

TREE SEEDLING PRODUCTION FOR AGROFORESTRY - GROWTH AND POTENTIAL OF THE ROOT PRODUCTION METHOD (RPM®)

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The Root Production Method (RPM®) is an innovative technique developed by a forest nursery in Missouri, United States, which may create taller, hardier trees which produce flower and seed in a shorter time by accelerated root growth. This method combines bottomless containerisation on raised open benches, seed selection, seed handling and air as a means of root pruning among others. In 2000 a research programme commenced in Northern Ireland to study the suitability of this technique for species such as Oak, Ash, Southern beech and Maidenhair. There are environmental and anthropogenic factors which currently limit their establishment and early development.

The purpose of this study has been to investigate whether these species would develop better if grown according to RPM® than conventional techniques and to evaluate their suitability for integration into multifunctional land use systems.

The results obtained from the outplanting phase after three growing seasons indicated that survival, growth rate and form of Oak and Ash were better than that of southern beech and Maidenhair trees under Northern Ireland environmental conditions.

Additionally the results indicated that RPM® can help to increase the economical potential by reducing time of establishment and enable final crop selection to be made earlier in the cycle. However RPM® has not yet demonstrated reduction in the time to produce flower and seed for all these specie.