SHORT-ROTATION FORESTRY IN GERMANY: LESSONS FROM THE PAST, PRESENT RESEARCH ACTIVITIES, AND FUTURE PERSPECTIVES

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Wood has traditionally played a major role in Germany in supplying biomass for energy. Demand for this raw material is expected to rise with new policies promoting renewables. Short-rotation forestry (SRF) is regarded as a promising option to counteract the limited availability of energy wood from traditional forestry. This paper summarizes and reviews Germany's experiences with SRF. Germany lies between 47 °N and 55 °N latitude. In areas generally suitable for SRF, precipitation averages 700 mm but can be as low as 400 mm. The mean temperature there is 9 °C (with a range of 7 to 11°C). Thus, conditions resemble North America in their variability. Enhancing cooperation between Europe and North America is of vital importance for solving common problems. For many sites *Populus* clones are preferable, while *Salix* clones and *Robinia pseudoacacia* increasingly are being used on other sites. Recommendations to match the available clones to available sites need much improvement. For example, satisfactory growth performance has been confirmed for only a few *Populus* clones (e.g., Max, Androscoggin) and under a limited range of conditions. With site-adapted clones, yields of 12 to 16 t dry matter ha^{-1} yr^{-1} can be achieved. Testing and breeding still need to be increased to reach expected production levels. Plantation management and harvesting techniques need to be further developed if SRF is to become an accepted biomass production system. Depending on political support and economic returns SRF is expected to cover an area between 0.5 and 4 million ha of former agricultural land.

KEY WORDS: short-rotation forestry, tree improvement, woody biomass production, *Populus*, *Robinia pseudoacacia*, *Salix*

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