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RYE.

Some authors contend that this grain is a native of Crete, while others appear to question whether it is to be found wild in any country. One thing is certain, we have at present but one species of it, *(Secale cereale)* common rye, and all its different varieties, of which there are a considerable number, are characterized by no botanical characteristics, but simply "by some differences," which are assumed to have resulted from certain methods or peculiarities adopted in their cultivation.

It has been grown more or less extensively in various countries from time immemorial, and is regarded as approximating more nearly the character of wheat than any other grain. On the Continent it is far more extensively cultivated than wheat, and is considered as a more certain and lucrative crop, requiring less care in the cultivation and less manure. In England it is not considered as entitled to the honor of a rank among bread stuffs, and is deemed of less value to the cultivator than barley, peas or oats. In Russia and Germany it is extensively raised, and may be considered as the bread corn of both countries.

For the cultivation of this grain, whether our efforts embrace the winter or summer variety, is much more successful on light, sandy and fine soils than on those of a closer and more ponderous texture. "It is," says Von Thaer, in his Principles of Agriculture, "the only grain that can be cultivated on a soil containing eighty-five parts of sand in a hundred, or more. With us, land of this nature is always called rye land. Soils containing less than eighty-five parts of sand are also adapted for the cultivation of rye." Some of the most luxuriant crops of rye we have ever seen, were the produce of what, in the New England States, are called Pine Plains land—that is, those far-stretching and extensive tracts of level land which produce originally the small stunted pitch or yellow pine of the North. Were it not for the forests of these trees which so densely clothe the soil of these vast expanses, they might well be denominated *sand prairies*, for so far as innate vegetable power is concerned, they are, in their pristine condition, poorer and more sterile, perhaps, than any description of soil known at the North. But when cleared, they are easily broken, and by a judicious course of management become extremely valuable, producing, in the first place, most luxuriant crops of both winter and summer rye, and, afterwards, corn, potatoes, wheat and hay, with all the variety of vegetables usually cultivated. From the peculiar constitutional character of the staple of these soils, as well as from the nature of the subsoil on which they repose, they are admirably calculated to withstand the effects of drought. A single operative will sink a well in a day, and when water is once obtained you have a fountain that rarely, if ever fails. On such soils rye can scarcely fail of producing a good crop.

The presence or predominance of deleterious acids in the soil, which operate so banefully upon certain other cereals, wheat and barley for instance, does not injure rye. "The degree of preparation bestowed on the soil," remarks a distinguished author, "and the nature of the crop which precedes the rye, are not of so much consequence as those points would be if wheat were to be sown. A sandy soil, such as is best fitted for the production of rye, requires less ploughing and working than those adapted for the production of other grains, and there is consequently a considerable economization of time and a saving of much fatiguing labor to both man and beast."

In cutting this grain care should be had that the operation be not too long deferred. We have known many farmers who had for years cultivated this grain extensively who always cut it just as it was turning from the milky to the indurated state. The same practice is now being extensively applied in harvesting other grains. The finest flour is said to be made from wheat cut in the milk. That very considerable accessions are made to the kernal when thus cut, from the straw, was sufficiently proved to us not long since in a manner we will here mention. It chanced, in getting in our hay crop, that we found ourself under the necessity of cutting a passage way through a beautiful piece of oats, then just beginning to "turn." The cradle was applied, the oats bundled and deposited, after being made, in the barn. On tying them, we noticed that the heads appeared to be full, and on threshing, found that a given amount of the *early* cut oats, yielded nearly the same weight of grain as the late cut ones. The straw, as a winter feed, was of course worth twice as much. Since then we have adopted as an invariable rule the maxim inculcated by Cato in reference to this matter. "*Oraculum esto hiduo citius, quam hiduo serius metere*"—get in your harvest too days too soon rather than two days too late.

"Spring rye is a variety of autumnal rye." "Both varieties acquire their distinctive appellations in the same way as autumnal and spring wheat do." We have had recently introduced into this country several varieties of rye, which promise, with proper attention and care, to become valuable accessions to our husbandry. Of these we may enumerate St. John's Rye, Norwegian Rye, and Archangel Rye, all of which are, doubtless, valuable varieties, as are, also, the Wallachian Rye, and a certain other variety introduced of late from the Russian Provinces, bordering upon the Baltic, known to the Germans by a name that may be rendered by the term Bushy Rye. The three first varieties some contend are identical, and of this opinion we believe is the celebrated Von Thaer. To us, however, they have appeared to be *distinct* varieties, and such, indeed, is the opinion of many who have cultivated them, and who purchased them of seedsmen who would not be likely to be mistaken in matters of this nature. I hope soon to be able to furnish an article for the Farmer, containing suggestions relative to the cultivation of this grain, but am prevented at present for want of time.—[Maine Farmer.

APPLICATION OF LIQUID MANURE.

I must first be understood to say, when I mention liquid manure, I do not mean water that runs from the dunghill whenever and as often as there is a shower of rain; nor yet water that runs from waterspouts into the farmyard, and is caught in a tank in the centre; but I mean the urine of every animal, both man and beast, from which it can be caught in a pure state, decompos d in a close tank, and then mixed with a definite quantity of water to dilute it according to the appetite of the plant for which it is required. Liquid manure of the kind I have described I consider the very highest fertelizer in use for all those grasses which have fibrous roots, and I should avoid using it for all those with tap-roots, having found by practical operation that the former (the fibrous rooted,) are much benefitted by the dressing; while upon the latter (the tap-rooted,) it is entirely wasted. To the stronger of the fibrous rooted grasses, the Italian rye-grass, cocksfoot, tall oat-grass, foxtail, catstail, and a few others, one part of urine, and two of water, will be found to agree and produce a most rapid growth; to the more delicate meadow-grasses I would dilute with five or six times the quantity of water, I am certain they require it much more diluted and I give five or six times the quantity at random, because I have not carried out the experiments with regard to them to so correct a rule as I have with the stronger, not thinging it worth while to grow the smaller when I can have the larger bulk of excellent food. Of all the grasses, I have selected my plant of Italian rye-grass as being so far superior to them all, that no comparison can be drawn as to the quantity and quality of food; with this fact clearly deduced, I have become a grower of Italian rye-grass, as exclusively as my farm covenants will allow me to carry it out. I have increased my quantity of land every year for its growth, and have drained and redrained the interior of my building three times, just as I have been convinced of the value of urine. I have added to my tank accommodation every year, and have now begun to cover entirely my straw yards, that so far as I have completed the work, no surface water can fall upon my animals, or dilute their urine. I began with growing a few y ds of my plant, I grow now 45 acres, during the last three years, have every year cut some portion of my land, seven, eight, or nine times, with, generally speaking, large crops. My mode has been to dress my land, which is a strong clay (badly underdrained) with the London house rubbish, (old mortar) plough my land, and make it as fine as possible in spring or autumn; sow it by a broad-cast barrow machine, with two bushels of seed to the acre, or with four by the hand, and allow the grass to grow about 18 or 20 inches high, when if I wanted the grass I cut it and dressed it with my liquid manure by a water cart passing once over it, leaving it for another crop, and so on to a fresh piece every day, and watering every day that I had cut. I have, on several occasions, grown, in warm weather, a yard of grass in height, in 21, 24, or 26, days, as thick as it could well stand upon the land, of delicious quality, so that an incredible number of animals have been kept in the house upon a few acres of land from March till November. This grass remains in the land two years, and should then be ploughed up; may be sown again with the same, and succeeds admirably for a term of years. I have had land eight years with only one change between the crop.

My experience with grain is very slender. I make my report equally so. I am not a grain farmer, but have grown as fine a crop of oats upon the land following the Italian rye-grass as I ever saw, to the astonishment of agriculturists from various parts of the kingdom. I have made an experiment upon a foreign barley with liquid manure, the result of which has astonished me so much that I have no doubt diligent corn farmers will ultimately succeed in producing two crops of grain from the same plant during an ordinary warm summer. [William Dickin on, 7, Curzon-street, May Fair, London, March 1.—[Eng. Farmer's Herald.

RULES FOR BREEDING GOOD STOCK.

Perhaps there is no department in the whole range of agricultural operations in Maine, if not in the United States, in which so little or regular system, or, indeed any thing of system at all, is adopted, as in the breeding of stock. There are very few indeed, who try to study, and who actually know the merits and demerits of the stock that they have, and who strive all in their power to improve where defective and save those points that are excellent. But these individuals are so few indeed, that they are hardly enough to form an exception when compared to the whole. The art of breeding good cattle is one of no small importance, and one, too, that requires much talent, experience and judgment. Allen, in his Herd Book, quotes the remark of a veteran Short Horn Breeder of England, who observed that there were an hundred men fit to be Prime Minister, where there was one ready good judge of cattle.

The rules absolutely requisite for breeding good animals of any kind, are few in number, and very simple in detail. But nevertheless it requires much judgment to carry them out in such a way that there shall be a steady march of improvement instead of a deterioration.

The following, which appeared in the American Agriculturist four years since, are to the purpose, and will be easily understood.

1st. When better materials do not exist, or the person wishing to make the improvements has not the means of going abroad for so doing, choose from the *best natives* at hand for this purpose.

2nd. But, when it is possible to do so, obtain *thorough bred* males of the proper kind from superior improved stocks, to cross on to native females, and so continue breeding up the grade females to the thorough bred males.

3rd. Be very careful in a thorough bred stock to use no male which is not at least *equal* to the females, and if he can be found *superior* so much the better, for this will ensure still further improvement, if possible, in the progeny.

We gave, in our last number, a comprehensive description of what may be considered good points in stock. When the young farmer has become familiar with them, he can thus have in his mind a standard by which he can compare the animal before him, and, by practice, thus mature his judgment: by following the above rules he will become a skillful breeder. He must first know what a *good animal is*, before he attempts to improve, and then he can take hold with some advantage in the business of breeding, and follow it understandingly and profitably.

The Wheat Crop.—Prediction of Dr. Smith.—Dr. Gideon Smith, the former able editor of the American Farmer, has the following prediction with reference to the coming wheat crop.

"The wheat crop must be looked to. I am not a dealer, nor interested in it, other than as an eater of bread. But the *scab* will be found to effect the crop in 1847 to such an extent that a great scarcity of good flour will prevail. The scab is also an epidemic at times. It will spread over the whole of this country in 1847, '48; will appear in Europe this year and in '48, and spread over the whole of that continent. It will take the usual course of all vegetable epidemics, from west to east—that is, it commences in America, and will reach the eastern world. Nearly all, if not all, animal epi-