

USE OF SELECTED HYBRID POPLARS IN SHORT-ROTATION WOODY CROPS PRODUCTION: THE EUROPEAN EXPERIENCE FROM THE FIELD TO THE FINAL TRANSFORMER

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Producing green energy through the use of woody biomass from short-rotation forestry gives farmers an interesting alternative to traditional crops while reducing reliance on fossil fuels. In Italy, the cultivation of hybrid poplar for woody biomass in short-rotation coppice (2 to 5 years) is a business opportunity for farmers and technicians involved in the production cycle, from the field to the power plant.

The *Populus* genus is well suited for short-rotation forestry, especially because of the potential for increased yields and disease tolerance through genetic improvement systems. For more than 20 years, this topic has been at the center of activity at Alasia Franco Vivai, an Italian company from northwestern Italy. High-performance plant material has made the production of woody biomass increasingly more attractive to farmers. New equipment has been developed for planting, cultivating, and harvesting operations, and species-specific agricultural techniques have been applied. The combined use of very productive poplar clones and appropriate agricultural practices gives high yields. Italy, with an area of more than 6,000 hectares, is the European country with the most land for short-rotation poplar coppices and the model that has been developed there will be exported to other countries around the world.

KEY WORDS: genetic improvement, hybrid poplar, yield, mechanization, chipwood

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