



Seasonality on the rainfall partitioning of a fast-growing tree plantation under Mediterranean conditions

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Studies on rainfall interception in fast-growing tree plantations are less numerous than those in natural forests. Trees in these plantations are regularly distributed, and the canopy cover is clumped but changes quickly, resulting on high variability in the volume and composition of water that reach the soil. In addition, irrigation supply is normally required in semiarid areas to get optimal wood production; consequently, knowing rainfall interception and its yearly evolution is crucial to manage the irrigation scheme properly. This work studies the rainfall partitioning seasonality in a cherry tree (*Prunus avium*) plantation orientated to timber production under Mediterranean conditions.

The monitoring design started on March 2012 and consists of a set of 58 throughfall tipping buckets randomly distributed (based on a 1x1 m² grid) in a plot of 128 m² with 8 trees. Stemflow is measured in all the trees with 2 tipping buckets and 6 accumulative collectors. Canopy cover is regularly measured throughout the study period, in leaf and leafless periods, by mean of sky-orientated photographs taken 50 cm above the center of each tipping bucket. Others tree biometrics are also measured such as diameter and leaf area index. Meteorological conditions are measured at 2 m above the forest cover. This work presents the first analyses describing the rainfall partitioning and its dependency on canopy cover, distance to tree and meteorological conditions. The modified Gash' model for rainfall interception in dispersed vegetation is also preliminary evaluated.