

PROLONGED PLANTING SEASON IN WILLOW SHORT-ROTATION FORESTRY: EFFECTS ON INITIAL PLANT GROWTH AND PLANT SURVIVAL

Nils-Erik Nordh*, Pär Aronsson, and Theo Verwijst

Swedish University of Agricultural Sciences

The recommended time for planting willow (*Salix* sp) in Swedish short-rotation forestry (SRF) is from early spring (April) to early summer (mid-June). After early planting, willow cuttings may take advantage of the high soil-moisture content and the longer establishment season. However, early planting increases the risk of frost damage during cold nights that may occur during this time. The start of the planting season varies between years depending on when the soil becomes dry enough to be harrowed and reached by the planting machine. Thereafter the planting may be delayed due to rainy periods or drought. In the worst case the planting may have to be postponed until next year. A longer planting season would justify the establishment of SRF and planting machines could be used more efficiently. This study, performed on three willow clones during 2007-2008 at two locations in Sweden, investigates the effects of a prolonged planting season on initial plant growth and survival. Planting was done 11 times every third week from May 2 to November 20. Individual plant development was assessed every week and survival, sprouting, number of shoots, and damage were recorded. First-year plant growth was measured nondestructively after growth cessation and second-year plant growth will be measured in winter 2008. The initial results show that plant survival in general decreases rapidly when planting after mid-July and that first year biomass production gradually declines after the first planting date. Therefore, our preliminary conclusion is that early planting should be recommended.

KEY WORDS: biomass, establishment, planting time, *Salix*, shoot sprouting

*Corresponding author: Swedish University of Agricultural Sciences, Department of Crop Production Ecology, Box 7043, S-75007 Uppsala, Sweden; Phone: +46 (18) 672561; Email: Nils-Erik.Nordh@vpe.slu.se