

drains are only needed in particular situations or wet spots, other portions being sufficiently dry. Where the soil is uniformly wet, or is generally injured by water in the subsoil, the rule which is followed in Britain will probably be found best, and that, according to Prof. Noron, is to lay the drains at eighteen or twenty-four feet apart, which he says will drain the stiffest and wettest land.

The *depth* of drains, it is generally agreed, should not be less than two and a half feet. They should be so deep that there is no danger of their being affected by any operations on the soil, either in using the common plough or the subsoil plough. When the tiles are once laid, and the earth is properly fixed around them, they should never be disturbed, except to remedy some obstruction.

FARMING ON TWENTY-ONE ACRES OF LAND.

BY WILLIAM GARBUTT.

MESSRS EDITORS:—Many of the cultivators of the soil, who occupy large possessions, do not realize the amount of labour that can be profitably employed in cultivation; and few farm labourers are aware how small a piece of ground will afford full employment to an industrious man, and yield himself and family the comforts of life, and make them an independent home.

In illustration of these facts, I will give an account of farmer B. His farm consists of twenty-one acres: one acre of it is occupied with buildings, yards and garden, and twenty acres are for cultivation—all made productive by thorough draining and bountiful manuring. A good substantial fence all round it, but no division fences. He has 57 rods of patent fence, which is easily removed, with which he encloses one-fourth of the ground for pasture.

The farm is divided into four equal parts—5 acres in each part. First season, No. 1 is in grass, clover and timothy, for pasture; No. 2 in hoe crop—one acre in wurtzels, one potatoes, and three in corn; No. 3, barley; and No. 4 in wheat. With these crops he keeps a regular rotation each year. Second season, No. 1 is manured in the fall with all the manure he has collected the past year, and ploughed for next season's hoe crop; No. 2 is ploughed in the fall for barley next spring; No. 3 (barley stubble) is sown with wheat; and No. 4 (wheat) is sown with timothy and clover for next season's pasture—which rotation he uniformly pursues.

He keeps a yoke of oxen, two cows, twenty good ewes, and a breeding sow, for which 5

acres of fresh clover on a rich soil will afford plenty of pasture, provided that he does not turn into it too soon in the spring. The wheat and barley straw, corn stalks and roots, will be ample forage for them in winter. He is industrious, economical, and prudent. Every thing is well done, and in season. The ground is kept clean, no weeds being allowed to grow, not even around the fence. It is made rich by plentiful applications of manure, which renders it very productive. His wheat averages 30 bushels per acre. It will take twenty-four bushels to bread the family the year, (which consists of himself, wife, and four little ones,) and will take 7 bushels for seed, which will leave 119 to sell; this, at \$1 per bushel, will make \$119. His barley yields 40 bushels per acre: it will take 8 of it for seed, and 192 bushels to market, at 50 cents per bushel, will be \$36. The corn averages 60 bushels per acre; the three acres produce 180 bushels: it will take 80 bushels to feed the pigs, fat the pork, and use of the family, (for they eat Johnny cake and much, which leaves him 100 bushels to market, at 50 cents per bushel, is \$50. The potatoes and beets are all used at home. The wool of the 21 ewes, averaging \$1 per fleece, will be \$21. They raise 20 lambs, which he sells in July or August for \$20. By taking the lambs from the ewes early, the latter will get fat by fall: 15 of them are sold for £30, with which he purchases 20 ewes for next season's keeping—and he has 5 fat sheep left for the use of the family. The sows have six pigs the last of March or early in April: 5 of them, with the sow, are fattened, and a young sow kept for pigs next spring. The 5 pigs and old sow when fattened will make 1,100 lbs. of pork; 500 will do the family, with the 5 fat sheep, and leave him 600 lbs. to sell, which at 5 cents a pound is \$30. The two calves are fattened and sold for \$5. This makes \$340 worth sold from the products of the 20 acres, and the family have had their farm living the past year.

It may be thought that this calculation is too large for an average production, but I assure you that if the operator is industrious, economical and judicious, he will seldom fall short of the quantity stated. But it is asked, how can an industrious man be constantly employed on 20 acres of ground cultivated for farm purposes? Look at it. His ground for spring crops is all ploughed in the fall. On the first of April he commences operations for the season. He first sows the grass seed on the wheat; then 10 cwt. of plaster on the hoe ground; and as soon as the ground is sufficiently dry he harrows it and sows the barley; then harrows and cross harrows until it is thoroughly pulverized, and then rolls it. By that time the planting ground is ready to harrow, which operation is continued