

parts of the eastern extremity are at present rarely submerged, and present gentle undulations of gravelly loam, black with vegetable remains.

The cultivation of wheat does not succeed well upon the mould of the prairie; the heaving of the soil injures the fall sown, while the spring sown grain rarely escapes the rust. Where however, the mould is so thin that deep plowing can be made to bring up the clay, a good wheat soil may be obtained. Indian corn, oats and barley succeed and grow luxuriantly, as also many root crops. The last season, although the tillage of these lands is not generally the best, the first prizes for these products, offered by the County Agricultural Society, were gained by crops raised upon the reclaimed prairie.

The cultivation of grass has hitherto been much neglected, as the natural growth of the country serves for both hay and pasturage, but clover has been a few times tried and great crops obtained. One fault of the soil is its exceeding richness in vegetable matter; it is probable that a judicious application of quicklime would be found very useful. Specimens of the soil were taken from a recently drained portion in the seventeenth lot of the first range of Raleigh. The mould was here twelve inches deep; a specimen of it at the depth of six inches, No. 16, and one of the clay at twenty inches, were taken. The analysis of the mould is subjoined; it contains no sand, and consists of—

Clay	80.9
Vegetable matter	13.6
Water	5.5
	— 100.0

100 parts previously ignited, gave—

Alumina	4.340
Oxyd of Iron	7.090
Lime (in part as carbonate)	1.580
Magnesia	1.030
Potash855
Soda240
Phosphoric Acid320
Sulphuric Acid155
Soluble Silica380

An analysis of the soil before ignition, a determination of the condition of the organic portion, and an examination of the subsoil, are yet to be made.

I have not spoken of my examinations of the soils in the vicinity of Woodstock and Zorra, in the neighborhood of London and Lobo, of Hamilton, and of St. Catharines and Port Dalhousie, as the results are not yet completed, and must form part of a future Report.

I may however here introduce the analysis of two interesting calcareous clays from London and Niagara. That of London is met with at a depth of five to ten feet, and is seen cropping out upon the banks of the Thames, near the town; wells have been sunk in it thirty and forty feet. Mr. Hamilton of London, who had submitted it to a partial analysis, has found it extremely beneficial as a manure when applied to his garden. It has

the texture of a fine clay and is mixed with limestone pebbles; during solution in hydrochloric acid it evolves a bituminous odor; it contains no sulphates.

No. 17. It consists of—

Clay insoluble acids	57.00
Carbonate of Lime	29.40
Carbonate of Magnesia	6.91
Phosphate of Lime*39
Oxyd of Iron and Alumina ..	4.40
Water, alkalies and loss	1.90
	— 100.00

A similar clay to that of London is found in like circumstances in Delaware and Mosa, and a specimen from Port Stanley was found to be similar in constitution. For those soils which are deficient in lime, it will be evidently extremely valuable, as it is in composition a rich marl.

The second is a clay taken at a depth of eight inches from an untilled field in the Township of Niagara, upon the ridge of land or escarpment here formed by the Niagara limestones. It contains three or four per cent. of silicious sand with mica, and some calcareous pebbles.

No. 18. Analysis gives for his composition—

Insoluble in acids	50.00
Carbonate of Lime	15.30
Carbonate of Magnesia	7.68
Oxyd of Iron	13.50
Alumina	
Manganese, a trace	
Alkalies51
Phosphoric Acid09
Moisture	4.70
	— 99.78

It contained besides a small amount of sulphuric acid, which was not determined.

I have refrained from speaking of the conclusions to be drawn from the preceding analysis, or the various theoretical deductions which might present themselves to the agricultural chemist, because sufficiently complete investigations have not yet been executed, to warrant me in generalizing. Some of the consequences are however so obvious, as to suggest themselves to every scientific agriculturist, and to the attention of such I commend these results, as the first fruits of my labors on the soils of Canada."

* The composition of the phosphate of lime here represented, is that of bone earth, of which thirteen parts correspond very exactly to six of anhydrous phosphoric acid.

(Concluded in our next.)

To the Editor of the Agriculturist.

SIR,—

As you seem anxious that farmers one and all should contribute to your valuable periodical, I hope you will excuse the liberty I have taken in addressing these few lines to you. I am led to make the following remarks by a conversation lately held with one of our most extensive city brewers; at the same time bearing in