The Peck of Wheat Per Acre.

The following communication from Ald. J. J. Mechi is at present going the rounds of the "old country" papers.

"Year by year I become more and more convinced of the immense damage done in the British farmer by an over-sowing of seed. The question is one much less important as a saving of seed than as a preventive of damage to and diminution of the growing crop. I have proved this by a simple experiment, and every farmer can, at a small cost, bring to his own mind a proof of the proper quantity of seed to be sown according to his soil, climate, and circumstances.

This is the third year that I have tried the experiment of half a peck on half an acre, in the middle of a field where my usual quantity of four pecks is sown The former results have been recorded—the peck an acre has yielded 7 quarters 2 bushels per acre of fine wheat, and was the best yield on the field.

The experiments have been perfectly fair ones, the wheat being all put in at one time, and under the same circumstances in every respect except quantity. The thin-sown was dibbled in, one kernel in a hole about 6 inches by 4½. The rest of the field was this year drilled with 4½ pecks per acre. The experiments for three years have been on clover lea, once mowed for hay, and then folded with sheep, eating cake, &c.

The thin-sown came up with single points, and looked all the winter and early spring like a bare fallow, especially at a distance on the hill side it looked as though the four stetches had not been sown So very wet and unfavourable were the winter and spring, that we thought this third year the thin-sown could not come to a crop. But slowly and surely it advanced and has at length become the best crop on on the field, undistinguishable from the rest except by its superior height and the largeness of the ears It will of course be tested by threshing. I have no doubt it will, as on former occasions, yield more weight of straw as well as more corn than the rest of the field. I expect it will give about 5 quarters per acre. This is not a good yielding year on our stiff non-calcareous soils. It has astonished many who have watched its progress, and made many converts. Thin sowers must be content to hear from all who see their thin sown crops during the early stages of their growth that they must prove a failure. These three years' experiments have given me perfect confidence in thin sowing under like circumstances; and I shall practice it gradually on a more extended scale as a safe and profitable investment. I think the proper term for thin sowing should be sufficient sowing.

I will endeavour by illustration to show how really unreasonable and injurious our general quantity sown must be. According to Mr. Caird and general estimates the quantity of grain sown (wheat, oats, barley &c.,) equal one-ninth of the produce, so that we get (taking the whole kingdom), 9 kernels for each one sown.) An average ear, of wheat, barley, and oats would have forty kernels, therefore we only get a fifth of an ear for each kernel!

Now I will defy any one who puts into the soil a perfect kernel of grain to produce so little as nine grains, or about one fifth part of an ear. The probability is, especially in the case of wheat, that if a space of three to five inches intervenes between that and the next kernel, the increase will be from 200 to 300 instead of nine. Many of mine have produced 600; how is it then that we arrive at the present miserable return of nine for one? Those who observe Nature's operations will soon receive a reply. By our system of two to four bushels per acre the kernels are crowded together, the young fibre are pushed forth, and fight with each other for the small available portion of soil. The result is many wounds, many deaths, and plenty of cripples among the few survivors, whose diminutive development gives evidence of the severity of the deadly struggle. The crop that came up thick as a grass field soon becomes thin and weakly. The reverse of all this takes place with thin sowing, as the roots ramify and extend without meet-hungry and numerous competitors

Baron Liebig justly says that the greatest enemy that a wheat plant can have is another wheat plant This alone is a sufficient explanation. Many farmers say "we don't like a thin wheat crop;" drawing their conclusions from the cases where the crop had become thin in consequence of over-crowding. So far as my experience goes, the grains are finer in size and quality, the straw more brilliant and glassy, and more free from blight or mildew than the thick-sown. There is more weight of straw per acre.

But see what benefits the young grass or clover plants derive from thin sowing. They thrive having air and light, in the thin-sown, while the thick-sown and poor, soft-strawed laid crop smothers and destroys them

A neighbour of mine who farms well, got so angry at losing his clover plant among his oats that he was determined to have a clover crop at the cost of his oats, so he only sowed one bushel instead of four, and to his great surprise (but not to mine) he had the best crop of oats he ever grew, and an ample clover plant besides. Of course, in speaking of thin sowing I assume that the drill is used and the seed thus properly deposited.

I use the blower to my seed corn so as to have only heavy perfect seeds 9/10ths of which at least will vegetate.

It is really distressing to be told, as I have been lately, that "we always sow broadcast 7 bushels of oats per acre and 4 bushels of wheat." Supposing forty animals were placed in a luxuriant pasture, which would keep in good condition ten animals for three months, at first all would go well, but long before the three months had elapsed there be plenty of deaths and a few cripples left. So it is with thick sowing"

Italian Ray-Grass.

The separate cultivation of ray-grass has been in use as a foddering plant in England for upwards of two centuries, as it appears from "Woldridge's Husbandry," first edition, to have been cultivated prior to 1677; besides which, red clover, spurry (Spergula arvensis), trefoil, and nonesuch were the only plants then cultivated as *artificial grasses.*

Ireland was never backward in adopting improved husbandry, which generally may be attributed to the return of gentlemen of rank from service in the army abroad, who brought home much information, from time to time, as to the farming practices in the Netherlands, Germany, and other countries, whence the introduction of turnips, transplanting rape in the autumn, lucerne, &c., all of which are to be found in the early proceedings of the Dublin Society. Common rye-grass (*Lolium perenne*) is a native plant, and found more or less in all natural pastures or meadows: but the first account we have of its being cultivated as a separate crop in Ireland is to be found in a paper read before the Dublin Society on the 25th of November, 1731, soon after its formation, by Captain Stothard, as practiced by him at Maherlin, in the county Down, with a computation of the profits of an acre for five years successively, and ordered to be registered.

In this paper Captain Stothard says that "he has had particular advantages from the use of ray-grass, which is this: "That whereas before he came into the use of it he lost every year some sheep by the rot and other distempers, and such sheep as did not die of the rot and were in good order yet had their livers tainted; but since the time he had fed his sheep with the ray-grass, which was the last five years, though the ray-grass was the least part of their feeding yet it has this effect, that he hath not lost one sheep these five years past by the rot, or any other distemper, nor have their livers been the least tainted, but all proved very sound; and he finds upon inquiry, that sheep are nowhere, that he could hear of, subject to the rot where they have ray-grass for part of their food" We have given the above extract from the manuscript copy of Captain Stothard's excellent paper, to show that the beginnings of the Royal Dublin Society all tended to the advancement of agriculture, several members contributing excellent papers the first year of its existence, amongst which we find another from the same gentleman on the cultivation of clover.

Since those times several improved varieties of ray-grass have been introduced, such as Pacey's, Russel's, Whitworth's, Stickney's, &c., but of late years the Italian ray-grass has been introduced, which in a great measure supersedes all the others in its use of alternate husbandry, yielding the quickest and heaviest crops when properly treated, both as a soiling and hay crop.

The Italian ray-grass is by some botanists regarded as a distinct species, and by others as a marked variety of the common perennial ray-grass, and is itself divided into two varieties—one more upright than the other, and of a paler colour, the palea of the plants having a long awn which distinguishes the Italian from all other ray-grasses; the other kind has a more fibrous root, the colour darker, a spreading stem, and with awns comparatively shorter. This latter variety is regarded as the true sort by the most intelligent cultivators, as it produces the most luxuriant and heaviest crops. This question is pretty well set at rest by the following report of Mr. Rodwell, of Alderton Park:—

"Having observed, in the growth of my crop reported on in the Royal Agricultural Society's *Journal* in the year 1841, some plants that were, as I supposed, not genuine, that is, not of the pale colour not producing with long awns, I determined, upon a fresh importation of seed direct from Italy, from which I have since tested the properties of the two varieties, both of which I have since cultivated with great care and attention; and I am now fully convinced, from every comparison I have made, not only of the different kinds of plants in different fields, but of both kinds in the same fields, and in every case have satisfactory proof that the best grass—namely, that which is the most productive and the most nutritive for all cattle—is the plant which spreads upon the ground, is dark-coloured, and being the produce of seed with short awn; and my conclusion has been more fully confirmed during the past week by testing the varieties, both in weight and bulk, finding that the dark-coloured plants from the seed of the short-awned grass exceed both in weight and bulk the pale-coloured plants by more than 30 per cent. It will be also worthy the observation of those who intend to cultivate this grass that if intended as a biennial or a perennial grass, in that case the dark-coloured is much preferable to the pale-coloured grass, the former branching and becoming thicker, and the latter spindling up, and thus becoming thinner in plant every succeeding year."

Either sort has a stronger braird, broader and more abundant foliage, and longer spikes than any of the other sorts of ray-grass, and are preferred by cattle, either as soil or hay, and to the farmer is more valuable for one year's grass than any other sort, in its early maturity and bulk of produce.

But from the rapidity of its growth, it is not so well suited for mixture with any other sorts, except that in small quantity, it may be sown in permanent pastures, to give shelter to the more tardy and more permanent grasses, and give an early bite to the ewes in spring, for which it is admirably adapted; but this very rapidity of growth renders it unsuitable to sow as a soiling crop with corn in the spring, for it grows so strong that it injures the corn crop, though it improves the straw as fodder; besides, it exhausts itself the season it is sown, and does not produce so early or so well the following one. On this account it should not be sown as a soiling crop till the autumn, when the corn crop is removed; but the better practice, when designed for an early soiling crop, and to cut repeatedly, is to sow it immediately after the removal of early potatoes: the land is then in the highest state of cultivation to receive the seed, being rich and thoroughly pulverised; the seed braids freely, becomes strong and luxuriant, and so well established in the ground that no amount of frost can throw it out.

Managed in this way, it produces, in some seasons, an 18 or 20 inch cutting so early as the middle of March; in others, such as the present, it may not come in for another month, and with a top-dressing of a little rich compost, or liquid manure, after each cutting, three, and sometimes four, and even five.—*Mark Lane Express.*

Productive Farm.—The *Mt. Morris Union* states that on the Ogden farm, located on the Genesee flats, fifty acres of fine wheat are being harvested, while there are 100 acres of oats with barley and corn to match. The net receipts of the farm for 1865 were $8,015. A few days since 55 steers were from this farm for the sum of $4,125. The farm consists of 450 acres of the best farming land in the Genesee Valley.

A New Farm Yearly.—The *Rural Advertiser*, for June, in remarking on the various fertilizers used by farmers says there is one unfailing source of supply within reach of every farmer. This is found in deep ploughing and a proper pulverization of the soil. In other words, "*depth of soil beneath* their crops and fertilizing atmospheric gases *above* them." By ploughing an inch deeper every year, a new farm, so to speak, is obtained. Of course there is a limit to this, but the trouble generally is, that but few persevere till they reach it.

Profitable Farming.—What zealous young farmers should ever bear in mind, is that it is not expensive manuring alone, nor thorough culture alone, nor drainage, nor any other one or two things combined, that can ensure success, but knowledge of and thorough training to their business, and then enlightened, courageous and liberal expenditure. Such expenditure would embrace all the processes necessary to productive cropping, and permanent improvement of the land. This we call "high farming." It is that sort of farming which has always been most productive of results in able hands, and will be especially so in the future of Maryland and Southern State agriculture. If it fail, it will not be that the system is wrong, but because of want of skill in its application.—*Ag. Ed. Balt. Sun.*