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BOOK OF ABSTRACTS

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UTILIZATION OF COMPOST FERTILIZER WHICH MADE FROM POULTRY SLUDGE AND MARKET WASTE AS A POTTING MEDIA COMPONENT WITH COIR DUST FOR ORNAMENTAL PLANT TAGETES PATULA (ANTIGUA YELLOW) AND LEAFY VEGETABLE IPOMOEA ACQUATICA (L).	61
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PHYSIOLOGICAL AND BIOCHEMICAL IMPACTS OF LEGUMINOUS COVER CROPS IN OLIVE RAINFED ORCHARDS

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Abstract

*Leguminous cover crops have the potential to provide numerous ecosystem services, including improving soil quality, nutrient cycling, pest regulation, which in turn will contribute to crop productivity and quality. The objective of this study was to investigate during two years the effects of a cover crop of self-reseeding annual legumes of short growing cycle on physiological and biochemical responses of twenty-seven-year-old olive trees (*Olea europaea* L. cv. Cobrançosa) grown under rainfed conditions, in comparison with conventional tillage. The results showed that leguminous cover crop improved the physiological and biochemical performance of olive trees under drought conditions, considering the rise of net photosynthetic rate, transpiration rate and stomatal conductance, as well as higher concentration of total phenols and flavonoids and total antioxidant activity in leaves. In addition, implementation of leguminous cover crops resulted in an increase of the total production of olive fruits in both years. These results indicate that cover crop is a good soil conservation practice compared to conventional tillage. Thus, the incorporation of well-designed, locally-tailored leguminous cover crop, associated with an appropriate mowing time, is a very promising strategy to implement in olive orchards under drought conditions.*

Key words: Soil management strategies, Leguminous cover crops, *Olea europaea*.

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