Report on Water management WS on the OGH Conference in Izmir

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The main topics addressed during the workshop are aspects regarding the crop water demand in relationship to the irrigation management at all as well as in organic practices, including types of irrigation methods: surface systems, overhead systems, subsurface systems. Furthermore, aspects of the influence of water management on soil microorganisms, on nutrient availability, transport in the soil and nutrient leaching were discussed. Other aspects discussed were methods of the assessment of the soil water status, the interaction of water and salinity, as well as water sources, water quality, and clogging problem.

The main identified knowledge gaps are:

- The influence and interaction of irrigation and fertilization on hygienic and food safety aspects
- The influence of the irrigation method (e.g. drip irrigation vs. sprinkler irrigation) on nutrient availability of different kind of amendments applied in different ways (e.g. incorporated into the whole soil body vs. banded application close to the crop/irrigation unit, frequency of the application)
- Calibration of soil moisture sensors according to soil physico-chemical properties
- The interaction and complementation of fertilization and irrigation in order to design well balanced systems in terms of nutrient input-output relationships
- The differences of the optimal soil moisture content for plants in comparison to main important soil microorganisms communities, also depending on soil characteristics
- The influence of soil water content and water management on overall N use efficiency, N leaching and soil N_2O emissions
- The best practices and systems to avoid any clogging related to the development of biofilm