

How to Identify White Pine Susceptible to Air Pollution

INTRODUCTION

Air pollutants have caused substantial losses to eastern white pine (*Pinus strobus* L.) throughout the natural and planted range. The annual loss of white pine trees is expected to increase as air pollution increases. Many trees established years ago, which were not susceptible, may die from air pollution damage as the concentration of pollutants surpasses the genetic tolerance of the tree. White pine trees susceptible to air pollutants can be identified by the presence or absence of yellow to yellow-brown bands on their needles. Grading out susceptible seedlings and trees in nurseries, eliminating susceptible trees in seed orchards and Christmas tree plantations, and removing susceptible trees during timber stand thinnings will increase the tolerance of white pine to air pollution over time.



LOOK FOR:

Poor growth and short needles that are grouped at the end of the branches.



LOOK FOR:

Chlorotic flecks, yellow to yellow-brown bands, and mottling on needles of susceptible trees.



ACTION:

These trees should be culled or considered for removal in nursery stock, Christmas tree plantations, seed orchards and during timber stand thinnings. Continue to observe healthy trees for symptoms as concentrations of pollutants change.

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