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Greatwoods, Genetically Superior Hardwoods

Genetically superior hardwoods offer higher growth rates, better disease resistance, and improved timber quality for the forestry, agriculture, and lumber industries.

Black walnut trees are highly desirable for use in veneers and as decorative hardwood, but the natural tendency of the walnut tree is to grow crooked with variable growth rates. Both of these traits reduce the timber value of the tree and cause it to yield fewer pieces of lumber. Researchers have been trying to develop a better walnut tree since the early 1960s, but with little success. The long growth time and lack of genetic research have made it difficult to grow a better walnut tree.

Researchers at Purdue University have developed several new walnut varieties (Greatwoods) that reduce variation in growth rate and tree form. Greatwoods have higher growth rates, better timber quality, and a stronger resistance to disease than any clones currently available. Black walnuts are not the only improved species being developed. The goal of the Hardwood Tree Improvement and Regeneration Center (HTIRC) at Purdue is to improve the genetic quality and regeneration of fine hardwoods, including black walnut, black cherry, butternut, northern red oak, white oak, and American chestnut, through application of classical breeding, genomics, molecular markers, genetic modification, advanced propagation and seed production technologies, and silviculture. Greatwoods are the product of decades of research and testing that have created trees that are more resilient and profitable.

Advantages:

-Higher timber quality

-Higher growth rate

-Better disease resistance

Potential Applications:

Technology ID
65190

Category
Agriculture, Nutrition, & AgTech/Crop Genetics & Breeding

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View online

-Forestry

-Agricultural industry

-Lumber industry

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