

above the mediocrity of Canadian farmers, in point of general skill and intelligence, and had early adopted the plan of cultivating alternate crops of clover and wheat. The crops on the ground were in a most flourishing state, and the whole face of the country bespoke an abundance of every thing which is calculated to cheer the heart of man.—As a mark of the good sense of the farmers of that part of the country, the ploughings have been always carried to one depth,—the depth of the surface soil forming the line of demarcation—and a pan or hard crust has thus been formed underneath, which both secures the manures from being carried down below that part which has been actually tilled, and also prevents the escape of humidity from the upper stratum. We mention this fact, to give our readers some idea of the importance of studying "nature's wants," and the cautiousness requisite to enable a man to successfully carry out experiments. If the farmers in the Long Point District, or in any other portion where sandy lands abound, should have tried the experiment of deep ploughing, upon the recommendation of the *Cultivator* and the result had proved unfavourable, instead of being beneficial, the blame would have been attached to us.

On many soils, and situations, much good would result from deep ploughing, especially for the wheat plant, and pease; and we are also of opinion, that peculiar soils cannot be stirred too deep, nor too often, for the benefit of the crop; but we conceive that the most judicious means for the untutored agriculturist to add to the depth of their soil, would be, to add little by little with each autumn ploughing, which will gradually tend to increase the depth of the vegetative mould by the mixture of small quantities of the virgin earth of the subsoil with the surface, and thus ultimately gain the desired object, without any risk or loss. If each farmer was qualified to practically analyze the qualities of the subsoil, he would at once know whether he could profitably bring it up to the surface or not. An experiment or two with a few square yards or rods, would determine the thing at once. Such of the Canadian farmers who desire to profit by their calling, would do well to look into this matter, and as a stimulus for such a laudable movement, we would mention one fact for their consideration. Much of the land which is called maple, beech, and elm land, has a deep black soil on the surface, and a remarkably rich chocolate-coloured greasy subsoil. If it were not for the abundance of potash, carbon, and sulphate of ammonia, which is present on all newly cleared lands from the forest, the wheat would not ripen, but would be a mass of useless straw. By constant and frequent cropping the vital principles of vegetation in the soil become exhausted, and the soil becomes as inactive, although of a deep black colour, as though it were a mass of rotten wood.—If it were possible to remove this from the surface, and by exposing the subsoil of the above description, to the action of frost and air, the produce from such land would be most certain and abundant. If the subsoil be thoroughly incorporated with the worn out surface soil, the two blended together will give a countenance to the soil, which will render it suitable for autumn and spring crops. For the want of a little discretion in this particular, the deepest and best lands in the country have grown more and more into disrepute, and the light soils have become celebrated for the growth of winter wheat. We are almost inclined to the opinion, that subsoil ploughing might answer a good purpose, unaccompanied with thorough draining,

providing the subsoil be of a permeable nature.—Our earnest attention shall be devoted to this subject, and as soon as circumstances will admit, we will purchase a subsoil plough, for the purpose of instituting a few experiments, to test its adaptation to the soil we cultivate.

There are many persons who are in the occupation of land in this country, who have been bred to professions, trades, and at dally labour in cities, who are not sufficiently well acquainted with the practice of agriculture, to know whether work be well done or not, to whom a few observations on the details of ploughing, might not be considered misapplied. While we attempt to treat on the subject, as though the reader really required instruction, we, at the same time, shall endeavour to communicate our ideas in such a style, as will both please and instruct, a class of readers for whom we have the highest regard, viz., the juvenile class, or the farmers' sons.

Every man was not born for a ploughman:—there are many who have much conceit of their capability of holding the plough in a masterly manner, but there are very few who deserve the appellation of good ploughmen. There is, in fact, a certain degree of taste in ploughing, as well as in every occupation a, kind of tact, which is difficult to be taught, and hardly to be acquired, unless the learner evince a great amount of ambition or desire to shine in that department; notwithstanding this, certain rules or broad principles may be laid down, which, if honestly acted up to, will enable the most un instructed to become able, at least, to do the work in a creditable style. The first care of a young beginner is to make the ridges straight, in which he will be much assisted if, instead of depending wholly on the accuracy of his sight, he, when ploughing with a pair of horses, puts a cross-bar between the cheeks of the bridles, so as to keep the horses precisely at the same distance from each other, and then setting up a pole at the end of the furrow, exactly measured to the same line as that from which he starts, fixes his eyes steadily upon it, and carries the plough in a direction precisely to that point. When the land is hilly, or so undulating that the ploughman cannot clearly see the stake from one end of the field to the other, a greater number of stakes will be required to be set in the line of direction, but, in all cases, where the stake can be distinctly seen throughout the entire length of the field, the most perfect plan is to sight at some object at a farther distance than the stake,—both shall be kept in a straight line with each other, and the furrow will most certainly be straight. Although ploughing the first furrow straight is a very important object, yet the regularity of the furrows, and the finishing of the ridge neatly, are of still more importance. An idea is generally entertained that the position in which the furrow sods are laid depends on the form of the mould-board, but, although this is partially the case, it depends more on the breadth and depth of the furrow. Ploughs of an ordinary form will lay the furrows on an angle of about forty-five or fifty degrees, if the land be ploughed in about the proportion of three to two, that is, if a furrow of nine inches in breadth be carried to six inches in depth.

Some ploughmen have imbibed a remarkably bad habit of leaning on the left stilt, which gives the bottom of the furrow a slope towards the land side,—a portion of the land is thus unstirred, or only ploughed to the depth of two or three inches, and consequently the tillage is imperfectly

performed. An instance of this kind of ploughing, was a subject of much remark at the last Home District Ploughing Match. The work in every other respect but this, was done most exquisitely, but the newly ploughed land instead of being compact, appeared to be spongy and very objectionable to the best judges on the ground.

The perfection of good ploughing can only be attained by practice, notwithstanding, certain rules may be laid down, as worthy of being observed by every one who means to become proficient in the performance of this work. The following will be found to be of much service to the beginner.

The horses should be harnessed as near to the plough as they can be placed, without impeding the freedom of their step; for the closer they are to the point of draught, the less exertion will be required to overcome the resistance. The most powerful horse should be worked in the furrow.—They should be kept going, when at work, at as regular and as good a pace as the nature of the work will permit. The desired breadth and depth of the furrow should be ascertained, and the plough should be held upright, bearing equally all along in a straight line without swerving to either side. The edge of the coulter should be set directly forward, so that the land side of it may run on a parallel line with the land side of the head, and in such a position that the cut of the land side of the shear and coulter may exactly correspond. The ploughman should walk with his body as nearly as possible upright, without leaning in a lounging manner on the stilts, and without using force to any part, further than may be absolutely necessary, to keep the implement steadily in a direct line. He should also be sparing of his voice, and not be constantly hollering which only disturbs the team.

The great importance of the subject under discussion, has caused us to extend the bounds of this article to a much greater length than we anticipated, when we commenced it; and we have only a few words more to add regarding the best method of carrying out the operation of ploughing.

The breadth and form of the ridge must depend both upon the nature of the soil, and the mode of culture to which it is subjected. The most common width, on land of ordinary quality and cultivation, is from 18 to 36 feet, each being intersected by a deep furrow, and they should be formed in a slightly convex shape, with the intention of draining the superabundant water from the surface.—This being less necessary on dry ground, than on that which lies wet, the ridges are in that case much broader, and laid proportionably level.—These remarks are, of course, intended to apply to autumn ploughing, as we have over and over stated, that the ridges for fall sown wheat should not be over four yards wide at the most, especially on close retentive soils.

If the land be at all grassy, it is essentially necessary before the crown of the ridge be formed, to open out a light furrow each way in the precise place for the crown; otherwise either the centre of the land or ridge must remain unploughed; it should however be observed that this practice is only followed by the very best farmers in the country; and those who have got good ploughmen under their employ.

We trust that what has been said will elicit a spirit of improvement among the farmers sufficient at least, to give countenance to an annual ploughing match, to be held in each township;—and the introduction of a better description of plough,