

TREE SHELTERS FAIL TO ENHANCE HEIGHT GROWTH  
OF NORTHERN RED OAK IN THE UPPER PENINSULA  
OF MICHIGAN

Douglas O. Lantagne and Raymond Miller<sup>1</sup>

**Abstract:** Tree shelters have been shown to be a questionable establishment practice in shelterwood stands. Experiences with low seedling survival and growth may be due to an apparent deficiency of light. In other situations, tree shelters have generally been found to be beneficial in enhancing survival and growth of hardwood plantings. This poster will describe the poor survival and growth results of a 3 year old tree shelter study with northern red oak in the Upper Peninsula of Michigan. The study was established to test the effectiveness of tree shelters in protecting northern red oak seedlings from deer browse in a heavily used deer area. After 3 years, the northern red oak have not responded favorably to tree shelters. Planted seedlings outside of tree shelters have a higher rate of survival rate and have shown better height growth than sheltered seedlings. It appears that tree shelters on this site were detrimental to the establishment of northern red oak.

---

<sup>1</sup> Associate Professor, Michigan State University, Department of Forestry, 126 Natural Resources, East Lansing, MI 48824; and Resident Forester, MSU Upper Peninsula Tree Improvement Center, Escanaba, MI, respectively.