

Soil Surface Sealing



Surface sealing is the orientation and packing of dispersed soil particles that result from the physical breakup of soil aggregates due to raindrop impact. Rapid soil wetting (in dry soils) and high exchangeable sodium percent can also cause aggregates to disperse. Sealing results when clay and silt particles get detached and/or dispersed and become suspended in the infiltrating water, which is moving downward through surface-connected pores. The pores become clogged with the fine particles, which become closely packed and create a surface seal.

Surface sealing is the initial process in the formation of a mineral crust, which is a broader term for a surface feature that is dense, hard, or restricts infiltration. A seal is a more specific term and refers to a surface layer that inhibits infiltration (Heil, 1993).

