

Activities of the Soil and Water Management and Crop Nutrition Laboratory, Seibersdorf

FAO/IAEA Training Course on Integrated Nutrient-Water Management at Field and Area-wide Scale, 19 May–27 June 2014, Seibersdorf, Austria

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The FAO/IAEA training course on Integrated Nutrient-Water Management at Field and Area-Wide Scale was held at the Soil and Water Management & Crop Nutrition Laboratory (SWMCNL) from 19 May to 27 June 2014 at Seibersdorf, Austria. This training was given by scientists and technicians from the SWMCN Subprogramme, in close collaboration with scientists from the public and private sector, i.e. universities, national and international research for development organizations and companies, based in Austria and abroad.

Twenty fellows from eleven Member States (Bangladesh, Botswana, Benin, Burundi, Iraq, Ivory Coast, Kenya, Oman, Senegal, Yemen and Zimbabwe) with various backgrounds (researchers and technicians mostly in the

field of irrigation management), participated in the training.

The main focus of the training course was on: (i) improving nutrient management in rainfed and irrigated agriculture, (ii) monitoring nutrient balances and water use efficiency at the field scale, (iii) increasing the efficiency of water management in rainfed and irrigated agriculture at field and area-wide scales, (iv) monitoring soil moisture at both field and area-wide scales, (v) assessing soil water balance and crop water relations, and (vi) training on the use of FAO's AquaCrop model to improve soil water management and irrigation scheduling.

The training was funded by the IAEA Technical Cooperation Department through national TC projects.

Besides lectures and laboratory and field work, a field excursion was organized to research stations of the Austrian Agency for Health and Food Safety (AGES) and the Federal Agency for Water Management in Grabenegg and Petzenkirchen (100 km west of Vienna), to demonstrate on-farm research on nutrient and water management at field and area-wide scale.

Mr Dirk Raes from the KU Leuven (Belgium), participated as a lecturer on the use of the AquaCrop model for yield response to water and irrigation scheduling, which was very much appreciated, as he has been the main developer of this model. Mr Bernard Vanlauwe from IITA (Nigeria) also delivered a keynote lecture on integrated nutrient-water management in Sub-Saharan Africa through an on-line conference.

In addition, experts from Pessl Instruments (Austria) and Eijkelkamp Agrisearch Equipment (The Netherlands) demonstrated the latest tools and equipment used to assess crop water use and sample soils of all kinds of physical properties. The use of Unmanned Aerial Vehicles (UAVs) for applications in nutrient and water management was also demonstrated by Precision Hawk (USA-Canada).

A self-assessment at the end of the training activity gave the organizers the opportunity to validate the effectiveness of the training course at an individual level. Feedback from the participants showed that the hands-on training with equipment was highly appreciated.