

NURSERY DISEASE WORKSHOP

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ABSTRACT

Abstract.--The largest variety and quantity of forest tree nursery seedling production presently occurs in the southern United States. The recent increased emphasis on nursery seedling production and field forestation in the South is accompanied by an expanded variety of nursery disease problems that demand the utmost in disease protection and control applications for these high-value forest products. A variety of conifer and hardwood nursery disease problems along with appropriate control recommendations are discussed in detail.

Additional keywords: Conifer diseases, hardwood diseases, root rots, stem diseases, foliage diseases, integrated pest management, systemic chemical controls.

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## INTRODUCTION

There are presently over 65 state, industry, and federal forest tree nurseries in the southern United States with an annual production exceeding 1 billion seedlings. This represents over 35% of all the nurseries and over 75% of the annual tree seedling production in the U. S. Eight to ten new nurseries have been constructed during the past 2-3 years reflecting the accelerated emphasis and demand on seedling production and reforestation in the south. Southern nurseries produce a variety of conifers (15+ species) and hardwoods (12+ species). The nursery sites in this region also represent a wide variety of soil types and environments from the Southern Appalachian Mountains in western Virginia and North Carolina to the subtropics in southern Florida.

This wide variety of seedling species and nursery sites has also resulted in the development of an associated wide variety of seedling disease problems. In addition, corresponding accelerated nursery seedling production costs and high-value products have significantly increased the disease impact on both conifers and hardwoods during the past 5-10 years. Consequently, some of our most valuable forest resource values are represented in our southern nurseries, demanding the utmost in disease protection and intensive coordinated integrated control efforts.

A variety of nursery disease problems occurring on both conifer and hardwood seedlings along with appropriate control procedures will be discussed in the following sections. These discussions include some "old" disease problems such as charcoal or black root rot and fusiform rust on southern hard pines and several "new" diseases such as pitch canker and foliage blight on pines. The variety and magnitude of the diseases discussed reemphasize the apparent accelerating variety and impact of southern nursery disease problems.