



Plants for  
Christmas trees  
and Greenery

# Mosemark FP.251

## Seed Source Description

ORIGIN: The material in 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:

From the beginning, 94 plus trees were selected (the same plus trees that were all part of the seed orchard FP.259 Silkeborg Nordskov). Based on early progeny evaluations, 27 clones were deselected, and only the remaining 67 clones were grafted in the seed orchard FP.251 Mosemark. Of the 67 plus trees, 56 were from the stands at Tversted (F.526 and F.527), and 11 were from the offspring of F.525 Uggerby. The selection criteria from the start were health and ornamental quality, followed by Christmas tree quality.

Offspring from the plus trees were tested in trials, and offspring stands from Tversted and Uggerby are included in multiple experiments. The trial results are used to conduct genetic thinning in the seed orchard, meaning thinning where the poorest clones are removed from the seed orchard.

## CLONE SEED ORCHARD

The seed orchard was established (grafted) with clones from 67 plus trees. The seed orchard was high-grafted in an existing Nordmann fir plantation in Mosemark Skov.

## GENETIC THINNING:

Genetic thinning in the seed orchard is based on results from the progeny trials. Thinning places special emphasis on selecting for better Christmas tree quality (proportion of ON trees), meaning 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 began in 2009 and is carried out over several years. It is expected that, after completion, the seed orchard will contain around 15-20 clones. As of 2021, there are 63 clones in the seed orchard.

## Use:

The plus tree selection combined with selection (genetic thinning) for better 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) is significantly improved compared to Ambrolauri. Additionally, there is good post-harvest quality (needle retention after harvest). Growth will be moderate.

## APPLICATION:

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



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