

some if the grower can rely on so steady a market at all times for it as for that grain that is above all others the breadstuff of civilized nations. There may, it is thought, be a brisk demand with a fair price for barley; for wheat, let the crop be heavy or light, and the price high or low, there is at all times a ready market.

The subject has been taken up by many agricultural writers both in England and America. We have, since writing on it for the *Advocate* of May, read not a few articles on it, and they advised farmers as we had advised them—to depend less on wheat, and, instead of so much spring wheat, to sow barley in part, and their only objection to this was the uncertainty of the market for the grain when ready for sale.

For good malting barley we have no doubt there will be always a good market. The demand for good malt drink is continuously increasing in Europe and America, and the area in which malting barley can be grown is limited by soil and climate. There is no grain more widely diffused than barley, none more successfully cultivated under so great diversities of climate and soil, but by far the greater part is ranked not as malting, but as feeding barley.

For feeding barley there is and always will be a demand to a greater or less extent, as provender for stock feeding, for which purpose it stands high in the estimation of feeders. Barley flour analyzed has been found to contain, in 1000 lbs., 720 lbs. of starch, 56 lbs. of sugar, 50 lbs. of mucilage, and 36½ lbs. of gluten, and this wealth of nutritive elements, as shown by analysis, is fully borne out by the experience of the many who have used it as cattle food.

Barley hulled and ground makes bread, coarser than wheat and less palatable, though nutritive and strengthening. It is the breadstuff most generally used in some countries of Northern Europe. Bere, or Bigg, which is of the same species, is, however, more generally preferred. It has the advantages of yielding very heavy returns and of being the first grain ripe. It is sown in the fall, is very hardy, ripens first in summer, and yields from 30 to 50 bushels per acre. The meal of bere is used in the same manner as that of oats, and mixed with it or used by itself, is much relished. It is very much used in Scotland, and hence it is known by some as the Scotch Bere.

#### The Cheese Market.

Some months ago we advised our friends who are engaged in the cheese business to make their cheese of a less size than many of them had been in the habit of doing. We were not singular in the opinion we expressed on this subject. Similar recommendation was given at the late Convention of the Dairymen's Association. If the Canadian cheesemakers are to maintain the character of this product of the dairy and obtain for it the best prices, they must be scrupulously exact in every particular connected with it. The quality of the cows, their food, the purity of the water they drink, the cleanness and ventilation of milk houses and factories—all must be attended to with the utmost care and unremitting attention. And not least in order to secure good prices—it must be sent to market in such size, form and manner as are in most demand by purchasers.

The *Oxford Tribune*, referring to this subject, regrets that more attention has not been paid by factorymen to the advice given in regard to the size of the cheese, having only heard of a few who have made the alteration. The purchasers desire a 14 or 14½ inch cheese, weighing 52 to 58 pounds, and in this the cheesemakers must act accordingly if they study their own interest. Our American neighbors, who are always awake to what concerns

their pecuniary interest, generally make their cheese of the size so much desired by buyers, and have the benefit; and there is no reason for us persisting in making our cheese of a size not popular among purchasers. We hope our readers will profit by the advice given, and they will find on closing their year's accounts a good balance on the credit side.

#### Provender for the Winter.

The only well grounded cause of complaint against the climate of Canada is the long winter. The summer's heat, though grumblers sometimes find fault with it, has advantages more than enough to outweigh any evil or inconvenience from the heat of the dog days; and the winter's cold in its greatest extreme is a positive benefit to the country. But the winter, we must admit, is long, and while it drags out its weary length of five months, we feel the loss it entails on us in the great quantity of provender used up by our stock. Hence the greater necessity of making timely provision for the winter, such as may leave us not losers even in our winter feeding.

Farmers have learned the value of the root-crop for feeding. Wherever we have a stock large enough in proportion to the area cultivated, we have found the absolute necessity of turnips and mangolds to bring them in fair condition from November till May. With such a supply added to our hay and straw, our stock may be turned out in May in at least as good condition as when housed for the winter. But it is necessary to have provided the dry as well as the succulent food—to have a store of hay as well as turnips. And of the one, as well as of the other, there is too often a scarcity on the farm. The season may have been unfavorable for the early growth of grass, or there may be a more than usual drought, and the consequence is seen in the diminished size of our hay-ricks. To meet such cases of deficiency in our usual hay crops, and the lightness of straw, if such there be, either millet or Hungarian grass should be sown. Both are sure, when more generally known, to be appreciated. Between the two there is very little difference in quality or produce. Mr. T., in the vicinity of this town, saved at the rate of six tons per acre of hay from Hungarian grass in 1873. This was a more than ordinary yield, but the yield is always heavy.

For Hungarian grass or for millet the soil should be well tilled, and this is the more necessary as the seed is small and tender. It should be sown in June. This lateness of the sowing is advantageous to the farmer, as he is then less hurried in his farm operations. The quantity sown is one bushel or more per acre. If only one bushel be sown, the straw is apt to be too coarse, especially on a rank soil, and when fine it is better for feeding, whether as green food or hay. It is better mowed before seed or stalk is ripe; while yet green its nutritive quality is much greater than if cut dry, and this nutritive quality it retains throughout the winter. In this state, cut green and well saved, it is greatly relished by stock of every description, and is good, wholesome, nourishing food for horned stock especially.

Some farmers find it profitable to grow it for the seed, and by this means realize a good profit from its cultivation. The quantity raised per acre is said to average 30 bushels, and a much higher yield is said to be sometimes obtained. We have heard of 80 bushels per acre. We recommend it, however, not for the profit to be made by it as a seed crop, but as a crop for soiling and hay. Millet especially is known to rank very high as a forage plant. It is said to be second to no other of the grasses for feeding cows and adding to the profits of the dairy by increasing the quantity and

improving the quality of milk, and keeping stock in good health and condition.

Corn and other grain crops may some seasons be destroyed or so much injured from frost or other causes as not be worth the ground they occupy. In such instances Millet or Hungarian grass is especially valuable to fill up the waste places and give a second crop scarcely, if at all, inferior to any other on the farm.

#### The Colorado Potato Beetle.

From a letter from C. J. J. we take the following extract on the method used by him for the preservation of his potato crop from the potato-beetles, and also an article on the dangers incurred by the use of Paris green, the remedy so generally used. We referred to the subject in our last number, and though we have ere now treated it pretty fully, we have dwelt no more on it than the importance of the subject demands. It is one that calls for our most serious consideration. If to apply to it in all its force the old adage—"Death is the pot," no more serious consideration ever forced itself on us. C. J. writes as follows:

We cannot afford to dispense with our potatoes, although until the parasites which prey on the Colorado Potato Beetle shall have increased to such an extent as to effectually check its depredations, farmers at a distance from market should content themselves with raising enough for their own use, and save them by hand-picking, the readiest way of doing which is to walk between the drills with a tin half full of water or ashes in one hand and a short stick in the other, and knock the beetles off the plants into the tin, not a very difficult matter, as they do not adhere very firmly; those which fall on the ground should be picked up and thrown into the tin. They do not readily bite, but when they do the best way to prevent any ill effects is said to be to apply a leaf of tobacco moistened in water to the bitten part for a short time, which will neutralize the poison. One of my neighbors has crushed them to pieces in his hand without feeling any ill effects, but I think, had there been any abrasion in the skin of his hand, he would have smarted for his temerity.

I was last spring thinning out some early cabbages in my hot bed, and amongst them I found a potato beetle; as it presented a peculiar appearance I placed it on the palm of my hand and found the peculiar appearance was caused by a great number of very small beetles, which left the old one and commenced running about my hand, which, of course, I closed and consigned the whole brood to the stove. This seems to prove that they can produce their young alive, and may account for their being so very numerous in the spring, before the early potatoes afford them a supply of food and a convenient place of deposit for their eggs.

C. J.

#### USING POISON ON PLANTS.

The scientific and other papers are discussing the subject of the danger attending the use of Paris green and other poisons in destroying insects on plants. The matter is one of great importance, and is deserving of the careful attention of all cultivators who are tempted to resort to desperate remedies for parasitic pests. The *Scientific American* says:

"The question of whether the use of Paris green (arsenate or aceto-arsenate of copper) upon potato plants as a means of destroying the bugs, will tend to poison the soil, and thus render it unfit to produce vegetation, receives a definite answer from Professor Le Conte, in his paper recently read before the Academy of Sciences. The opinion, advanced and concurred in by such high authority as Professors Silliman and Alexander and Mr. Mitchell, affirms unequivocally that arsenic and copper are poisons which act with equal energy upon plants and animals. It is merely a matter of time, if the poison is used at repeated periods, before the soil is poisoned so as to prevent the growth of all vegetation.

"Professor Le Conte enters an earnest protest against the present loose, yet enormous use of this fearful poison in the hands of uneducated men. It is ordered by the western druggists literally by the ton, and repeated deaths have resulted among farmers through its careless employment. The death of several persons in a single dwelling in this

city from eating Paris green had been blotted recently. It is worth noting even externally that its poisonous amount inserted in the stomach."

In the *Journal* of the 19th of June, 1874, is a report from Paris green, which is quite too numerous who partook of a pickle at No. 17, York, on the 19th of June, and on the 20th Powers, died. In the *Journal* of the 19th of June, 1874, is a report from Paris green, which is quite too numerous who partook of a pickle at No. 17, York, on the 19th of June, and on the 20th Powers, died. In the *Journal* of the 19th of June, 1874, is a report from Paris green, which is quite too numerous who partook of a pickle at No. 17, York, on the 19th of June, and on the 20th Powers, died.

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There is no doubt of Paris green poisoning many of them, though all would protest of this fearful poison. The grounds for the April number of the *Journal* are We repeat we have years, without any The potatoes have been injurious to the health of the soil or the slightest present been poisoned so as to prevent the growth of all vegetation, and ex-

Professor Croft, who in science, has explained the slightest could be detected we pointed out in our queries from "C. J. Co. The minute in the stalks may be them. This shows that eating potato stalks their having access should be prevented non-use of any poisons less but injurious Paris green, if it should be bought with either plaster 1 lb. to not less than 1 lb. of plaster has the advantage than flour, and be preferred by some tenaciously than many who have tried it, is by mixing Paris green in an order on the plants.

In the use of Paris green, the fatal with it, though many do potato beetle it without the ground.