

عنوان مقاله:

Effect of a long-term cultivation and crop rotations on organic carbon in loess derived soils of Golestan Province, Northern Iran

محل انتشار:

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خلاصه مقاله:

The effects of 34 years cultivation on organic carbon content of the loess derived soils were studied in Golestan province, northern Iran. Soil organic carbon (SOC) showed significant decrease in most of cases. The minimum and maximum SOC decreases were 4 and 51.14 Mg C ha⁻¹/30 cm for 34 years. In a few cases there was an increase in SOC up to 16.93 Mg C ha⁻¹/30 cm over the period of 34 years indicating a favorable management, application of manure, and incorporation of the crop residues. Permanganate-oxidizable carbon (POC) was used to establish the potential loss of SOC, which was estimated between 38.07 and 72.32 Mg C ha⁻¹/30 cm. The (Clay + Silt)/OC ratio had a negative significant ($P<0.05$) correlation with POC content, confirming the effect of fine particles in conserving .of soil organic matter

کلمات کلیدی:

Mollisols, Soil organic carbon, Management, Long term cultivation

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