

viating from the old path, I would say, import a dynamometer, and test ploughs on the ground, and let the farmers see how many useless pounds of horse-flesh they are annually throwing away, by employing the old swing wedge shaped ploughs, instead of the lever shaped wheel ploughs of Messrs. Howard or Ramsome & Sims. Referring once more to the duty on machinery, there is no reason why the splendid clay lands about Newport should not be brought into cultivation by the steam plough, earning thirty per cent. in the way Mr. Prout has in England, but the duty alone would come to something like three hundred pounds. I see if I ever want to publish I must finish, but I have not said one half that I wish to. I cannot go into practical drainage in this article, and any thinking man must see how subordinate it is to the subject on which this article mainly bears. To condense as much as possible, few men possess sufficient capital to own, drain, manure and work their farms, to give the most profitable returns; wherever this is the case it is to the advantage of the farmer to borrow capital to work one or more properties, to release his own and substitute that of some one else, as a farm unworked and unmanured can only be compared to a store without goods. But referring to the remarks of Mr. Dickson. Farmers should recollect that mortgaging for the purpose of drainage is dangerous, and not by any means as safe as a ten year's lease under a landlord, unless the farmer has other securities to fall back upon, for the following reasons: everything appears to run riot, to use a sporting term, after drainage; the increased warmth of the land starts every weed seed, the accumulation of perhaps centuries, growing, and the farmer, unless he keeps good control over his crops, may have the mortification of seeing an immense mass of rubbish, instead of valuable grain; this will not pay interest money, and consequently the straightened circumstance of a poor man, might be taken advantage of. With a ten year's lease, as almost every landlord knows more or less of the principle of agriculture, except in cases of gross carelessness in the tenant neglecting to clean his crops, no advantage would be taken of a bad season, the same would be the case with Government Security, the object being to increase the general prosperity of the country.

A few more remarks and I have done for the present. Should the Legislature advance money for draining, as it certainly will ultimately and the sooner the better for its own credit, the security should not be the farm but the drainage itself, thus leaving the farm itself to be mortgaged, to work the drained farm or supply tenant's capital. I know that this is taking a very advanced and liberal

view of the whole subject, but not one bit more than the exigency of the case requires, for I have shown that if, according to the experiments shown above, the land does deteriorate in that ratio, that the thorough restoring the land to its old state of fertility is almost an impossibility, and consequently the best that a farmer can do is to keep up his balance of fertility from hand to mouth; this necessitates increased facilities for purchasing, feeding stock, purchased food, arrangements for saving manure, &c., &c., all requiring tenant's or working capital. As many may think that my idea of the rapid deterioration of the land is simply the working of a morbid imagination, let them take an extensive drive through the country, particularly where the clay soil predominates, and question the farmers themselves, and see how many would sell out before they are starved out. Look at the articles in the different Agricultural Journals, one long article in the *Maine Farmer*, headed, What shall we do to be saved? This article points out the seat of the disease very plainly, but the remedy is very absurd, the farms are to be restored by farmers going more into specialties, keeping sheep, and raising fruit, as if sheep did not draw on phosphate and nitrogen as much as anything else, and as regards fruit, I think it is the Rev. Ward Beecher, once a great advocate for raising it, stated that after years of experience, he had come to the conclusion, that, it paid about as well as anything else, when the same time, trouble, skill and capital were employed in raising it.

I must now close with the following apology for taking so much of your room up. When first I commenced tile draining a scientific gentleman, then resident in Windsor, who took great interest in my operations, remarked, that it would not be long before every one would follow my example. I confessed to having great doubts. He then told me how rapidly these improvements had been taken up in the poorest parts of Scotland, remarking that surely the residents about Windsor would be as enterprising and intelligent. Time has shown that my doubts were not without foundation; considering that my draining was successful in every way, and appears to be universally approved of by all the practical farmers, it seemed strange that it had not been more universally carried out. I have given the reasons to the best of my ability, that is the thorough ignorance as to the application of farm capital, I know that to a certain extent this article is rambling and egotistical, the former I cannot help, as writing for the press is not my business and I have tackled a very deep subject; as regards the latter I had to refer to myself as being the only one I know of who has completely deviated from the beaten track. Although it does

not belong to this article, I cannot close without one illustration of the indirect advantages of draining; last year I practiced an easy method of getting out turnips, much in vogue in England, by ploughing out with a very broad shear, cutting the tap root, but the men complained that it made it inconvenient to get hold of the top, so this year by way of improvement, we fixed broad chisel shaped blades to wooden handles, and with one of these implements a man can top as fast as he can walk; the plough then follows and leaves the turnips on the ground, with nothing more to be done than to pick them up and throw them into a cart. This was carried on successfully wherever the land was drained, but, on a small undrained piece the old tedious, expensive operation of pulling had to be resorted to.

Any remarks made in this article that may appear to be offensive, must be taken in the fair spirit of criticism in which they are offered; the writer does not pretend to censure anybody, believing that the Central Board have always conscientiously performed their duty to the best of their ability, but the restoring, or rather forcing agriculture into the position it should hold will require a great deal of mental labor, and the united efforts of the whole country.

MR. CARR'S ACCOUNT OF THE SHORT HORNS OF HILLHURST, COMPTON, QUEBEC.

(From Bell's Weekly Messenger.)

Mr. Cochrane's farm of Hillhurst now consists of about 1000 acres of fine rolling land, almost in one block, and well watered with springs and brooks, the haunt of many a speckled trout. It lies between two picture-que valleys, about three miles from the Compton station of the Grand Trunk Railway of Canada 110 miles east of Montreal, 120 south of Quebec, and 18 north of the boundary line between Canada and the United States. The soil is, for the most part, a fine, deep, gravelly loam, well adapted to the growth of grass, spring Wheat, and Turnips, which are the principal crops, though Oats, Barley, and Indian Corn are also cultivated to a smaller extent. About 500 acres are in permanent meadow and pasture, the herbage of which is luxuriant and vividly green, with a close spontaneous undergrowth of white Clover, which appears to make the sheep and lambs only too fat. Nearly 150 acres are under a course of rotation. The remaining portion of the estate is chiefly woodland, and ground marshy from springs, or cluttered with forest stumps and glacial boulders. Much of this woodland is Maple, valuable for the extraction of sugar, the annual yield of which on