

Title: Inter-specific differences in growth, leaf phenology in seedlings of cork oak (*Quercus suber* L.), Zeen oak (*Quercus canariensis Willd*.) and their hybrid afares oak (*Quercus afares Pomel*) grown in the nursery.

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Outside of the systematic, Leaf Life Span (LLS) is used to classify trees into two main groups: evergreen and deciduous species. It varies according to the forms of life between taxonomic groups. Co-occurrence of deciduous and evergreen oaks is common in some Mediterranean type climate areas. Nevertheless, in the Tunisian forests, there is no enough information about the functional inter-specific diversity among oak species, especially in the mixed stand marked by the simultaneous presence of *Q. suber* L, *Q.canariensis Willd* and their putative hybrid (*Q. afares*), endemic oak species threatened with extinction. This study has been conducted to estimate the LLS, the relative growth rate and the count of different growth flushes in samplings in semi-controlled conditions. Our study took 17 months, with an observation's interval of 4 weeks. The aim is to characterize and compare the hybrid species to the parental ones. Differences were observed between species, both at growth and phenology. Indeed, *Q. suber* saplings reached higher total height and number of growth flushs then *Q.canariensis*. On the other hand, *Q. afares* showed much less growth flushs and is the less performing species. The LLS of parental species has exceeded the duration of the experiment, but their hybrid lost all leaves on all cohorts. The short LLS hybrid species are in accordance with his phenology in the field but for *Q. canariensis* the long LLS contrast with observations in the field where phenology is strictly annual. This study allowed us to differentiate the hybrid from both parental species at seeding stage.

Biography

Samah MHAMDI received her Ph.D. degree at the age of 31years in 2013 from the Institut National d'Agronomie de Tunisie (INAT), Tunisia. She is now continuing her research at Institut National de Recherches en Génie Rural, Eaux et Forêts (INRGREF) de Tunis, Tunisia, as a collaborative researcher. Her research interests include biological diversity, dynamics of plant populations and functioning of oak species.