

INFLUENCIA DEL MANEJO SOBRE LA CALIDAD DEL SUELO

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INFLUENCE OF MANAGEMENT ON SOIL QUALITY

Abstract

A study was conducted to establish the influence of management on soil quality in a Dystric Regosol in Calvarrasa de Abajo in the province of Salamanca, Spain. In the systems studied a series of physical and physicochemical parameters and also the microorganisms respirometry, were evaluated, finally it was considered the soil fertility index and soil evaluation factor in soils under three types of management: cultivated with maize (*Zea mays*), reclaimed soils and soil cultivated with sugar beet (*Beta vulgaris L.*) The predominant pattern of texture is loamy sand for different soil management systems. The values obtained in reclaimed soils were the highest: pH (7.3), Carbon (1.67%), N (0.10%), Organic Matter (2.88%), Mg^{2+} (1.34 $cmol\ kg^{-1}$), followed by soil planted with beets and then the soil planted with corn. The highest content of available nutrients, K (0.232 $g\ kg^{-1}$), Ca (0.176 $g\ kg^{-1}$) and Mg (0.105 $g\ kg^{-1}$) are also in reclaimed soil. The available P was higher in soils with corn (160 $mg\ kg^{-1}$). The microbial respiration rate was greater in the reclaimed soil, followed by soil planted with beets and corn, respectively. The soil fertility index used was higher in maize (166.2), followed by beets and reclaimed soils. However the soil evaluation factor was higher in the reclaimed soils (14.1), followed by the beet and corn.

Keywords: Soil quality, soil management, soil respiration.

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