

Ectomycorrhizal fungi as an alternative to the use of chemical fertilisers in nursery production of *Pinus pinaster*

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Addition of fertilisers is a common practice in nursery production of conifer seedlings, since they enhance seed germination and root growth and development. The aim of this study was to evaluate whether ectomycorrhizal (ECM) fungi can be an alternative to the use of chemical fertilisers in the nursery production of *Pinus p inaster*. A greenhouse nursery experiment was conducted by inoculating seedlings obtained from seeds of *P. pinaster* plus trees with a range of compatible ECM fungal isolates: (1) *Thelephora terrestris*, (2) *Rhizopogon vulgaris*, (3) a mixture of *Pisolithus tinctorius* and *Scleroderma citrinum*, and (4) a mixture of *Suillus bovinus*, *Laccaria laccata* and *Lactarius determinus*, using forest soil as substrate. Plant development was assessed at two levels of N—P—K fertilizer (0 or 600 mg/seedling). Inoculation with a mixture of mycelium from *S. bovinus*, *L. laccata* and *L. determinus* and with a mixture of spores of *P. tinctorius* and *S. citrinum* enhanced plant development, measured by shoot height, and plant biomass, without the need of fertiliser. Results indicate that selected ECM fungi can be beneficial biotechnological tools in nursery production of *P. pinaster*.