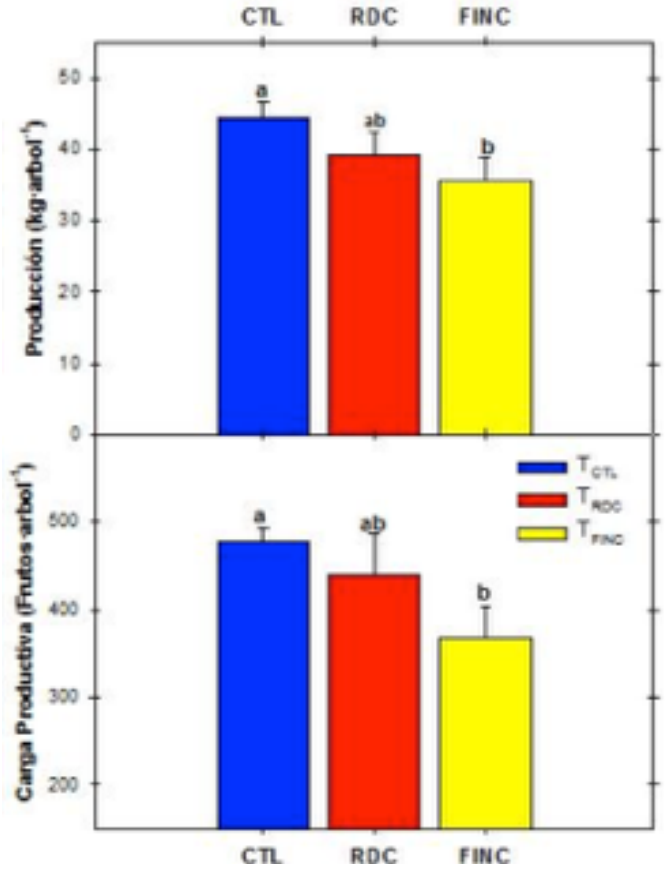
Analysis of data of the nectarine harvest in the Campotéjar community



The Irriman Life+ Project has developed the harvesting work and analysis of data from one of the experimental stations located in the Campotéjar Irrigation Community.

The following figure shows the significant differences among the different treatments: TRDC showed no statistically significant differences in production nor in the number of fruits per tree. The production with TFINC was significantly lower than with TCTL. This was due to the lower number of fruits per tree found in TFINC.

What explanation can be found for this? Having carried out pruning using the same criterion in all the treatments, there is one treatment with a lower number of fruits. The answer to this lies in the fact that TFINC brought forward the period of water deficit at the same time as its intensity increased. All this may have affected the flowering differentiation, and consequently the percentage of flower buds was lower the following year.

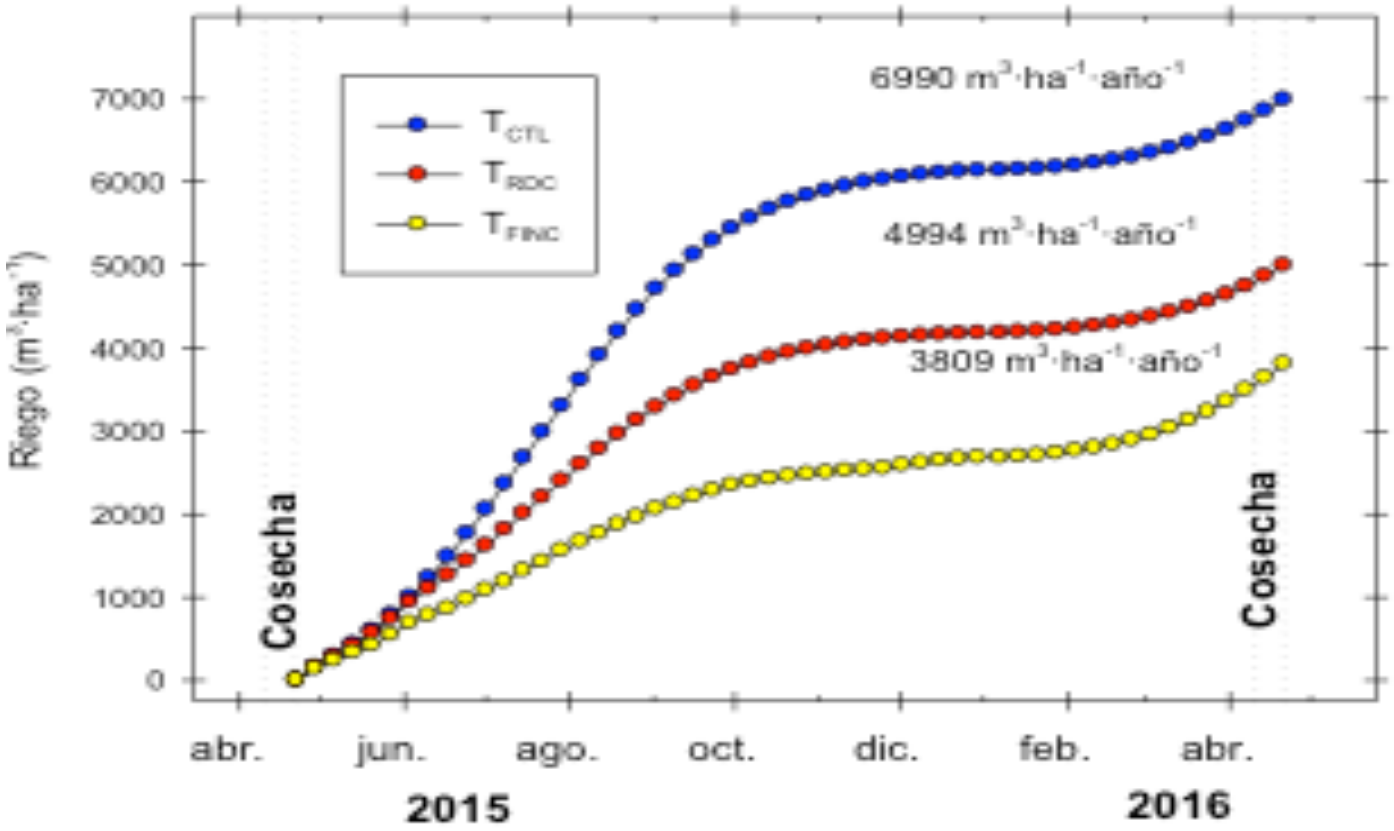


Figure 2.- Evolution of the accumulated irrigation for the control (TCTL, blue), controlled deficit irrigation (TRDC, red) and farm (TFINC, yellow) treatments during the production cycle of 2015-2016. The vertical lines delimit the harvest periods of 2015 and 2016.

Evolution of the accumulated irrigation throughout the production cycle 2015-2016

The accumulated irrigation applied for each one of the treatments was 6990, 4994 and 3809 m3·ha-1·year-1 for TCTL, TRDC and TFINC, respectively (Figure 2). The low use of water in TFINC is explained by the limited provision of water that the company Frutas Esther had available.

TRDC decreased the contribution of water by 28% without significant falls in the production parameters. Conversely, TFINC applied an excessive water deficit as this generated a 45% drop in production.

Below we can see the variation in the irrigation depending on the crop phenological status. TRDC applied irrigation volumes similar to those of TCTL during the critical periods, and considerably lower volumes than those of the control in the non-critical periods (late post-harvest – from June to December and phases I and II of fruit growth (first weeks of March). TFINC applied a more intense water deficit than TRDC in the post-harvest (between May and October) and conversely irrigated more than TCTL during fruit growth (Figure 3).

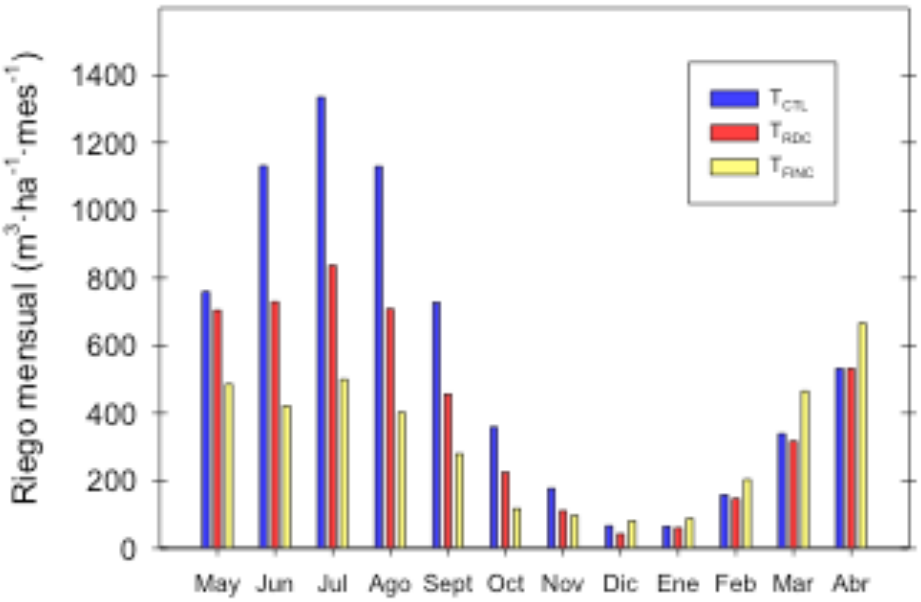


Figure 3.- Irrigation applied monthly for the control (TCTL, blue), controlled deficit irrigation (TRDC, red) and farm (TFINC, yellow) treatments throughout the production cycle 2015-2016.

For more information on the irrigation treatments applied weekly in the farms, visit our GIS viewer http://irrimanlife.eu/visor-gis/