



Water and crop efficiency evaluation of surface irrigation methods in the Piemonte plain (NW Italy).

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The Piedmont plain in the provinces of Turin and Cuneo is characterised by surface irrigation systems. Maize is the most spread crop. The increasing frequency of dry springs and summers has enhanced the scarcity of water for such irrigation systems. The aim of this work is to evaluate the efficiency of surface irrigation in three representative farms and provide a tool for prediction of future efficiencies in relation to possible change in irrigation practices.

During three growing seasons (2006 - 2007 - 2008) automatic Time Domain Reflectometry gages have been put at different depths in the fields. Soil specific parameters have been estimated from TDR measurements and the soil water balance during several irrigation events has been computed.