





## Monitoring systems for irrigated agriculture in MENA



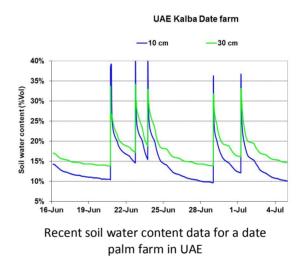
## **Quarterly Progress Report April-June 2015**

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Compiled from the reports submitted by the Co-PIs Luna Al Hadidi, (NCARE-Jordan), Yaseen Al Mulla (SQU-Oman) and Samir Yacoubi (INRGREF-Tunisia).

The 2<sup>nd</sup> quarter in 2015 was dedicated to continuing data collection from the field: biophysical and crop management data, and sensor systems data.

Socio-economic surveys were actively conducted in order to describe the key irrigated farming systems, farm typology and business profiles in 17 farms located in 11 agro-ecological zones (16 geographic locations).



Additional surveys of farmers in the vicinity of the project sites were conducted in order to explore the potential for future scaling up of the technology and its associated accumulated technical expertise.

The training activities continued with sessions related to data collection and graphing.



Field training in plant and soil sensors in various crops

The sensor data is being progressively shared with ICBA for the website, including a dedicated sharing platform that is currently under construction.

The exercise of data processing and interpretation along with crop management is on-going.

Activities planned for the next quarter are:

- ✓ Complete establishment of the website for data sharing
- ✓ Datasets on crop management; precision measurement from various probes; continuous soil water reserve variation; water models; and empirical water consumption of main crops
- ✓ Dissemination materials for technology transfer

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| Where We Work                          | Application of near-r   | eal time  |   | Sear    | rch   |        |  |
| Marginal Environments                  | monitoring systems for irrigated<br>agriculture in MENA   |   |   |         | Q   |        |  |
| Projects                               | View Edit Outline Track   |   |   |         | KNOWLEDGE HUBS                                |        |  |
| Ongoing Projects<br>Completed Projects | Problem Overview:<br>Irrigated agriculture is a major user of water resources in the MENA region, often<br>accounting for most of the water divarted and consumed. Within the various<br>irrigated production systems in MRNA, there is obten potential for substantial   |   |   | • Bio   | MAWRED Biosaline Agriculture Wastewater Reuse |        |  |
|  | improvement at the farm level. Monitoring<br>poweful tool to improve on-farm indigaton run<br>measure soil water content, salinity, leaf ur<br>(transpration) can assess water status and<br>soil, plant and atmosphere. When combine<br>communication via cellular networks, they<br>management by enabling near-continuous<br>man evaluated in four countries (Jordan, OV<br>varletv of environments (20 castons). prov | crops and their envir<br>nanagement. Electr<br>ater potential and sa<br>d flow through the er<br>d with data loggers<br>add a new dimensio<br>and near-real-time re<br>ter use. The techno<br>nan, Tunisia, UAE a | ronments is a<br>onic sensors tha<br>ap flow<br>titre continuum of<br>and remote<br>in to irrigation<br>emote monitoring<br>logy is implemen<br>and Yemen) in a | of<br>a |   |        |  |