

excess of humidity, even when the surface of shallow soils would be drenched with moisture. Deep land retains the moisture which they have absorbed for a considerable period, and communicates it to the surface when that becomes parched and dried up. Nor is this advantage confined to the extent to which the roots of the plants reach; I am well convinced of this from having noticed that during a long period of dry weather, a crop of grain, growing upon land that had some years before been dug up to the depth of three feet, suffered much less than another that grew on a soil only a foot and a half deep, although both of these soils had received exactly the same amount of cultivation and preparation.

Nor is this all; crops of grain growing on deep soils suffer much less from sudden changes of temperature, from drought, or from heat; because their roots being able to penetrate farther, are less subject to the action of these influences, than they would if nearer to the surface. During excessively hot or very dry weather, it is evident that the plants are much fresher in deep than in shallow soils. Lastly, it has been everywhere remarked that corn growing upon deep soils is much less liable to be laid even when very luxuriant in vegetation; this is, no doubt, owing to the greater degree of strength which the depth of the roots gives to the lower part of the stalks, a strength which corn growing upon a shallow soil never can attain, because then the fresh shoots put forth by plants growing closely together, cannot find sufficient nutriment to enable them to attain their full vigour. Nor is it to grain crops alone that the depth of soil is beneficial; it is not less favourable to the cultivation of plants the roots of which penetrate deeper into the soil and seek their nourishment beyond the level occupied by the roots of grain crops. This is the reason why a deeper than is absolutely necessary for the cultivation of grain crops, is always desirable, to make it more suitable for root crops. But if we would have a soil attain all these advantages, and permanently possess them, it is requisite that from time to time it should be ploughed to the very bottom of its vegetable layer, turned over, loosened, and every part submitted to the vivifying and beneficial action of the atmosphere. Unless this is done, it will, if nearly superficially ploughed, generally lose all those advantages of which we have been speaking; a hard crust or pan will be formed immediately beneath the sphere of the plough's action, which cuts off the earth beneath from all communication with the atmosphere and with the vegetable mould. Experience has convinced me that it is not necessary that this deep ploughing should take place every year, but only that it should be repeated once in six or seven years, especially if, during the interval, the depth of the ploughings given to it are varied, for nothing contributes so materially to form the crust of which we have spoken as repeated ploughings of equal depth. "It appears that the alternate cul-

tivation of grain and of corn crops, the tuberculous roots of which penetrate further than the others, likewise contributes towards the loosening of the inferior layer of the soil, and maintaining its communication with the upper and superior layer. Land ought, therefore, to be ploughed every seven years to the very bottom of its layer of vegetable soil; and the intervening ploughings may be more or less superficial, and varied in their depth, according to the purpose for which they are bestowed."

The foregoing extract from Thae, although copied from a book, may be read with advantage by the most experienced farmers in Canada. It clearly shows the necessity and advantage of ploughing the soil in a very different manner from the general mode adopted here. Indeed there are few fields in Canada ploughed according to Thae's plan, and we have no hesitation in saying that it would be most desirable that all deep soils should be ploughed in the manner pointed out above, provided the land was sufficiently drained.

TEMPLEMOYLE SEMINARY.

An agricultural seminary has existed at Templemoyle, in the county of Londonderry, for some years. It originated with the members of the North-West of Ireland Farming Society, and in it the sons of farmers and tradesmen are taught agriculture.

"The formation of this establishment has caused its founders an expenditure of above £4,000, of which about £3,000 were raised at its commencement by shares of £25 each, taken by the noblemen, and gentlemen, and members of the North-west Society. The Grocers' Company of London, on whose estate it is situated, have been most liberal in their assistance, and have earned a just reward in the improvement of their property, by the valuable example in the farm of Templemoyle presents to their tenantry. In sending a pupil to Templemoyle, it is necessary to have a nomination from one of the shareholders, or from a subscriber of £2 annually. The annual payment for pupils is £10, and for this trifling sum they are found in board, lodging, and washing, and are educated so as to fit them for land-stewards, directing agents, practical farmers, schoolmasters, and clerks. From fifteen to seventeen is the age best suited to entrance at Templemoyle, as three years are quite sufficient to qualify a student possessed of ordinary talents, and a knowledge of the rudiments of reading and writing, to occupy any of the above situations."—*Stephens' Book of the Farm.*