loft, and is boxed in so the heat of the stable keeps it from freezing. It is well



JAMES BRAY, Oak Grove Farm.
Marquette District, Man.

Inside Watering.

The watering of cows in winter is a question of great consideration. Farmers have widely different methods of tending to stock; some will feed lots of straw and hay and turn their stock out to water once per day, allowing all the cold water the animals can take in. As it takes from two to three hours for an animal to warm the great quantity of water thus taken in, the animal heat is reduced and their strength heavily taxed, and in the spring the animal is turned out poorer than when put into winter quarters.

My experience with cattle of all kinds, whether beefing cattle, breeding cows or young stock, is decidedly in favor of watering in the stable, using long water troughs in front of them. In Manitoba, where the winter is severe, I find it is best to stable my cows as soon as it freezes up for good. The extra milk obtained from them pays for the extra trouble. Cows will fail in milk more from cold than from natural causes. The cows enjoy a good, warm, comfortable stable, as well as a man does a warm house. Have double stalls seven feet wide, so there is plenty of room for two cows to move around a little. I feed both fattening cattle and cows cut feed, made up of oat sheaves, straw and hay mixed, cut into chaff, then put into a large box, some water poured over it; a nice sprinkling of chop is then added and the whole mixed up well; giving each animal what I think they will eat up clean. This is given twice daily, morning and evening, with a little rough feed at noon. I water in the stable all winter, about 9:30 in the morning and about 5 o'clock in the evening. The reason I feed damp cut feed is, that if cattle get some water in their feed they don't drink as heavy from the troughs; their hair never stands on end from

drinking excessively, and the animals come out in the spring slick and fat. I have to feed a little salt twice a week to make them drink enough to suit me. Watering in troughs in the stable the water is at an even temperature, and when animals drink freely it does them more good. Keep the animals thrifty and their blood right by feeding twice per week one part of ground flax with two parts of ground oats. I have never been troubled with "dainty" cattle, or "stalled" cattle, as some call it. We use no ensilage, so flax takes the place, and I believe it is quite as good if fed ground.

W. E. BALDWIN.

Pembina Municipality, Man.

APIARY.

Ontario Beekeepers' Convention.

[SPECIALLY REPORTED.]

The 18th annual convention of the Ontario Beekeepers' Association was held in the Court House, Hamilton, on Dec. 7th, 8th and 9th, with a fair attendance from different parts of the Province.

The President in his address drew attention to the fact that the season just past had been a varied one, some districts giving a good yield, others a scanty, and still others none at all. He also spoke of the desirability of educating many of our beekeepers in better plans of managing their apiaries, and also the general public in the use of honey as an article of diet.

Referring to the minutes and the President's address, Mr. Holtermann, of Brantford, stated that there was too much unripe honey placed upon the market, and that we should take steps to have a limit fixed as to the percentage of water honey should contain when placed before the public. In the discussion following attention was drawn to the difficulty of fixing a proper standard, and to the fact that the breed of bees, locality and season had much to do with the thickness of honey. Prof. Shutt, analyst from the Dominion Experimental Farm, referred to the English standard of 18 to 20 per cent., and that there are cases where the percentage far exceeds 25 per cent., but he considered the Association safe in putting it at 25 per cent. Upon motion it was decided that this Association appoint one or more of its members, and that the Department at Ottawa, the Dominion Experimental Farm, and the Ontario Agricultural College at Guelph be requested each to appoint a man, and that this committee secure samples of honey capped in the hive and find the percentage of water contained therein, and report to our next annual meeting.

Management of Bees in the Spring.—Mr. J. W. Sparling, of Bowmanville, gave a paper on this subject. He emphasized the importance of commencing spring management in reality the fall previous. A first care is abundance of stores, and too much importance cannot be attached to young, vigorous queens. He advocated early setting out, no spring packing, and if stimulative feeding be practiced, that it only be done during the honey dearth between fruit, bloom and clover. Mr. Alpaugh spoke of the desirability of early fall packing, and also stated that comparatively small colonies of young bees were preferable to large colonies of old ones.

Prof. Shutt gave the results of three years' experiments with foundation of various weights. The results pointed toward the use of heavy foundation, the bees seeming to add less wax when drawing out the foundation, thus making more use of what was given them.

A considerable discussion took place as to the desirability of opening up the British market for Canadian honey. It was stated that the clover honey from Canada was of a better quality than that from Australia and other foreign countries. The British market does not demand minty honey, hence it is a mistake to send basswood honey there. Nothing but the best clover should be sent to Britain, and many thought that we could not expect to realize over 7 to 8 cents net for it.

Outline of Work during the Extracting Season.

—Mr. Newton, of Thamesford, in dealing with this subject, stated that he produces both comb and extracted honey. He selects his best colonies to work for comb honey and the remainder for extracted. He uses queen excluders and full-depth supers. When the first super he puts on is about two-thirds filled, he raises it up and puts an empty one beneath it and on top of the honey-board. Be sure the honey is well ripened before extracting, and have combs capped over before removing from the hive. He recommended being scrupulously clean and tidy while extracting. He renders his cappings each day with a solar wax extractor. At the close of the season he has his extracting combs piled on the hives and cleaned by the bees before being put away. In the discussion following the fact was brought out that the honey obtained from cappings when being rendered into wax by a solar wax extractor would not be colored by the heat if the pan into which it run were shaded; it was also necessary to keep the extractor clean if the honey was not to be colored by sediment or other matter in it. It was contended that it was a loss of time to the bees to give them extracting combs during the day; they should be given in the evening, and they then will have the night to clean them up.

[TO BE CONTINUED.]

GARDEN AND ORCHARD.

Ontario Fruit Growers' Association.

[SPECIALLY REPORTED FOR THE FARMER'S ADVOCATE.]

The thirty-seventh annual meeting of the Ontario Fruit Growers' Association was held in the town of Waterloo on Dec. 15, 16 and 17. This annual meeting might well be designated as the "cold storage, spraying and San Jose scale meeting" of the Association, since it differed from all former gatherings in the absorbing interest centered upon these three subjects. The best means of utilizing and extending the advantages of the first two and limiting the ravages or meeting the threatening dangers of the other, all in the interest of the fruit-grower, were the dominating features of the discussions from the opening to the closing sessions. While the promise and anticipation connected with the two brings hope to the fruit-grower, the serious and threatening danger in the other gives him nothing but fear. But all alike appeal to his best efforts and highest energies in the protection and development of his own interests.

The first subject taken up was the matter of spraying, by Mr. W. M. Orr, Provincial Experimentator. He said during 1897 the experimental spraying of apple trees carried on by the Department of Agriculture of the Province of Ontario was conducted in 29 orchards, situated in 23 counties, covering the Province from Sarnia to Lancaster. Only one solution was used, Bordeaux mixture, according to the following formula: Copper sulphate, 4 pounds; fresh lime, 4 pounds; water, 40 gallons. To this in every case was added four ounces of Paris green. The results were highly satisfactory, in some cases the full 100 per cent. of clean fruit being obtained, the trees and their fruit being absolutely perfect. A great deal of interest, he said, was taken by farmers and fruit-growers in the work, the attendance during the season, which almost reached the 3,000 mark, being 60 per cent. greater than last year, while the inquiries by mail were ten times as great. As a result of his experiments Mr. Orr gave a number of examples. One orchard of Talman Sweets gave 92 per cent. of clean fruit on the sprayed trees and only 2 per cent. on the unsprayed ones. An orchard of Snow apples sprayed gave 100 per cent. clean fruit, against 5 per cent. unsprayed; Northern Spys, 80 per cent. sprayed and a total absence of marketable fruit on the unsprayed trees. With this excellent showing Mr. Orr said the cost of his experiment amounted to only two cents per tree.

In the discussion which followed this address Dr. Fletcher advocated winter spraying for all kinds of black spot and fungi, and said there was no necessity for spraying for any kind of fruit during the blossoming period. While it was contended by Dr. Saunders and others that Bordeaux mixture was good for grape and other kinds of mildew, it was strongly argued by T. H. Race that it was no good for gooseberry mildew. The Spramotor Company made a display of their excellent apparatus at the convention.

Mr. L. Woolverton gave a very valuable paper on the results of the trial shipments of fruit to Britain during the past year in cold storage. The results, he showed, had not been very profitable, though they had been instructive. What had been learned from them was that fruit should be well cooled before being packed, and that a temperature of 30 to 35 instead of 48 was necessary to keep the fruit in good condition.

It had also been proved that Canadian Crawfords and Bartlett pears are just what the trade wants in England, the latter variety being identical with the favorite English pear, Williams. Regarding packing, Mr. Woolverton said that if it were possible to encourage the establishment of packing companies, managed by experts, to do the packing for export, the difficulty would be overcome. Under the present system, by which each shipper packs his own fruit, it is impossible to get uniformity. Of the tomatoes shipped by Mr. Woolverton, those picked and packed when just half ripe did the best, while the pears did the best that were fully ripe. Another point made was that those cases packed after the fruit had been thoroughly cooled brought 11 shillings, while only 9 shillings could be got for similar cases packed in a warm or uncooled state.

Prof. Robertson followed Mr. Woolverton, dealing with the Government's relations to the cold storage shipments. He started out by assuring the fruit-growers that the Government were determined to spare no pains and no reasonable expense in establishing and perfecting a system of cold storage from the fruit centers to the British markets. He emphasized what Mr. Woolverton had already said, that one of the important things was to get the fruit cooled before it went into the cases or thoroughly cooled in the case before being shipped. If they can get it in good shape the people of Britain will take and eat five times the quantity of Canadian fruit they are now getting. But there must be more care in packing if Canadian apple-growers hope to get their full share of the British market. Prof. Robertson instanced one case where he visited an auction sale of Canadian apples and noticed that a number of well-known buyers stood by and saw lots going off at 16 shillings per barrel without bidding, but as soon as the brand of some favorite or well-known packer was offered they at once bid the lot up to 24 shillings per barrel. In a few years, Prof. Robertson says, fruit