



OS I-13

Adapting to emerald ash borer: planting and assessing the survival, health, growth, and hydrological impacts of non-ash trees planted into black ash depressional wetlands

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Five different tree species were planted the fall of 2015 in six study sites in a randomized strip planting design. All seedlings were 6-month old containerized stock of the same size and from the same greenhouse. Plantskydd® was applied in spring and fall as a browse deterrent and weedmats were installed on every other seedling to assess the effects of vegetative competition control. Species were assessed twice a year to measure health, growth, and causes of stress or mortality. Stand attributes such as tree density and canopy closure, ground vegetation and diversity, and hydrological variables were also assessed at each site to determine affect on health and growth. After one growing season, seedling survival ranged from 53-95%, with browse being the largest contributor to mortality. Silver maple and river birch had the highest rates of survival, the least amount of browse, and exhibit resilience from browse. Although silver maple and river birch seem to be clear leaders with high survival rates, seedlings may further differentiate over time in terms of shade tolerance, recovery from repeated browse, hydrological conditions and weather tolerance. Long-term seedling growth, health, and survival will continue to be assessed semi-annually or annually for several more years. This project is a cooperative effort between the Fond du Lac Environmental Program and the Fond du Lac Forestry Program and has received technical assistance from the University of Minnesota's Cloquet Forestry Center and the USDA Forest Service, with funding from the Environmental Protection Agency.

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Science & Management of Ash Forests after Emerald Ash Borer

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