

## On the Improvement of Wheat. No. 1.

MR. EDITOR:—

Wheat our principal cereal is cultivated, 1st, for seed or reproduction, and 2nd, for the food of man, and this has been the case from time immemorial; for both purposes, the freer it is from impurities and disease the better. For 1st, when it is intended for food, the quantity of the farina (flour) contained in the sound kernel, is much greater than in diseased grain, of much finer texture, and more wholesome quality, (the bread being more palatable and nutritious) so that mankind is doubly benefitted, i. e., both in quantity and quality; and 2nd, when it is intended for seed, not only are the same results produced, but we have the certainty of obtaining a more prolific, and in every way more remunerative crop. Such are the results from sowing good and healthy seed—and the same follow in an equal degree from sowing seed that is pure and unmixed. In the mother country much careful attention is paid to these points, with the most beneficial consequences. These are various diseases which affect the wheat crop, which can be prevented, or at least, lessened by the exertions of the farmer himself—as to these and the remedies for them, I may speak in a future letter, at the proper season. Meantime, I wish to direct your attention to a few of the impurities which are frequently to be found affecting the sample of wheat, much to its detriment in all respects. This is a fit matter at this very time to be brought before the notice of Canadian farmers, as I observe, that the Canada Company has very liberally and spiritedly offered a handsome premium to be awarded at the Agricultural Meeting at Hamilton in October, for the best sample of 25 bushels of fall wheat, so that I am induced now to call the attention of farmers to some weeds, whose seeds may, with some little care, easily be eradicated from among those of wheat, but which, if found in the sample exhibited by any competitor for the above premium, ought properly, and in all probability will, disqualify it from receiving the award; for I suppose it is the sample composed of 25 bushels of grain which is best not only in quality, but also in purity, that will at all be considered worthy. Of such weeds, I would here particularly notice, and make a few observations on

## CHESS, CHEAT, OR DARNEL.

This is a weed about which much nonsense has been written. I was lately highly amused

on perusing a statement regarding it, by a writer in the *Prairie Farmer*, which certainly reaches the very climax of absurdity. This writer asserts, not only what has often been done before, "that wheat will turn to chess by freezing and pasturing," but he goes much further, and actually states that he has himself, more than once, had in his possession, a root from which proceeded both a stalk of wheat and one of cheat, and which he affirms, was seen by other parties, and that "another respectable citizen of this neighborhood has found wheat and cheat growing from the same root." The Editor of that excellent paper, very properly remarked, that the writer should have preserved his specimen for general inspection, "as people are naturally incredulous on this subject" in this I cordially concur, and do not hesitate to say, that had the alleged single root been minutely examined, it would have been found to have been really double—though from being warped together in a manner that can only be accomplished by the hand of nature, it had, at first sight every appearance of being only one. I have myself in the antipodes of Great Britain (and probably you and others in this country may have) seen even trees, whose roots, stems and branches had become so interlaced, that a superficial observer might have been justified in alleging that there was only one tree, though several branches were evidently composed of different timber, fibres and leaves, and otherwise retained their distinct characters of separate trees.

But the statement as to one root producing both chess and wheat, is in itself absurd; for chess is not a disease, (as are smut, rust, mildew, &c.) but wheat and chess are two different plants, and the one is entirely distinct in its characters, is in fact an altogether separate species of plant, from the other. The stalk or straw alone of the one, resembles that of the other; while the head of chess (which is now well known to be a kind of grass, by Botanists named *Bromus*), is not close and compact, or even at all like that of wheat, but is open and branching in the manner of the oat. Agriculturists both in the old and new world have often ere this been gulled with stories of wheat degenerating into chess, and these are still believed by many—but as Professor Johnston very aptly remarks, "Let us assume with all Botanists, that species cannot be transmuted, and the production of wheat from a *Bromus* (et vice versa), is impossible," and hence the alleged pro-