Evaluation of clonal variation and active gene conservation in wild Danish blueberry (*Vaccinium myrtillus* L.)

Martin Jensen and Kell Kristiansen, Department of Horticulture, Faculty of Agricultural Sciences, Aarhus University. Kirstinebjergvej 10, DK-5792 Aarslev, Denmark, email: Martin.Jensen@agrsci.dk

Blueberries (*Vaccinium myrtillus* L.) are of increasing interest worldwide due to their high content of bioactive constituents with potentially benefits in human health and well-being. In Denmark, berries are harvested in natural environments and no commercial horticultural production exists, to date very little breeding has been carried out. Future commercial production will depend on the availability of superior plant material with high crop yield and berry quality. Therefore, identification and conservation of genetically superior plant material from wild and undomesticated natural populations is crucial for the development of this crop.
We have collected shoots and berries from over 170 superior clones from 58 locations distributed all over Denmark. Healthy clones with large berries and a high number of berries were selected. Average berry size was measured and samples were frozen for analysis of biochemical constituents of berries. Nodal buds were surface sterilized and placed in tissue culture for further propagation and rooting of plants. Two gene conservation stands will be established that will have a triple function: as gene conservation of superior plant material, as a comparative trial for clonal quantitative and qualitative attributes, and as a clonal seed orchard for harvesting seeds of superior genetic quality. This project will identify and conserve superior plant material, and verify the use of these plants by describing the variation between plants, the most interesting clones and it will promote the future availability of the superior plant material to growers and consumers. Results on phenotypic variation, propagation success and strategies of 'activating while conserving' genes will be presented.

Keywords: *Vaccinium myrtillus*, activating genetic resources, conservation, phenotypic variation

Preferred form of presentation: Poster
Symposia category: S01 Berries