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Impact of soil management on seasonal soil CO₂ emissions in an irrigated olive orchard

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Olive culture counts as one of the most significant agricultural activities in Greece, from a financial, social and ecological point of view. Modern olive culture often includes exhaustive use of the available resources having as a result adverse effects for production cost, the environment and the quality of produced food. The main aim of the LIFE+ OLIVECLIMA project is to trial the introduction of new cultivation practices for tree crops in order to find a cost-effective means of mitigating and adapting to climate change, through the increase of carbon sequestration by soils, and reduction of greenhouse gases emissions. In an irrigated olive cv Kalamon orchard, seasonal soil CO₂ emissions, soil humidity and temperature have been monitored in relation to addition of compost, no tillage and retention of all aboveground biomass. Preliminary results indicate that soil CO₂ emissions can be manipulated through proper soil and water management.

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