

Project report

Molecular diversity in Nordic angelica populations

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Angelica (*Angelica archangelica* L.) has a long history in the Nordic region as a vegetable, spice and herbal remedy. Two subspecies (*ssp. archangelica* and *ssp. littoralis* (Wahlenb.) Thell.) are represented in the Nordic region, with partly overlapping distribution and alleged hybridisation. Designation of subspecies to Icelandic angelica has been inconsistent. A Norwegian ecotype, *Angelica archangelica ssp. archangelica* var. *maiorum* Fægri; with a long history of cultivation, has in recent years become alarmingly scarce but is still conserved in a few locations in western Norway. The objectives of the project were to assess Nordic angelica populations for genetic diversity within and between populations.

Six angelica populations originating from Iceland, Norway, Sweden and Finland were included, each represented by 4 – 20 individuals. The DNA samples were characterised by inter simple sequence repeat (ISSR) markers for genetic diversity.

Results showed that the two Icelandic populations had the shortest genetic distance to the Finnish population (*ssp. archangelica*). The Swedish population (alleged *ssp. littoralis*) had the shortest distance to a Norwegian angelica population. The Norwegian ecotype (var. *maiorum*) was genetically uniform and distinct from all other populations, however, with the closest genetic distance to the Icelandic populations.

Results from the study were presented at *Fræðaðing landbúnaðarins 2011* (Göransson *et al.* 2011). As an outcome of the study, in 2011 nine angelica populations were planted in the Botanical Garden of Reykjavik in collaboration with the Nordic Genetic Resource Centre, for morphological characterisation in 2012.

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Göransson M., Solberg S. & Kolodinska Brantestam A. (2011) Genetic diversity in angelica (*Angelica archangelica* L.) populations assessed by ISSR molecular markers. *Fræðaðing landbúnaðarins 2011*: 264–269.