




Water management in Mediterranean orchards

Thursday 21 May 2015

<p>Promoter</p>	<p>University of Basilicata DiCEM Matera, Italy</p>	
<p>Objective</p>	<p>Disseminate optimal irrigation management aimed at improve water use efficiency.</p>	
<p>Demosites</p>	<p>Olive orchard – Ferrandina (MT) Wastewater reuse for olive irrigation management.</p>	
	<p>Kiwifruit orchard – Bernalda (MT) Irrigation management aimed at improve water use efficiency.</p>	
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Research activity of UNIBAS-DiCEM group

Research activity of UNIBAS-DiCEM group covers the following topics: eco physiology; water relations and photosynthesis; development, maturation and fruit quality; orchard management system; restore soil fertility; nutrition; irrigation.

UNIBAS-DiCEM group has several demonstration sites for optimal irrigation management studies in fruit tree orchards located in Southern Italy (see red circle in the picture above). Studies are mainly devoted to the assessment of tree productivity and vegetative growth under

irrigation management aimed at improve water use efficiency mainly in peach, olive, apricot, kiwifruit.

Sites host a series of technological supports (e.g. various soil moisture probes and weather stations) used for daily soil water budget calculation which employ dedicated software and specific web-based platform. Interactions at the sites with farmers and staff member of the Regional Extension Service are routinely used to both collect needs and exchange knowledge. Since 1999, in the olive orchard located at Ferrandina (MT), the municipal wastewater is treated by means of a prototype operating with an innovative treatment process. The innovation allows the protection of certain compounds/nutrients (such as organic matter and nitrogen) during the wastewater depuration, so that they can be used as fertilizing substances. The innovated process also allows the reduction of the economic cost due to the disposal of biological sludge as end-product of standard treatment processes. The recycled wastewater is then conveyed through a dedicated pipeline to the close olive orchard and supplied by drip irrigation. The olive grove combines additional sustainable management practices (no-tillage, retention of crop pruning residuals) aimed to increase soil water holding capacity and tolerance to erosion.

Agenda

- 9:00-10:00 Start from Matera to field trials
- 10:00-12:00 Visit to olive orchard (Ferrandina, MT)
- 12:00-13:00 Lunch
- 13:00-15:00 Visit to kiwifruit orchard (Bernalda, MT)
- 15:00-16:00 Return to Matera

Registration

Deadline for application: May, 5

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