

# **Conducting forest experiments and demonstration plots with valuable broadleaves**

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Historically, procedures for forest experiments and demonstration plots were developed mainly with a focus on above-ground parts of the trees and with the main objective to quantify the wood resource and its growth potential. Due to an increasing diversity of the forest policy agenda and of forest management objectives, plot procedures are developing to provide data for a broader range of forest and site characteristics and to adjust and refine measurement practices accordingly. In addition to the classical topics of tree and stand growth, forest health and wood quality, the focus has gradually expanded to include, for example, assessment of forest operations performance, regeneration abundance and quality, carbon stock, biodiversity (fauna, flora and fungi), habitat diversity, range land, water resources, light conditions, crop nutrient balances, soil characteristics, recreation opportunities, cultural heritage, and amenity values. This presentation focuses specifically on challenges related to the conduct of cost-effective field experiments for valuable broadleaves. Due to the scattered occurrence of many valuable broadleaved tree species the issue of statistical representation is given special attention. Due to the high economic potential of valuable broadleaves the measurement of associated wood quality variables is also given special attention. Overall, a pragmatic approach is suggested, but it is stressed that this should not lead to inferior statistical procedures or inferior measurement practices.

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