

## WHEAT CULTURE.—PREVENTIVE OF RUST.

We have not unfrequently told our brother farmers previous to our commencing this publication, that a single *hint* gleaned from an agricultural periodical, was oftentimes worth more than ten times the small subscription that is usually asked for such a journal. It may be considered superfluous in us to enumerate the numerous and interesting experiments which we have made, to test the adaptation of the different modes of cultivating land for crops, practiced in England and the United States, to the Canadian climate and soil—experiments which we were induced to make from reading agricultural journals published in those countries. We may, however, briefly state the conclusion at which we have arrived relative to the important subject of preparing lands for fall sown wheat, and the mode of cultivation best calculated to prevent rust.

Probably our gentle readers will question the soundness of our judgment, when we state that the modes practiced in cultivating lands for wheat in Canada, are in nine cases out of ten the sole cause of the uncertainty of the maturity of crops. This, to a certain extent, may not be much a wonder of surprise, when the fact is taken into consideration that the mass of the agricultural classes are deprived of the aid of science to assist them in their onward career; nor is the wisdom and experience of the successful of their own class concentrated and published for their benefit; nor have they the inestimable advantage of perusing the suggestions made by the most experienced of their class of the British Isles. We mean to say that there has been little or no encouragement given either from the Government, the Legislature, nor large landed proprietors, to the dissemination of useful knowledge among the agricultural classes.

It may be almost unnecessary to state that it is of the utmost importance that the land designed for wheat should be thoroughly drained, either with the spade or plough, so as to prevent all possibility of injury to the plant from surface-water. We will confine our remarks, on the present occasion, more particularly to the proper application of manure.

The great cause to which we attribute the origin of the disease called mildew, so subject to the wheat plant in Canada, is the superabundance of unfermented vegetable matter applied to the soil.

There can scarcely be found one farmer in a hundred, that throws up his barn-yard manure in large heaps to ferment. Most of them suppose that the fermentation would destroy the fertilizing qualities of the manure—a fact, which we admit, to a certain extent: but it should be remembered that wheat is a very tender plant, and one which required only a few centuries since, much skill to acclimate to the English climate, and even now cannot be grown in any portion of Britain where the land is elevated three thousand feet above the level of the sea. The common plan of manuring summer-fallowed land in Canada, is to apply from fifteen to twenty-five double-horse waggon loads of manure per acre; the manure, as we remarked before, being generally in its crude state. When this plan is adopted, mildew nine cases out of ten follows, unless the land so manured is of an elevated position,

and dry, warm, and friable in its nature, by which means the gasses caused from the decomposition of vegetable matter would have passed away in the atmosphere, previous to the plant arriving at the stage at which it is most subject to the disease. Hence the opinion has gained ground, that light and sandy soils are more certain for wheat than clay soils, whereas the latter is the most certain, if plain common sense culture be practiced. Repeated experiments have proved that pure sand would not produce wheat to maturity, and they have also proved that clay divested of all vegetable matter, when exposed to the action of severe winter frosts would produce wheat to perfection. We would very naturally infer from such results, that soils impregnated with clay are the most natural to the wheat plant. But the great mistake in the management of such soils rests in the application of fermentative manures, by which means the soil becomes comparatively a hot bed, the gasses from which forces the plant into maturity by their attraction and affinity to unnatural agents in the atmosphere, which like too stimulating food given to the animal creation, overdoes nature, and thereby produces premature decay or disease. By the presence of a quantity of unfermented vegetable matter in the soil, the plant becomes glutted with food imparted to it, and the effect produced are like repeated heavy draughts of alcohol on the human system, which cause a bloated and deranged state of the natural functions of the organic system which is a sure forerunner of disease.

The remedy which we propose to prevent the disease, so far as human agency can be applied, is the application of fermented manures, and dressings of lime, marl, or charcoal or wood ashes if accessible; by adopting a system of clover culture in proper rotation with the wheat and spring crops; and by drilling in the seed, or causing the plants to be in rows by ribbing. Each of these subjects will form a separate article for our next number, and we hope our skillful and scientific farmers will correct us if we fall into error in any particular. Our object in expressing our views so frankly, is to bring truth and common sense to bear on the agricultural profession.—*Pub.*

We would again remind farmers to raise all the stock they can this year. Some change must take place shortly that will be favourable to us. It is useless for us to cultivate the inferior grains while we can only dispose of this grain for consumption in this country. If we raise over what is required to supply this consumption, the market will be glutted and it will be impossible to effect sales at any price. We have seen in the Montreal market, the last week of December, excellent oatmeal offered at seven shillings the 112 lbs., and the owners could not even obtain an offer of any price for it. We would have no objection to low prices if they were general for every commodity and for labour: but for every article the farmer has to purchase, the prices are as high as heretofore, including wages. At the present time, the expenses of taking to market, and selling hay and straw in Montreal, often amounts to more than those articles sell for. It is useless to farm on these terms. By raising stock much of the expense of labour will be saved, and before these stock are at maturity

some change for the better is likely to take place, if farmers will only be true to themselves. The land will also be improving while in pasture and in better condition every succeeding year for yielding crops, when the farmer will see a prospect of disposing of the produce of a crop to advantage. In any case, cattle will be more profitable than tillage. Beef and pork, if properly fattened and cured for exportation, will sell for a reasonable price in England. The great point is, that the Canada beef and pork may be able to establish a good character in the British market. Without this, there cannot be any hope of finding an advantageous market in that country—and so long as every trash of cattle are brought in here from the United States and slaughtered and cured for exportation, we never shall be able to establish a good character for our salted meat in the English markets. Let farmers and others consider this matter well. The produce of our dairies, if properly manufactured, would also be sure to find a market and reasonable prices in England. These are proper objects for our attention.

**RUSSIAN STOVES.**—We have seen statements of travellers respecting the Russian Stoves, which convinces us they might be very profitably introduced into Canada, if properly constructed—but their usefulness would altogether depend upon their proper construction. It is said they are extremely well adapted for economizing heat, and of course, must be a saving of wood or other fuel. The flue of these stoves is carried up and down so as to fill a space of about four feet square, and to the height of about ten feet; (but in large houses higher than this)—it is then carried off. Those stoves stand in the corner of a room, so that they can warm four rooms. The flues are built of hollow porous brick, which of course contain the heat. The external surface is of white glazed and ornamented tiles. The fuel is usually birch, and when the flame is entirely spent, a damper is placed on the flue, and the heated air thus inclosed diffuses itself through the rooms. The stove requires to be heated at most for an hour in the morning and another at night, to maintain a high temperature during the twenty-four hours. These stoves are in respectable houses, rendered highly ornamental, by the tiles of which the external parts are constructed, and by a variety of ornaments placed on different parts of them. If stoves of this description are found to heat the houses in Russia, they would certainly be fully sufficient to heat the Canadian houses.

The advocates of free trade have constantly accused the farmers in England, for not having cultivated their lands in the best manner, and if they did the produce would be increased one-half, and they would require no protection from foreign competition. If by more judicious cultivation the produce could even be increased a fourth-part, England would not require any foreign agricultural produce for the food of her population; and, in that case, what were foreign nations to give in exchange for British manufactures? Hence the arguments of free traders is only a fallacy. Their real object would be, we suppose, that the lands of the British Isles should remain uncultivated, and that these countries should be supplied with foreign agricultural produce in exchange for British manufactures.—