

nada, as it is not expensive—and too many of us are extremely negligent in allowing the most fertilizing properties of our manure to be carried off, without an exertion to save it.

Mangel Wurzel should not be moulded up, nor should the mould be hewed away as with Turnips, but the ground should be kept level. It is a plant that requires a great deal of potash in the soil to bring it to perfection, and on that account it is that a small quantity of unleached ashes applied on each hill, has such a wonderful effect in expediting its growth.

PLOUGHING.

Having considered the proper rotation of crops, it may be well to say a few words about ploughing, and thanks to our Association and Branch Societies, this department is pretty generally understood. The old system of ploughing 10 or 14 inches wide and laying the furrow quite flat is, I think, almost entirely abandoned;—6 inches deep by 9 inches wide is about the proportion, and if properly turned, leaves the furrow at an angle best calculated for covering both grass and seeds. The Prescott plough, one of which has been sent to the Great Exhibition, is probably as good as any we have. The weight of draft in it is less than in many in common use, and it turns the furrow at the best possible angle. The mould-board cleaning itself immediately over the whole surface, showing thereby that the friction is equally divided over the whole mould-board, and the draft consequently light upon the horses. As to the time of plowing it seems evident that only summer fallow, or only drilled crop, or perhaps a bit of stiff sod, should be ploughed in the autumn. There is always a better crop of grain upon what is termed a hot furrow, *i. e.* new turned, and great care should be taken that no land should be ploughed wet, at least in the spring of the year. If clay land be ploughed wet it requires double or treble dragging, and nearly double seed, and after all the extra seed and labour, the crop is never so good as when the land is ploughed dry, even if it should be 8 or 10 days later. If gravelly land or sandy loam be ploughed wet, the effect is not so bad, but the vegetation is not so rapid as when ploughed immediately before sowing, nor is the crop ever as good. Patience is often a great virtue with the farmer in the spring of the year. It often happens that farmers plough their *summer fallows* early in spring, when they think the land too wet to plough for a spring crop; but they universally have to lament their ill judged haste; the land is more difficult to labour through the summer than if they had waited patiently to turn a drier furrow; the fallow cannot for that reason be got into as good order as if a little judicious patience had been exercised in the early spring.

SOWING.

First, as to thick and thin sowing. From many years' experience and intimate knowledge of Canada, I am convinced that farmers do not sow thick enough. As to wheat and oats for example: if thin sowed on rich land the young plants will stool out or tiller very much, showing that nature makes a great exertion to supply the want of seed, and every farmer will observe that each shoot as it becomes further removed from the parent stem becomes weaker, and the produce more and more deficient, and more liable to disease, such as smut, mildew, &c.; and they will further observe that every outshoot from the parent stem is more subject to disease and weaker than the parent itself. In 1850, in a field of ten acres, I tried two average acres with a double cast of seed, sowing about $3\frac{1}{2}$ bushels to the acre, and I was delighted to find at harvest, that on this land, thus thickly sowed, the crop was fully one-third better than any other two acres in the field; there being more parent stems, the heads were prouder and came all to more equal maturity; the capabilities of the soil were more equally diffused, and the result showed so very much in favour of thick sowing that I am led strongly to recommend the practice. It is too much the custom in Canada for farmers to calculate what return they have from the bushel of seed instead of from the acre of ground. If they put in more seed they might have a smaller return *per bushel*, but they would have a larger return *per acre*, which is the great desideratum. I have this year sowed 4 bushels of oats to the acre, and I am confident there is not one grain too much; the soil is heavy clay, but even on rich loam I would recommend the same quantity of seed;—the experience of the old countries is, that that quantity is not too much there, and I know of no principles by which our cleared lands would require less seed than similar soils in England. Having farmed many years very extensively in the Old Country, I always sowed $3\frac{1}{2}$ bushels of good wheat, and four of oats (weighing 40 lbs. to the bushel) to the acre, with the best possible effect. The land too, is not nearly so much exhausted by growing a thick crop as it is by growing a thin one, even if the acreable produce were the same, which is quite possible, but of rare occurrence. The same principle holds good in the sowing of clover. If much grass seed is not sowed with it there should be 12 lbs. per acre sowed; and this is the quantity always sowed in the best agricultural counties of England; and perhaps for this reason—there the custom prevails to a great extent, to plough down the aftermath or second growth when about 8 inches high, and sow wheat upon it, and I have seen splendid crops of wheat by this practice; but where