

*Rye.*—This is a grain less valued than it deserves, and the qualities are less known and appreciated than they ought to be. It does not compare with wheat, still there are circumstances, which as an object of culture, may give it the preference.

1st: it will grow and produce well where wheat cannot be raised.

2ndly: it endures much colder climate than wheat.

3rdly: It comes much sooner to maturity, and therefore exhausts the soil less. Indeed it is not uncommon to have two or three successive crops without manure, and the last crop as good as the first. Can be sown in the fall, and it gives good pasture without material injury to the final crop.

4thly: its produce is generally greater from an equal surface than that of wheat.

These known facts render it particularly suitable to poor soils, to high and elevated lands, and is well adapted to our high northern latitudes.

Its use and value are well known and appreciated in various parts of the Continents of Europe and America. In Germany it is regularly given to the horses in shape of bread; also in Belgium and Holland. The grain chopped and its straw cut and mixed forms the common and every day food of the horse of Pennsylvania. Its culture may be in keeping with our remarks on the potatoe crops preceding in a sandy soil. The ploughing, harrowing and manuring, given to that crop, will prepare for this. After harvesting the potatoe crop, plough the ground, and sow and harrow in the rye. Take especial care that the seed be carefully selected, and thoroughly washed in hot lime-water, then dry the seed with gypsum, and sow. Whenever the straw of rye becomes yellow and shining, cut promptly; observe to cut always early rather than an hour too late. This being done, time is given for ploughing and for next crop in succession.

*Turnips.*—Said to be natives of the north of Europe. There are of them eight species, and of these many varieties, but those which obtain most notice and approbation are the white in Europe, and the yellow, or *Ruta Baga*, with us.

Two methods of cultivation are adopted, suited to the end in view; say, if for enriching the soil by the turnips are then turned down by the plough; or for securing them for stall food. This latter practice seems generally the favourite mode, as it is justly considered the most economical and satisfactory. In the first case the harrow is used instead of the plough in light porous soils. The seed is sown after the harrowing, and left to itself. In the other case, the plough is used, and after it the harrow; a method generally performed, as the return will give a good equivalent for all the extra labour. Well, this done, sow your seed, say two pounds to the acre, this will allow some for accidents, &c.; when the plants are all above ground give them a light covering of ashes. Ashes which assist the growth of the young plants and save time, leeching on their leaves, protect them from the fly, &c. Soon afterwards it is a good practice to thin your plants by hand, and weed carefully. Some recommend running the plough at

stated lengths to form their land into beds, as approved culture. A second, and even third weeding and thinning is considered advantageous, as all weeds and surplus turnips are good converting manure. Then draw and top your turnips, afterwards stack, interspersing between each layer coarse hay or straw; should the season be open, it is a good practice to put on your turnip field sheep to pick up anything left there, and even after them your pigs. So much for the white Turnip; next the yellow or "*Ruta Baga*." This is usually cultivated and well known here, and a great and growing favourite in Europe, particularly in Old England, where many years ago it was successfully introduced by Wm. Cobbett, Esq. (His works generally on agriculture, from his personal experience, are well worthy of reference both in England and America). A Swedish Agriculturist says of its properties, as follows: "Its root is milder and more saccharine than that of the other species, particularly when boiled; its flesh is harder and more consistent, which better enables it to withstand frosts and to keep from one year to another. Its leaves extend horizontally, and may be stripped off from time to time as wanted for forage, without injuring the product of the root, which on a good soil gives on an acre of Sweden 350 quintals, and even in poor soils gives a crop. We sow half a pound of seed about the beginning or middle of May, which will give plants enough to fill an acre. Transplanting is performed about the last of June. To set out and water five or six hundred feet in a day is the task of one man or two women. One or two hoeings augment the product much. The harvest is made about the 1st November, and the Turnips are covered in ditches or dry cellars for winter's use."

*Barley.*—Of this we hear first of bread, or loaves, and among the Greeks the gladiators were called "Barley Eaters;" hence probably the modern descriptive name given to some questionable persons, namely, Loafers. At an early period it was used by the Romans as food for man, and afterwards for cattle, and this obtained favour from the general belief among that energetic people, of its nutrition and invigorating qualities. The same opinions have diffused, this grain above every other being better adapted to different climes and soils, more easily preserved and less subject to attacks from insects. I need hardly add its capacity for the production of those refreshing, wholesome and invigorating beverages, called beer, ale, and porter. Finally, it is good for cattle, and on which the Arabians bring up the horse to its greatest perfection. There are two species most in request, say "Two-Row Barley," and "Naked Barley." The former is preferred in England. It is understood to possess all the good qualities of the other varieties, and is much more productive than the latter species. The Northerners give the preference to it, and as they use this grain much as food and drink, ought to be considered good judges. Barley is not so particular as to soil as either wheat or rye, still it prefers a loose, warm, and moist soil (though not wet), and will thrive well even in sand, in succession to turnips. All