

# **COST E42 Valuable Broadleaves Country report for Denmark 2005-06**

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During 2005-06 research activities on valuable broadleaves focused mainly on

- the identification of suitable seed sources,
- the development of young stands (pure as well as mixed),
- the development of ground flora following afforestation of former farmland,
- the use of valuable broadleaves as understorey in oak stands, and
- the health of ash and horse chestnut.

## **Seed sources**

For many species the number of Danish seed sources are very limited. Often, foreign seed sources are unsuitable because they are adapted to different climatic conditions or because of unknown survival and growth performance. Currently, provenance trials are being established for sycamore, Norway maple, lime, black alder, birch, cherry and numerous other species for use in forests as well as in the open landscape.

## **Development of young stands**

Valuable broadleaves are being used increasingly in afforestations of former farmland. Several experiments include pure stands of ash, sycamore or Norway maple, or admixtures of hornbeam, cherry, lime, horse chestnut and other species. The experiments focus mainly on survival and early growth, pre-commercial thinning and pruning of potential crop trees.

## **Biodiversity**

The development of ground flora is being investigated in experiments on pre-commercial thinning of ash and of mixed stands of oak, hornbeam, cherry, lime and horse chestnut. During 2005-06 two forestry students reported on this in their B.Sc. thesis.

## **Valuable broadleaves as understorey in oak stands**

The long-term effects of different understorey species on the growth and exterior wood quality of oak is currently being investigated. The understorey species include black cherry, hornbeam, elm, lime, sycamore, field maple, Norway maple, *Acer hyrcanum*, *A. monspessulanum*, *A. circinnatum* and possibly *A. saccharum*. Additionally, a survey of recreational preferences is being prepared. The survey will focus on preferences in relation to understorey type.

## **Ash decline**

During recent years ash has suffered from extensive top-dying in all of northern Europe. The possible causes remain unknown. Unfortunately it has not been possible to launch a research initiative on ash decline, but samples from experimental and operational stands have been analysed for pathogenic fungi and abiotic damages.

## **Horse chestnut moth**

During recent years horse chestnut has suffered from extensive attacks by horse chestnut leaf-miner (*Cameraria ohridella*). Due to the widespread use of horse chestnut in urban areas the development of this pest has caused great concern among the general public and is being followed closely by scientists as well as by the media.

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