

### Wheat continuously on the same Land without Manure.

The English Agricultural Journals have for the last few months been much occupied with the discussion of a system of cultivation practised by the Rev. Mr. Samuel Smith, of Loiston, Northamptonshire, England. Mr. Smith's system is in effect a revival, with some modifications, of that propounded by Jethro Tull a hundred and thirty years ago. Tull's system was that by sowing grain in drills, and constantly stirring and loosening the soil by the use of the hoe and other implements, the perpetual fertility of the land could be maintained without the use of manure. His main principle was that tillage will supply the place of manure, and that a good crop of wheat, for any number of years, may be grown, every year, upon the same land, without any manure, from first to last.

Mr. Smith, of Loiston, has been practising this theory, upon his own system, for the last twelve years, and has obtained an average of thirty-six bushels per acre from the same piece of land every year during that time, the crop being in 1859. The latest crops have shown no symptoms of deterioration over those of the preceding year. Mr. Smith's plan is as follows:—He plants three rows of wheat at ten inches apart, the three thus, allowing five inches on each side, occupying a space of thirty inches. The next two feet and a half are left vacant, the next planted in the same way as the first, and so on in alternate strips throughout the field. The vacant strips are thoroughly and deeply cultivated during the winter and summer, by means of the spade or fork, the horse hoe, and other following operations, and the spaces between the drills are also hoed at the proper season. After harvest the vacant strips are ploughed and the stubble strips become fallow, to be subjected to the same course of treatment as the others the preceding year.

In some respects this system is analogous to the one in which the simple alternation is practised, of wheat one year and bare fallow the next, then the next, and so on in perpetuity. Some opponents of Mr. Smith's system advance a new view of the case, and state that it is a fallacy for him to speak of growing a crop from the same land every year, for that it is in reality a very other year. If this be granted however, the chief advantage they gain is, that they

must allow Mr. Smith by his system to have succeeded in obtaining 36 bushels from the same half acre every alternate year, instead of 36 bushels from the same acre every year. But, in effect, there are numerous obvious differences of detail between the modes of tillage adopted and their influence on the crop, in the 30 inch strip system, and the alternate wheat crop and bare fallow field system.

We do not allude to this experiment for the sake of advising any of our readers to adopt a similar system upon their farms, but as an interesting illustration of what results may be produced by thorough and deep cultivation. Mr. Smith's wheat field is but small, only some five acres, and consequently admits of a system of perfect hand culture, which would be quite impracticable on a large farm, especially in a new country like Canada. The soil of Loiston is likewise of prime quality, consisting of a good strong wheat land, resting on sound clay, and naturally dry.

Should any Canadian farmer, allured by the successful results of Mr. Smith's experiments, fancy that he could grow wheat every year on the same field without manuring, and attempt to put his theory into practice on a large scale, in the slovenly way in which it would be pretty sure to be done in this country, we apprehend that it would require but a very few years to convince him that his experiment was a grievous failure. Those however, who have the leisure, and the means and opportunity, to conduct such experiments on a small scale, and with adequate skill and care, may learn many interesting and valuable truths from them, and confer a large benefit upon the country by making the results of their experiments known to the public.

### The Cattle Disease in New York State Six Years Ago.

It appears that Pleuro-Pneumonia is not altogether a new disease on this side of the Atlantic. There are several well authenticated cases of it having occurred some years ago, and having been extirpated by careful measures. Mr. E. P. Prentice, a well known breeder, of Mount Hope, near Albany, has written a letter to the *Country Gentleman*, stating that one of his cows became affected with the disease in the autumn of 1853. She had been sent to Brooklyn dur-