

of which marl is principally composed. The carbonate of lime or calcium is the most valuable ingredient. In addition will be found small quantities of sand, silica, oxides of iron and aluminum, and occasionally small quantities of phosphate of lime. Marl, however, is a lime fertilizer, and is used as such.

The results of analyses are given in the following table, in which some of the percentages are wanting, though the important ones are given. The first seven were analyzed lately at the laboratory of the Ontario Agricultural College by myself. Nos. 1, 2 and 3 came from north-eastern Ontario; No. 4 from the Experimental Farm, direct from a low-lying bed; No. 5 is a weathered sample, locality unknown; No. 6 is from near Toronto; No. 7 is from Quebec; No. 8 is an Ontario marl, analyzed by the Connecticut Station; Nos. 9, 10, 11 and 12 are Michigan marls, analyzed at Lansing College; Nos. 13 and 14 are from North Carolina:—

No.	Water.	Sand and Silica-insoluble matter.	Oxide of Iron and Aluminum.	Magnesium Carbonate.	Lime or Calcium Carbonate.	No.	Water.	Sand and Silica-insoluble matter.	Oxide of Iron and Aluminum.	Magnesium Carbonate.	Lime or Calcium Carbonate.
1	2.82	1.13	1.84	1.29	92.92	8	2.51	0.41	0.29	2.10	94.69
2	11.10	2.48	1.37	1.27	83.78	9	1.43	13.00	1.43	4.54	79.60
3	20.64	1.09	0.92	0.98	76.37	10	.....	36.79	1.05	6.00	56.16
4	53.90	1.42	0.52	1.18	42.98	11	.....	5.50	.....	2.00	90.00
5	2.25	5.51	1.16	1.84	89.24	12	.....	16.00	.....	2.50	80.00
6	1.56	1.54	1.89	0.72	94.29	13	.....	74.86	.....	.....	10.57
7	2.41	0.83	0.76	.....	96.00	14	.....	0.48	.....	.....	94.00

According as the lime, clay or sand predominates, the marl is classed as calcareous, clayey or sandy. The Ontario samples are calcareous; the 13th is a sandy marl.

As before noticed, marl is a lime fertilizer. Phosphoric acid, when present, adds to its value slightly. Its effects are either physical or chemical. Physically, it seems to give lightness and looseness to soils, and thus render them more workable. Chemi-