



Plants for
Christmas trees
and Greenery



Silkeborg Nordskov FP.259

Seed Source Description

ORIGIN: The Tversted pool is presumed to originate from the Borshomi area in Georgia. It was introduced around 1900, and several common production stands were established. Three of these stands were later selected for seed production for Christmas tree production (F.525 Uggerby, F.526 Tversted, and F.527 Tversted).

BREEDING PROGRAM

78 plus trees were selected in the stands at Tversted (F.526 and F.527), along with 16 plus trees in the offspring of F.525 Uggerby. Selection criteria included health and ornamental quality. Offspring from the plus trees were tested in trials, and offspring stands from Tversted and Uggerby were included in multiple experiments. Trial results were used to conduct genetic thinning in the seed orchard, removing the least favorable clones.

CLONE SEED ORCHARD

The seed orchard was established (grafted) with clones from the 94 plus trees. The seed orchard was high-grafted in an existing Nordmann fir plantation in Silkeborg Nordskov.

GENETIC THINNING

Genetic thinning in the seed orchard is based on results from the progeny trials. Thinning focuses on selecting for better Christmas tree quality (proportion of ON trees), ensuring that clones with the best Christmas tree quality remain in the seed orchard after thinning. In addition to Christmas tree quality, an examination of the post-harvest quality of the offspring (needle retention after harvest) is conducted, and the poorest clones are removed from the seed orchard. The offspring from the seed orchard gradually improves with genetic thinning. Genetic thinning is carried out over several years, and it is expected that, after completion, the seed orchard will contain as few as around 25 clones. Genetic thinning was carried out in 2007/2008, removing a total of 26 of the original 94 clones from the seed orchard.

Use

The plus tree selection combined with selection (genetic thinning) for improved Christmas tree quality will result in an increased yield of quality Christmas trees in the offspring. Progeny trials show that Christmas tree yield (proportion of prime trees and ON quality) is significantly improved compared to Ambrolauri, with a respective increase of +14 percentage points and +8 percentage points. Additionally, there is good post-harvest quality (needle retention after harvest). Growth will be slightly faster than Ambrolauri, with slightly earlier bud burst.

APPLICATION

With the improved quality and better post-harvest characteristics, the offspring is particularly suitable for Christmas tree production.



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Rooted in Knowledge

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