

Burnt Land.

To the Editor.

SIR,—Having lately noticed some articles in the FARMER respecting burnt land, I offer what little experience I have had for the benefit of those who, like myself, have had their standing timber destroyed by those destructive fires which sometimes occur in our Canadian forests. The recommendation to sow barley for a first crop I have no doubt is good, when any black soil is left; but when nothing remains but the hard clay loam, I should be unwilling to try it, as such soils retain the water too long in the spring, and when the hot weather sets in the soil becomes baked hard, and cracked in every direction, and unless the barley had time to cover the ground well, the crop would hardly be worth harvesting.

The first piece of such land I cleared was ploughed in the fall and sown the next year with spring wheat, but although the spring was favourable, the crop was not worth much. The stubble was ploughed in the fall, and sown the next spring with peas at the rate of three bushels to the acre. The summer proved showery, and the pea stalks grew to a length of eight or nine feet, and were heavily podded; the weeds were completely smothered, and the soil mellowed, so that it was much easier to plough. The next piece I sowed with fall wheat, ploughing the ground as soon as I could get it cleared, and sowed early red clover, very early in the spring. The clover took well, and it would have been better to have ploughed it in last year, but, as is frequently the case on bush farms, I had not sufficient meadow, so I cut it for hay, and in September tried to plough in the after-grass, then over a foot high, but the ground was so hard I had to desist, and cut the after-grass for fodder. In November, when the ground was soft enough to admit of being ploughed about four inches deep, the clover was about six inches high, and I found the clover roots had penetrated the hard pan about 6 or 8 inches. This year I sowed peas, but owing to the extraordinary drought the straw was very short but well podded, and the pods well filled. In 1869 I had a ten acre field cleared and sown with the Treadwell fall wheat, and in the following spring I sowed early red clover at the rate of 12 lbs. to the acre. In some places two ploughings could not go more than two inches deep, and in those places the wheat was winter killed, but the greater part came on well, and I had a fair crop. The clover took well except on the hard places, and these I harrowed after harvest, and sowed clover again, and this year, in spite of the drought, I had a fair crop of clover hay. Last fall I cleared another field, and sowed the Treadwell wheat at the rate of two bushels to the acre. Scarcely any was killed, and though the crop is of course not so good as on unburnt land, yet the grain is an excellent sample, and weighs much heavier than last year; but as the clover sown last spring failed, I have ploughed in the stubble for peas next year, and in future shall sow such ground first with fall wheat and clover, then peas, followed by fall wheat, with clover again.

SARAWAK.

Dissolving Bones.

To the Editor.

SIR,—I beg to submit to you a few hints on the decomposing of bones, for the guidance of those of your readers who may be unacquainted with the process.

In the old country, where bone manure is extensively used, various plans have been adopted to secure their ready decomposition. But to chemistry, the practical farmer is chiefly indebted for that method of effecting their decomposition which has of late years been adopted, with the most signal success. To Baron Liebig the agriculturist owes a deep debt of gratitude for the service he has done the agricultural world in pointing out the benefits which science is capable of rendering to the farmer. He says, in his report on the Chemistry of Agriculture: "The most easy and practical method of effecting the division of bones is to pour over them half their weight of sulphuric acid, diluted with three or four parts of water, and after they have been digested for some time, to add about one hundred parts of water, and to sprinkle the mixture before the plough. In a few seconds the free acids unite with the gases contained in the earth, and a neutral salt is formed in a state of very fine division."

But the difficulty of applying liquid manure suggested other methods, which are now generally adopted. It is found that by mixing the liquid with dry saw-dust, or even dry earth, it is converted into a form more conveniently used by farmers.

The following method for the preparation of bones can be recommended.

The bones to be used should be broken as small as possible; they cannot be too small as the smaller the pieces the greater the surface presented to the action of the acid, and consequently the more rapid and perfect will be the solution. Having broken the bones into pieces from one to two inches in length, place them in a large cask or sugar hogshead, add a quantity of water sufficient to moisten the bones, and allow them to soak in it for three or four hours before adding the acid; if the water be boiling, so much the better; then add the acid, and stir it well with the bones. Sulphuric acid is the acid most commonly used; its specific gravity from the manufactory ought to be 1.845; it should be kept in closed vessels, as it attracts moisture rapidly from the atmosphere, and becomes weaker. When strong acid is added to water, a considerable amount of heat is produced. If we mix vitriol and water in the proportion of 5 lbs. of acid to 2 lbs. water, the temperature will rise to 266 degrees.

The proportion of acid to be used in making vitriolized bone manure is one hundred weight of acid for every two hundred weight of bones, and the proportion of water should be fully three times that of the acid. The water must be applied first to the bones, afterwards the acid. The reason of this is, that when undiluted sulphuric acid is poured

upon the bones, violent action ensues, but continues only for a short time; as a coating of gypsum, which is the first new compound formed, covers the surface of the crushed bones with a crust, which prevents the acid from coming in contact with the unaltered portions, and consequently preventing a perfect solution. But by applying the water first, and afterwards adding the acid, the action is complete.

A. GORDON.

Fitzroy, Co. Carleton, Nov. 11.

Wild Oats.

At this season nothing is more advisable about a barn than to carefully guard against the distribution of wild oats. They are propagated and distributed in every possible and conceivable manner. A horse or an ox may eat them, and they will grow afterwards nevertheless. These pests never die of themselves. They will bear an excellent crop of seed when only four inches high above the ground; that is, after being cut at harvest. The young plants throwing off shoots and sprouts again the same fall, they will even then mature good seed. Wild oats will remain ungerminated underground upwards of ten years without decaying in the least; and a certain meadow on our farm, if ploughed up now, would bear as good a crop as it ever did. It has lain eleven years in grass, and not one oat has been seen for more than eight years, except where a heap of rails or haystack bottom happens to be built; then, next year, "presto," up comes the wild oats again, as thick as ever, directly the sod is killed from any cause. The most fruitful sources of distribution are the thrashing machines. The beards of the oats are furnished with hooks and hairs, so arranged by nature that the grain, many people absolutely declare, will travel forward itself, and adhere to everything it touches; certainly it will do so if moved a little from any cause; so there cannot be two opinions about wild oats, and unceasing efforts should certainly be made to collect every grain and burn them. Do not even grind them. Boiling will do for them, I believe, provided they are absolutely boiled for some time; but it often happens they are only subjected to steeping in water, not boiling, and under this treatment they thrive all the better. It looks like extravagance to burn 10 or 20 bushels of oats, and I have often seen as many obtained from one fall's thrashing, where the land has been badly infested, but it is the best and cheapest policy to do so at once and effectually.

There are many ways said to lessen their production, and some to kill them, but it is very difficult to do so under any circumstances; still, it can be done, and effectually also, as shall proceed to show in a future paper on the subject. At present we have more particularly to do with prevention than cure, this being the season best adapted for that precaution.