soil. In some sections seen near to the village of Chatham, this clay was about four feet in thickness, and was underlaid by a more or less sandy loam, regularly stratified, while beneath at about ten feet from the surface, appeared a tenacious blue clay. The ordinary tillage rarely brings up the lighter colored subsoil, but a plan of deep ploughing has been lately adopted by some of the farmers with excellent results. The wheat sown upon the black mould grows too luxuriantly, and is disposed to rust, tendencies which are arrested by an admixture of the clay. There are fields near the river in the Township of Raleigh, which I was well assured had been cropped with wheat for thirty or forty years, without manuring, and with very little attention to crops or fallowing, and yet these still yield very fair returns. Upon the best conditioned lands thirty-eight to forty, and even forty-two bushels of wheat to the acre, are obtained in good seasons. Hemp has recently been tried with much success.

The newly cleared lands are frequently first sown with Indian corn, which grows luxuriantly, and preferring as it does a light open soil, succeeds perfectly well in the richest moulds. The crops of oats and barley are also very fine, potatoes succeed well, and mangel-wurtzel and carrots are beginning to be cultivated for the feeding of stock. The evil of rust is often severely felt upon the wheat crop; the fall sown grain however, suffers less from it than the spring wheat. Sifting lime over the field while the grain is yet in the milk is said to have been found useful in preventing this disease, and I was informed by a gentleman interested in agriculture, that a plan which has been tried in very rich soils is to sow a much larger portion than usual of grain to the acre. The result of this is, that the plant becomes checked in its otherwise luxuriant growth, and ripening more rapidly, escapes the rust. The yield is not what would be obtained in proper soils with much less grain, but it yields crops of wheat where other means have proved unsuccessful in the Townships of Zone, Dover and elsewhere, and is recorded rather as a fact of interest than an example for general adoption. Draining and subsoil ploughing, where the clay can be brought to the surface, will be found the remedies most efficacious.

Such is the fertility of the soils in this region that but little need has hitherto been felt of a system of rotation in crops; some however have begun to adopt it, and have commenced the cultivation of clover, which grows finely, especially with a dressing of plaster, which is used to some extent.

The natural growth of these lands is oak, elm, with black walnut and whitewood trees of enormous size; the black walnut timber is already becoming a considerable article of export. Fine groves of sugar-maple are also met with, from which large quantities of sugar are annually made.

I give here an analysis of a specimen of the black mould from the seventh lot of the first range of Raleigh. The mould here is eight or ten inches in thickness, and had been cleared of its wood, and used six or eight years for pasture; the specimen from a depth of six inches contained but a trace of white silicious sand.

No. 15. It consisted of—

Clay	83.4	
Vegetable matter	12.0	
Water	4.6	
		100.0

100 parts of it gave—

Alumina	2.620
Oxyd of Iron and a little Oxyd Manganese	5.660
Lime	1.500
Magnesia	1.060
Potash and Soda	.825
Phosphoric Acid	.400
Sulphuric Acid	.108
Soluble Silica	.290

The examination of the clay subsoil is yet to be made, as well as the determination of some points of interest with regard to No. 15.

Near to the mouth of the Thames, and skirting the borders of Lake St. Clair, is an extensive prairie which is supposed to cover about 30,000 acres. Commencing nearly behind Chatham, it forms a belt three or four miles wide, which keeps the south side of the Thames for about six miles; here it comes upon the river, and occupying both banks, extends down to the lake; stretching as far as the eye can reach in one vast plain, broken only here and there by *oases* of forest, like small islands, dotting it surface. These consist of a growth of soft maple, walnut and elm, with occasional willows, which are seen springing up here and there in little copses, with thorns. The plains are covered in some places with a coarse sedge, and in others with a stout jointed grass, which sometimes attains the height of three feet, and makes good hay pasturage for the half-wild poneys which feed in great numbers upon these prairies.

In spring time the greater portion of this region is overflowed with water from a few inches to two or three feet in depth. The whole of the country to the south from the ridge near Lake Erie, discharges its water upon this tract, and it is said that in the spring time a current is perceptible across the whole surface. In 1836–'37 nearly the whole prairie was covered throughout the year, a circumstance connected with the yet unexplained change in the levels of the upper lakes.

The soil is a black unctious mould from six to eighteen inches or more in depth, with a subsoil composed of blueish or whitish clay, which by exposure to the air readily disintegrates. It often contains shells and fragments of wood, and an intelligent man employed in ditching assured me that he had met with the end of a canoe at the depth of eight feet in the heavy clay. About 2,000 acres of the prairie are under cultivation in the Township of Raleigh, and from 6,000 to 7,000 more rise to a height of about twelve feet above the lake, and might readily be drained. Some