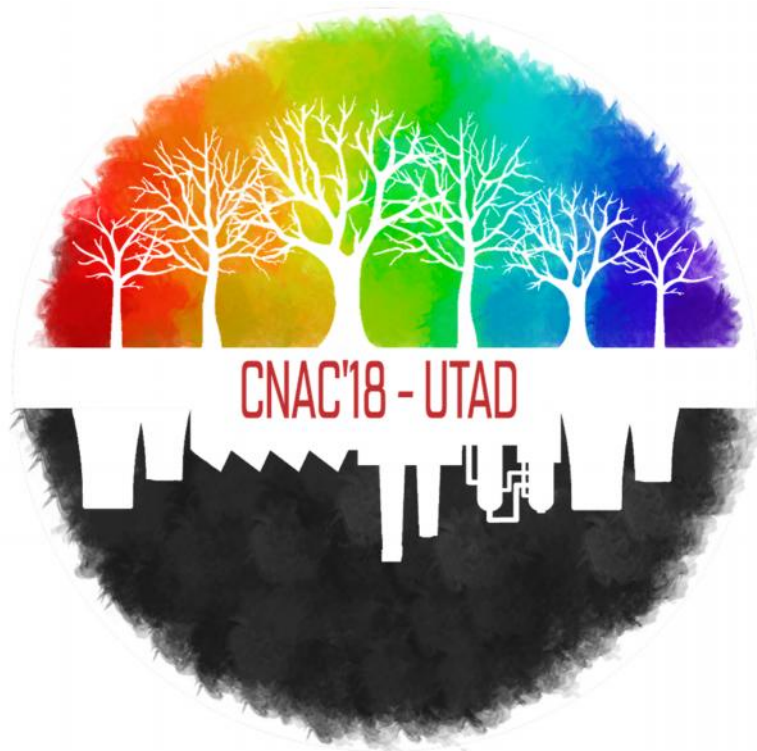


Livro de Resumos

Congresso Nacional sobre Alterações Climáticas 2018



**19, 20 e 21 de fevereiro de 2018,
Aula Magna, Vila Real, Portugal**

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Use of kaolin as a summer stress alleviating product in olive orchards under rainfed conditions

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RESUMO

In a changing world, where is expected the temperatures rising and the reduction in precipitation in some semi-arid areas of the globe, the search for new agronomic practices that help crops to maintain and/or increase yields and quality is a continuous challenge. Kaolin (KL) exogenous application has been considered a short-term solution to alleviate the adverse effects of summer stress. The formed particle film increases the reflection of excess radiation reducing the risk of leaf damage from heat load accumulation and solar injury. Olive trees (*Olea europaea* L.) cultivated under rainfed conditions were sprayed with KL (5%) during two consecutive years in the beginning of the summer season. In general, relatively to the control group, KL-sprayed plants showed an enhancement in leaf water status, stomatal conductance and photosynthetic capacity and a reduction in leaf sclerophylly. In the severest period analyzed, at the end of the second-year summer, KL has lost the effectiveness of keeping gas exchange above the control measurements. However, in both years, allowed a faster restauration of the physiological functions in early autumn and contributed to higher crop yield. Overall, the results of the present investigation revealed that KL were effective in preventing the adverse effects of summer stress on crop performance and yield.

Key-words: Olive tree, abiotic stresses, water status, photosynthesis, yield

Acknowledgments: Doctoral fellowship under the Doctoral Program “Agricultural Production Chains – from fork to farm” (PD/00122/2012) provided by the FCT-Portuguese Foundation for Science and Technology to C. Brito (PD/BD/ 52543/2014). Institution CITAB, for its financial support through the European Investment Funds by FEDER/COMPETE/POCI– Operational Competitiveness and Internationalization Program, under Project POCI-01-0145-FEDER-006958 and National Funds by FCT - Portuguese Foundation for Science and Technology, under the project UID/AGR/04033/2013.