

Surface Drainage.

From a late number of *The Mark Lane Express*, we copy the following:—

"It is now generally admitted, by all those who are competent to give an opinion, that draining is the most important improvement of the soil that can be adopted. The operation may be divided into two departments—Surface Drainage, and Main Drainage. By the former, lands under cultivation will be rendered capable of producing a much larger accruable quantity of produce; and by the latter, many tracts of land constantly under water, or frequently flooded, will be rendered permanent by production. Speaking of Surface Draining, Mr. Dudgeon says:—'Taking the arable land alone of the Empire, we may well conclude there are not less than what would be equal to 10,000,000 acres annually under crop, to which the improvements of thorough draining and its accessories might be profitably applied, and with immense advantage to the nation's comfort and pecuniary resources. From what is known of the effects of those operations, on different kinds of soil, I consider that I am within the mark in estimating the result of their application on so extended a scale as I have contemplated, as equal to an average of fully eight bushels an acre. Indeed, Mr. Smith states, the effect of such improvements upon the most unpromising sterile soil, as exhibiting a return of sixteen bushels an acre higher than the average assumed by Mr. McCulloch for the arable land of all England; and, in point of fact, to justify the expense of all those operations, we are warranted in assuming to the full the increase I have supposed.—This, then, without having recourse to new soils, would give an addition to the annual produce of the Empire of 10,000,000 quarters—an amount about ten times larger than our average annual importations for the last forty years.' Here is a source of improvement involving the profitable employment of from fifty to sixty millions in labour, and affording means for continuing the permanent employment of that labour."

We have for long been convinced that there is not any improvement more required in Canadian agriculture, than more perfect Surface Draining, and Main Drainage.—Good farming, or productive crops, we never can have on land that is not sufficiently drained. In this climate in particular, the soil never can be in a proper state for arable culture, if it is not drained. And how can we expect that plants will thrive and find nutriment in a soil that is at one time saturated with moisture, and at another time, dried and hardened by the effects of excessive heat and drought. When the soil is properly drained, ploughed land will not become hard, but remain loose and open, and receive the full benefit of the dew, and light summer showers, that are so well calculated to nourish and preserve, in a healthy state, the plants growing upon it. The tender and delicate roots of plants cannot extend, or collect sufficient nutriment in a hard soil, which neither dew nor slight showers can penetrate; and soil not sufficiently drained, will be sure to become hard in the summer heat we have in this country. In passing through the country in the summer season, it is easy to observe the destructive effects of the want of draining, on lands that are naturally flat, and the soil of strong quality.

Last year, in particular, we had an opportunity of seeing the crops of grain growing upon such lands, and we believe, in many instances, they would not produce the seed sown. How could it be otherwise? as from what we could see of these lands, the soil must have been in a wet and unfit state for sowing and harrowing, when the seed was put in the ground. No wonder the crop should be bad.

INSURANCE OF FARMING BUILDINGS AND STOCK.

We perceive, by *The Mark Lane Express*, that Insurance can be effected in England, on houses and farming stock, at extremely low rates, compared with what farmers have to pay in Canada, for the same description of property. In England, farming stock are insured without the Average Clause, at 1s. 6d. per cent.—no duty. Private houses, not hazardous, 1s. 6d. per cent. Hazardous, 2s. 6d. per cent. Double hazardous, subject to special agreement. In Canada, we pay rates of insurance on farming stock, buildings, and their contents, ten times the amount per cent. that is paid in England. We cannot see any reasonable cause for this great difference in the rate of insurance. Indeed, we believe, that farming stock and buildings, are more subject to casualties, by fire, in the British Isles, than in Canada.—Why is it that we should not have "A Farmers' General Fire Insurance Institution" in Canada.

ACQUISITION OF PROPERTY.

There is something healthful to the human mind in the possession of a portion of the earth. Property of other kinds is easily squandered or dissipated, and never can give rise to those feelings of attachment which spring up in the minds, even of the lowest of mankind, with the acquisition of property in land. The incessant labour which it requires; the habits of solitude or of domestic society to which it gives rise; the permanence of the object itself; all tend to introduce habits of foresight and attention, and to check that propensity to present indulgences from which so much misery arises to the lower orders.

The great difference between the effects of property in land and in money upon the human character, consists in the superior facility of dissipation which the latter possesses. The proprietor of a field cannot convert it into money, or render it the means of indulging individual gratification, without disposing of it to a purchaser, or burdening it with debt. But either of these is a great and decisive step, sometimes drawing after it a change of residence, an alteration of employment, and probably the sacrifice of habits of feelings of attachment. Men pause before they take so serious a step, or indulge in the habits likely to render it necessary. But the case is totally different with the possessor of a sum of money; it melts away insensibly with the indulgence of taste for dissipation, and can be entirely spent without involving a change of home, a sacrifice of affection, or alteration of employment. Every person must have felt himself, or witnessed in others, the great difference between the facility with which an individual in the higher ranks draws upon a bank, or spends money in his possession, and

disposes of his estate; and hence the importance which the friends of every man of improvident habits attaches to getting part of his professional earnings invested in land, or a house, or some other permanent object. —*Alison on Population.*

THE COMPARATIVE ADVANTAGE OF FEEDING CATTLE WITH GRAIN OR OIL CAKE.

If the farmer was a friend to himself, the preferable mode of fattening, was to feed the animal with the good and clean produce of his own farm. When in the English markets, beans can be purchased at 15s., and barley at 13s. per coomb, of 4 bushels, it is recommended decidedly to feed with farm produce. It is the opinion of eminent feeders of cattle, that to feed a beast for a prize, corn is preferable to oil-cake; for independently of the cheapness of the one, the exact composition of the oil-cake sold in England was not known; and besides, feeding stock with corn, was beneficial to the farmer, as it was creating a market for his own produce.

A Farmer states further:—

I gave my feeding beasts ground corn for several years with success, particularly bean meal; I also used barley and wheat meal; which, when I gave to them without a large proportion of bean meal, disagreed with them, causing them scour; but three years ago, having a quantity of inferior barley, and no beans, I determined to try whether the boiling of the barley would prevent the effects the meal produced on the bowels. The trial was so successful that I continued feeding with boiled barley ever since; and this year I have six beasts feeding on boiled barley, superior to any I have seen in the neighbourhood fed on oil-cake; and so convinced was a friend who saw them very lately, of the superior condition of mine to his, which are feeding on oil-cake, that he expressed his intention of immediately following my example.

The method of boiling the barley is as follows:—To two quarts of water add one of barley, then boil it slowly; when it boils add no more fuel, but let it remain in the vessel closely covered; at the end of forty-eight hours take it out to cool, and if properly done, it will have imbibed all the water, every corn will be burst and in a jelly-like state; this mix with chaff, and afterwards, give hay to assist rumination. My six beasts, each weighing from 50 to 60 stone, (14 lbs. to the stone), consume two bushels of barley per day, worth at market 3s. per bushel. The cost of boiling, now coals are selling at 1s. 6d. per cwt., is 1½d. per bushel.

It would be very desirable that farmers should try the above experiment, and we doubt not of its complete success. We would also recommend ground oats to be used in fattening cattle. Half a bushel of ground oats, of moderate quality, would be a good allowance for a common sized ox or cow, given in three mashes. We will take upon us to say, that with good hay and proper attention, cattle will fatten as well and at as little expense, fed on ground oats, as on any other food they can be fed on in British America, and it would be the most profitable market for this sort of grain.

In the Victualling department at Portsmouth, an eye witness reports that, corn was bought, ground, cleaned, mixed, rolled, cut into shape, stamped with the Queen's mark, baked, taken out, and carried into the stores, in thirty-three minutes.