



Soil organic matter on citrus plantation in Eastern Spain

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Citrus plantations in Eastern Spain are the main crop and Valencia region is the largest world exporter. The traditional plantation are located on flood irrigated areas and the new plantation are located on slopes where drip irrigation is the source of the wetting. It has been demonstrated that the citrus plantations contribute to high erosion rates on slopes (Cerdà et al., 2009b) as it is usual on agriculture land (Cerdà et al., 2009a), but when organic farming is present the soil erosion is much lower (Cerdà and Jurgensen, 2008; Cerdà et al., 2009; Cerdà and Jurgensen, 2011). This is a worldwide phenomenon (Wu et al., 2007; Wu et al., 2011; Xu et al., 2010; Xu et al., 2012a; Xu et al., 2012b), which are a key factor of the high erosion rates in rural areas (García Orenes et al., 2009; García Orenes et al., 2010; García Orenes et al., 2012; Haregewyn et al., 2013; Zhao et al., 2013). The key factor of the contrasted response of soils to the rain in citrus is the organic matter cover. This is why the Soil Erosion and Degradation Research Team developed a survey to determine the soil erosion rates on citrus orchards under different managements. A hundred of samples were collected in a citrus plantation on slope under conventional management (Chemical management), one on organic farming, one on traditional flood irrigated organic farming and one on traditional chemical flooding farm. The organic farming soils were treated with 10000 Kg ha⁻¹ of manure yearly. The results show that the mean soil organic matter content was 1.24 %, 3.54%, 5.43% and 2.1% respectively, which show a clear impact of organic farming in the recovery of the soil organic matter. meanwhile the on the slopes and the flood-irrigated soils are

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