



Agroforestry practices for Chestnut production

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Chestnut plantations are one of the most profitable trees that can be used in the Atlantic area of Europe as shown the existence of a DOP label that Galicia chestnut fruit has. Nowadays, a well managed chestnut fruit plantation can deliver 10000 euros per year. Galicia has a long history of chestnut production because it was the main source of carbohydrates until the XIX century, when the ink illnesses destroyed those chestnut plantations placed below 600 m above sea level. The development of ink-resistant chestnut hybrids have allowed an increase of the plantations in Galicia in the last decade. So, there are two different types of chestnut stands co-existing nowadays in Galicia, those in high altitude areas (i.e. Ancares/Caurel) and those associated to low altitude areas (new plantations). Traditional Chestnut stands are composed of over 500 years-old trees from around 100 different varieties that ensures chestnut production and therefore resilience to unpredictable weather events (i.e. winds, frosts..). Chestnut trees need regular pruning and grafting every 30 years to ensure fruit productivity. Moreover, these traditional chestnut production and are placed in high steeply areas with difficult access are currently not profitable enough to harvest the fruit. In this case, it may be interesting to introduce local and rustic animal breeds such as the "porco celta" that are adapted to mountain conditions and that deliver high value meat products that are exported to countries such

as Japan. On the other hand, the new tree plantations introduced thanks to the Rural Development Measures in lowlands areas are unproductive until they are 15 years-old, and widely planted (10 x 10 metres) which allow both the implementation of both silvoarable through the introduction of adequate crop varieties or silvopasture practices through the introduction of animals, generally sheep. The combination of sheep and chestnut production have shown a reduction in the pesticides use to prevent chestnut fruit damage in Portugal.



Figure 1. Celtic pig under chestnut

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