

FOREST4EU ITHub 2 - Forest Adaptation to climate change FOREST4EU partner: ANSUB OG: GO REGACORK OG's country: Portugal

# "New" pruning method for fertigated Cork Oak (*Quercus suber* L.)

Type of Innovation: Process

### Introduction

The irrigation and fertilization of the plants during the dry season leads to an increased growth rate and to the creation of a larger number of branches in the tree trunk. In normal conditions (cork oak stand without fertigation) the trees are pruned with the objective of creating better conditions for the production of cork and acorns, also allowing more sunlight to reach the ground enabling it to be use for agricultural or livestock activities, and creates a tree with a single trunk, few branches and most of the time with 2,3 or 4 ramification, evenly spaced, between the height of 2 and 3 meters.

In the case study REGASUBER the pruning applied was different. The "style" of the prune was similar to the ones done in high quality wood trees, prioritizing the formation of a single straight trunk, without ramifications, and leaving most of the branches that are in the horizontal position, cutting any branch inserted in the main trunk with an acute angle, because that kind of branches are the ones that will compete with the main stem for apical dominance. One other matter to take in mind when pruning fertigated cork oak trees is that it is necessary to start the pruning operation at a very young age since the trees grow faster, and it is necessary to do the operation annually to be sure that the tree trunks keep a good shape (straight without ramifications)."

#### Lessons learned

The young cork oak trees under optimal conditions, without water and nutrient deficits, will grow much faster than in normal conditions and will have way more branches. For this reason, a "new" kind of pruning was applied.

The results are not yet fully understood since the trees did not reach adulthood, but it is expected that the trees will grow taller, the diameter of the trunk will be higher and with a straight shape.



Figure 1. Cork oak tree before and after pruning.

## For further information contact

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The information presented in this factsheet was developed by the FOREST4EU partner, drawing on the innovations and knowledge generated by the indicated operational group with their explicit authorization.

#### Further information

