

IMPLEMENTS.

This department of the show was, as on former occasions, very extensive. Most of the articles were most substantially made, and evinced very great skill both in design and workmanship.—Howard & Ransome carried off the principal prizes for ploughs. Bentall was the most successful among the cultivators and grubbers.—Seragg's machine for making draining tiles and pipes, were decided the best. A trial of Reaping Machines took place on rye; several machines were put into competition. The question of merit lay ultimately between Crosskill's Bell with McCormick's Cutter, and Dray's Hussey, and the prize was awarded to the latter. "It is singular (remarks the *Agricultural Gazette*), how the English and Scotch judges vary in their decisions on this subject. In its own country, Bell has uniformly won the palm,—and as the trials there have generally been during a drier state of the grain for its operation, we should be inclined to give greater weight to the Scotch decisions.—Dray has this year added a tilting board, which greatly facilitates the delivery of the corn."

COMPARATIVE ESTIMATE OF JETHRO TULL'S PRACTICE IN GROWING WHEAT.

have been favored by J. B. Marks, Esq., of Kingston, with a copy of the Eleventh Edition of the Rev. Mr. Smith's pamphlet, entitled *Wheat in Season; or How to Grow Wheat with Profit*; addressed to the British Farmer. Mr. Smith's operations are carried on upon a limited scale at Lois Weedon, Northamptonshire, and here attracted general attention both among scientific and practical farmers. We propose extracting such portions of his work as will prove suggestive and interesting to Canadian readers:

Attention has been roused at last to the merits of that extraordinary man, the undoubted pioneer of the onward march of modern agriculture. I believe, however, that little is still known by farmers generally of the actual details of the process by which he carried his theory out. A few introductory words, therefore, on this point, and a comparative estimate of his practice, may not come amiss at a time when a great degree of interest on the subject has been awakened among thinking men.

The principle of Tull, in his tillage for wheat, was to pulverize the soil effectually to the bottom of the staple, in order that every particle of the mould might be impregnated with the fertilizing substances of the atmosphere, whatever they were; and that the roots of the plant, at the same time, might be enabled with ease to permeate the loosened earth and so take up the food thus placed within their reach.

To attain his object he divided his field by broad and deep furrows,—a deep, that is, as the staple would permit, and no deeper,—into lands about six feet wide. In the centre of each land he drilled his seed in two rows about ten inches apart, thus leaving an interval of about five feet between each double row. Then, when the plant was up, came a very nice and difficult operation. After closing up the furrow, he ploughed the whole interval, with the exception of six or eight inches, for a winter fallow, taking the last slice within three or four inches of the wheat, and leaving that standing on a ridge about eighteen inches wide, with a deep furrow on each side. Thus it remained during winter. At spring another equally nice and difficult operation succeeded. He cast back the soil, thus fertilized by exposure, against the tender wheat, and restored the broad furrow in the centre of the interval. Then, during summer, as often as the nature and state of the soil required it, he horse-hoed, or rather ploughed it away from the wheat and then back to it again, retiring farther and farther from the spreading roots as the season advanced, and operating for the last time after the wheat had just gone out of flower.

The process succeeded to admiration. The well-stirred soil had become impregnated with the elements of fertility. The roots had been enabled to take up their nourishment. The straw, exposed to the sun and air, hardened and stood well up, except in very peculiar seasons. The ears became unusually bulky, the grain large. And Tull calculated that thus, without manure, on the same acre of land, he gained year after year, for several years, a profit much larger than that of farmers in the common mode of farming.

But, if it indeed was so,—if the profits of the system were so surpassing, it has been very naturally asked, how came it to pass that it dropped, and, with few and scattered exceptions, died away?

The question, as I think, admits of easy solution. The principles of Tull were sound and original, and, as applied to root-crops, have gained their author imperishable fame as a farmer. But with reference to corn, his theory, as carried out by himself, could not stand.

For, it is quite clear, in the first place, that if any farming scheme proposed for adoption be so beset with difficulties in the execution as to be beyond the capacity or the power of common husbandmen, it must come to nothing. It can make no progress as a national concern; and, however promising it may be, it will be looked at only at a distance as a pleasing delusion.

Now, that the full effect of Tull's mode of tillage might be felt by the roots of the growing plant,—in order that they might receive, without any obstruction, the benefits of the impregnated and pulverized mould thrown back to them for their nourishment at spring, it was necessary, at the first ploughing before winter, to guide the plough with such unerring nicety, that a slice should be cut from the sides of the