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Growing Timber As an Investment

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One-third of the United States is covered with forests, and two-thirds of the nation's forests — almost 500 million acres — are considered "commercial" forest lands capable of growing at least 20 cubic feet (about ¼ cord) of wood per acre per year. Timber management has always been a good investment for a landowner, but it has been difficult to convince nonindustrial, private forest landowners to invest in timberlands. Some new developments, however, have changed the situation, making the timberland owner's financial future brighter than ever. This leaflet focuses on these new developments in Texas and also makes some regional and national observations.

Texas Timber Resource

Of the 28 million acres of forest land in Texas, only 12½ million are rated as commercial and almost all of that (10.9 million acres) is in East Texas (figure 1). The most productive land and the best forestry investment potentials are in East Texas. Ninety-nine percent of the timber harvested in East Texas comes from areas designated as Northeast and Southeast Texas on figure 1. Most of this land (58.7 percent) is owned by nonindustrial, private forest landowners. Forest industry companies own the next largest amount (34.4 percent), and government ownership accounts for the remaining 6.9 percent (table 1). Softwood, principally southern yellow pine, is the main economic timber crop in East Texas.



Figure 1. Forest resource regions of East Texas.

Pine and Hardwood Resources

Table 1 shows the different net annual growth increments that occurred in the three ownership categories when the U.S. Forest Service conducted the 1974 Texas Forest Survey. The broad disparity between government and nonindustrial, private forest growth is due largely to a greater percentage of low value hardwoods with lower growth rates on private acres. Also a difference exists in the productive potential of an average acre of nonindustrial, private land when compared with the other two ownership classes.

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Table 1. East Texas forest land ownership and net annual growth of softwoods by ownership class.¹

Ownership class	Commercial forest land owned (thousand acres)	Percent of total	Net annual growth ³ (cubic feet per acre)
Government	753.2	6.9	58
Forest industry	3,750.6	34.4	45
Nonindustrial landowners ²	6,397.7	58.7	34
Total	10,901.5	100.0	

¹Softwoods are mainly southern yellow pines.

²Includes farmers, non-forest industry and miscellaneous private owners.

³Mortality from fire, insects and diseases have been accounted for.

Source: In 1980, pine sawtimber was worth almost four times as much per thousand board feet (MBF) as hardwood (\$200 per MBF pine versus \$51 per MBF hardwood) with the exception of fine quality hardwoods such as white oak, cherry and walnut. Pine pulpwood was 3.7 times more valuable as hardwood pulpwood (\$9.25 per cord versus \$2.50 per cord).

Table 2. Value differences of softwood timber products (Doyle log rule).

Timber product class	Value/cubic foot (CF)	Upgrade value multiplier
Pulpwood (80 CF/cord)	\$.12	(base)
Sawtimber (224 CF/MBF)	.92	7.7
Veneer logs (224 CF/MBF)	.99	8.2
Poles and piling (224 CF/MBF)	1.49	12.4

Source: Adapted from 1980 Timber-Mart South, Inc., Highlands, North Carolina, monthly price reports for Texas.

Table 2 indicates the range of values available from different pine timber products. This shows the advantages of proper management and harvest timing. For example, if pulpwood is allowed to grow to sawtimber size, it may bring a price 7.7 times greater than it would if sold as pulpwood.

The potential for converting some nonindustrial lands from hardwood to pine is good. Conversion is often done by applying timber stand maintenance (TSM) techniques. Undesirable hardwoods are deadened and replaced with pines that either "seed-in" naturally or are planted. Managing for pine regeneration following timber sales offers an excellent opportunity to keep more valuable pines growing on the land. Conversion or regeneration operations involve expenditures or capital investments.

Eliminating all hardwoods from pine sites in East Texas is not recommended. Hardwoods provide some valuable wood products, wildlife amenities, erosion control and improved recreational experiences. However, on many private

acres the existing hardwoods are little more than brush and are extremely low value trees of little benefit to wildlife or society. If this undesirable vegetation were replaced with higher value trees, such as pines, landowners would realize an overall increase in property value and a more realizable future cash crop.

Even when all of these advantages favor timber management, some landowners still choose not to invest in timberland or to use good forest management. In conferences conducted in 1975 by the American Forestry Association in the South, private landowners ranked the common deterrents to managing forest land for timber production. These deterrents with subsequent improvements follow:

1. Tax code changes, including reforestation investment tax credits, lower property taxes and lower capital gains tax rates and estate taxes
 - Reforestation tax incentives passed in 1980 allow a 10 percent tax credit (up to \$1,000) and 7-year amortization of the first \$10,000 of capitalized reforestation expenses each year.
 - Texas House Bill 1060 passed in 1979 allows forest land to be taxed on productivity instead of "fair market value."
 - Capital gains rates were lower in 1981 for individuals than they were in 1975; because of the Economic Recovery Tax Act, the maximum rate was reduced from 28 to 20 percent.
 - The "carry-over" basis rule affecting estate taxes was repealed in late 1979, returning to the "stepped-up" basis evaluation rule which supports continuation of forest management plans and transfer of property to heirs.
2. Increased technical assistance from government and private enterprise (industry and consultants)
 - The number of professional consulting foresters has grown. Many wood-based companies have cooperative assistance programs. Lists of either group are available from county Extension offices.
3. Better marketing information
 - In June 1980, county Extension agents throughout East Texas began receiving *Timber-Mart South*, a monthly timber price reporting publication.
4. Improved public-supported financial assistance
 - The Forestry Incentives Program (FIP)

benefits many landowners but struggles each year for funding. In 1981, national funding was cut from \$15 to \$12.5 million. It likely will drop to \$10 million in 1982 and may soon disappear altogether. However, the Texas Forestry Association implemented a cost share plan (TRe Foundation) in 1981 that functions similarly to FIP, except that it is privately funded.

5. Adequate funding for resource protection from fire, insects and diseases
6. Improved inventories to broaden knowledge for better decisionmaking
 - Developments in aerial photography allow more rapid access to inventory information. This was significant in arriving at land productivity values for House Bill 1060 (see point 1).
7. Limited landowner liability if public use of land is allowed
8. Reduced risk of government regulation
9. Better benefit/cost analyses including more than just timber to enable better decision-making

Investment Potentials and Strategies

The investor has a number of areas in which he can invest. He must consider the amount of money he has to invest and when he wishes to recapture it. The general investment strategy is to secure a rate of return that exceeds the rate of inflation and reduces the risk of losing the invested capital to a level the investor is comfortable with. The two main categories of investments are (1) those based on currency, such as savings accounts or certificates, corporate stocks or bonds, U.S. government bonds or Treasury Bills and money market certificates or funds and (2) real capital assets. Real capital assets may either be durable producer goods such as real estate, buildings or equipment or real personal assets and durable consumer goods, such as houses, cars, furniture, boats and "collectibles" such as coins, stamps and paintings. Precious or strategic metals, as well as other commodities, are also considered real capital assets.

Investments in timberland management are also investments in a real capital asset. They are essentially investments in commodity production, because the returns come when the timber commodity is sold.

Comparative analyses of pulpwood plantations managed on a 15-year rotation in the South and in

Texas show returns on investment to be superior to investments in 15-year government bonds. Capital gains treatment of income is the main reason for this.

Past trends in Texas pulpwood prices indicate that they barely keep even with inflation. But, the situation is changing. Sawtimber prices, however, have shown a real growth (i.e., adjusted for inflation) of 4.5 percent per year for the last 25 years in East Texas and western Louisiana. The message seems clear — grow sawtimber for the best financial return and hedge against inflation.

While Texas timber growers have enjoyed the highest sawtimber prices in the South, they have received, on the average, the lowest pulpwood prices. However, a pine plantation can nonetheless be a good investment if cut for pulpwood after 15 years. The real payoff in a pine plantation investment comes after 25 to 35 years when timber reaches 10 to 14 inches in diameter and can be sold as sawtimber.

Suppose that after 15 years you decide not to cut your pine plantation for pulp but let it mature to sawtimber. In year 15, if not before, thin your plantation, remove the worst trees and thereby give the best ones more room to grow. Also, sell your thinning as pulpwood to realize some returns. Returns from these thinning operations probably will only recover the cost of thinning.

The investment which might be expected when the pine plantation is sold for sawtimber after 30 years is figured for three sets of assumptions. For plantations on the poorest sites with the highest cost for establishing the plantation and with poor timber price projections, returns on investment may still be expected to exceed inflation by 2 or 3 percent. For plantations on the most favorable sites with the lowest establishment cost and good price projections, returns may exceed inflation by as much as 15 percent. A third set of assumptions midway between the favorable and unfavorable conditions should produce returns approximately 8 to 9 percent in excess of inflation. Even the most favorable of these three assumptions is fairly conservative¹, especially when growth rates on good sites in Texas are as good as anywhere in the South, and Texas sawtimber prices have historically been the highest of any state in the South.

Investment Outlook

In 1965 pine growth exceeded pine harvest by 87 percent in Texas. In 1980 the Texas Forest Service reported that pine harvesting had surpassed growth in 1979. This indicates that the future sup-

¹See Lester Holley, "Grow a Crop of Moneytrees," *American Forests*, October 1979.

ply of Texas pine will be limited because inventories of growing stock will be harvested, as well as annual growth. Besides this diminishing timber supply situation, there is also a ½ percent per year declining land base. Demand, however, will continue to rise. The USDA-Forest Service predicts a 20 to 47 percent increase in volume demand by 2000 with demand to double by 2030.

The South, currently supplying more than 40 percent of the nation's wood, is expected to provide 51 percent of the wood used in the U.S. by 2000. With more than 60 percent of the southern timberland in nonindustrial, private ownership, the economic future is bright for landowners who have well-managed timber stands.

Several investment firms and bank trust departments are very interested in investment potentials of timberland. In a recent report, Thomas Clephane, vice-president of a large New York investment firm, predicted that timber prospects in the South will be very good. His predictions include:

- Softwood sawtimber prices will continue to rise faster than inflation.
- Southern timber prices should rise more rapidly than other regional timber prices.
- Southern pine plantations will not be a major source of supply until after 1990.
- There will be a continuing shift of major forest products operations to the South.
- Attempts will continue to maximize timber values by holding stands until they are sawlog size.
- Investments in southern timberland will increase. Forest industry companies, private landowners, diversifying companies and individuals and syndicates representing domestic and foreign interests will buy and invest in timberlands.

Four timber features of particular interest to actual and potential timberland investors are:

- Nine to 11 percent average annual current timber price increase, with 2 to 4 percent annual real price increase after inflation.
- Six to 8 percent annual physical growth on good sites.
- Sawtimber is worth five to seven times an equal volume of pulpwood, depending on local markets. Seven times is the multiplier for Texas (table 2).
- Annual increase in land value that slightly exceeds the inflation rate.
- Export of southern wood products is becoming

more of a reality as world timber and wood product demand increases.

Texas' portion (6.7 percent) of the South's commercial forest land ranks ninth among the 12 southern states. Predictions for the South also apply to Texas timber markets.

Advantages and Disadvantages of Timber As an Investment

A number of advantages and disadvantages are inherent when investing in timberland. The following list will help the Texas landowner in making decisions.

Advantages

- Timber income can be timed to provide periodic returns when properly managed; timber is a liquid asset with no set maturity date.
- Timber income provides a means of paying taxes on land held for future use or heirs.
- Estate planning advantages are a benefit.
- Timber income qualifies for capital gains tax treatment which is considerably lower than for ordinary income.
- Reforestation investment (up to \$10,000 per year) can be amortized over 7 years, instead of waiting for final harvest to recover costs.
- Reforestation investment provides immediate tax credit of 10 percent of costs (up to \$10,000 per year).
- Annual maintenance costs and time requirements are low.
- Up to 65 percent of reforestation investments may be covered by cost-share programs, either publicly funded (FIP) or privately funded (TRE Foundation).
- Technical assistance is available from government, private consultants and forest industry companies.
- Timberlands can be taxed at their productive potential which may be lower than other assessed property values.
- Timber management can enhance other land uses such as wildlife, recreation and grazing.
- Annual physical growth of timber ranges from 4 to 8 percent.
- Timber prices have historically increased at a rate 2 to 4 percent greater than inflation.
- Prices increase as trees grow plus sawtimber brings seven times the price of pulpwood, while veneer logs ("peelers") and poles are worth more than sawlogs.

- Demand for timber products will increase; more demand is expected for export of wood products, use of wood for fuel, withdrawal of land for urban expansion and recreation use.
- Supply of timber products is shifting to the South; trees grow faster than in northern or western U.S.; industrial expansion is occurring in the South.
- Many investment analysts refer to forests as "green gold."

Disadvantages

- Long term nature of forestry investments.
- Risks due to fire, insects and diseases.
- Trees are not marketable until about 15 years old.
- Plantations require heavy front-end capital investments.
- It is a long time before returns on investments are realized.
- Lack of risk insurance.
- Timberland usually reverts to lower value hardwoods after harvesting unless properly managed for pine.
- Small tracts are unattractive to timber buyers and uneconomical for timber management.
- Loans for forestry investments are difficult to acquire.
- Costs of additional land purchases may be prohibitive for forestry investments.
- Returns on forestry investments won't exceed inflation rate until trees reach sawtimber size; however, pulpwood prices will stay even with inflation.
- Professional assistance is needed to fully realize investment and management potential and tax benefits of timberlands.
- Obtaining adequate vendor services for timber management may be a problem.
- Logging can temporarily disfigure the land.
- Landowner must apply for land productivity taxation assessment.

Land Management Alternatives

Many forest landowners conduct livestock or farming operations on their property and have forested areas on part of the land, thus have excellent opportunities for income-generating diversity. If well-managed, timberland provides a low maintenance asset that can periodically give substantial additional income on a planned basis.

Wooded areas also provide recreation opportunities, shelter from weather, fuelwood supplies and security.

Forest landowners not actively conducting intensive forestry production practices should consider forest management after reviewing the advantages and disadvantages. Comparing the time and expense involved, no other income-generating land use provides a better rate of return on investment except perhaps leasing, which involves loss of certain freedoms on the land during the term of the lease.

A number of forest management and regeneration alternatives are available to the landowner. Two broad classifications are natural and artificial reforestation systems. Artificial reforestation refers to manmade methods of establishing forests of desirable trees. Plantations and direct seeding of cutover areas are the two most common forms.

Natural methods include leaving seed trees to reforest areas, managed under "seed tree," "shelterwood" or "selection" systems of management. Many private landholdings are relatively small and one of the natural regeneration methods may be better suited to the landowner's objectives than an artificial method would be. Seek the advice of a professional forester.

In addition to deciding upon a reforestation method, one should consider marketing the timber product so the management plan supports the marketing objectives. In pine management, sawtimber, veneer and pulpwood are the basic market products. Poles have an even higher value but generally comprise a small percentage of the forest. Base the management scheme on the products grown.

To Learn More

An anyone interested in investing in timberland falls into one of two categories: (1) those who own the land and (2) those who wish to purchase land. In either case, the land may or may not have timber growing on it now. First, cruise or inventory the timber resource on the tract of land. This information is vital for making management decisions. Professional foresters are available from private consulting firms, governmental agencies or forest industry companies to assist in making inventories. Foresters are trained not only in making the necessary surveys but also in advising and assisting landowners. Always consult a professional forester before selling timber. The forester can help you get not only the best price for your timber but also aid you in meeting long-term land management objectives. For information about a professional forester, call the local county Extension agent or the state Extension forester at Texas A&M University.

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