

Forest plants with the best shape and growth strength

Betula pendula – Sandbirch and *Betula pubescens* - Moorbirch

As a pioneer tree species, the birch contributes to the rapid reforestation and development of the edges of forests. It is an important forerunner in the foreland, promoting humus accumulation and reducing the risk of late frost. Due to its light colour and silvery sheen, birch wood is becoming increasingly important in the furniture industry, especially in veneer production.

The plant material

The Niedersächsische Forstliche Versuchsanstalt (Lower Saxony Forest Research Institute) selected plus trees of sand and downy birch in Germany, Poland, Finland, Sweden and the Netherlands as early as 1975. With one-year-old seedlings from single tree sowings progeny examinations were arranged in 1978. At the age of 21, the superior offspring (half siblings) in terms of trunk shape, crown shape and growth performance were identified and the best trees for clone testing in vitro were established in autumn 2000. Six sandbirch and five moor birch clones proved to be significantly superior after clone testing. The six superior sandbirch clones have their origin in Poland, while the five superior moor birch clones all originate from Germany (Eastern Lower Saxony).



Abb. 1: Birch clone test (LWK Nordheide) at the age of 6 years (5 years on the surface).
Average height 4. 80 m. Significantly superior clones 5. 70 to 5. 95 m.

Advantages of the selected sand and downy birches

The 11 superior clones show average increases in height growth performance between 1 and 68 %. The absolute proportion of straight trees is increased by an average of 15 to 91 %.

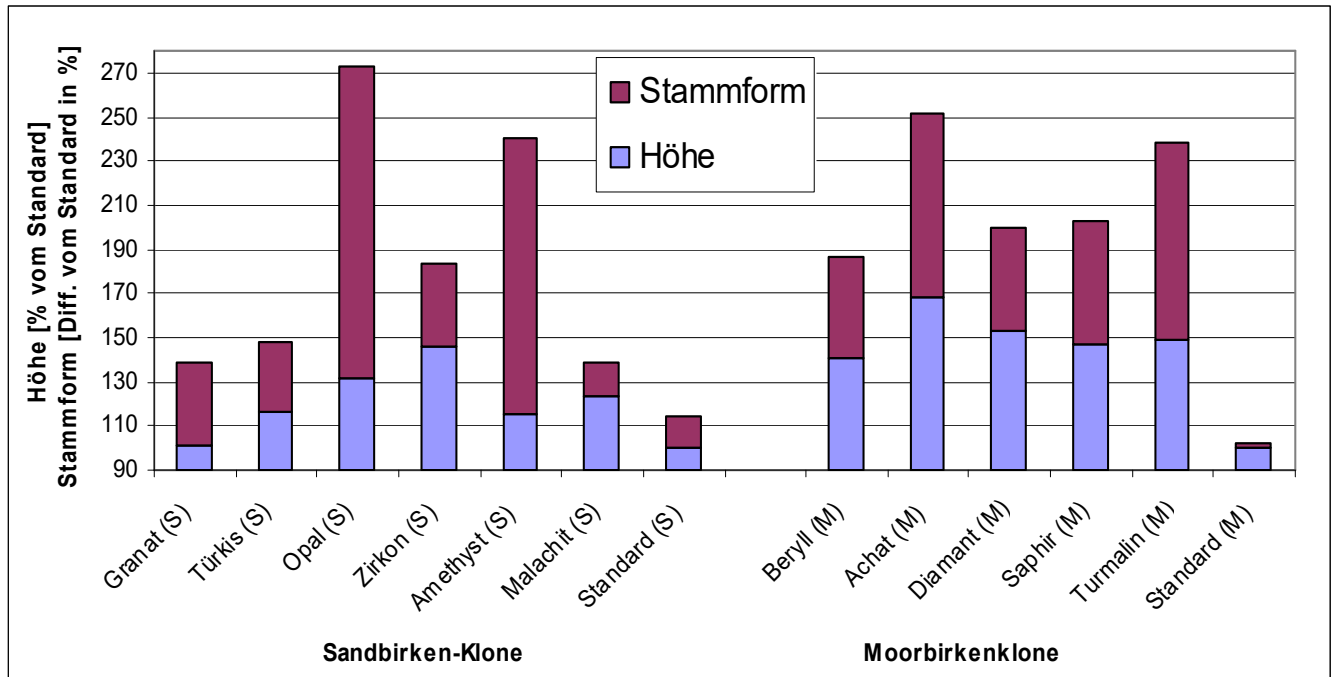


Abb. 2: Significant superiority of sand and downy birch clones in terms of Height and stem form in three clone tests

The results show that the cultivation of in vitro propagated sand and downy birch clones is a promising alternative to seedlings.

Qualities

The sand birch clone collection „silvaSELECT“ consists of max. 6 clones.
The moor birch clone collection „silvaSELECT“ consists of max. 5 clones.

We inoculate all plants with symbiotic mycorrhizal fungi during the hardening phase in the greenhouse. This ensures rapid growth at the natural site.

Notes on silviculture

Your planning should provide for 100 to 150 Z trees/ha to be taken out. For sandy and downy birch, we recommend that the high-quality plant material is spread evenly over the areas in quantities of 400 to 900 trees/ha and that filling wood (birch seedlings) is integrated. The recommended final number of plants is 1600 plants/ha (2.5 x 2.5 m plant bandage).



Abb. 3: Birch clone test (LWK Nordheide) at the age of 6 years (5 years on the surface). Average height 4.80 m. Significantly superior clones 5. 70 to 5. 95 m.

The birch can also be added during first afforestations. Due to the fast-growing glider it offers excellent frost protection, improves performance and structure. The same applies to planting along roadsides and in the case of gaps in natural regeneration. The birch has a high efficiency even on poorer sandy sites under the condition that a good water supply is guaranteed. But here, too, you can achieve the best yields on humus-rich soils.

Notes on the FoVG

Sandbirches are subject to the FoVG, the clones are approved under the register numbers of the individual clones as reproductive material of the category „Tested“ (GP). A list of register numbers and master certificates shall be attached to the delivery documents. You will receive a clone mixture of at least 4 clones plus license fee.

Downy birches are subject to the FoVG, the clones are approved as propagating material of the category "Tested"; (GP) under the register numbers of the individual clones. A list of register numbers and master certificates shall be attached to the delivery documents. You will receive a clone mixture of at least 4 clones plus license fee. Institut für Pflanzenkultur e. K.

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