It is easy therefore, when we are in possession of such facts, to under-tand how one field in a farm, apparently well adapted by its mechanical condition for the growth of any description of plant, may, while capable of yielding a fair return of some crops, refuse to bring other crops to perfection.

The apparently contradictory results which have followed the application of certain manures, as bone-dust and guano, to the soil, may also be explained in accordance with the above information; and lead to the conclusion, that when these manures proved without value in certain localities, and produced advantageous effects in other places, that the materials which they are capable of supplying were not of the kind in which the soil was deficient or of which it had been chiefly deprived by the preceding crops raised upon it.

The effect which the growth of a crop of turnips is capable of exerting upon the soil, or in other words, the quantity of mineral ingredients required for its full development, is particularly worthy of attention. It will be evident that as, in the present position of the agriculture of this country, the turnip crop must every year become more important, it is only in proportion as the farmer is acquainted with the elements it requires, that he can judge of the value of the various substances offered to him as manures.

	Bulls.	Тор».
Potash	142.66	88.82
Soda	17.31	16.76
Lime	46.24	72.14
Magnesia	18.16	9.58
Oxide of Iron and Manganese	4.35	2.67
Phosphorie Acid	25.77	28.80
Sulphuric acid	46.24	38.81
Chlorine	12.24	49.75
Silice	27.03	2.67

340 lbs. 310 lbs.

In all 650 lbs. of matter derived from the soil. Like the potato, the turnip is distinguished by the very large amount of the alkalies, especially of potash, which it extracts from the soil, 2651 lbs. of potash and soda being taken away in 20 tons.

In Europe certain manures have been regarded by the farmer as specially applicable to the growth of the turnip crop :--thus bones, and lately guano, have been considered the staple manures of the turnip growers ; yet, examination of both of these applications shews us, that they are signally deficient in some of the matters which, from the above table, we perceive, are indispensable to the development of the turnip.

The bones of the ox have the following composition :---

Phosphate of Line	553
Phosphate of Magnesia	3
Soda and Common Salt	33
Carb nate of Lime	33
Fluoride of Calcium	1
Gelatine	334
-	
	100

It will be perceived from the preceding statement, that where bones have produced a full return of turnips, the soil must have been deprived of the potash and soda necessary for