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Research on genetic improvement of ash and sycamore in Ireland

Ash and sycamore are important hardwoods for farm forestry in Ireland because of their growth rates, adaptability to soil and climate conditions and their final commercial value. The afforestation rate for ash and sycamore is approximately 4.0 million and 0.4 million plants annually. Genetic studies on ash have been an genetic diversity using nuclear and cytoplasmic molecular markers. To test the adaptability of ash from its European natural range, we have established an international provenance trial consisting of 30 European sources on two sites. Plans are underway to establish clonal seed orchards of ash and sycamore as a bilateral project with the UK (British and Irish hardwood Improvement Programme, (<http://www.bihip.org>)). Over 200 ash and 150 sycamore trees have been selected and material has been grafted for conservation and for the seed orchards. A project on vegetative propagation of material from selected trees of ash has shown that it is feasible to initiate shoot cultures from grafted trees and to establish the micro propagation of some selected trees. Micropropagated trees grew normally in field tests and research is now focussed on developing a system for cutting propagation on a large scale.