

FOREST INDUSTRY'S INCREASINGLY PROBLEMATIC  
JOURNEY INTO THE FUTURE

R.A. Woessner<sup>1</sup>

**Abstract.** --\_The southern wood products industry has been committed to establishment of the southern pines in plantations for over 70 years. Likewise, the industry has been applying genetic principles to improving the growth of the trees in these plantations for over 40 years. The goal, of course, was to produce fiber to be consumed in company mills. An investment in plantations lasting about a quarter of a century is justifiable if sustainability of supply is assured as well as the maintenance of a competitive advantage. Until recently, growing highly productive forests for harvest was looked upon favorably by the public. Now, the industry is increasingly berated for its cutting and intensive management practices. This includes the use of genetically improved planting stock.

The ever lengthening list of business and environmental issues facing executives in segments of the forest products industry make it increasingly difficult to choose a profitable path to the future with a reasonable level of risk and a competitive rate of return. This paper reviews a number of these interacting issues. **The** research community can buffer the risks by assuring that the genetic integrity of the industrial high yielding plantations is beyond question.

INTRODUCTION

The southern wood products industry has been committed to forest renewal for over 70 years. U.S. Forest Service records indicate a modest beginning as only 15 thousand acres were planted on industry land in 1925(U.S.F.S. 1988). Interestingly, this was 48 percent of the acreage planted that year. Plantation establishment on industry land in the South has now grown to over a million acres per year in the 1990's. The forest industry is now responsible for over 60 percent of the tree planting in the South. Industry plantations currently occupy over 16 million acres. The 55 percent of the land area of the 12 southern states that is forested totals 182 million acres. Thus, one acre of every eleven forested acres is an industry pine plantation. If Forest Service projections to 2030 come true, then one acre of every seven forested would be an industry pine

---

<sup>1</sup> Lands and Forest Productivity Manager, Mead Coated Board, Woodlands Division, Columbus, Georgia.

plantation.

The industry has been committed for over 40 years to applying genetic principles to improving the trees used in establishing these plantations. These extremely successful programs are producing improved seed in record amounts. In excess of 60 tons of improved seed is being harvested in good years. Soon, 25 percent of the seed for plantation establishment will be from advanced generation orchards.

Until recently, growing highly productive forests for harvest and conversion to useful products was looked upon favorably by the public, who incidently are the very customers that buy the products produced from the forest. Now the industry is increasingly berated for the practices of clear cutting and the intensively managed pine plantations. Our increasingly urban and affluent public wants much more than wood from forests. This applies to public as well as privately owned timberlands. There is an increasing concern about the quality of life now and in the future as the U.S. and other developed countries move into what some term the "post-industrial society." Issues like biodiversity, forest sustainability, wetlands, air and water quality, endangered species, ancient and tropical forests, and ecosystem management swarm around practicing industrial foresters like a hive of killer bees. It was probably inevitable that these concerns be extended to the tree genetic program (Hoekstra 1992). The warning signs have been present for some time. Concerns have been frequently raised about the wisdom and safety of the genetic manipulation of agricultural plants and the medicines used to cure our ills. All these environmental issues are more likely to intensify before they diminish.

These environmental issues are an over burdening addition to the other current challenges facing the industry. Choosing a profitable path to the future with a reasonable level of risk and a competitive rate of return is the goal. The following section will review these interacting issues.

#### OVERVIEW

##### Wood, The Essential Raw Material

The growing of trees as crops to be harvested is big business in the South. Timber is the most important agricultural crop in the South. Wood ranks ahead of such other crops as soybeans, cotton, tobacco, wheat or corn (U.S.F.S. 1988). The portion of the industry most familiar to me, the integrated producers of solid wood products, pulp, paper and paperboard, maintain a competitive advantage because of the currently abundant and competitively priced wood supply in the South. Jaakko Poyry (1989) stated "that this preeminent position was in danger because of the diminishing supply of softwood pulp and neglected silviculture, particularly in the "U.S. woodbasket" of the Southern U.S." Recently, Colberg (1992) reported that softwood inventories were declining in many areas of the South.

Wood is the single most expensive item used in the manufacturing process by the forest products industries. The industry must cost effectively produce wood while concurrently meeting the other expectations that the public wants from the forest.

## The Industry

Any discussion of the forest products industry must address diversity. Diversity exists in location, size, capital structure, land ownership, product lines, manufacturing processes and marketing strategies et al. This diversity means it is extremely difficult to put forth one industry position. There are similarities among the largest companies. The largest wood consuming industries are frequently integrated producers of pulp, a wide variety of paper products and several solid wood products. Increasingly, these businesses have a global focus. In fact, their long term profitability depends on selling to foreign markets. Also, many are divisions of larger companies that sell a wide variety of consumer products. The majority of the company revenue comes from selling the consumer products. The pulp and paper operations supply the other businesses but are not the reason the companies exist as a commercial entity. These consumer products are sold in very competitive markets that bring the customer and the company selling them into very close contact from a marketing and sales standpoint. The end result is that customer expectations can greatly influence not only what is produced, but how it is produced. This means customer expectations in Europe or the Far East as well as the United States can ultimately influence how we produce and manufacture wood products in the South. An example is Germany's "Green Dot" legislation. No longer are purchase specifications (for pulp) in Germany limited to those pulp properties required to satisfy its intended use. Now the pulp must meet strict environmental performance standards at the mill producing it, and sustainable management practices in the forests from which the fiber comes (Wrist 1992). Another section of the law deals with recycling which is the next topic.

## Recycled Fiber

As a result of governmental and public expectations, the consumption of recycled fiber is growing more than twice as fast as overall fiber consumption. This trend is projected to continue to 1995 and beyond. Recovery rates were 24 percent in 1985, 29 percent in 1991 and are expected to rise to at least 40 percent in 1995. As a benchmark note, the Japanese are working hard to push an already high rate of 55 percent recycled fiber to 60 percent. The basic technology to do this already exists for some grades of paper. The challenge is to improve on the existing technology. These recent and essentially mandated rapid increases in recycle use have a negative impact on company profits. Recycled products require additional capital and manufacturing expertise but bring no more in the marketplace at this time. Use of recycled fiber does however keep the producer in the market. Capital spent on recycle capabilities is not available to be spent elsewhere such as in the forest. Also, high usage rates of recycled fiber can tend to weaken the corporate focus on the primary fiber source which is of course the forest.

## A Capital Intensive Industry

These capital expenditures for recycle capacity come close to being the proverbial straw that broke the camel's back. These expenditures are an additional unwelcome burden added to the balance sheet of the paper industry which is already the most capital intensive industry in the United States and probably the world. During the last ten years, the paper industry has been twice as capital intensive as the average of all manufacturing (Storat 1993).











