

ORGANIC O HORIZON

Layman's description: Full of organic matter and spongy (compost-like)

- (i) has sufficient organic carbon to ensure an average content of at least 10% throughout a vertical distance of 200 mm;
- (ii) is saturated with water for long periods in most years unless drained (evidence of wetness is invariably present in the subsoil).

Except where vegetation is totally absent as under extreme desert conditions, natural topsoils contain accumulations of organic material. Amounts vary between wide extremes. Unusually large surface accumulations which result from a slow rate of decomposition of plant residues due to ponding of water are distinguished by means of the diagnostic organic horizon. Differentiation of organic from other topsoil horizons is based on amount of organic material present (measured and expressed as organic carbon) and profile wetness. These horizons are found in estuarine swamps, inland swamps and on some mountain slopes. However, not all swamps and marshes produce organic horizons. Colour is normally black or dark brown and the state of degradation of the plant residues may vary from predominantly finely divided in certain situations to predominantly fibrous in others. Organic horizons are not widely distributed in South Africa and have not been intensively investigated. The definition is thus somewhat tentative and it is likely that it, as well as the classification of soils possessing organic horizons, may undergo future refinements. Excluded from this diagnostic horizon are layers of organic litter that, in certain conditions, accumulate on the surface of A horizons which are not subjected to prolonged periods of saturation with water, for example layers of pine needles in pine plantations.