

Role of State Nurseries in Southern Reforestation An Historical Perspective

Clark W. Lantz¹

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THE AGE OF UNCERTAINTY

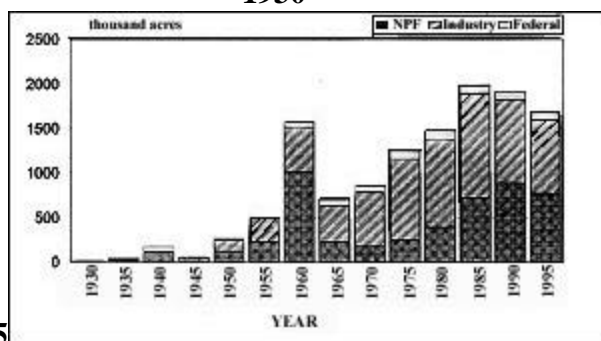
Right now we are living with a great deal of uncertainty. Private property rights are being questioned. Does a landowner have the right to cut his timber if It affects threatened or endangered species? Does a landowner have the right to use pesticides on his own land if these T & E species may be affected? Salvage logging has been questioned in the West. Environmental organizations challenge the logging of beetle- or fire-killed timber, even when it presents a serious fire hazard. Reinvention, down-sizing, out-sourcing are all part of our "new age" vocabulary. Perhaps the most serious of all is that the politicians are re-ordering our priorities. Often science is replaced with political expedients. The short-term "fix" has taken the place of the long-term, scientifically based strategy. We may not live to see the results of these short-term "fixes" but our children and grandchildren certainly will.

PLANTING AND SEEDING IN THE SOUTH

A brief look at the historical record will show the accomplishments of the major federal planting programs (Figure 1). In 1930, 33 thousand acres were planted southwide in 1987 more than 2 million acres were planted, most as part of the Conservation Reserve Program (CRP).

In the 1950's the Soil Bank program resulted in many acres removed from agriculture and planted with trees. Non-industrial private forest (NIPF) landowners planted 1.4 million acres in 1988 as part of the Conservation Reserve Program to retire marginal agricultural land. Forest industry has increased planting on their lands since the 1950's. The peak planting on company land was in 1986 with over 1.2 million acres planted.

Planting and Seeding in the South
1930-



1995
Figure 1. Planting and Seeding in the South, 1930-1995.

FOREST NURSERIES IN THE SOUTH

The number of forest nurseries in the South has gone through an interesting evolution. In 1956 there were 5 federal nurseries, currently there is only one (Figure 2). Forest industries started building nurseries in the 1970's and by 1986 there were 37. Many of the state nurseries were built during the Soil Bank and were maintained through the 1970's and 1980's. Some new state nurseries were built during the CRP, and others were expanded. Only in the last few years have the number of state nurseries declined.

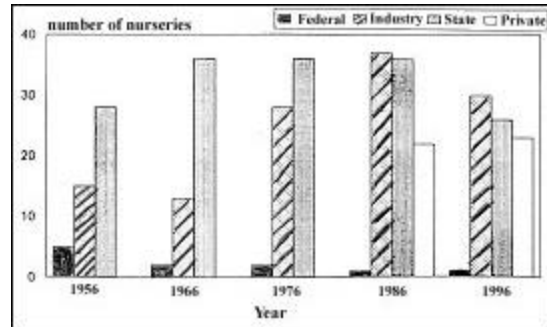


Figure 2. Forest Nurseries in the South: 1956-1996.

Competition from industrial and private nurseries and reduced state budgets have resulted in 10 state nurseries closing since 1986. The most dramatic change has occurred with the opening of 23 private nurseries in the last 10 years. Some of these have been employee buy-outs of company nurseries, some have been the results of corporate mergers, and some have been new organizations, formed to serve a specific clientele.

NURSERY PRODUCTION

Nursery production has been a response to the major federal planting programs, reaching a peak in the CRP with a total of about 2 billion seedlings. This represented about 82% of the total seedling production in the US (USDA 1988). The number of genetically improved seedlings grown in the South has increased from 27% in 1976 to 99% in 1994. Currently the only seedlings produced from woods-run (non-improved) seed are some longleaf pines, some hardwoods, and a few nontimber species.

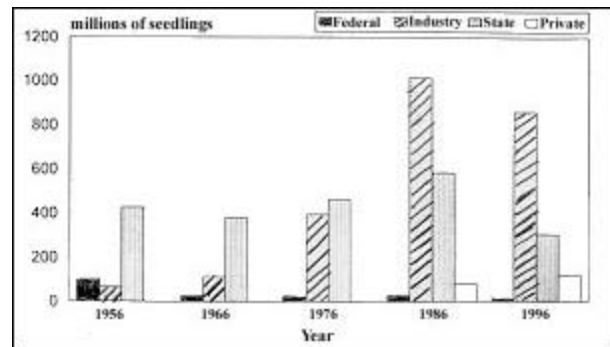


Figure 3. Nursery Production in the South: 1956-1996.

HARVESTING VS PLANTING

In the last 5 years the number of acres harvested has steadily increased in the South in response to rising stumpage prices. As more federal land is restricted from logging in the West, the large acreage of private land in the South is under pressure to supply more and more wood. Unfortunately, as the harvested acreage has increased, planting has not kept pace.

Since 1989 the acreage planted (on all ownerships) has steadily decreased from about 60% to about 40% of the area harvested (Southern Group of State Foresters 1996) (Figure 4). Unless this trend is reversed there may be a serious shortage of wood in the future. Certainly some of the acres logged will be naturally regenerated. Unfortunately however, many of these areas will never reach their full potential. Natural seeding often results in low quality trees, while planting genetically improved seedlings would result in 10 to 15% more high quality wood per acre per year than these natural stands

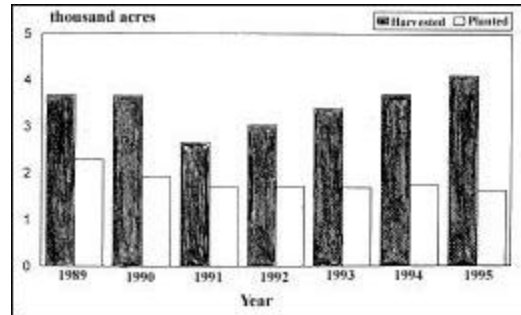


Figure 4. Harvesting vs Planting in the South: 1989-1995.

In areas where there is an inadequate seed source left after logging, low quality hardwoods, greenbriar, kudzu and honeysuckle will often take over, requiring substantial site preparation costs and the loss of one or more years before productive trees can be established. In the South we currently have about 23% of the softwood growing stock in the US and about 44% of the hardwood growing stock (Cubbage et.al . 1995). The annual growth exceeds the harvest with the hardwoods but unfortunately we are cutting more than the annual growth with the softwoods. To quote Cubbage et al. (1995): " Environmental protection, urbanization, fragmentation, and landowner preferences all suggest that our balance between growth and removals is tenuous... sustainably increasing both southern timber harvests and inventories will be difficult".

Intensive management of genetically improved trees on our most productive sites will provide more high quality wood on the same number of acres of commercial forest land.

SEEDLING PRODUCTION SURVEY

Seedling shortages occurred across the South during the 1995-6 planting season. In an effort to avoid the same shortages in 1996-7 the Southern Group of State Foresters requested that the USDA Forest Service conduct a survey of Southern nursery production. The results of this survey are presented in Table 1. The general conclusions of the survey indicate that seedling demand is likely to continue to increase in the future. Even though cost-share funds are not as widely available as in the past, seedling demand appears to be largely a response to elevated stumpage prices. (See table 1).

PREDICTIONS FOR THE FUTURE

It looks to me that the South is in a very favorable position to continue as the leading timber market in the US. Federal timber in the West is likely to continue to be tied-up due to "environmental restrictions". Private land in the South will have the opportunity to supply a major part of the timber market if we manage the land properly.

It also appears that seedling demand will continue to increase and that there will be more demand for hardwoods and other "native species".

What can we do to ensure that the South continues to be the "Wood Basket" of the US?

- Develop and utilize procedures for better utilization of hardwoods.
- Intensively manage our most productive sites for pine timber, including the planting of genetically improved seedlings on harvested land.
- Continue to improve the seedling quality of all species.
- Continue to work with the small, private, nonindustrial landowner who owns the bulk of our southern timberland.
- Develop procedures to motivate landowners without using cost-share dollars.
- Continue to educate the public on the proper way to care for and plant seedlings.
- Be more aggressive in educating the public about good forestry practices. They need to understand that paper and other wood products come from trees and that trees are a renewable natural resource.

Table 1. Bareroot Seedlings available for NIPF landowners: 1996-7 season.

1996-1997 Season (Million Seedlings - Estimated)						
<u>Nursery Ownership</u>						
<u>State</u>	<u>State</u>		<u>Industry & Private</u>		<u>Total</u>	
	<u>Pine</u>	<u>Hardwoods</u>	<u>Pine</u>	<u>Hardwoods</u>	<u>Pine</u>	<u>Hardwoods</u>
Alabama	36	4	77	1	107	5
Arkansas	7	3	50	2	57	5
Florida	23	--	87	3	110	3
Georgia	48	2	110	*	158	2+
Kentucky	3	4	--	--	3	4
Louisiana	43	5	21	*	64	5+
Mississippi	38	2	31	--	69	2
North Carolina	25	3	53	--	78	3
Oklahoma	5	2	4	--	9	2
South Carolina	19	1	71	2	90	3
Tennessee	8	2	--	--	8	2
Texas	12	1	51	*	63	1+
Virginia	38	3	2	--	40	3
Total	305	32	557	9	862	41

Note: These numbers are predictions of future seedling production. Extreme weather conditions and nursery crop failures may occur. Seedlings are shipped across state lines, are resold, and sometimes lose seed source identity. For these reasons these data should be considered as estimates only.

* Less than 1 million

¹ *Cooperative Forestry, Southern Region, USDA Forest Service, 1720 Peachtree Rd., W., Atlanta, GA 30367; Tel: 404/3473554.*

LITERATURE CITED

Cubbage, F.W., T.G. Harris. Jr. D.W. Wear, R.C. Abt, and G.Pacheco 1995. Timber supply in the South: Where is all the wood? *Journal of Forestry* 93(7):16-20.

Southern Group of State Foresters 1996. Southeastern states reforestation efforts 1995-6. Prepared by Georgia Forestry Commission, Forest Management Department. Macon GA 10/1/96 1p.

USDA Forest Service 1988. Tree planting in the United States-] 988. Cooperative Forestry, Forest Service, Washington DC 13pp.
