



# IRRIMAN

Implementation of efficient irrigation  
management for a sustainable agriculture



## Irriman initiates the transfer of results to the 15,000 hectares which will apply sustainable irrigation methods

Irriman Life+ is a project cofinanced by European Union which principal objective is put into practice, demonstrate and spread a sustainable irrigation in different woody crops to promote their acceptance on a large scale in Mediterranean agroecosystem, characterized for water scarcity, without affecting negatively the final fruit quality.

The Project, started in September 2014 and now all the experimental plots are implemented with different sensors that measure the plant and soil water status. During 2016, all the results obtained in 2015 will be extrapolated to the rest of the commercial orchards located in the three irrigators communities. The crop area between Córdoba and Murcia is 15.000 ha.



The main result of the project will be the irrigation water saving by 30% with the adoption of deficit irrigation compared to the current irrigation regime applied in agriculture lands.

The water leaching will be reduced, increasing the quantity of crop effective water and productivity of water. We expect that no irrigation water is leached reaching the groundwater. The 30% decrease in irrigation water will decrease chemical fertilization by 30%, minimizing groundwater pollution by leaching of nitrates applied as fertilizer.

CO<sub>2</sub> emissions due to current energy consumption arise to 0.70 ton/year/ha. Since these emissions will also decrease by 30% with the sustainable irrigation regime by optimization of consumption.

The reduction in water applied by irrigation will maintain crop yield and quality, and will suppose an organoleptic improvement in the harvested fruits, since we expect increments around 10% in the concentration of dissolved solids in juice and around 15% in the colour of fruits.

Since the entire irrigation system is pressurized, we expect to reduce by 30% the energy consumption with the implementation of this project.

We also expect an annual decrease in CO<sub>2</sub> emissions by 40%, owing to the decrease in soil CO<sub>2</sub> flux rates by application of deficit irrigation. This directly indicates the quantity of CO<sub>2</sub> not released to the atmosphere, and sequestered in soil, by suitable irrigation management, contributing to global warming mitigation.



## Murcia and Cordoba farms to test methods Irriman

The Irrigation Community of Campotéjar has a surface of 3.356 ha dedicated to multiple crops: peach and nectarine trees (55%), citrus (35%) and grapes (8%).



The Irrigation Community of Miraflores has a surface of 1.329 ha dedicated to different crops: pear (45%), peach (32%), apricot (12%), olive, (5%), plum (3%), vineyard (2%) and almond tree (1%).



The Irrigation Community Genil-Cabra, located in Córdoba county has a total surface of 15.184 ha, with olive (30%) and almond orchards (1%).



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