

variety of this grain which the Dominion Government has been importing in the hope that it may be found profitable to raise it in this country. Heretofore, two-rowed barley, the kind most in demand in the English market, has not been found a remunerative crop in Canada, and it is believed by many that our soil and seasons are not suited to it. Of course, any soil difficulty that may exist in this case can be removed by proper culture, but, if, as alleged, our summers are too short, hot and dry to allow this grain fully to mature, it is not likely that the experiments which are being made will prove successful. Climatic difficulties cannot be removed. We must adjust our farm practice to them, and it may be that we shall have to content ourselves with such varieties of barley as long experience has shown to be adapted to our circumstances, as fixed by the natural laws prevalent in the land we live in. (1)

The desire to raise this two-rowed barley arises out of its high price in the English market, as the one kind most preferred for malting purposes. This desire has been intensified by the prospect of a virtually prohibitory duty on Canadian barley being imposed by the U. S. Government. It is said, in some quarters, that even the best barley is not likely to be in such demand as it has been, owing to the fact that brewers have found a way of putting the required "stap," or what ever it may be that consumers love, into the beer without the use of malt. If this be so, it will result in less barley being used for beer, and more for animal food. It will take its place besides other grains, and be rated in price according to its nutritive value. It has been used less for feeding purposes than it would have been but for its relative cost, and if it comes to be rated in the market simply at its food value, it will be used more both by man and beast, in the way intended by nature. Barley bread has been, from ancient times, highly esteemed for human food. It is the favorite grain for horses in Oriental countries, and the Arabs have a proverb that the rider whose horse is fed on barley will not be caught. It makes excellent pig and chicken feed. The manure made from its use is rich in plant food.

Whatever the result of the two-rowed barley experiments, and quite irrespective of the use of this grain in beer making, the probability is that it will continue to be, as it has been during past ages, one of the standard crops of the world. It is, therefore, desirable that it should be grown according to the best rules of intelligent husbandry. Director Saunders no doubt does well to call attention to the English practice in barley-growing, and there is one important respect in which it differs from that which prevails here. In Great Britain, it is usually considered that the land to be sown to this grain should be prepared beforehand by manuring some preceding crop, barley being treated as the main crop to be benefited by the manure applied. In this country, barley is too often treated as a secondary crop, (2) and is put in after wheat has had the first opportunity to appropriate to itself what it is able to absorb of the plant food supplied, and universal experience proves that wheat is quite able to dispose of the lion's share of it. Artificial fertilizers, too, are largely used in the Old Country, such as 200 or 300 pounds of superphosphate with from 50 to 100 pounds of nitrate of soda per acre, put on before seeding. (3) Such appliances are hardly ever thought of in this country.

(1) The Messrs. Dawes have sown some acres of the imported seed this season. A. R. J. F.

(2) The best samples of malting barley in England are grown, on moderately good soils, after roots fed off by sheep. But on very rich, highly farmed land wheat is taken after roots, and barley follows the wheat. In Hampshire, on the chalk, two root-crops follow one another, then wheat, and then barley. A. R. J. F.

(3) Nitrate of soda is, I may say, never applied before sowing, but invariably on the young *braird*, and generally, at two applications. A. R. J. F.

A moist soil is desirable to start the plant early. When the land is too light and dry, germination is delayed and valuable time lost in the first stages of growth. Hence a sandy soil is not good for barley. (1) Nor is a heavy, stiff clay to be chosen for this crop. A light, rich, friable loam, with a foot deep of land well stocked with plant food, is the best seed-bed for this grain. It is also very necessary to the best results that the land be free from weeds, which do as much harm to growing barley by the exclusion of light and air as they do by abstracting nourishment from the soil. Early sowing is advised, at the rate of two bushels to the acre, to be drilled in. The more evenly barley can be sown the better, as an even growth prevents excessive tillering on the one hand, and irregularity in ripening on the other.

Too much stress cannot be laid on the use of good, plump, clean seed. (2) This bulletin states that it has been proved by experiments that selected, extra heavy seed, has produced three times the weight of actual growth, in the first fifteen days after sowing, than was obtained from light, inferior seed. It is important, especially in localities where drought is apt to prevail, that this early growth should be encouraged as much as possible. Barley should be allowed to ripen thoroughly before harvesting, for thus only can the best quality of grain (3) be secured. Some advocate early cutting in order to secure a brighter color in the grain, but this is undoubtedly a mistake. Full maturity is necessary to secure the highest quality in barley. Great care is needed in threshing this grain, so as not to break the kernels, which are very brittle. When any large proportion of the kernels are broken, the value of the grain is greatly reduced for all purposes, and especially for seed. (4) After threshing, precaution must be taken to keep barley thoroughly aerated by piling it in small heaps or storing it in bins of very moderate dimensions. Before marketing, the grain must be very carefully cleaned by means of the fanning-mill. LINDENBANK.

Market Garden Farming.

BRASSICAS.

As the term "Brassica," though derived from the old Celtic name *bresic*, meaning cabbage, comprises the many forms known also as cauliflowers, broccoli, Savoys, Brussels sprouts, &c., it may be convenient to refer to them under this well-understood heading, in so far as seed sowing is concerned, then treat of them, in the matter of after culture, separately. This is the more necessary, from the fact that large growers make a point of sowing the main crop seeds of all at, or about, the same date. Large market garden growers, besides, treat these plants in a far more rational way than do gardeners and numerous growers in a small way. The former have fully mastered the fact that the whole are perfectly hardy native plants, capable of growth and progress, along with the very earliest seedling weeds, in the earliest spring months, being quite indifferent about weather, provided good seed beds, in sufficiently dry workable state, can be prepared and sowings made, even during the first weeks in the month of March. If we contrast this fact with the practice followed in much more sheltered gardens, where such seeds are rarely sown until the

(1) The Norfolk barley-soils are almost pure sand. So much so, that even sheep do not always consolidate them sufficiently, and I have seen young horned-stock hurdled on the lighter parts to give additional firmness. A. R. J. F.

(2) Essex and Hertfordshire farmers sell their own barley to the Saffron Walden, Ware, and other maltsters, and buy their seed from the fens—not by any means plump though of course clean seed. A. R. J. F.

(3) For malting, that is; for feeding, cut before it is dead ripe. A. R. J. F.

(4) And for malting, as the broken grains won't grow, but turn mouldy on the floor, and the beer won't keep. A. R. J. F.