

It is understood that the first ploughing must be done with a light furrow, and the second and last furrow should be ploughed very deeply, and to perform which, the power of at least three strong horses will be required. When the seed furrow is ploughed deep—say, from ten to twelve inches, the seed should be sown early, and a much greater quantity is required than if the depth of furrow be only four or five inches.

The quantity of seed should in most cases equal from seven to eight pecks per acre, when sown broadcast, and if drilled in rows, a reduction of about twenty per cent. may be made, and a still greater reduction when it is the intention to horse-hoe the wheat, which, by the way, cannot be done in alternating wheat with clover. In this country, and indeed throughout the entire wheat growing regions of North America, this plant is disposed to be attacked with rust. Thin seeding is apt to be favourable to this disease, which must be accounted for mainly through the tendency that thinly sown plants have to continue growing when they should ripen. If the plants be thin on the ground, they will throughout their entire growth have a dark green and luxuriant, if not an unhealthy or over-fed appearance; and a short time before harvest, unless the weather prove remarkably cool and dry, the crop will be either partially or wholly destroyed by rust. Over seeding land will have just the opposite influence, and would be as frequently detrimental to the crop as would thin seeding. Plants, as has already been argued, require certain descriptions of food to bring them forward to a healthy maturity. If any one principle be deficient, an unhealthy growth must obviously be the result; then, on the other hand, the tender wheat plant, especially, will not endure to be over-fed with stimulating manures; and where this is done, unless some powerful counteracting influence be employed, disease will invariably follow. Therefore, it is wise to so regulate the quantity of seed, and the amount and quality of manure applied to the soil, in such a manner, that the largest possible yield shall be obtained, without endangering the plants from being attacked by disease. No specific rules can be laid down, which would in all cases and on all soils produce alike favourable results; but, when the farmer becomes so

sufficiently acquainted with the science, if it may be so called, of his profession, he will then more clearly understand the true causes that produce the effects, that develop themselves in his varied pursuit; and in process of time favourable results may be confidently relied upon.

Alternating wheat with the pea crop possesses advantages that cannot be obtained by the method just described. It would be well to duly consider their merits, before a decided preference should be given to either. In a period of twelve years the former method will give four crops of wheat, and the latter, during the same period, six crops. When the clover plants follow in rotation after wheat, neither of the two crops can be cleaned by the use of horse-hoes; but when the pea crop is employed as a preparative crop for wheat, both may be hoed, and the ground thereby made to be as thoroughly clean as if it had regularly undergone the expensive process of a naked summer fallow. This advantage cannot be too highly estimated, for no system of cultivation should be favourably received, that did not secure to the land perfect tilth, and cleanliness from noxious weeds.

Supposing that two such hoeings be given to each crop, the entire expense would not exceed five shillings per acre; and it is quite certain that a much heavier growth of straw and grain would thereby be secured, and, besides, the land would yearly improve in cleanness. In some instances, the soil being very foul by slovenly cultivation, might be found difficult to bring into a thorough state of culture, without giving it the benefit of a naked fallow. If this expense can be dispensed with, without incurring any perceptible falling off in the average yield, it would certainly be unwise to continue the practice. There are many ways by which it may be profitably avoided, some of which have already been illustrated in the columns of this Journal. The great object of naked fallows is to thoroughly clean the ground—any system that will secure that end at a less expense, and at the same time afford larger returns of grain, deserves a favourable consideration. Horse hoeing both the wheat and pea crop in the manner described, will, in most cases, accomplish such a result; but there may be instances in which it would be found to fail, in keeping the ground