

Autonomous Irrigation of Avocado with the Tevatronic controller - Pri-Or

Dr. Isaac Klein

25/4/2013 – 9/3/2015

A young avocado orchard of one ha was irrigated with a single Tevatronic controller for 2 years (25/4/2013 – 9/3/2015). An adjacent commercial one ha plot served as control. The Tevatronic control irrigation saved 25% water in 2013 (Fig. 1) and 34% water in 2014 (Fig 2). Initially in 2013 the tension was maintained at 10 centibar and irrigation depth at 30 cm. In June 2013 and thereafter the tension was raised to 15 centibar.

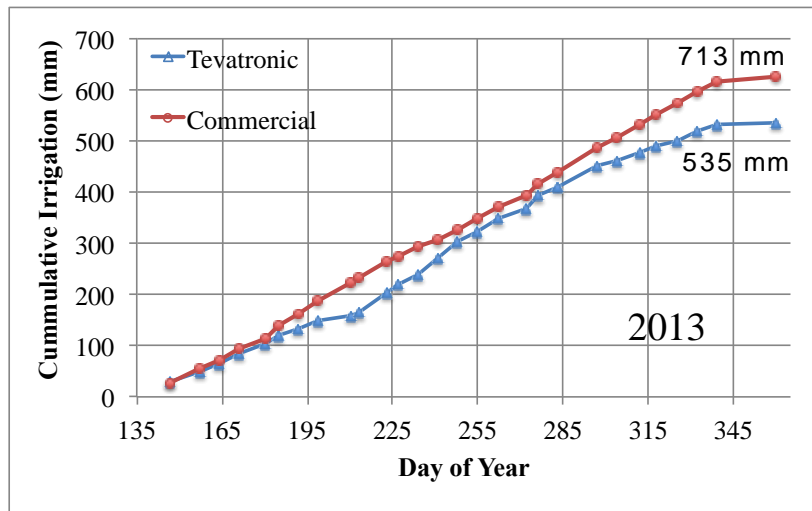


Fig. 1 Cumulative irrigation of avocado in 2013. Pri-Or

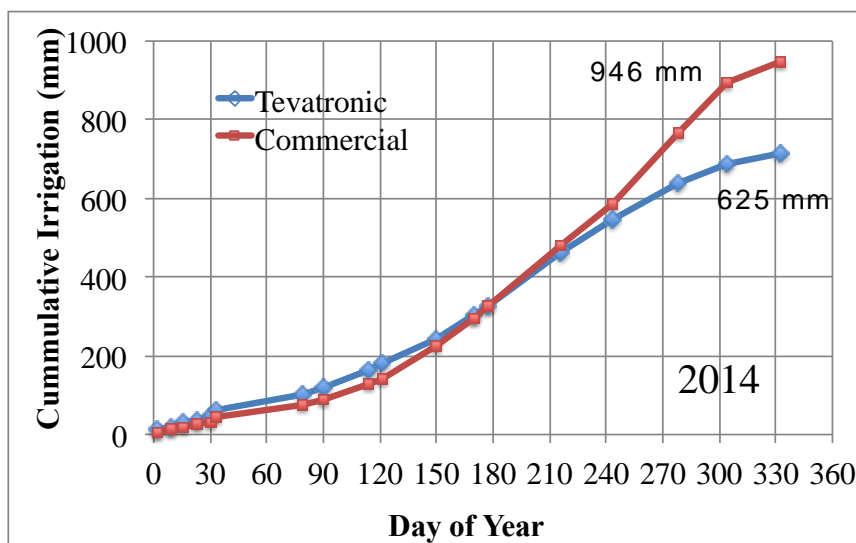
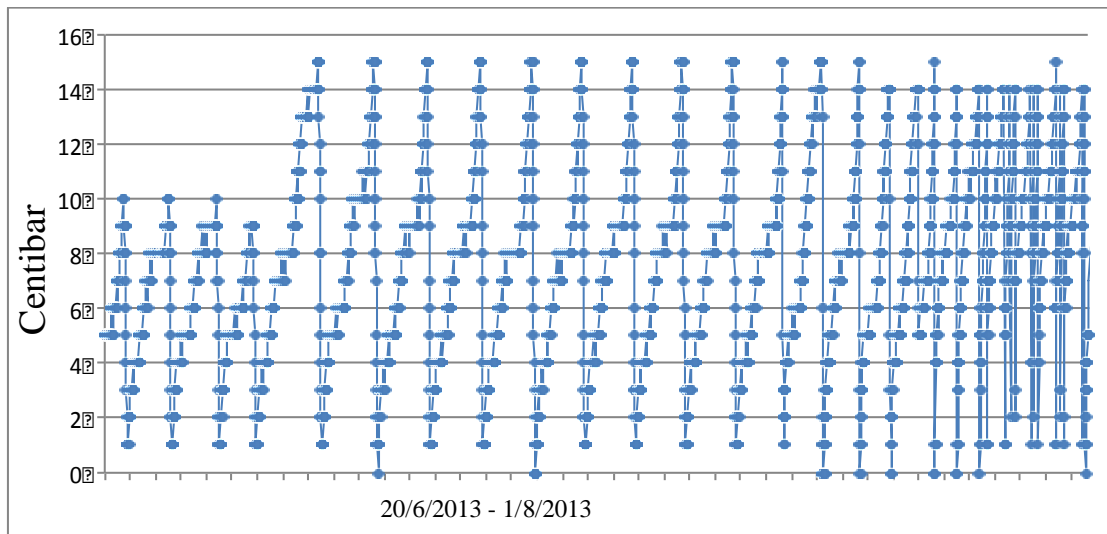


Fig. 2 Cumulative irrigation of avocado in 2014. Pri-Or

The tension was maintained at the threshold set: 10 centibar until the end of June and then raised to 15 centibar. At the end of July transpiration rose and the system irrigated 2-3 times a day (Fig 3):



The transmitting modem behind the solar panel and the growth in the 2.5 months after the start of the irrigation with the Tevatronic controller:



25.4.2013

7.7.2013



Transmitting modem behind solar panel

The avocado orchard at the beginning of 2014, after one season of irrigation:

