

EXPANDING THE BELGIAN SEED ORCHARD NETWORK, A COLLABORATION BETWEEN PRIVATE AND PUBLIC SECTOR

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By 2030, the regional government of Flanders (Belgium) needs to create an additional 10,000 hectares of forests. Due to the slow pace of natural reforestation in non-forested areas, a substantial amount of planting material is required. This high demand for forest reproductive material (FRM) has led to shortages in the existing supply. FRM refers to seeds, plants, and parts of plants that are used for planting new forests and other types of tree planting. FRM is harvested from registered parent trees (i.e., basic material) to ensure traceability. Certification of FRM ensures its origin and quality. To solve the problem of shortages, the Research Institute for Nature and Forest (INBO) collaborated with the Flemish Agency for Nature and Forests (ANB), which owns most of the seed orchards, and the tree nursery sector, and carries out the harvesting and commercialization. We address the challenges of shortages in FRM through three approaches. Firstly, we are analyzing existing seed orchards to identify factors that cause a decrease in seed production. Secondly, we duplicate material, using various methods to expand or rejuvenate the public seed orchards. Lastly, duplicated material from the public seed orchards is being provided to establish private seed orchards. Throughout the project, we have identified numerous flaws in the existing seed orchards, such as light availability and pruning practices; we have identified various shortcomings and areas for improvement in the existing seed orchards, such as light availability, pruning practices, or diseases. Fortunately, many flaws are temporary and can be mitigated by adjusting management practices. The material used for expanding and constructing seed orchards, both private and public, is clonally propagated ensuring uniform quality. Various propagation methods, including softwood and hardwood cuttings, grafting, and rootstock, have been employed with varying degrees of success. Nevertheless, substantial progress has been made in duplicating material during the project's first year.

Keywords: Seed orchard design, Seed orchard duplication, Seed orchard establishment, cuttings, grafting