

## SUMMARY TRIAL REPORT

### TerraCottem® Universal in Orange tree cultivation

Trial under supervision of **Eng. Rafael Ortega**

Location: Hornachuelos, Córdoba, Spain



On a 3.5 hectares' plot located between the towns of Mesas and Bembézar, near Hornachuelos, the TerraCottem® Universal soil conditioner was introduced as a new technology in the cultivation of oranges. This trial plot, located on the San Cayetano farm, was placed under the supervision of agricultural engineer Rafael Ortega. The area is irrigated. The aim is to use water as efficiently as possible as it represents a high value within the production costs. As a result of the application of the TerraCottem® soil conditioning technology all treated seedlings established successfully with a well-developed root system and approx. 25% of water savings were reached.



#### — San Cayetano farm, Hornachuelos —

#### 1. Facts & Figures

- Plant: Orange tree, *Valencia Delta* variety;
- Spacing: 6 x 4 m;
- No. of trees planted: 1600 seedlings;
- Soil: clay loam<sup>1</sup>
- Irrigation:
  - Drip irrigation
  - 2.4 l/h;
- Date of planting: 10 April 2014;
- Planting area: 3.5 ha;
- TCU - application rate: 25g / plant hole of 30x30x30cm (appr. 1kg/m<sup>3</sup>);






#### 2. Challenges

- Poor quality seedlings with limited survival changes;
- Water stress (heat, dry season);



<sup>1</sup> optimal for the cultivation of oranges

### 3. Results



-  *"The product was applied in the tree pits just before planting the orange trees, which isn't a great additional cost."*
-  *"The first thing to be said is that the seedlings had a very deteriorated root system when they came from the nursery, insomuch that serious thought was given to discard them. Thanks to the application of TerraCottem® Universal, we've obtained a good proliferation and development of the root system. The response has been outstanding; all seedlings went on successfully, despite the initial appalling conditions."*
-  *"TerraCottem® Universal has greatly improved the rooting of the seedlings. Consequently, there is an earlier entry into production."*



Control plants (no TerraCottem® Universal)

With TerraCottem® Universal

14/05/2014 - 35 days after planting

-  *"At no time did the seedlings show any signs of water stress. I've witnessed savings in irrigation water of about 25% without having put the seedlings under water stress meaning higher savings could be reached."*
-  *"We are currently in the second year from the initial planting and the first oranges appeared. Next year (3rd from plantation) we will harvest for the first time. The seedlings are growing very well and both the owner and the technical advisor (me) are very pleased with their response to TC."*

**Rafael Ortega,**  
Agricultural engineer



With TerraCottem® Universal (29/08/15)

Mr. Ortega concludes: *"I did not want to miss this opportunity to say that TC also minimizes run-off losses coming from fertigation."*

*I congratulate you for your product, TC, and the work you are doing to develop a more sustainable agriculture."*

<sup>2</sup> It was estimated that the TCU investment was 2.33% of the total planting cost.