

## **Application of molecular markers in the Dutch Conservation program: a case study of *Ulmus minor***

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### **Abstract**

The Centre for Genetic Resources, the Netherlands (CGN) conducts, on behalf of the Dutch Government, statutory research task associated with genetic diversity and identity of species that are important for agriculture and forestry.

Its activities in forest genetic resources management are aimed at *ex situ* conservation, support for *in situ* conservation and promotion of the use of material in sustainable forest management.

For the *ex situ* conservation of trees and shrubs CGN closely collaborates with the State Forest Service and the Ministry of Agriculture, Nature and Food Quality. In spring 2006 a new gene bank for indigenous trees and shrubs has been opened in which material of more than 50 species has been included, representing over 400 *in situ* locations. In a number of these species molecular marker studies are applied to support the management of these genetic resources.

In *Ulmus minor* a microsatellite marker study was applied on 6 populations with the aim to characterize the genetic diversity of this species in the Netherlands and to support/refine the sampling strategy for setting up an *ex situ* collection that represents the gene pool of the *in situ* populations of *U. minor* well. The studied populations showed a modern genetic differentiation. Also a substantial number of clones occurred in the sampled material. The results support the influence of historical human plantings. The natural status of this species in The Netherlands and implications for conservation strategies are discussed.