



HedeDanmark
S E E D

Picea abies, Norway Spruce

Seed orchard C.E. Flensburg FP.631



Objective:

Production of seed of high physical and genetic quality for increased timber production.

Origin:

The plus trees were selected in 20 Danish and 4 South Swedish Norway spruce stands of presumed west-continental origin.

Selection criteria:

Stem straightness, volume, wood density, branch quality and plant health.

Tree improvement programme:

100 plus trees were selected as part of an intensive tree improvement programme. They were specifically selected from 800 plus trees for having the highest wood density and were selected according to stem form, fine-branching and growth rate. The progeny of 100 selected plus trees have been tested in progeny trials and the results form the basis for a genetic thinning of the seed orchards.

SSO seed orchard:

The seed orchard was established as a SSO (Seedling Seed Orchard), meaning that that progeny of 100 plus trees after open pollination were planted in 4-tree plots. Before approval of the seed orchard, all plots were reduced to comprise 1 tree only. These were selected based on a phenotypic evaluation and on diameter growth.

Genetic thinning:

The genetic thinning in the seed orchard will take place based on results of the progeny trails. At the time of thinning, the poorest progeny (families) in the seed orchard will be removed.

Characteristics:

The intense selection for increased wood density is expected to result in an increased relative wood density of approx +3%. This selection, particularly relating to stem straightness, is expected to increase the quality of the progeny. Furthermore, the genetic thin-

ning is expected to result in improved plant health of the progeny compared to the original material.

Application:

Based on the increased wood density, stem straightness and plant health, progeny of FP.631 will be specifically suitable for production of timber of high quality in all places where it is advisable to plant Norway spruce of west-continental origin.

Christmas trees:

Expected to correspond to the original stands.

FACTS

Facts

Year of propagation: 1977

Year of planting: 1981-1982

Original material for planting: 100 plus trees' progeny at free pollination

Design: 4-trees' plots thinned out to 1 tree

Phenotypic thinning: Number of stems reduced by 75%

Isolation to the nearest occurrence of Norway spruce: Min. 300 m

Selection number: FP.631

Selection category: Selected in the category "qualified" in 2010

Selection objective: Wood production

Identification

Species: Picea abies

Ownership: HedeDanmark a/s

Supervisor: HedeDanmark Seed

Location: C.E. Flensburg, DK

Latitude: N56°38.088'

Longitude: E009°22.845'

Altitude: 30 m

Area: 2.5 ha

HedeDanmark a/s

Seed

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