SOUTHERN TIMBER SUPPLY
TRENDS, ISSUES & RESPONSES

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ABSTRACT

Southern softwood and hardwood timber supplies are examined. Softwood removals exceed growth across much of the South. Hardwood growth exceeds removals by a large margin: but, much of the hardwood inventory faces constraints on its availability. Forecasts indicate that southern softwood inventory will decline over the next decade. Possible public, private, and forest industry responses are examined.

INTRODUCTION

Inventory, growth and removal data from the most recent Forest Inventory and Analysis (FIA) survey were discussed and reviewed by Cubbage et al. in the previous paper. The prospect of declining softwood inventories in the face of increasing demand for southern forest products was also discussed in that paper. We will discuss some of the trends issues and assumptions used in analyzing the southern timber inventory. In some cases Georgia data will be used as an example of conditions occurring across large areas of the commercial timberland in the South.
TRENDS, ISSUES AND ASSUMPTIONS

Softwood
Softwood inventories are declining across large areas of the South. Only Virginia, North Carolina, Tennessee and Oklahoma have surpluses of growth over removals. The total annual deficit is almost 320 million cubic feet (4.2 million cords).

Non-Industrial Private Landowners (NIPF) account for most of the deficit.

Forest Industry lands have high growth rates but deficits of growth over removals in Arkansas, East Texas and Louisiana create a 32 million cubic feet annual deficit for this ownership group south wide.

The age class structure is favorable for improved growth rates during the next decade. Many areas have a large acreage of 1-10 year old pine plantations due to the Conservation Reserve Program (CRP) and heavy industry planting over the past decade. In Georgia, for example, the 1-10 age class has twice the acreage of the 11-20 age class.

Hardwood
Hardwood demand has increased substantially over much of the South due to expansions at existing pulpmills and the demand for export chips.

About one half of the hardwood inventory is impacted by either steep slopes (> 20%) or seasonal or year around water.

Some landowners are reluctant to sell hardwood timber at current price levels.

Additional Clean Water Act regulations and the process of wetlands mitigation could impact timber supplies in some areas.

General Factors
High variability in timber supply conditions exists across the south, within the states and within FIA survey units.

Metropolitan areas have different characteristics than the rural areas of the South. Metro areas are liquidating softwood inventories rapidly and retaining hardwood inventories. In the Southeast 25 percent of the commercial forest land is in metropolitan counties.

The acreage available for timber production is expected to decline. Increasing population growth and recreational use are major factors.

Environmental and regulatory constraints are likely to increase. Streamside management zones, the Endangered Species Act and local regulations can all impact the availability of timber inventories.

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Small stands and small tracts are increasing. In Georgia, for instance 40 percent of the NIPF forest land is in stands smaller than 25 acres.

Public landownership will increase and timber production will have low priority on almost all public land.

**Non-Industrial Private Lands**

Farmer ownership of timber and timberlands is declining. The CRP program may mask this trend temporarily in some areas. However, the long term trend is for increasing ownership by the corporate and individual owner classes.

Absentee ownership is rising. Frequently the new owner lives in urban areas and has objectives other than timber production.

In many areas of the South, residential construction patterns favor large lots and "mini farms. In the ex-urban areas near metropolitan centers and along the interstate highway significant acreage is effectively out of timber production because of this pattern of land use.

Stands over age 50 have light removals rates and the acreage in these older age classes are increasing.

Pine growth rates are low on NIPF lands and many opportunities appear to exist to improve production from these lands.

Institutional owners (pension funds, etc.) are a small but rapidly growing segment. The impact of this group is difficult to assess because they employ a variety of strategies and time horizons.

**Forest Industry Lands**

The forest industry owned timberland base is expected to stabilize or decline slightly over most of the South.

Pine growth is currently 98 percent of removals on industry lands southwide and increased growth rates are expected.

Industry owned lands will play an increasingly important role in providing supplies and in providing strategic direction for forest industry firms.

High intensity pine plantation management regimes will be an increasingly attractive alternative for industry firms. Practices such as multiple applications of weed control and fertilization treatments can provide attractive financial returns as well as provide needed additional stumpage in favorable locations.

Hardwood availability is an issue for many firms. Southern forest industry lands have traditionally been pine oriented. Cost effective high intensity hardwood silviculture technology
is not available. Research is needed on the availability, economics silviculture and harvesting of hardwoods.

Forest industry timberlands and practices in the South will come under increased scrutiny by the public. The industry will be the target of the extremists within the environmental community. These groups, funded by well organized and marketed junk mail campaigns, will attempt to deify some species, practices and groups, and to vilify others. Fresh from victories in the West they will attempt to spread the eco-religious concepts of neo-druidism to private and industry lands in the South.

Demand Factors
The demand for lumber and wood panel products is shifting to the South as production declines in the West and Canada.

With rising prices demand will be dampened by increasing substitution. Steel beams and studs and concrete will be the major beneficiaries. Newly emerging plastic lumber products will be competitive in markets such as lawn furniture. Plastic for paper substitution in bag and containers will continue.

Recycled paper is capturing much of the growth in capacity construction. Mini-mills near waste paper sources will shift some demand from the South. New technologies are being and will continue to be developed. Southwide wood pulp production will stabilize.

Higher costs for wooden construction materials will result in delays of purchases and downsizing of construction.

RESPONSES TO TIGHTER TIMBER SUPPLIES

Public Sector Responses
In response to increased demand and reductions in timber inventories, efforts are being made to expand many of the traditional approaches to promote timber production.

Educational efforts such as the Tree Farm Program and the Forest Stewardship Program will receive greater emphasis and will target the "new" landowner.

Incentive programs and tax incentives will be re-examined and new programs proposed.

Regulatory approaches such as seed tree laws and regeneration requirements will also be reexamined.

The effectiveness of these approaches will remain a topic of debate.

NIPF Responses
The NIPF owners will respond to changing market conditions and price relationships in a variety of ways. This will be the subject of numerous reports, surveys and talks by hordes of forestry researchers over the coming decade and thus, will not be discussed further here.
Firm Level Forest Industry Responses

Forest industry firms can respond to changing timber market conditions in a number of ways. The choices available to a given firm will be determined by local conditions and opportunities. Actions which are expected to be attractive to many firms throughout the South are included in this section.

Intensive management of existing pine plantations will be attractive in many locations. Weed control and fertilization can provide incremental harvest volumes and/or allow for earlier harvests.

Premature harvest on industry or NIPF lands need to be avoided. Contracts on CRP lands when the government contracts expire and longer term timber deeds can be considered.

Methods can be developed to deal with the increasing number of small stands and tracts. New purchasing and pricing policies may be necessary. New harvesting systems are needed to replace the manual bobtail truck systems.

Salvage efforts can be improved. Bark beetle damage, other mortality and logging waste could represent opportunities to extend existing inventories.

Programs to improve the salvage and recovery of wood from developing and Metro areas could be cost effective. New forestry prescriptions and contracts for lands being held for land speculation and future development could maintain growth in these areas for many years.

Wood quality specifications should be reviewed with total firm economics in mind. In-woods chips and species substitution as well as size specifications should be evaluated objectively with both wood procurement and manufacturing needs given consideration.

Yield and recovery rate improvements both in harvesting and in manufacturing plants offer substantial opportunities. Investments in the best available technologies and improvements in operational effectiveness are likely to be necessities.

Inventory management improvements can improve wood costs. Extreme solutions with low or high inventory levels need to be avoided.

While some firms and sites may be able to adopt the traditional approach of expanding their procurement area, others will find this a very expensive alternative.

CONCLUSIONS

Inventory levels over much of the production forestry region of the South are likely to decline during the next decade. Forest industry firms have a number of potential responses. Those that effectively choose alternatives suited to the conditions in their procurement area can remain cost competitive in domestic and international markets.