

TWO-YEAR SURVIVAL OF PLANTED SEEDLINGS AS INFLUENCED BY PLANTING STOCK, PLANTING METHOD, FERTILIZATION OR COMPETITION CONTROL

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Oaks (*Quercus* spp.) are valued in the South both for timber production and wildlife habitat. Survival and rapid early growth of planted oak seedlings has long been a concern of forest managers in the South. More than 500,000 acres (200,000 ha) have been planted across the region, and survival in many of these plantings has been unacceptably low. U.S. Forest Service scientists developed a nursery protocol for production of "enhanced" oak seedlings which have demonstrated excellent survival, rapid early growth, and early acorn production when planted and managed under an intensive regime. The objective of this project was to evaluate the influence of planting stock, planting method, fertilization, and competition control on survival and early growth of Nuttall (*Q. nuttallii* Palm.) and white (*Q. alba* L.) oak seedlings.

In February 2005, a total of 6,560 1-0 bare-root seedlings were planted at two former agriculture fields (one bottomland and one terrace) in Mississippi. This total included 1,640 of both the "enhanced" and "nursery-run" seedlings of both species at each location. Survival was evaluated at the end of the first and second growing seasons. Survival did not differ by planting stock within a species. Neither planting method nor fertilization had a significant effect on survival. Survival did vary by site for white oak and varied by competition control.