

A BRIEF HISTORY OF SOME SHORTLEAF PINE PROGENY TESTS IN THE OUACHITA AND OZARK NATIONAL FORESTS

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The considerable economic value and recent rapid and range-wide decline of shortleaf pine (*Pinus echinata*) have increased interest in this species for tree improvement work. The USDA Forest Service has studied the genetics and improvement of shortleaf pine since at least the 1950s. For instance, the cooperative Southwide Southern Pine Seed Source Study included shortleaf amongst other major southern pines in a comparison of the performance of different geographic sources. In the 1960s, a formal tree improvement effort used breeding material from 50 superior trees from 12 geographic sources, including three from Arkansas and Oklahoma. This effort led to the establishment of five shortleaf pine first generation seed orchards in the 1970s in which full-sib families were developed. Intended to help support the Forest Service's silvicultural program at that time, scores of shortleaf pine progeny tests were installed between 1978 and 1990 on national forests using seedlings from these families. As a part of this effort, 84 shortleaf progeny tests were established based on 33 full-sib families grown in the Mt. Ida Seed Orchard using three local geographic seed source regions. Following analysis of early results, selections were made from these progeny tests to establish second generation seed orchards in the 1980s. However, a shift in agency management priorities led to most of these plantings being abandoned in the 1990s. Recent interest in large-scale planting of shortleaf pine has renewed investigations into the Ouachita and Ozark progeny tests that remain in good condition. We hope that these investigations can help guide the Forest Service towards more informed management decisions about the quality of available shortleaf pine families for today's conservation needs and future tree improvement programs.



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