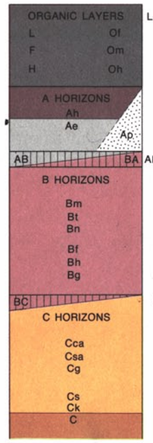
SOIL PROFILES

A particular soil is recognized by identifying the various soil layers that make up its vertical cross-section or profile. These layers, known as 'horizons', occur approximately parallel to the land surface and each soil horizon differs from adjacent genetically related layers in properties such as, colour, structure, texture, consistency and chemical, biological and mineralogical composition.

The diagrams of soil profiles shown here depict the general horizon characteristics of the soils shown on the map.

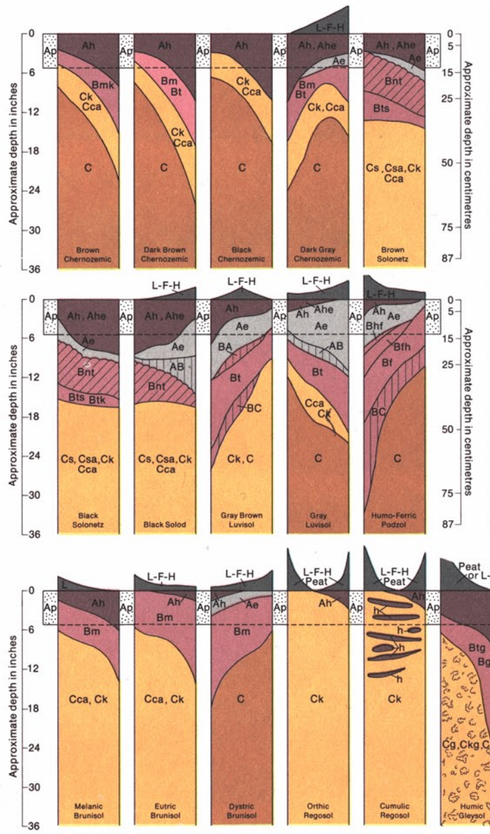


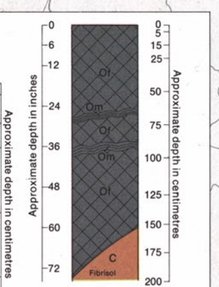
Key to code letters used in the soil profile diagrams

- L-F-H - well drained decomposing plant litter
  - L - slightly decomposed, F - moderately decomposed, H - well decomposed
- O - poorly drained decomposing peat and moss layers
  - Of - *fibric* - slightly decomposed, Om - *mesic* - moderately decomposed, Oh - *humic* - well decomposed
- A - organic-mineral horizons at or near the surface.
  - Ah - dark-coloured, humus-rich horizon
  - Ae - light-coloured, bleached and eluviated by removal of clay, iron, alumina or organic matter.
  - Ap - horizons markedly disturbed by cultivation or pasture
- AB, BA - horizons transitional to A and B
- B - a mineral horizon differing from A and C by the following characteristics:
  - m - colour or structure
  - t - a significant accumulation of clay
  - n - a columnar structure, hard consistence and significantly high exchangeable sodium.
  - f - a significant accumulation of iron
  - h - a significant accumulation of illuvial organic matter.
  - g - a significant expression of gleying[1] with dull colours and mottles
- BC - a horizon transitional to B and C
- C - a horizon comparatively unaffected by soil-forming processes, except for:
  - ca - an accumulation of lime carbonate.
  - sa - an accumulation of soluble salts.
  - g - a significant expression of gleying[1] with dull colours and mottles
  - s - the presence of salts.
  - k - the presence of lime carbonate

[1] "Gleying" or gleysation refers to a soil-forming process operating under poor drainage conditions which results in the reduction of iron and other elements and in gray colours, and mottles.

Note: The lower case code letters shown above in the B and C horizons are sometimes combined in the diagrams to express combinations of characteristics.





Note different scale of Fibrisol profile diagram.

SOILS

NOTE: The soils represented on the map are identified at the Order, Great Group or Subgroup levels of the *System of Soil Classification for Canada*.[1] The map does not reflect the true complexity of the national classification system which consists of 8 Orders, 23 Great Groups, 165 Subgroups and further sub-divisions. The map scale does not permit the separate identification of all Great Groups or Subgroups but provides for their inclusion within the correct Order. The letters used to identify the Orders, and the numerals used to identify Great Groups and Subgroups are particular to the map, and are not a part of the Classification nomenclature.

In addition to the soil areas delineated on the map according to the classification, certain "Land Types" are recognized. They are defined as "Dominantly Rockland" and "Rocky and Stony Phases", signified on the map by overprinted symbols.

[1] Canada, Department of Agriculture, 1970. *The System of Soil Classification for Canada*, (prepared by the Canada Soil Survey Committee) Ottawa, Queen's Printer for Canada.

LAND TYPES

- DOMINANTLY ROCKLAND
- ROCKY AND STONY PHASES (soil areas characterised by excessive stoniness and/or rock outcrops)
- GLACIERS

ORDER	GREAT GROUP OR SUBGROUP
A: DOMINANTLY CHERNOZEMIC	
A1	BROWN CHERNOZEMIC
A2	DARK BROWN CHERNOZEMIC
A3	BLACK CHERNOZEMIC
A4	DARK GRAY CHERNOZEMIC
B: DOMINANTLY SOLONETZIC	
B1	BROWN SOLONETZ*
B2	BLACK SOLONETZ*
B4	SOLOD
C: DOMINANTLY LUVISOLIC	
C1	GRAY BROWN LUVISOL
C2	GRAY LUVISOL
D: DOMINANTLY PODZOLIC	
D3	HUMO-FERRIC PODZOL
E: DOMINANTLY BRUNISOLIC	
E1	MELANIC BRUNISOL
E2	EUTRIC BRUNISOL
E3	DYSTRIC BRUNISOL
F: DOMINANTLY REGOSOLIC	
F1	ORTHIC REGOSOL*
F2	CUMULIC REGOSOL*
F3	CRYIC REGOSOL*
G: DOMINANTLY GLEYSOLIC	
G1	HUMIC GLEYSOL
G2	GLEYSOL
G3	CRYIC GLEYSOL*
H: DOMINANTLY ORGANIC	
H1	FIBRISOL
H3	CRYIC FIBRISOL*

*Subgroup level of soil classification

This map is a reduced adaptation of the "Soil Map of Canada" produced by the Soils Research Institute, Canada Department of Agriculture and the Canadian National Soil Survey Committee.

Compiled by J.S. Clayton and I.B. Marshall, Canada, Department of Agriculture, 1972.

Lambert Conformal Conic Projection Standard Parallels 49°N. and 77°N.

Scale 1:15,000,000 or One Inch to 236.74 Miles