

Surface layer (0 - 25 cm) texture

Texture indicates the relative proportions of the various particle size fractions (sand, silt and clay) in the soil (Day and McMenamin 1983). Six texture classes (Agriculture Canada, 1976) have been identified for mapping purposes (Table 1). Texture affects a number of soil properties, such as permeability, available water, structural stability and fertility. This map is designed to supplement the particle size class distribution map by showing surface layer (0 - 25 cm) texture. We may expect soils in texture classes 1 and 2 to display low water and nutrient retention capacity. Soils in texture class 3 possess greater water and nutrient retention capacity, but they are more vulnerable to smearing, compaction and erosion. Soils in texture classes 4 and 5 contain over 20% clay as a rule. Clay plays both a physical and a chemical role in retaining water and nutrients. The higher the clay content, the greater the water and nutrient retention capacity. However, clay soils are slower to warm in spring, and cannot be worked as soon after rainy periods.

Table 1. Definition of texture classes

Class	Texture	Definition
1	Coarse	Coarse sand (CS), medium sand (S), fine sand (FS), very fine sand (VFS) and loamy sand (CLS, LS, FLS) (e.g. La Présentation series)
2	Medium coarse	Very fine loamy sand (VFLS) and coarse to fine loamy sand (CLS, LS, FLS) (e.g. Rougemont series)
3	Medium	Very fine sandy loam (VFSL), loam (L) and silty loam (SiL) (e.g. Ste-Rose series)
4	Medium fine	Sandy clay loam (SCL), clay loam (CL) and silty clay loam (SiCL) (e.g. Du Jour series)
5	Fine	Sandy clay (SC), clay (C), silty clay (SiC) and heavy clay (HC) (e.g. Providence series)
P	Peaty	Peaty surface layer ($\geq 17\%$ organic C) (e.g. Nobel series)

Agriculture Canada 1976, Day and McMenamin 1983

Coarse and medium-textured soils (1 to 3) predominate in Richelieu and Saint-Hyacinthe Counties, while the other counties are characterized by medium-fine (4) and fine (5) soils.