

Historical Periods of Tree Planting in the South

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Abstract: From 1932 to 2011, 4 distinct periods of tree planting characterized the history of state nurseries in the South. These periods were associated with 4 major programs: the Civilian Conservation Corps, the Soil Bank program, the Conservation Reserve Program, and the expanded Conservation Reserve Program. Throughout these programs, state nurseries fluctuated in numbers and seedling production. The later conservation reserve programs also had an impact on species diversity, including increasing hardwood seedling production.

Introduction

Since 1925, trends in seedling production and planting have seen a steady increase to a peak in 1989, followed by a steady decline to present day. Within this time period, 4 distinct periods in production and planting are visible, each corresponding to 4 major federal programs advocating tree planting across the landscape (Figure 1). These programs include the Civilian Conservation Corps (CCC), the Soil Bank program, the Conservation Reserve Program (CRP), and the expanded Conservation Reserve Program (CRP2). While forest industry had a large part in creating the bulk of the trends, the non-industrial private land owners participating in the Conservation Reserve Programs also had a big influence.

The number of state nurseries in the south also fluctuated with these trends and peaks, responding to the needs of each of these programs. From 1920 to 2011, state nurseries peaked in their numbers in 1956 and have seen a steady decline to their current total of 16, presently (Table 1). Although improvements in seedling culturing technology have increased the efficiency of seedling production, and hence the need for less nurseries, other factors, such as larger industry nurseries coming online, have contributed to the decreased numbers.

The following article briefly summarizes the federal programs that contributed to tree planting trends in the south since 1925. The overlay of state nursery numbers is also presented.

Civilian Conservation Corps

Tree planting in the South began before 1932 but these early efforts were generally localized and of a limited in scale. The first period of tree planting in the South was the CCC tree planting program which ran from 1932 until 1941. The tree planting efforts of the CCC marked the first time that a region-wide, large-scale tree planting project was attempted by the federal government. This program was suspended as the tree planters who worked with the CCC tree were absorbed into the war efforts that began in December of 1941 after the bombing of Pearl Harbor. During the CCC period, 17 state nurseries were in operation and almost 202,000 ha (500,000 ac) were planted.

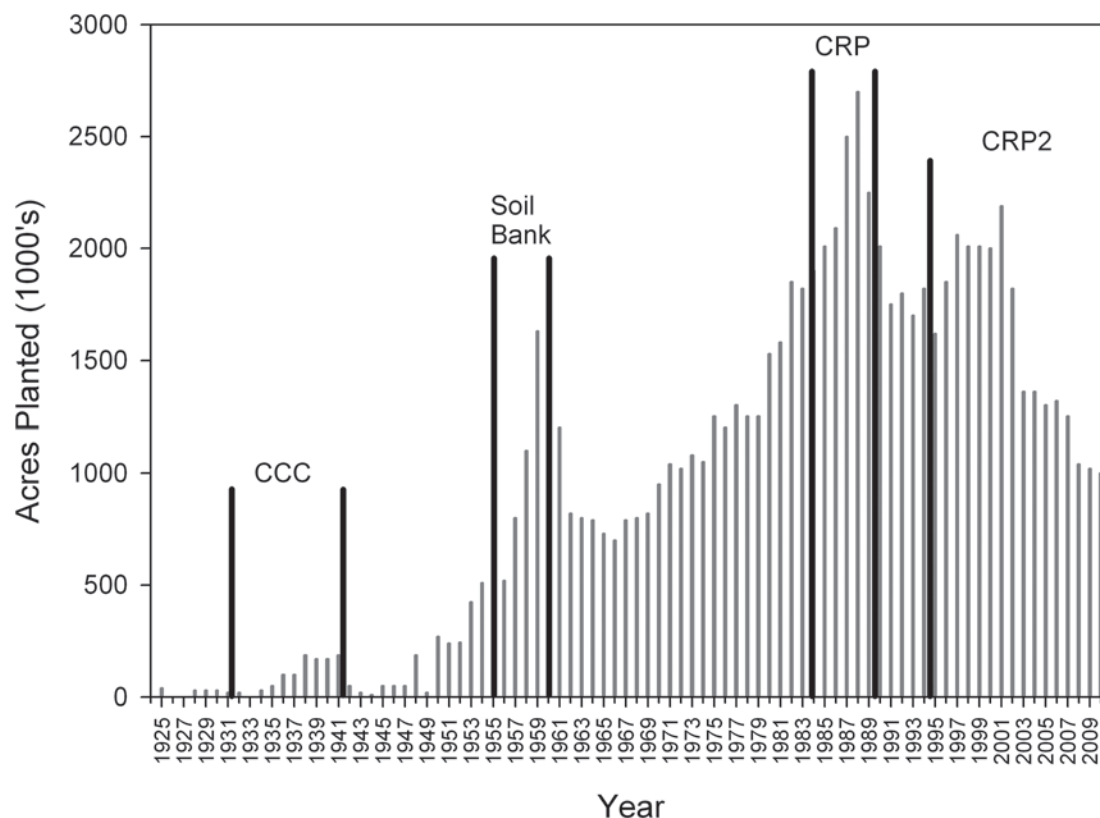


Figure 1. State nurseries and total tree planting in the south: 1925 to 2010. Four distinct peaks in the number of acres planted correspond to the Civilian Conservation Corps (CCC), the Soil Bank program, the Conservation Reserve Program (CRP), and the expanded Conservation Reserve Program (CRP2).

Soil Bank Program

The CRP was initiated by the USDA as a part of the Soil Bank Act of 1956. This has become known as the Soil Bank program and ran from 1956 to 1960. The purpose of the Soil Bank program was to encourage landowners to retire cropland and to install conservation practices; tree

planting was one of the accepted conservation practices. During the Soil Bank program, 46 state nurseries were operating in the South. At the beginning of this period just over 202,000 ha (500,000 ac) of trees were being planted per year; at its peak (1959 & 1960), 3 times as many acres were being planted. Attributing to this boost in numbers were significant advances in cultural practices (Abbott and Eliason 1968).

Table 1. State operated forest nurseries in the southeastern United States 1920 to 2011.

Alabama John R. Miller Nursery Jake Stauffer Nursery Edward A. Hauss Nursery Arkansas Bluff City Nursery Bacum Nursery* Florida Prison Farm Nursery Munson Nursery Harry Baker Nursery M D Andrews Nursery* Herren Nursery Georgia Herty Nursery Davisboro Nursery Flowery Branch Hightower Nursery Horseshoe Bend Page-Walker Nursery Morgan Nursery Flint River Nursery*	Kentucky Pennyrile Nursery Louisville Nursery John P. Rhody Nursery* Morgan County Nursery* Louisiana Alexander State Forest Nursery Oberlin Nursery Northwest Nursery Columbia Nursery* Beauregard Nursery* Monroe Nursery* Mississippi Mt. Olive Nursery Winona Nursery Waynesboro Nursery North Carolina Griffith Nursery J.S. Holmes Nursery Goldsboro Nursery* Ralph Edwards Nursery Linville River Nursery*	Oklahoma Stillwater Nursery Forest Regeneration Center* Broken Bow Nursery South Carolina Camden Nursery Georgetown Nursery Sumpter Nursery Tilghman Nursery Old Piedmont Nursery Coastal Nursery Taylor Nursery* Rock Hill Nursery Tennessee Pinson Nursery East Tennessee Nursery* Texas Conroe Nursery Kirbyville Nursery Indian Mound Magnolia Springs West Texas Nursery*	Virginia Charlottesville Peary New Kent Forestry Center Augusta Forestry Center* Garland Gray Forestry Center* * Nurseries still in operation
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Conservation Reserve Program

The 1986 CRP was designed to convert highly erodible cropland to less intensive uses. Tree planting was included in the acceptable practices of the 1986 CRP. From 1986 to 1990, the area of trees planted per year ranged from an estimated 688,000 to 1.1 million ha (1.7 to 2.7 million ac) in the South. The success of this program can be best illustrated by the 2.3 billion seedlings that were planted nationwide (South 2005).

Expanded Conservation Reserve Program

From 1996 to 2011, the Conservation Reserve Program expanded (CRP2) for agricultural producers and landowners to better conserve and improve their natural resources, especially with longleaf pine (Enebak 2011). This enhanced program increased the tree planting opportunities for landowners and briefly created a spike in acres planted from 1996 to 2001. While the total number of state nurseries decreased from 42 to 25 (Figure 2), the expanded program still averaged an estimated 1.6 million acres of trees per year (Figure 1).

The creation and expansion of these programs had a profound effect on state nurseries. An examination of seedling production shows this effect. In 1939, the 17 state nurseries that were operating produced 77,205,000 seedlings, but by 2010, the 16 state nurseries still in operation produced 118,299,000 seedlings. This dramatic increase was the result of increased mechanization, improved seed quality, and an improved understanding of seedling growth and development. These improvements made it possible for production to reach 2.3 billion tree seedlings in one year at the peak of the CRP. At the same time, the numbers of state nurseries were also at their all-time high of 42. Correspondingly, as the CRP slowed down, the number of state nurseries also decreased.

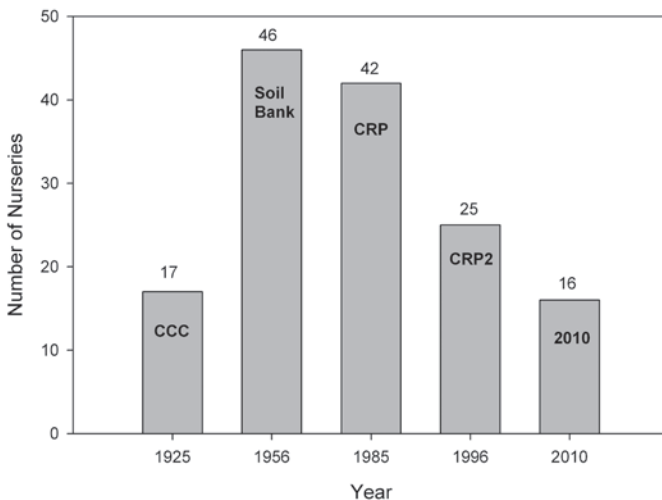


Figure 2. State operated forest nurseries in the southeastern United States: 1920 to 2010.

Conservation Reserve Program and Hardwood Seedling Production

The CRPs not only encouraged the planting of conifers but also stimulated the planting of hardwoods. In 1965, state nurseries produced more than 9.8 million hardwood seedlings, forest industry nurseries produced 1.7 million seedlings, and federal nurseries 368,000 seedlings (a total of more than 11.8 million seedlings)(Rowan 1972). Since then, the number of hardwood seedlings produced has increased to 29.2 million (in 2009), with state nurseries still producing 44% of the total and private and industry nurseries producing the majority (46 and 11%, respectively)(Enebak 2011). The production of hardwood seedlings has been a positive one in the last 20 years. Because hardwood seedlings have a higher unit sales price, the increase in production has added extra revenue to forest seedling nurseries.

References

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