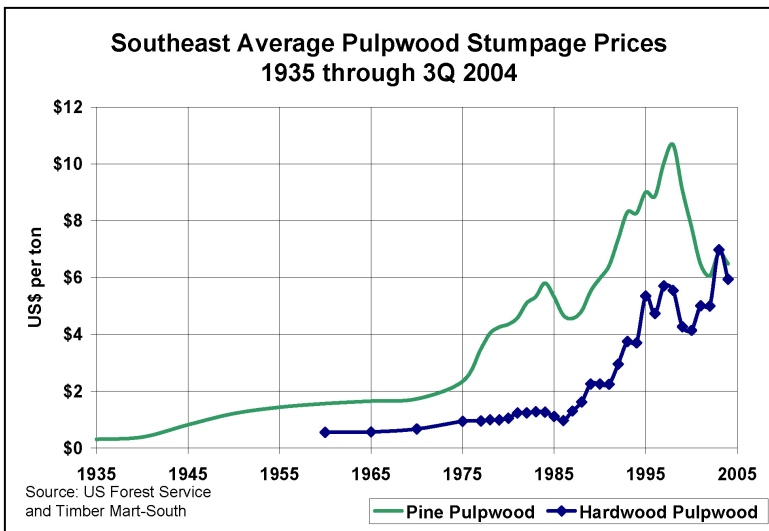
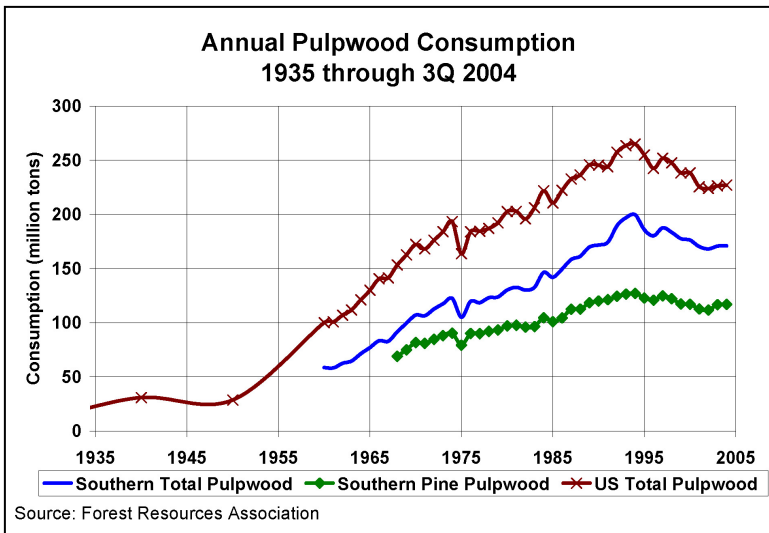
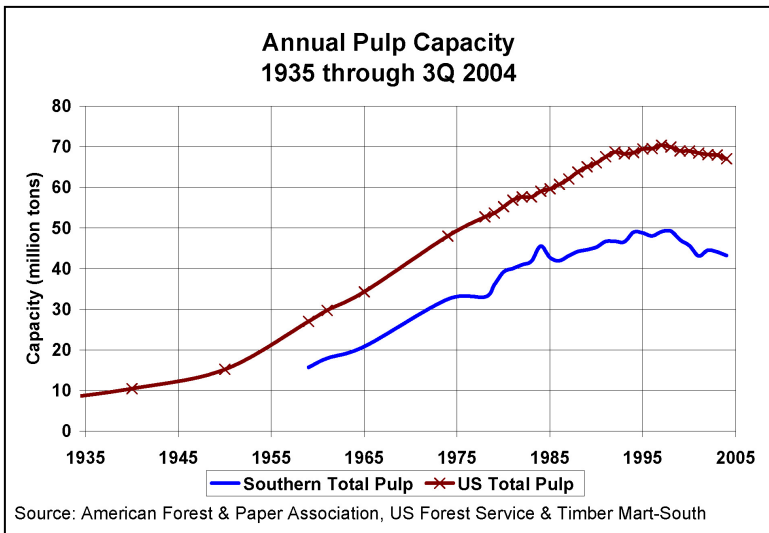


Pulpwood and Pulp: Long-Term History

By Thomas G. Harris, Jr., Sara Baldwin, *Timber Mart-South* & Brooks C. Mendell, PhD



The maturing of the South’s pulp manufacturing industry in the 1990s reduced pulpwood consumption and impacted pulpwood prices. Forest landowners, enticed by rising pine pulpwood prices from 1975 to 1995, may have initially planned on short pine plantation rotations. Today, lower pine pulpwood prices cause most to “let it grow” for longer sawtimber rotations. Also, higher hardwood stumpage prices, including pulpwood, have revived interest in hardwood propagation and management.

The expansion of pulp manufacturing in the South paralleled the industry’s U.S. growth. In 1910, the U.S. consumed about 8 million tons of pulpwood for wood-based pulp, paper, and paperboard. By 1965, consumption was nearly 130 million tons. At the peak in 1994, U.S. pulp mills consumed about 265 million tons of pulpwood. The South consumed nearly 80 million tons of pulpwood per year by 1965 and 200 million tons in 1994.

In the early years, growing pulp capacity drove pulpwood demand and consumption. The number of pulp-producing facilities increased and, by 1965, there

were 280 mills in the U.S. with 87 of those in the South. By 1980, the industry had already closed mills in the Northeast and North central regions, but the South had increased to 114 mills. New mill construction ceased but pulp capacity continued to grow from improved mill technologies and efficiencies. At the peak in 1997, the U.S. had capacity to produce over 70 million tons of wood pulp with the South's capacity at nearly 50 million tons.

Pulpwood harvests and stumpage prices increased with the expansion of pulp manufacturing facilities. According to the U.S. Forest Service, by 1984 pine pulpwood had grown to be the largest output timber product in the South. About 42 percent of timber harvested was pulpwood, while 37 percent was sawtimber, and 9 percent veneer logs. Hardwood pulpwood represented the third largest harvest behind pine pulpwood and pine sawtimber.

Prices for pine pulpwood stumpage in the South increased from an average of \$0.31 per ton in 1935 to about \$6.50 in 2004. Much of this price appreciation occurred between 1935 and 1985 at an annual average growth rate of about 7 percent. Rising pulpwood prices served as incentives for producers to employ technological innovation, move manufacturing to lower-cost facilities and substitute lower-cost fiber. Changed wood specifications allowed cheaper, smaller-diameter pulpwood logs, and improved wood utilization gave a higher yield per log.

Hardwood pulpwood represented a lower-cost fiber source for all but a brief period in 2003. Shifting production to hardwood from pine moderated increases in pine consumption. Prices for both products increased, but at a different rate. In 1960 hardwood pulpwood averaged only \$0.56 per ton compared to \$1.57 for pine the same year. By 1998, when average pine pulpwood stumpage prices peaked at over \$10 per ton, hardwood pulpwood had increased to about \$5.50 per ton.

Industry adjusted the proportion of pine to hardwood pulpwood consumed by southern mills from about 10 percent in 1950 to about 30 percent in the 1980s. Mills also substituted chips and sawmill residue from less than ½ percent of pulpwood consumption in the 1950s to about 26 percent in the 1990s. The export of chips and use of recycled fiber, both beyond the scope of this article, also shifted supply and demand. In 2004 the pine and hardwood pulpwood trade, on average, at nearly the same price.

Pulpwood consumption peaked in 1994 in the South but the industry did not begin to shut significant pulp mill capacity until 1998. Pine pulpwood supply was high and prices began to fall. By 2001, sawlog harvest, driven by a booming housing market, accounted for 49 percent of southern timber harvest and pulpwood had dropped to 35 percent, with veneer logs remaining about the same as in 1984.

Forest landowners in the South have expressed chagrin at the fall of pine pulpwood prices. However, they could be proud of their scientifically-based and financially-sound forest management practices which have ensured a consistent, reliable fiber supply for the paper, tissue and packaging requirements of a modern industrial nation. Their participation in one of the great success stories in the history of forestry: the harvest, regeneration and growth of forests in the U.S. South, means that a greater percentage of harvests now go to higher value sawtimber products, bringing even better returns on their investment.

Timber Mart-South is a 29-year old price reporting service publishing quarterly reports used by private companies, consultants, landowners, and others to assess market prices in the Southern U.S. The University of Georgia, Warnell School of Forest Resources is under contract with the Frank Norris Foundation to compile and publish Timber Mart-South quarterly reports. Call 706-542-4756 or see www.TimberMart-South.com for more information.

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