

The Field and Farm Yard.

DRAINING—ITS INFLUENCE IN PREPARING THE LAND FOR CULTURE AND MANURES.

Over a great portion of the surface of Britain the land is a perfect illustration of the evils of no drainage.—There is a hardened "pan" about 6 inches down, through which there is no exit for the melted snows. Even yet the thaw has scarcely overcome the frost, and till then the soil, so far as it is melted, must continue water-logged. When once the frozen layer has been fairly penetrated, then on all drained land we shall in the course of 48 hours, see the full advantage which such a condition gives it. Now little better than a puddle, it will then tread firm, and permit the use of implements of husbandry which would at present only poach it into mortar.

Those are wise who wait until the land is perfectly fit to work. Any attempt to gain lost time by too hurried a recommencement of either seed or tillage operations will be mischievous. Let the soil become firm and dry again before the plough is set to work; and it will turn over land already "tilled" by frost, without spoiling the good effect of the "tillage" it has thus received. But squeeze or knead or stir the soil thus loosened while it still is full of water, and you will effectually spoil it for the season.

The special conditions of Agriculture in these islands are a stiff soil and a moist atmosphere.

Look Europe over, and you will not see these conditions elsewhere such as they are with us. No where else does these three questions press with the same emphasis, under the same modifications upon the attention of the land owner and farmer. And they are more intimately connected together than their general treatment either by the agricultural or the non-agricultural world, would at first sight, lead any one to suppose. Travelers in France, Belgium, Tuscany, or China, who admonish us of the value, and effective application of sewage in those countries, almost invariably omit to notice the *non sequitur* which a moist climate and a stiff soil place, like an extinguisher upon most of their calculations and conclusions. Something of the same kind of pretermission seems to run through all the discussions, and most of the writing upon steam culture. As it is upon the heavier soils that this great auxiliary of Spring and Autumn cultivation is preeminently needed, so it is upon the lighter and drier districts of the kingdom that profitable results are to be, if any where looked for from profusely diluted manures.

It is difficult to make a sanguine improver clearly understand that let a fertilizer be ever so precious in itself, it may

like the pearl in Cleopatra's cup, be lost to all practical and commercial use, by mere solution, having become in fact more costly to restore, and apply, than its intrinsic value will repay. There still are rivers in whose sands like those of the once-famed Pactolus, gold-dust runs that will not repay the labour of separation. Ammonia, and the Sulphates and Phosphates are very precious; but they are not more precious than gold; nor, in like case, able to repay the costly labour of extraction, by chemical or mechanical reagents. This, at least, is the true point to be objectively kept in view, not the intrinsic but the relative, or resulting value; not the market-price of the metal, but whether it will pay for smelting from the ore. Wherever there is, under a dry climate, a light thirsty soil, free enough to filter off the fluid part, yet close enough to absorb that essence—volatile as it is precious—the Ammonia, from sewage water,—there let enthusiasts glorify its value. But under our skies, and upon our retentive soils, one word about solids, how to deal with them, is worth five upon liquids, except how to get rid of them.—*Agricultural Gazette.*

CULTIVATION AND MANUFACTURE OF FLAX.

The demand for fibres, both of animal and vegetable origins, has of late years been greatly increasing. This circumstance has led to an extension of flocks in many countries, and to the growth of fibre plants.—Although there are several fibre plants well suited to our climate, yet Flax is likely to prove the most important and most useful one. Its culture has been revived in Ireland as well as in England and Scotland, and in Canada great efforts have been made, both by public Boards and private individuals to render its culture more general. The editors of the *Canadian Farmer* have given a useful account of the establishments carried on by the Messrs Perine at Doon, and other parts of Upper Canada, from which we extract the following details. The moister climate of Nova Scotia, and the character of its numerous streams, point it out as even better suited for flax culture and preparation than Upper Canada:—

"As actual trial demonstrated the practicability and profitableness of the undertaking other points beside Doon were sought as centres of operation, and Mr. W. D. Perine was joined by his two brothers, the trio forming the firm now carrying on business as Perine Brothers. They have at present four scutching mills at work in Upper Canada, located respectively at Doon, Conestogo, Drayton, and Baden. At Baden the premises are rented, but at the other places the works are owned by the firm. They consume at these establishments the product of about

1500 acres of land annually, tilling about 200 acres themselves, and depending upon the adjacent farmers for the balance. They have enlarged their business to its present dimensions mainly by a quiet exhibition of the advantages of flax culture, in the way of personal intercourse with the farmers, whom they visit, and encourage by placing facts and figures before them, loaning them seed, and pledging them a market for the crop. They have no difficulty now in obtaining all the raw material they want. The results on the whole have been such as to encourage the Messrs. Perine, and induce them not only to increase the number of their scutching mills, but to import machinery for the manufacture of linen. This most useful plant accommodates itself to almost all the climates of the world, and may be grown successfully upon any soil of ordinary productive capacity. After thorough trial of every description of land from light sand to heavy clay, the Messrs. Perine are of opinion that flax does best on a strong loam, somewhat inclined to clay. They recommend about 70 lbs.* of seed per acre as the quantity to be used when the plant is raised for both seed and fibre. In Canada the last week in April or the first week in May, may be set down as the proper time for sowing. Seasons vary, however; and nothing is gained by hurrying in the seed before the land is in proper tilth, which is sometimes as late as the second or third week in May. About the middle or end of July, the crop will be ready for pulling, a process usually performed by hand. In Ohio it is a very common practice to cut flax with a mowing machine, but this is objectionable, as it wastes a portion of the fibre, and leaves butt ends which are troublesome to the spinner and manufacturer. A flax-pulling machine which will supersede the necessarily slow hand process is greatly needed. The inventor of such a machine would be sure to make a fortune by his patent. In the meantime, hand-pulling must needs be the prevalent mode of gathering the crop.

The average yield of flax is from one-and-a-half to two tons of green straw per acre,—or about one ton when rotted,—and 12 bushels of seed. Green straw is worth about \$6 per ton, at the scutching mill, and rotted straw \$10. Flax seed is worth on the average \$1 25 per bushel. At present it commands a higher figure, the market price being \$1 50 per bushel. The above is, according to the experience of the Messrs. Perine, a safe, and if anything, a low estimate. In one instance, five acres of flax grown in the township of Waterloo, U.C., yielded 725 lbs. of dressed fibre per acre, and 15 bushels of seed, value \$53 75 per acre. This was an unusual yield. The crop grew in a rich field, close to the farmer's barn,—the season was every way favorable,—pains were taken to harvest the straw properly, and on the whole, this must be taken as an instance of maximum success. Four to six hundred pounds of dressed flax to the acre is by no means uncommon, and while 12 bushels of seed per acre is perhaps about the average, as high a yield as 24 bushels has been obtained.

In reference to the cost of this crop, and its profitableness, the testimony of the Messrs. Perine is highly satisfactory. They do not consider that more labor is required than for a crop of winter wheat, indeed the most of what has been raised, under their inspection, has