

# The Main Agro-Ecological Zones and Associated Benchmark Soils of Ghana. (A06-mahjoory223259-Oral)

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## Abstract:

Climate, vegetation, parent material are pedogenic factors in classifying soils (local and FAO), their association with Forest, Savanna Agro-ecological zones. Forest zones include High rainforest(HRF), rainfall(1800-2000mm/y) and Semi-deciduous forest(SDF), rainfall(1400-1700mm/y). Soils in HRF are Forest Oxisols(Acrisols, Ferralsols), pH(4.5-5.5), mainly Al on exchange site, OM>3%. Soils in SDF are Forest Ochrosols(Lixisols), Lithosols(Laptosols), pH(5.5-6), OM(1.5-3%). Forest soils have granitic PM; cocoa, cassova, sugar cane,oil palm crops; Al toxicity, P deficiency. Savanna zones include Forest-Savanna Transition(FST) with (800-1200mm/y); Interior Savanna(IS); Coastal Savanna(CS)<800mm/y. Soils in these zones: Savanna Ochrosols(Acrisols, Lixisols, Cambisols); Groundwater Laterites(Plinthisols),Tropical Black Earths(Vertisols); Tropical Grey Earths(Solonetz), Sodium Vleisols (Solonchaks) respectively with pH(6-7), OM<1%, developed on red, brown sandstone, shale. Crops: yams, millet, cashew, avocado. Savanna, Forest Gleisols (Gleysols) are extensive, used for rice crops. Nutrient mining, soil degradation, food insecurity are major problems in Ghana and Africa.

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