

years ago and was closely identified with industrial developments in the West of Scotland. He took a deep interest in rural affairs, was for a lengthened period member of Parliament for Renfrewshire, and for nearly a decade Chairman of the Caledonian Railway Company.

A famous breeder of Black-Face sheep has passed away in T. W. Buchanan, Upper Wellwood, Muirkirk. This most estimable gentleman was a son of the late Robert Buchanan of Lettre Farm, Killearn, an eminent and highly successful breeder of Black-Faces. T. W. Buchanan was a man between fifty and sixty years of age, and one of the most upright and honorable men in Scottish agriculture. Yet another notable agriculturist has passed away in Alexander Dewar, a member of the Land Court, and one of the ablest members of that body. He was the son of an Aberdeenshire small farmer and farrier, and was at one time tenant of Bethlin Midmar, Aberdeenshire. He was later appointed factor on the estate of Fasque, Kincardineshire, by the late Sir John Gladstone, Bart., brother of the famous statesman W. E. Gladstone. When the Land Court was founded, following the passing of the Small Holdings Act, in 1911, Mr. Dewar was one of the discoveries of Lord Pentland. As a member of the Land Court he was in his right place. There was no more able man in Scotland for such work. An older brother is Professor I. R. V. Dewar, F.R.C.V.S., who was lately head of the Royal (Dick) Veterinary College, Edinburgh. They are a brainy crowd, these sons of Aberdeenshire small farmers, and few more so than the brothers Dewar. Alexander Dewar was about sixty years of age.

In connection with stock breeding, high prices are still the order of the day. Shorthorns maintain a strong lead. The high prices of 3,000 guineas at Perth and 3,200 guineas at Aberdeen were eclipsed by 3,700 guineas paid at Penrith by A. J. Marshall, Stranraer, for the Aberdeenshire-bred young bull (C. 1916) Everlasting. This bull was bred by A. Crombie, Woodend, Newmackan, Aberdeen. He was sold at the Aberdeen sale in the spring of 1917 for 42 guineas to J. Robinson, Townend, Skelton, Penrith, by whom he was sold at the Penrith bull sale on March 6 for the price named. The next highest price at Penrith was 1,800 guineas, the seller being the Duke of Northumberland, Alnwick Castle, and the buyer Mr. Casares, who like A. J. Marshall is in the South American export trade. Penrith is the centre of a great cattle-breeding area, and the sale there, under the leadership of John Thornbarrow, Auctioneer, has become one of the best in Great Britain. British-Friesian cattle, as the Dutch cattle bred in these islands are now to be named, have been selling at great prices. Yesterday at the Crewe sale of young bulls, held under the auspices of the Breed Society, a bull made 2,000 guineas, and some even higher prices have been reported privately. This breed has grown immensely in popular favor and bids fair to take first place as the source of the dual-purpose cow.

Horses are in great demand. Never was Clydesdale breeding so brisk. Geldings at Perth have more than once recently made £200. On the other hand, we are told that in New Zealand draft horses are almost unsalable. A first-class gelding can be bought for £35, and worn-out sorts can hardly be given away.

The Brydon Challenge Shield, presented by the late Robert Brydon for competition at the Glasgow Stallion Show in 1904, after being open for competition at fifteen shows has been won outright by James Kilpatrick, Craigie Mains, Kilmarnock, with his lovely young horse Craigie Litigant, 19071. It had to be won five times by an exhibitor, with a different animal each time, before it became his absolute property. Mr. Kilpatrick won it with Oyama 13118, Perfect Motion 13123, St. Clair 14347, Bonnie Buchlyvie 14032, and Craigie Litigant 19071. Three of these horses are sons of Baron of Buchlyvie 11263.

The Government have introduced an important Bill affecting horse breeding. Its object is to eliminate the unsound and unworthy travelling stallion, and it is made applicable to the three Kingdoms. The weak point in the Bill is, the power which it proposes to place in the hands of the veterinary advisers of the Departments of Agriculture. That these gentlemen should have the last word where questions affecting health and soundness are concerned is agreed, but most sensible people are opposed to them being constituted judges of merit in draft horses. It has been cynically observed that a veterinary surgeon is a man who knows something about the inside of a horse but very little about its outside. The breed societies are working hand in hand in this connection, and are claiming that a panel drawn from a list recommended by their councils should have the last word in questions affecting merit in horses. Certainly some eminent veterinary surgeons, whom we have known, were very unsafe judges of merit in cart horses.

SCOTLAND YET.

An Old-Time Corn-Planting Custom.

EDITOR "THE FARMER'S ADVOCATE":

As I have been asked several times lately "when is the right time to plant corn", I think it might be well to tell my brother farmers how I decide the right time on my farm. I believe it is very important that corn should be planted at the right time, that is to say when the soil is warm enough to allow the seed to germinate. I planted two acres with a hand planter, putting the rows at twelve inches apart and the hills in the row at 14 inches, dropping about five grains in a hill. The first two plants in an acre that way in a day should feel secure, that is to say, have done enough for a day. But to get back to the importance of planting at the right

time. I allowed four days to lapse between planting the first acre and the second, and although it was all one field the last planted never seemed to catch the first, and was not as good a crop.

My grandfather used to say, "when the white oak leaves are the size of a mouse's ear is the time to plant corn," and I always stick to that, as I have yet to see the white oak leaves damaged by frost. I have seen beech cut black a number of times, but never the white oak.

As corn is perhaps the most important crop on the farm I think we should take care to have it treated just right. An extra day spent on the corn land to put it in the very best condition is never ill spent, but it should be done so as not to delay planting. See how the corn looks when put on a nice mellow, well-worked piece of land. It shows good dollars all over the field. If a man would put one fifth of his grain land in corn he would be able to feed more stock and feed them better; it may take more labor but it is worth it.

Muskoka, Ont.

A. H. B.

Test the Seed Corn.

The time for planting corn is again at hand. While the outlook for securing seed was rather gloomy early in the season, it is believed that an adequate supply of seed corn which will grow has been secured from the Southern States. While this may not mature in Ontario, it will produce good fodder which may be ensiled. We understand that a considerable quantity of early corn has also been secured, and it is believed that it will ripen in this latitude; if so, it will be of considerable assistance to the hog and cattle feeders next winter. There should be no easing up on the amount of corn planted, if seed can be secured. It is doubtful if any other crop grown on the farm will give as large a yield of feed per acre with the same amount of labor. The cultivation of the corn crop can mostly be done by horse power, and the silo makes a very convenient place for storing the crop.

From whatever source the seed is secured, it is advisable to test the corn for germination so that the drill or planter may be set to plant a sufficient quantity of seed to give a good stand. If the corn only germinates seventy-five per cent., it is necessary to plant a quarter more than if it tested one hundred per cent. We have heard of some seed testing less than fifty per cent. Now, if the usual amount were planted not more than half a stand could be expected. Thus the necessity of knowing what the seed will germinate in order that the required amount be planted. If the corn is on the ear, it is a good plan to test about six kernels from each ear, two kernels being taken from each end and from the centre. By following this method, any ear of low germination can be discarded. While it is strongly advised that the corn be purchased on the ear, the bulk of this year's supply will be shelled. In this case it is necessary to take a few kernels from different parts of the bag. It is not a difficult matter to test the seed. It may be planted in a box of fine, loamy soil and kept in a warm place for a few days, when signs of life should appear if the corn is of good quality. A shallow box may be filled with sawdust and the kernels placed in it and then covered with a cloth. This should be kept moistened and if the temperature is high enough but a few days will be required for germination. The strength of growth, or the vitality, should be taken into consideration as well as the germination.

Corn is a hot weather plant and requires a fairly high temperature in order to give best results. For this reason it is well to delay planting until the soil has a chance to warm up. If the seed lies in the ground too long it very often rots, which results in a poor stand. The more cultivation that can be given the soil before planting the fewer weeds there will be to cultivate or hoe out later on.

There is a difference of opinion as to the quantity of seed to plant per acre for best results. There are stockmen who claim that the more ears they get on the corn, the better their stock will do. Consequently, they plant rather thinly in order to give the corn a chance to develop and mature. There are others, however, who favor a thick seeding, claiming that by so doing they get a heavier yield of fodder per acre and that their experience has been that silage made from matured corn without ears gives equal results to the silage containing a lot of grain. If planting in hills it is well to have about four kernels to a hill, but more must be planted in order to have a uniform stand. The rate of seeding varies from one peck to the acre up to forty and fifty pounds. This latter rate gives a particularly heavy stand, and the stalks will grow much finer than where the seeding is not so heavy. However, it is possible for the stalks to mature even if they do not produce grain.

The corn planter, grain drill, or small hand planter may be used for putting the seed into the ground. Whichever method is used, care should be taken not to cover the seed too deeply. In some localities the crows are always on hand to dig up the young plants as soon as they show through the ground. Various methods of preventing this destruction have been tried with more or less success. Shooting a few birds and leaving them on the field sometimes has the desired effect of frightening away the entire flock. Soaking some corn in strychnine and scattering it over the field will undoubtedly kill many crows, but then many other birds are also caught. We have found that tarring the corn is a splendid method of keeping the crows from damaging the crop. The corn is placed in a large tub and then a stick is dipped in a tar tin and used to stir the corn. By this method a thin coating of tar is placed on each kernel without getting an over-supply on some. This does not

seem to hurt the germination of the corn. Test the seed, sow plenty to ensure a good stand and then aim at giving plenty of cultivation during the growing season as no crop responds to tillage like corn.

The Sugar Beet Crop.

In some sections of Ontario a considerable acreage of sugar beets is grown each year. This has become a fairly profitable industry, but the production of the roots has been somewhat curtailed by the price not advancing in the same proportion as the price of sugar. The cost of growing an acre of beets has increased quite as much as the advance in the cost of manufacturing sugar. The shortage of help is also preventing many farmers from putting in a large acreage of beets. According to Bulletin No. 262, on "Sugar Beets," written by Dr. C. A. Zavitz, Professor of Field Husbandry, at Guelph, and A. W. Mason, Assistant Experimentalist, the sugar production of the world under normal conditions amounts to about 20,000,000 tons annually, and about one-half of this supply is made from beets, while the other half is made from cane. A large percentage of the world's total supply of sugar has formerly been produced in the European countries now at war. The estimated consumption of sugar per capita, per annum, in the United States for the five years previous to 1916 was 87.4 pounds, and this had slightly increased from August 1916 to August 1917. The consumption of sugar in Canada per unit of population is estimated to be fully as great as that of the United States. A considerable bulk of the sugar used in Canada must be imported. According to the Bulletin, the three sugar-beet factories operating in Canada can manufacture sugar from approximately 33,000 acres of sugar beets, and they are offering for 1918 an option of \$9 per ton for the beets, with an increase of one dollar per ton for each advance of one cent over eight cents in the wholesale price of sugar, or of \$8.75 per ton for beets analyzing twelve per cent. sugar, with an increase of thirty-three and one-third cents per ton for each advance of one per cent. of sugar. An average of close to ten tons per acre of sixteen and a half per cent. sugar has been grown in Ontario for the past few years. The percentage of sugar varies according to the variety of beets grown and also the method of cultivation.

For the best results, the sugar beet requires a warm, moist soil having open sub-soil. However, good crops have and can be grown on clay, loam or sandy soils, provided the sub-soil is not hard and there is good drainage. The cultural methods as outlined in the Bulletin are as follows: "It is a good plan to grow sugar beets after such crops as potatoes, corn or winter wheat, which had previously received a good application of farm-yard manure. Sugar beets can be followed to good advantage by spring wheat, spring rye, barley or oats; any one of which could be seeded with clover alone or with a mixture of clover and timothy. It will therefore be seen that this crop fits nicely in either a four or five-year rotation. If it is necessary to apply farm-yard manure immediately before the sugar beet crop, it is considered advisable to use well-rotted manure in the autumn and have it worked into the soil. The use of commercial fertilizers can best be determined by local experiments to ascertain the requirements of the soil. It is advisable to plow the land a good depth in the autumn and it is an excellent practice to manure and then make ridges about thirty inches apart with a double-mold-board plow. This conserves the fertility in the ridges and enables the frost and water to get into the sub-soil. Land treated in this way is in excellent condition for cultivation in the spring. Before the seed is sown the land should be thoroughly cultivated and rolled, so as to make the soil compact and firm. By means of a light harrow, a fine seed bed can then be formed. About fifteen pounds of seed per acre is usually sown, either with a beet drill or with an ordinary grain drill, leaving the rows about twenty-one inches apart."

According to experiments carried on at Guelph, it was found that the roots which were thinned when at a height of two inches surpassed those which were not thinned until they had made a growth of eight inches by an average of 1.3 tons per acre. In an average of five years sugar beets which were thinned when two inches in height produced the heaviest weight of roots compared with those thinned at other stages of growth. The distance at which the plants are left in the row also influences the yield. At two inches, the average weight per root was .39 and the average yield per acre 17.75 tons; leaving the plants six inches apart the weight per root increased to .83, but the yield per acre dropped to 15.74 tons; at ten inches the roots averaged 1.25 pounds, and the yield per acre 15.48 tons. Thus it will be seen that as the distance between the roots was increased there was an increase in size, but a decrease in the yield of roots per acre. While leaving the plants two inches apart may give the heaviest yield, from eight to ten inches is considered advisable owing to the greater ease in handling the crop. In regard to depth of planting, the best results were obtained when the seed was sown about one-half inch below the surface of the ground. To sow as shallow as this and have the seed properly covered would necessitate the land being in fine tilth.

A considerable acreage of land in Ontario is suitable for growing sugar beets, and as high testing beets can be produced here as anywhere else. With an adequate supply of labor and a price per ton for beets commensurate with the cost of growing and the price of the manufactured article, a much larger proportion of Canada's sugar requirements could be produced at home. While some have a preference for the cane sugar, the sugar made from beets is of high quality. Those who grow sugar beets must be prepared to give them attention at the right time.

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