

### Raising Calves Without Milk

Crockett Bros., Antigonish, N.S.

We prefer to raise fall or early winter calves, as we have more time to care for them at this season of the year. In feeding and caring for calves our experience is entirely with dairy stock.

We take the calf away from the cow almost as soon as born, seldom allowing them to suck. This is for the good of the cow, not the calf. When the calf is a few hours old, we milk the mother and feed the calf as much of the milk as it will take.

We give whole milk, always using the mother's milk, for about three weeks, starting with three pounds of milk to a feed and gradually increasing to six pounds three times a day. We warm the milk fed at noon to blood heat.

#### CUTTING OFF THE MILK

At the end of three weeks we begin to substitute skimmed milk and "Blatchford's Calf Meal," gradually decreasing the quantity of whole milk until the calf is about five weeks old, when it gets no whole milk at all. We then begin to cut out the skimmed milk and in two or three weeks more our calves get calf meal alone, fed according to directions sent with each package. This prepared meal we continue to feed in reduced quantities until the calves go on the grass in the spring.

The bulky portion of the ration is not forgotten. When the calves are about two weeks old, we place a little well cured clover hay within their reach. We also give them wheat bran and crushed oats in small quantities twice a day, always being careful to remove any left from one meal before giving the next.

The principal things to remember in rearing calves are to have all dishes used in feeding them kept clean and well scalded, when shifting from one food ration to another to do so gradually, to feed regularly, both as to time and quantity, and to see that the calves are in comfortable quarters, warm and dry, with room to exercise.

To anyone short of milk for calves we recommend "Blatchford's Calf Meal." We have used it for years, and have never had a sick calf while feeding it.

### Substitutes for Oats

Oats are high in price this year in every part of Canada; and in some parts of Quebec and the Eastern Provinces, where continual rain prevented early seeding and the crop was harvested green, farmers will have practically no oats of their own. Farm and Dairy has received numerous enquiries, which read somewhat like the following from B. W. Webster, of Elgin Co., Ont.: "Can you suggest some green feed that would take the place of oats and be cheaper? What kind of feed is barley for horses?"

Considerable experimental work has been conducted along this line, and there are several grains and combination of grains which tests show may be used in the place of oats with equally good results in the condition of the horse. And these mixtures are cheaper than oats. On the Pacific Coast, barley is extensively used for feeding horses on all kinds of work. Where the horse's teeth are good and the later not severe, barley may be fed whole. Ground barley, when mixed with the saliva, forms a pasty mass in the mouth, and is therefore unpleasant to the horse while eating. Crushed barley or barley soaked in water are preferred to ground barley. A point to be remembered in feeding barley is that it is almost twice as heavy as the same bulk of oats, and where we are accustomed to feed four quarts of oats to a feeding, a little over two quarts of barley would give the horse the same amount of nutriment.

One experimenter reports that oats, beans and

corn have a relative value of four, 3.5 and three. That is, four pounds of oats are equivalent to 3.5 pounds of beans and three pounds of corn. At the New Jersey Experimental Station dried brewers' grains were fed to street car horses in place of oats. Horses averaging 1,000 lbs. in weight were required to make four trips a day of six miles each, with increased work on Sun-



The Harvest May be Bountiful—But What of the Market?

Our fruit growers are becoming more and more expert in the production of No. 1 fruit in large quantities. The problem that many must still solve lies at the marketing end. Apple buyers have been losing money in recent years, and are wary of buying. Individual growers have difficulty in finding a profitable market. The solution of the marketing problem lies in the cooperative society. Association guaranteed fruit is sure of a market. The scene here illustrated is in the orchard of R. H. Sloan, Huron Co., Ont., a young fruit grower who is making things go.

days. The ration was as follows: Hay, six pounds; wheat bran, two pounds; unground corn, four pounds; dried brewers' grains, eight pounds. The veterinarian in charge of the horses reported: "I have watched the horses closely from the beginning to the end of the experiment, and have

### Several Districts Open

Although over two hundred enthusiastic workers have already started in to win those special prizes offered in our \$2,500 Prize Contest, not a name has yet come from several of the best districts. Here's a big chance for a good many people to win some prizes easily.

Well-known breeders, farmers, postmasters, cheese and creamery men are entered in the contest; they want to help Farm and Dairy, and believe that this special dairy paper will help their neighbors to succeed if they can once be induced to give it a trial.

Your personal request to them to help you get a prize is the quickest way to get their subscription, so if you want to help Farm and Dairy, one of the best ways is to enter this contest.

There's an entry blank for you in the advertisement in this issue.

failed to discover any ill effects from dried brewers' grains. The horses fed dried brewers' grains have been as healthy as any I have ever known." It was found that the oat ration cost 4.9 cts. a day per horse more than the ration in which dried brewers' grains were substituted. Wheat was tried at the North Dakota Experiment Station, but with poor results when fed alone. At the same station bran and shorts fed together were found to be of equal value with oats.

Probably the most desirable substitute for oats is corn, and no feed has been more thoroughly tested. The Paris Omnibus Company, employing nearly 10,000 horses, began feeding trials with Indian corn in 1874. They concluded that a mixture of 6.6 lbs. of corn and 12.1 lbs. of oats will prove more satisfactory for work horses than oats alone. The horses lacked their former abundance of vivacity, but worked as well and as rapidly as before.

### Farm Wastes

J. R. Westlake, Carleton Co., Ont.

We have all been told that a woman can throw more out of the back door with a teaspoon than her husband could get in through the front door with a scoop shovel. Similarly, I believe that many farmers are losing more through various

wastes, large and small, than they are making from the profitable departments of their farms. Last winter, at the National Live Stock Conference held in our neighboring city of Ottawa, Dr. Rutherford told a story that illustrated how extravagant are our methods of farming.

A large colony of Russian Dukhobors were located at a western point waiting to be apportioned their homesteads. It was noticed that each morning several of the men would go away early and come back late.

This could not be accounted for until the Dominion Government, thinking it would do well to give these immigrants some agricultural training, sent an ex-

pert to them; but they refused his services. When asked why, they replied that their men had been out investigating on nearby farms, and had come to the conclusion that three Dukhobor families could live on the wastes of the average Canadian farm. Similar testimony has been given us by Dr. G. C. Creelman of our Agricultural College. On his return from Europe a few years ago I remember him making the remark that one thing that had impressed him in his study of European agriculture was the economy everywhere evident. He, too, said that a European family could live on the wastes of a Canadian family.

#### HOW TO ELIMINATE WASTE

The starting point to eliminate wastes, I believe, is a system of farm bookkeeping. It is quite possible on the general farm where several branches of agriculture are practised to be making a profit from one branch and losing it all on another. For instance, we may be losing our profit on the crops we produce by feeding them to dairy cattle so inferior that they will not return us the market price. The money being made in the poultry department may be lost in the hogs, or vice versa. My biggest help towards eliminating farm wastes has been the account book. It has also been my biggest inspiration towards improving the stock that I have on my farm. It is the only way of detecting big wastes that lose us hundreds of dollars at a time.

After we have eliminated the big wastes there are numerous little ones to occupy our attention. For instance, are we making the best use of every by-product of the farm—the skim milk, the manure, the small potatoes that cannot be marketed, and so forth? Have we our work planned out so that we can work with the greatest efficiency or do we spend twice the energy that we might to get a certain amount of work done? To illustrate my point: My neighbor has been walking clean around the end of his barn to get into his stable for the last 25 years. Two hours' work would put a door through the near side of the barn and save an endless amount of travelling. Inconvenient arrangement is one of the minor farm wastes that may count to a good deal in the course of a year.