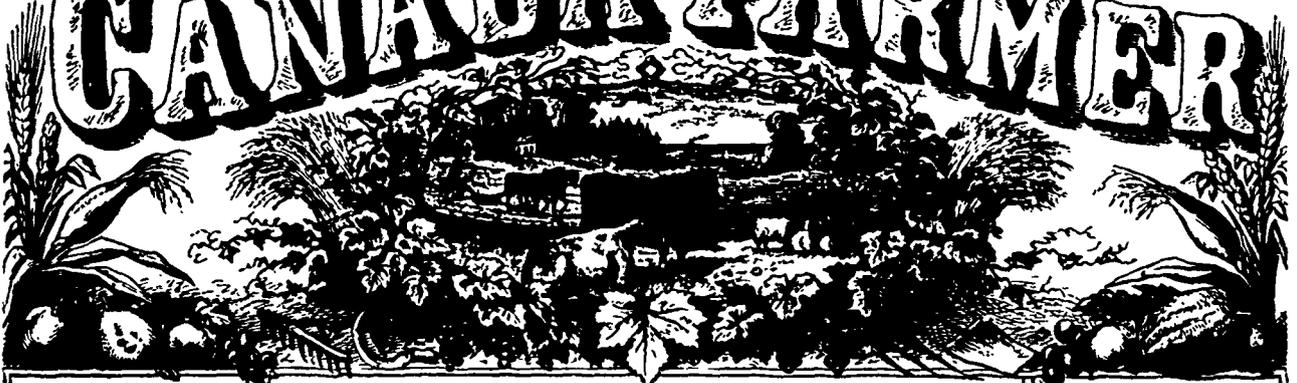


THE

# CANADA FARMER



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NEW SERIES.

## The Field.

### Culture of Winter Wheat

A good wheat soil always contains a considerable amount of alumina (clay), but so balanced and corrected by other mineral ingredients, lime for instance, as never to become cold and sour. Freedom from stagnant moisture is another indispensable condition of a good wheat soil.

Deep ploughing, on most clayey lands, will assist greatly to render the soil dry and permeable to the roots of the wheat plant. The wheat plant is provided with two sets of roots, one of which spreads out near the surface of the soil, and gathers organic food for the sustenance of the plant; the other goes deeper down, supplies the needful moisture, and extracts the inorganic material that goes to form the bran and the starchy coat that gives stiffness and a hard outer covering to the straw.

The land intended for wheat having been duly prepared during the summer, by a summer fallow, or the cultivation of some preparatory crop, as peas, barley or clover, the finishing touch is given about a week before seeding time by a last reversal of the soil with the plough. This is a matter of some moment, and should not only carefully done, but a due regard given to the requirements of the soil and the crop. If a sod has been turned over for the summer fallow, or pea crop, it is usually ploughed under to no great depth; at the cross plowing the implement is run deeper, so as to break up the hardpan and stir up the subsoil, and this raw material having been subjected to amelioration by a succession of harrowings and by exposure to atmospheric influences, the last turn of the soil before seeding should thoroughly intermix this

with the now decomposed sod, and form a seed bed containing a due admixture of both mineral and vegetable food for the support of the wheat plant.

The application of manure is a very essential point to the successful culture of wheat. Land may be made too rich for wheat, or rather the manure applied to the soil may be in a condition that renders it unsuitable as food for the wheat plant. Fresh unfermented barn-yard manure is not desirable, while composted manures, or those in which decomposition has already been effected, can scarcely be given too largely. The practice, once so common, of applying fresh barn-yard dung to the wheat crop by turning it under into the soil at the last reversal with the plough preparatory to sowing the wheat, has been proved to be of very doubtful utility, and it is now generally admitted that the better plan is to compost the manure and spread it over the surface of the land on the wheat crop, either harrowed in with the seed, or applied at some time during the autumn, or early in spring when the snow melts, and before the frost is out of the ground, spreading it finely over the surface of the crop. This year there has been but little damage done to the wheat crop by its once so formidable enemy, the wheat midge, and there is good hope that this pest is fast disappearing, and that the old favourite varieties, like the Soules, and Blue-stem, that once yielded such large crops of beautiful grain, may again be largely grown with success; but still, in view of the fact that nothing is known yet with certainty as to whether the midge has had its day, or has only been kept back for one season by the unusual character of the weather, it will be well for farmers to still continue to sow largely of the best midge-proof varieties of winter wheat, such as the Diehl, Treadwell, or

Michigan amber. Many new varieties have been tried this year by various parties who have imported seed from Europe or the States; but as yet little is known about them, and a single year's trial furnishes no conclusive evidence of success or failure. Some years ago we sowed in the garden a small sample of very fine wheat brought from Australia. It did fairly, and it seemed as if it would succeed; but the next year we had the produce sown in the corner of a wheatfield, on a light dry soil, and every plant was killed out by the frost the following winter—not one remained from which to raise a single grain. If wheat is sown early, say from the last of August to the 15th September, less seed is required than if sown later. By using a seed drill, only one and a quarter bushels of seed per acre will be necessary; if sown broadcast, about one and three quarter bushels will be required. These quantities should be increased about ten per cent. for every week beyond the 15th of September at which the grain is sown.

In giving the last ploughing to the land intended for winter wheat, it is well to pay some attention to the lie of the surface and the nature of the subsoil. Where the land has not been underdrained, it will often prove retentive of surface water in certain spots. In ploughing for the last time, great care should be taken to make the ridges or lands somewhat narrow, and give a gentle slope from the ridge towards the furrow, and all the furrows should run diagonally across the natural slope of the land, giving a free outlet towards the lower end to all surface water. The lands should be harrowed only lengthwise, and as soon as the seeding is done, clean out the furrows with a plough, and with a handrake level down the slight ridge of earth then thrown out on each side. Then give a good outfall