

## EXPERIMENTS UPON SWEDES—AWARD OF CHALLENGE CUP.

## ARTIFICIAL AND IMPORTED MANURES.

The following experiment arose from a conversation at the Farmers' Ordinary, at Briggs, a noted market town in Lincoln. It was conducted by T. M. Richardson, Esq., assisted by a committee of farmers.

The field selected for the experimental trial of swedes was certainly inferior to the one where the common turnips were grown, both from its deficiency of soil and a lighter and more sandy nature. Two acres measured were out to each competitor. The land was ridged upon the manure sown broadcast by hand, without any admixture of ashes, and the seed (Skirving's improved green-top) drilled on the ridges at the rate of two pounds per acre, on the second day of June. Each experimental plot occupied thirty-three rows of equal length, viz., eighteen chains. All the plots were sown on the same day, by the assistance of my neighbours (to whom I now offer my warmest thanks for their valuable assistance,) thereby rendering this public trial much more complete; and all the plots, as regards hoeing, singling, cleaning, &c., were afterwards treated in precisely the same manner. In addition to the manures sent by the competitors, I experimented with eight others in the same field, of one acre each—manures strongly recommended to the notice of farmers as valuable fertilizers, viz., Lawe's superphosphate, Hodgson and Simpson's nitrophosphate, Peruvian guano, Fernande's manure, bones dissolved by acid in a dry state, bones ditto applied with the liquid drill, good cake farm-yard manure, guano and dissolved bones mixed and these certainly do not disgrace the swedes grown by the competitors, but in many instances outweigh them. On each plot a good plant was obtained, and with the exception of the powerful ammonical manures came quickly and evenly up to the period of singling; but the water drill plants had a decided start of some four or five days, which, however, did not carry them through, although the manure was applied at the same expense (clearly showing its use is more adapted for clay land than for light soils.) The swedes were pulled out and weighed in the presence of C. Nicholson, Esq., of Stanwells House, John Stephenson, Esq., of Burnham, and M. Maw, jun., Esq., of Cleatham, who most carefully weighed each lot, and placed them according to their respective weights in the following order, viz.,

No.		£.	s.	d.
1.	Phospho-Peruvian Guano, entered at	13	0	0
2.	Morris and Greeves' Superphosphate	7	0	0
3.	Odam's Blood Manure .. ..	7	10	0
4.	Odam's Superphosphate .. ..	6	10	0
5.	Nicholson's Cuero Guano .. ..	8	0	0
6.	Smalley's Ammoniacal Manure ..	9	0	0
7.	Stephenson's Blood Manure .. ..	8	0	0
8.	Miller and Johnson's Superphosphate	10	0	0

The latter manure was sent from London, and two bags being detained at Retford beyond the day of trial, it was sown at the rate of 5 cwt. only, instead of  $7\frac{1}{4}$  cwt., its price being only £6 10s. per ton.

The judges, consequently, again awarded the cup to Mr. J. B. Horner, of Lincoln, as agent for the Phospho-Peruvian Company, thereby again introducing to the notice of the public a manure which, being entered about thirty shillings per ton beyond its present value in the market, proves its highly fertilizing powers; and if the opinion of our highly respectable chemists is of any use, we find that, from the analysis of Professor Voelcker, Way, Anderson, Herapath, Apjohn, Cameron, and Hodges, this is the most valuable fertilizer, whether na-