

## B1.14 Oral

### Does acorn production influence the diametric stem growth of holm oak?

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*Quercus ilex* ssp. *ballota* (Desf.) Samp. is a widely distributed species in the Mediterranean basin and Middle East. In the Iberian peninsula holm oak is also a very abundant species and covers a total area of about 2.5 million ha. This species is the dominant in Mediterranean pasturelands known locally as dehesa. Scarce studies have been conducted on the vegetative growth of the stem diameter of holm oaks, but a better knowledge of the growth dynamics is also very important to characterize these systems as atmospheric carbon sinks.

Allocating resources to current reproduction deprives vegetative growth of these resources and so reduces plant size and resource storage (Reekie & Avilà-Sakar, 2005), but since there is a general agreement that there is a trade-off between reproduction and growth, there is very little empirical data available (Reekie & Avilà-Sakar, 2005), and there aren't any for holm oak. In this study we try to advance in the knowledge of the processes that affect growth in holm oak, analyzing the "trade-off" between growth and reproduction. To this end, two plots have been laid out in the province of Huelva, where stem diametric growth (using band dendrometers) and acorn production (containers method) have been assessed in 34 trees throughout 2004–2008. Data have been analyzed using a mixed linear model, the dependent variable being annual acorn production per tree.