



The impact of alternative shrub encroachment management options on cork growth

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Recent studies carried out on a mature and uneven aged cork oak stand, 53% crown cover, characterized by Podzols with 1.5% of organic matter, pH 5.7, with shrubs composition dominated by *Cistus salvifolius*, medium average precipitation 550mm for the 2003-2012 period, compared the effect on cork annual growth and on cork thickness, of two understory management alternatives (UMA): i) understory maintenance along the complete 9 years cork growth period: ii) shrubs removal with a forestry mulcher and residues incorporation in the top soil, followed by yellow lupine seeding (3 years between applications).

Cork thickness from the samples collected in 2003 and 2012 showed a clear decreased for both UMA, associated with a total annual precipitation decrease between the 1994-2003 and 2003-2012 periods. In one of the plots managed with lupine application, an increase of less than 1 mm on the mean annual cork growth (boiled cork) was observed. On the second plot no difference was found.

Results show that, for the trial conditions, lupine seeding did not have a relevant positive effect on the cork growth and final cork value. The maintenance of this specific spontaneous vegetation in the understory throughout the cork rotation period may reduce operations costs, and promote ecological functions such as tree regeneration or soil protection.

References and links:

<http://dx.doi.org/10.1038/srep15110>

<http://dx.doi.org/10.5424/fs/2018271-11967>

<http://hdl.handle.net/10400.5/14412>



Figure 1. Cork oak plantation with spontaneous understory vegetation. Credits: Paulo Firmino.

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