

pure-bred Ayrshires as all other dairy breeds combined. Jerseys, too, are popular, and Chas. Ruiters & Sons and Geo. Ford have herds of this breed that will average well up in production with any other Jersey herds in Canada. Sir Sydney Fisher at Knowlton has a herd of Guernseys; and Guernseys and their grades are now fairly common in that locality. Holsteins have been more recently introduced, but are now gaining in popularity. Messrs. Cooley & Soles, in West Brome, have excellent Holstein herds, the former being one of the few men of the district who is using a milking machine. Probably, too, there are many other Holstein herds of which I did not hear. The biggest objection to the black and whites on the majority of farms will be their inability to make good use of extensive, rough pasture lands.

Crop rotations are as well understood among the English-speaking farmers of Bedford as anywhere else in Canada. The main dependence for cow feed is placed on corn ensilage and clover hay, and silos are found on a far greater proportion of the farms than is common in Quebec localities. Alfalfa, I was told again and again, cannot be grown successfully on account of the hard winter. The Ruiters boys, however, seem to have disproved the common belief. When on their farm, Mr. Andrew Ruiters took me out to a field of alfalfa, standing two feet high and almost ready for the first cutting. This crop had survived several winters, with practically no winter-killing, and two good crops and sometimes three have been cut. Eventually the Ruiters hope to run their whole farm on a five-year rotation of corn, grain and three years alfalfa.

#### Alfalfa Success Secrets

The success that Ruiters have had with this crop when others have failed is probably due to the care that they have taken in inoculating their seed and in liming the land. The Bedford district is off the limestone belt, and one of the first requirements of good alfalfa is a soil rich in lime. A dressing of 1,000 pounds of lime to the acre has given the Ruiters splendid conditions for alfalfa and the soil on this farm is representative of the soil on other farms in the district. The Macdonald College demonstrator,

#### Alfalfa Seed Production in Canada\*

Prof. James Murray, Macdonald College, Que.

THE amount of alfalfa seed grown in Canada is very small compared with the amount used for seeding purposes every year. Most of our seed comes from warmer countries, from the central and south-western states and from South



The Hardiness of Alfalfa Again Proven.

This alfalfa, standing two feet high, is on the Ruiters Farm in the Bedford District of Quebec. Mr. Andrew Ruiters may be seen in the illustration.

America. Many of the varieties imported are too tender for Canadian climatic conditions, hence the frequent failure of alfalfa to make a stand in Canada. Acclimatized seed is scarce and expensive, but I would prefer to get it and sow a little than take the risk with the tender varieties on a large scale.

Three varieties of alfalfa are now being advocated as hardy: Ontario Variegated, Grimm's, and the Baltic. The Ontario Variegated has been grown for 25 or 30 years in the Niagara peninsula. The supply of seed is limited, and yet seed must be grown under practically the same conditions under which the crop is expected to flourish. I believe that Canadian farmers could grow their own alfalfa seed and grow it well. The greatest difficulty to this plan is that alfalfa is very uncertain as a seed producer. For seeding purposes the plants must not be too close together. Each plant should have room to spread out and blossom.

\*Synopsis of a part of the address given by Prof. James Murray at the last Ottawa Winter Fair.



Creameries Are Common All Through the Bedford District.

This is one of the larger creameries of the Bedford District of Quebec. It is situated just outside of Cowansville, and three silencing plants are run in connection with it. The residence in the foreground is that of T. W. Dunn, the proprietor. Mr. Dunn, like almost all other creamery men of Quebec, is ever willing to denounce the hand separator as the prolific source of bad cream and second grade butter.

—All photos by an editor of Farm and Dairy.

Mr. Lode, is making a special effort to introduce alfalfa throughout the district, and if proper attention be given to liming and inoculation, I believe that this queen of legumes will soon be a more popular and common crop there than it now is.

The marketing of the output of the dairy herds of the district is largely in the hands of the factory proprietors. Creameries preponderate, and

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To grow for seed it is necessary then to follow different methods than in growing for hay or fodder. The best plan is probably to sow in rows two and one-half feet apart, then the seed can be sown thinly, the soil cultivated easily, and there will be room for the crop to spread out. I would say do not sow more than two pounds to the acre, and sow in June or July. Sown at this period, we have two months in which to get the soil into proper condition. If the crop has sufficient top and blossom in August, it should be cut and the cuttings left on the ground.

The spring following seeding the field should be worked up thoroughly by drawing an ordinary cultivator across the rows. This stirs up the soil and tears out the weeds. The second cutting is the one reserved for seed. I would advise harvesting when two-thirds to three-fourths of the pods have turned brown. The balance will ripen when the top has been cut. Cutting with an ordinary binder is as good a way as any, the alfalfa being bound and stooked in the same way as grain. Lacking the binder, a mower with clover seed attachment may be used, the cut crop being moved out of the way of the horses' feet. Threshing is best done with a clover huller.

One hundred pounds of seed per acre is an average crop, but under very favorable conditions it runs as high as from 300 to 400 pounds. The greatest returns of seed are secured from seeding thinly in rows as I have suggested.

#### The Control of Locusts

DURING the past three years Farm and Dairy has received many inquiries asking for methods to prevent the ravages of locusts or grasshoppers. During the years 1912-14 these pests have been extremely numerous and destructive in the provinces of Ontario and Quebec. One farmer in Lanark Co., Ont., reports that crops in his district alone have been destroyed to the extent of 75 per cent. In many instances, fields of oats and barley were cut green to save for feed. The Department of Agriculture at Ottawa reports that in some parts of the province of Quebec, farms have been abandoned within the years mentioned, owing to the large number of locusts present.

Several thorough and extensive experiments have been conducted by the Federal Department of Agriculture to determine the efficacy of poisoned bran mash in holding locusts in check. At Bowesville, Ont., for instance, the mixture was broadcasted early in the morning, and counts of the locusts killed made four days later. These counts gave from 50 to 414 dead locusts to the square yard. Several farmers of the same district, who tried the mixture, reported later that they were well pleased with the results of their experiments. Rev. J. I. Trudel reported from St. Etienne de Gres, Que., that eight days after the poison mixture was broadcasted, counts in various fields showed 900 to 1,200 dead locusts to the square yard.

In the Bowesville experiments the mixture was scattered so that 20 pounds of the bran was sufficient to treat four acres and the cost for labor and material came to 25 cents an acre. In the Quebec experiment, the cost was 18 cents an acre, exclusive of labor. The formula used in preparing the poison mixture was as follows:

Bran, 20 pounds; Paris Green or white arsenic, 1 pound; molasses, 2 quarts; oranges or lemons, 3 fruits; water, 3½ gallons. In preparing the mash the bran and Paris Green or white arsenic are mixed thoroughly while dry. The juices of the oranges or lemons are squeezed into the water, and to this is also added the pulp and put after cutting into fine bits. The molasses should then be added, and when dissolved the mixture poured on to the dry bran and poison, stirring the whole constantly so as to dampen the bran thoroughly. This mixture is then broadcasted very thinly over the fields.

#### Breeding

THERE is a farmers' chance to raise, an almost sure to be mother of good heifers are equally better calf is large against you. Even instances from experience of neighborly milkers were paid. I will grant their contention. I want to know about where everything plain sight. Milk is a matter of temperament is not so easily made as the charm of the beef breeder.

I am speaking of pure-bred dairy cows or a herd of milk breeding of heifers is a more certain of a good beef made by those who a lottery is that milking qualities scientific investigations go to making tendency largely from the records offer abundant Study the pedigree animals. In all cases through a line of the sire's side, wide, in many cases mediocre.

#### Milk Transmittal

Starting the same way we may milk cow trans through her male female offspring. I that has come under A big roan Shorthorn friend's herd was a better heifer calves milkers. A couple had been sold to a farmer who heifer bulls turned out to be, possessing the tire powers of their

It is just at this testing work conducted maximum results in who are trying to ing heifer calves much regard to the sire. Such breeding



A Choice Line of J