

Substratum (C horizon) carbonate content

Calcareous classes express the percentage of carbonates (CaCO_3) present in the substratum (Table 1). Carbonates act on the soil's calcium content and acidity, thereby affecting the uptake of many elements by plants. They also act on microbial life and soil structure (Magny and Baur 1962) and affect cation (e.g. Zn, Mn, Ca, Ni) and anion (e.g. P) retention and movement in the soil.

Table 1. Definition of calcareous classes

Class	(% CaCO_3)	Percentage area
Non-calcareous	<1*	71.0
Weakly calcareous	1 - 6	25.8
Strongly calcareous	6 - 40	3.2
Extremely calcareous	≥ 40	Nil

* No effervescence observed upon the addition of 10% HCL)

The map shows the distribution of calcareous classes in the soils of the southeastern part of the Montreal plain. Most of these soils (71.0%) are non-calcareous. Weakly calcareous soils (e.g. Saint-Urbain series) account for 25.8% of the total, distributed throughout the study area. Strongly calcareous soils (3.2%) occur essentially in Chambly County (e.g. Sabrevois series) and as a rule are associated with materials of glacial origin (till).