Environmental Sciences Proceedings

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*Proceedings*

# Growth and Silvicultural Potentiality of *Lomatia hirsuta* Forests from Stump Shoots in the Valley of El Manso/ Patagonia/ Argentina

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† Presented at the 1st International Electronic Conference on Forests, 15–30 November 2020; Available online: https://sciforum.net/conference/IECF2020

Published: 15 November 2020

**Abstract:** *Lomatia hirsuta* (Lam.) Diels is a pioneer tree species that regenerates mostly after fire, and more frequently found as a secondary species in Patagonian forests dominated by *Austrocedrus chilensis* and *Nothofagus dombeyi*. However, in the El Manso Valley, Province of Río Negro in Western Argentina, *L. hirsuta* forms pure stands, originated from stump shoots. The wood is very attractive for its colourful appearance and beautiful grain, suitable for fine furniture. Nevertheless, these forests are not managed for timber production, they are mostly thinned for grazing, and the wood is mainly used as firewood. The objective of this study was to evaluate the possibility to improve quality wood production in stands through silvicultural interventions in a sustainable way. Samples have been carried out in dense stands of different ages and in one less dense stand with the traditional use for pastures. We evaluated the state and quality of the trees, and their growth has been studied by means of trunk analysis. The results indicate, that there is a significant potential to improve the production of quality wood in dense stands through thinning oriented to crop trees. This should start in young stands, because in older stands, good form and sound trees are already considerably reduced. It also became apparent, that forest management is necessary to stabilize these nearly unattended forests, which in old stands are very vulnerable to damages caused by wind and wet snow. In such stands the extraction of trees could be combined with the planting of seed trees, with the expectation to improve the quality and vigour of the trees at maturity.

**Keywords:** Lomatia hirsuta; stump shoots; quality wood; trunk analysis; stability of stands