



WORKSHOP ON

"Managing irrigation with fresh and saline water using the SALTMED model as a management tool"

Introduction:

The limited fresh water resources require more efficient water management. Non-conventional water resources such as saline drainage or brackish groundwater and treated waste water could be used under suitable and careful management that safe guards the environment and minimizes the long term impact. Models when successfully calibrated and validated can be used as management tools to predict the impact of different management of crops, soils and water qualities. They can be used with “what if” scenarios instead of running short term expensive and labour intensive field experiments. Dr. R. Ragab, CEH has developed an integrated field scale management model, SALTMED that can be used as a management tool for water, crops, land and N fertilizers. SALTMED is a physically based model that uses an integrated approach. Unlike existing models, which were designed for a specific irrigation system or a specific process, SALTMED model is generic. It can be used for a variety of irrigation systems, soil types, soil stratifications, crops and trees, water application strategies, different nitrogen applications and water qualities.

The model can run simultaneously with up to 20 different fields or treatments and produces daily output files and figures. The daily output includes: soil moisture, salinity and nitrogen profiles, plant water uptake/transpiration, soil evaporation, crop water requirement, nitrate and salinity leaching, nitrogen dynamics (mineralization, nitrification, and denitrification), nitrogen uptake, Relative yield, dry matter and final yield and groundwater level. The model has a database for soils and crops parameters and is friendly and easy to use

Themes of the workshop:

- Why we use models?
- SALTMED processes, equations and worldwide examples of applications
- Efficient water use and irrigation management
- Management of crops, soils and N fertilisers
- Integrated field scale management
- Modelling and hands-on working with the SALTMED Model

General Information

Side event title: "SALTMED Workshop - Managing irrigation with fresh and saline water using the SALTMED model as a management tool"

Date and time slot: Monday, 12th of October, 2015, 8h30 -12h30

Side event organizer: CER and STEP (Water4Crops)

Location: SupAgro, Montpellier (<https://www.supagro.fr/>)

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