

Decision supporting tools for irrigation

Goal	Reduce water consumption.
Short description of the measure	<p>There are several technologies that can be used for helping farmers to make a decision regarding the irrigation of the crop. The very basic one included in this measure is a water meter. It is a basic step towards accuracy for knowing the real volume of water used. A more advanced level would be using any of the available technologies (commonly known as water sensors) that measure the soil moisture at different depths, allowing the farmer to know with high accuracy the water needs of the plants.</p> <p>Tensiometers, soil psychrometers and pressure transducers are highly precise tools for assessing soil water potential. Tensiometers, which assure low cost, simple operation and provide information for precisely determining the irrigation timing and depths when irrigation thresholds are well established, are widely used for the irrigation of horticultural crops.</p>
Quality elements of soundly implemented biodiversity measures	Tensiometer locations: two or more tensiometer for each homogeneous area.
Effects on biodiversity (ecosystems, species, soil biodiversity)	 Avoid contamination of groundwater and surface channels caused by a non-efficient irrigation (leaks and runoff).
	 Avoid the overexploitation of the aquifers.
	 Maintain and recover of aquifers and wetlands; and associated flora and fauna.
	 Prevent soil erosion and desertification.
Other positive effects/benefit for the farmer	<p>Farmers using these devices can better understand the plant needs, save water and improve their phytosanitary performance.</p> <p>Other benefits of an efficient irrigation are reduced impact of weeds due to less soil surface with moisture, more efficient application of fertilizers, less herbicides needed, works at low pressure (less energy costs), etc...</p>
Indicator/key data	% of UUA covered with a decision supporting tool for irrigation.
Reference	<ul style="list-style-type: none"> Sustainable Water Management in Agriculture under Climate Change. Dr. Kostas Chartzoulakis NAGREF, Institute for Olives and Subtropical Plants.

Further information: [Knowledge pool](#)

This Action Fact Sheet belongs to the training package for advisors of standard organisations and companies and was developed within the project LIFE Food & Biodiversity (Biodiversity in Standards and Labels of for the Food Industry). The main objective of the project is to improve the biodiversity performance of standards and sourcing requirements in the food industry by helping standard organisations to integrate efficient biodiversity criteria into their schemes and motivating food processing companies and retailers to include comprehensive biodiversity criteria into their sourcing guidelines.

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