

# Picea abies, Norway Spruce

Seed orchard C.E. Flensburg FP.635



## Objective:

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

## Origin:

The seed orchard consists of progeny of 177 plus trees, of which 142 are selected in Jutlandi plantations. 23 are originally selected in stands in Gribskov and are part of the seed orchard Soroe FP.209. The remaining 12 progeny are from plus trees chosen in stands in Rold Skov.

## Selection criteria:

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

## Tree improvement programme:

The material represents a wide range of the best-adjusted Norway spruce in the 1960's heath plantations and in Rold Skov and Gribskov. Based on the large amount of plus trees, a broad genetic base is guaranteed, making a broad base for future generations possible.

## SSO seed orchard:

The seed orchard was established as a SSO (Seedling Seed Orchard) and designed to work both as a progeny trial and a seed orchard. The 177 plus trees were planted in 4-tree plots and are today thinned out to contain 1 tree only. The remaining tree was selected based on a phenotypic evaluation and on diameter growth.

## Genetic thinning:

Evaluation of results of the seed orchard's trial plots will form the basis for selection of families to be removed. The primary objective is to select seed orchards for better plant health and that the healthiest trees are left in the seed orchard for seed production.

## Characteristics:

The heavy selection for stem straightness, fine-branching, plant health and diameter combined with the plus tree selection are

expected to have a positive effect on the quality of the progeny. Furthermore, the genetic thinning by diameter and by plant health is expected to result in an improved progeny compared with the original material.

## Application:

Based on the genetic origin of the seed orchard and the selective thinning, progeny of FP.635 will be specifically suitable for production of high quality timber in all places where it is advisable to plant Norway spruce.

## Christmas trees:

Expected to correspond to the original stands.

## FACTS

### Facts

**Year of propagation:** 1980

**Year of planting:** 1984

**Original material for planting:** 177 plus trees' progeny at free pollination

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

**Phenotypic thinned:** Number of stems reduced by 75%

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

**Selection number:** FP.635

**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 Dept. 118, DK

**Latitude:** N56°38.088'

**Longitude:** E009°22.845'

**Altitude:** 30 m

**Area:** 5 ha

## HedeDanmark a/s

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