kinds, which are non-nitrogenous, are largely increased by nitrogenous manures.

The direct supply of phosphate in an assimilable form largely increases the turnip crop, while the same supply to the wheat crop, which is especially phosphatic, scarcely increases the yield.

The best natural fertilizer is doubtless farm-yard manure, or good stable-dung. When this can not be procured, the artificial manures, such as guano-sulphate of ammonia, are valuable, especially on soils rich in the mineral constituents of plants, such as the Bermuda soils. The application of these nitrogenous manures would doubtless considerably increase the non-nitrogenous arrowroot crop, and probably the banana. I regret I have not an analysis of the ash of the banana to which I can refer.

These soils, were they in England, would doubtless produce large crops of wheat when manured with nitrogenous manures; and there is little doubt they would in a climate such as Bermuda.

Much interest would attach to experiments showing the power of these soils for the absorption and retention of ammonia and water. However, time precludes this at present.

FREDERICK A. MANNING.

100.656

## SOIL I.—RED EARTH.

Soluble in dilute acetic acid. (1 to 4.)	Hygroscopic water	16.231
	Organic substance	11.210
	Silicie acid	0.126
	Sesquioxide of irou	0.040
	Alumina	0.146
	Lime	3.144
	Carbonic acid	2.251
	Sulphuric acid	Trace
	Chlorine	"
	Magnesia	0.012
Soluble in strong hydrochloric acid.	C Sand	40.001
	Alumina	13.604
	Sesquioxide of iron	12.310
	Lime	0.364
	Magnesia	0.464
	Potash	0.118
	Soda	0.006
	Phosphoric acid (estimated in nitric acid solution)	0.626