

## RECENT DEVELOPMENTS IN FOREST TAXATION POLICY: A COMPARATIVE OVERVIEW OF SELECTED MAJOR TIMBER-PRODUCING STATES

E. B. Kelley, CF<sup>1</sup>

---

**ABSTRACT.**—Several key timber states have recently reviewed and adopted forest tax policy changes, either legislatively or administratively, to reflect the changing forest resource. While some states recognize tree farming is similar in nature to agricultural farming, other states only recently concluded that timber mining no longer exists and state tax policies have been modified to match this recognition. The tax policy changes have helped to create more tax equity, lower production costs, increase investment returns, encourage better forest management and provide a more stable tax system.

---

Private forest land and the associated forest management activities on that forest land in the entire United States has undergone a fundamental transition over the past several decades. The passage of the Endangered Species Act of 1966 and the National Environmental Policy Act (NEPA) of 1969 was clearly intended to provide a national policy framework for addressing emerging environmental concerns. However, most if not all private forest landowners never envisioned these major policy directives would impact their ability to practice forestry on private ownership in the 1960s and 70s to the degree it clearly has in the 1990s. These policy changes coupled with the changing character of the forest resource and changes in national and global markets have produced a much more difficult economic environment for industrial and nonindustrial landowners alike. In addition to these environmental policy, resource, and market changes, recent changes in forest taxation policy in Oregon, Arkansas, and West Virginia have recognized past policies as obsolete or flawed.<sup>2</sup>

### **Taxing Agricultural Crops and Timber Crops**

Until the late 1960s, the production of mature timber supplies occurred primarily by an extraction, or mining

process which was dependent upon old growth timber inventories. However, today nearly all private merchantable timber is produced on tree farms; timber production is now very similar to an agricultural industry. Stand management activities associated with “tree farming” very closely resemble agricultural crop farming except for the much longer time required to produce a timber crop. Like agricultural crop production, forest land must be prepared; seedlings planted; young crops thinned; weeds, insects, diseases, fire, and animals controlled; and the crop carried through to maturity and finally, harvest (Dowdle, 1992, 1995).

Regardless of the many similarities between producing timber and agricultural crops, important differences exist, and these differences have and continue to contribute to maintaining obsolete or flawed tax policies for tree farming. The most important difference, as noted above, is the long time horizon required to produce a timber crop—agricultural farmers can produce as many as 30 to 70 annual crops while tree farmers are producing one. While agricultural farmers are generally producing a single annual crop, tree farmers are required to carry large inventories of maturing timber (goods-in-process). These inventories delay and easily disguise the adverse effects of obsolete or flawed policies. Consequently, these policies which adversely affect timber investment decisions today may take decades to affect rates of timber harvest or the final economics of investing in timber production. However, obsolete or flawed policies that adversely affect investments in annual agricultural crop production generally would be expected to affect the economics of production from that year only.

Another difference is that annual agricultural crops are generally classified as personal property and are exempt from property taxation. Property taxes apply to

---

<sup>1</sup>Senior Tax Manager with PricewaterhouseCoopers LLP, a professional services firm in Seattle, WA. Previously, Manager, Timber and Timberland Taxes, Weyerhaeuser Company, Tacoma, WA. Currently, affiliate associate professor, School of Forest Resources, University of Washington.

<sup>2</sup>1993 Oregon Legislative Session enacted HB 2438; Arkansas Assessment Coordination Division administrative determination (1996); 1998 West Virginia Legislature enacted SB 151 (1998).

## A Review of U.S. Property Tax Systems on Forest Property

agricultural land only, and the value of land for tax purposes is based on its ability to produce crop income. For agricultural land, this approach works well.

However, there are states that still view the timber crop as real property and not inventory or goods-in-process. There are a number of states that treat tree farms similar to agricultural land, for instance, North Carolina taxes only the land and the growing stock is exempt and viewed as inventory or personal property. However, industrial tree farms in North Carolina are valued using a market sales approach while nonindustrial tree farms are valued using a direct income capitalization approach. Each method produces significantly different land values for property tax purposes even if the land is identical in all respects except ownership. Other states, such as Washington and California, value and tax the harvested timber and land. The harvested timber is subject to an excise or yield tax on the value of the timber. The underlying bare land is valued and taxed annually at the local property tax rate. While this approach may have been suitable when the timber production was entirely from old-growth inventories, this tax policy on today's tree farms clearly creates a "double-taxation" and one that will over time lead to a confiscation of the economic value of the property. In the case of Minnesota and with respect to the Tree Growth Tax, this tax treatment is viewed as a productivity tax in that the tax is a function of the productive capability of the land to produce income or value. The annual growth rate and reported stumpage prices comprise the basis for determining the value of the tree farm for property tax purposes. Minnesota's tax policy is intended to reflect the productive capability of the land and the recent and current market price of mature timber reduced by 70 percent, and when fully applied then determines the tax per acre. Production costs are not a factor nor is the accrued interest on any "out-of-pocket" investments such as planting, insect, disease or weed control expenses, annual administrative expenses, annual property taxes, etc.

Another difference between timber and other agricultural crops is that the latter typically generates annual income from which production costs and property taxes are paid as annual or periodic operational expenses. Revenue can only be accrued as the timber matures and therefore actual cashflow (other than the incidental revenue from commercial thinnings) is not received until merchantable timber is harvested. This suggests that start-up, annual, and periodic expenses incurred in growing timber, including annual property taxes on land, must be paid "out-of-pocket." Correct financial accounting requires that these costs be treated as investment expenses and interest carrying costs need to be included. These interest costs on the out-of-pocket expenses grow to become a significant portion of total production costs.

Property tax comparison studies between timber states generally attempt to draw distinctions between the forest property tax systems employed by the various states. In addition, these studies also attempt to inform individual taxpayers, taxpayer groups, legislative bodies or the public in general (Alabama Forestry Association 1991; Northern Forest Lands Council 1992; Oregon Forest Industries Council 1993). The property tax systems in the U.S. can be classified into five general categories.

### *Ad Valorem Tax System*

The ad valorem tax system is the most basic in that the tax is determined by applying a tax or millage rate to the assessed or taxable value. The value may be at the land's highest and best use or may be its current use, i.e., in timber production in the case of forest land. The assessed or taxable value can be determined in one of a number different ways including using a market sales approach, an income capitalization approach, legislatively or administratively establishing "reasonable" values and adjusting those values annually. These annual adjustments can be accomplished by using a value trend index or some other method to reflect changes in market factors. The assessed or taxable value may be assigned by some productivity class (site or soil class) or a single value may be applied to all private commercial forest land.

### *Modified Ad Valorem Tax System*

The assessed or taxable value is generally based on the fair market value but may be adjusted by an assessment ratio which in general reduces the market value by some factor or percentage. This adjustment "modifies" the fair market value and creates a second tax system known as the modified ad valorem tax system. Under this second system, these value reductions are usually legislatively established and are set equal to other classes of property (residential, industrial, commercial, etc.) or can be lower to reflect preferential treatment similar to agricultural property. In other instances, the assessed or taxable value may be legislatively determined and set by statute or administrative rule. While the ad valorem tax system (standard or modified) is simple in description and design, the manner in which the assessed or taxable value is determined can vary considerably. Some states (Mississippi, Alabama, Oklahoma, Louisiana to name a few) use a simple direct income capitalization method to determine taxable value. Other states (Washington and California) establish statutorily set values and annually adjust those values by the value change in annual stumpage prices on some rolling average as a surrogate for actual land value trends. Georgia is the only state

that applies an ad valorem tax system both to the underlying bare land and the mature timber upon harvest.

#### *Productivity Tax System*

The next major system is one that, as noted in an earlier section, is based on the land's capability to produce annual income or value. Once the annual growth rate per acre is determined (ideally by species, site or productive class and geographic region) and then is applied to a recent or current stumpage price will determine the tax per acre. Several states including Minnesota currently use this method or a variation of it.

#### *Yield Tax System*

The next system to discuss is the yield tax system. This system taxes the mature timber when harvested. A yield tax rate is expressed as a percentage and is applied to the stumpage value of the harvested timber. This system is generally offered as an optional system but as will be discussed next, could also be part of a combined yield tax and ad valorem tax system.

#### *Combined Yield and Ad Valorem Tax System*

The last system is a combination of both the ad valorem and the yield tax systems. This system only occurs in a handful of states including as examples, Washington, California, Louisiana, and Oregon (until 1993). This system was adopted in Washington, Oregon, and California in the 1970s to convert from an ad valorem system that taxed land, growing timber, and mature timber. This shift imposed an ad valorem tax system on the land and a yield tax system (described as a severance tax in Oregon and excise tax in Washington) on the mature timber harvest. The growing stock was legislatively exempted from the property tax in all three western states. Oregon has since come full circle and in 1993, the Oregon Legislature enacted an ad valorem tax system for the majority of the private forest land.

A survey of the various states indicates that nearly all have adopted a use value approach or some form of a use value approach. A summary of the various tax systems for the major timber states is listed in Table 1.

### **Tax Per Acre Comparison Between Selected Timber States**

Since there continues to be a wide array of property tax systems in use in the United States, many attempts at developing a meaningful comparison between systems has been and continues to be difficult. A number of studies have attempted to compare the tax payments or burdens between states to assist policy makers and others in better understanding the state of forest taxation

(Hickman 1982; *Timber Tax Journal* 1984; Oregon Forest Industries Council 1993). One observation regarding current tax systems is that most incorporate features of agricultural use, whether such use is allowed because it is the "highest and best use" or because it is the "current use" and it is in fact, similar to agricultural use in concept and/or practice. Table 1 summarizes the various states and identifies whether or not the tax treatment can be characterized as one that incorporates a "use value" feature for purposes of property taxation. In addition, the type of tax program is included for each state, however, some states may have more than one program, e.g., Oregon has two such programs. One tax program is available to all landowners, large and small; while the second program is exclusively for small landowners. Both are intended to be ad valorem tax systems and incorporate productivity features in determining the assessed or taxable value. Interestingly, until 1997, the two programs produced significantly different values and in 1997, supporters of the small landowners program submitted legislation to adopt the values used by the other tax program primarily because the values were lower but also to produce equity between programs.

While the information in Table 1 helps to understand how various states view their individual forest tax systems, it does not allow one to compare one state's tax level to another state. One approach for allowing one to compare tax systems between states is summarized in Figure 1. This approach estimates the tax per acre that results from the current major tax system currently in use in each state.

The approach includes several assumptions:

- A hypothetical ownership has an annual harvest requirement of 20 million board feet per year. This requirement may be the amount of timber necessary to supply a vertically integrated manufacturing facility (sawmill, plywood mill, pulp mill, etc.), or the amount of timber that would be necessary to satisfy some cash flow demand for an investment commitment or the annual harvest amount is simply the sustained or planned harvest level for that ownership.
- An average estimate of the 1997 stumpage price for the primary commercial species of timber is used.
- An average estimate of 1997 timberland value for property tax purposes is used.
- An average tax or millage rate and assessment ratio if permitted is included.
- An estimate of the productive potential (yield) is assumed for an average site.

It is important to note that the estimates contained in Figure 1 will probably not represent any individual ownership but is intended to allow for a comparison between tax systems.

It is interesting to note that while most states either directly or indirectly treat timberland similar to agricultural land, however, the various tax systems produce vastly different tax per acre levels. The tax per acre levels range from a low of \$1.09/acre in eastern Oregon to a high of \$23.66/acre in western Washington. The tax cost for producing an annual harvest of 20 million board feet in western Washington is more than 10 times higher than the arithmetic average for the mid-South states (Arkansas, Oklahoma, Alabama, and Mississippi), \$23.66/acre compared with \$2.13/acre. Another observation is that the arithmetic average tax per acre for the coastal region of the Pacific Coast states (coastal California, western Washington, and western Oregon) is more than four times higher than the inland regions of those same Pacific Coast states (inland California, eastern Oregon, eastern Washington, and Idaho), \$13.49/acre compared with \$2.80/acre. Clearly, the significant portion of the tax per acre for the Pacific Coast states (Washington, Oregon, and California) is related to the harvest portion which comprises more than 80 percent of the annual total tax level. While the combined ad valorem and harvest tax treatment for these states (Washington, Oregon, and California) attempted to correct tax policy flaws observed in the 1970s, these current treatments have now created inequitable and clearly uneconomic tax costs in light of the investment costs associated with tree farming. Oregon attempted to correct the obsolete tax policy in 1997 when the Oregon Legislature enacted legislation allowing landowners the option to elect taxation under an ad valorem tax system however, Oregon's governor vetoed the passed legislation citing revenue shortfall concerns independent of tax equity or efficiency considerations.

It is also interesting to note that those states which have historically treated timberland much like agricultural land seem to have forest tax policies in place that produce tax per acre levels consistent with agricultural land. Examples would be the mid-South states (Arkansas, Oklahoma, Mississippi, and Alabama), mid-Atlantic states (North Carolina, and West Virginia) and Lake states (including Minnesota). The tax per acre for Minnesota is nearly identical to the average tax per acre for the mid-South states, \$2.15/acre compared with \$2.13/acre. Georgia is one of the few states that seems to have shifted from an ad valorem tax system that attempted to tax timberland similar to agricultural land to one that now clearly taxes timberland as different from agricultural land as is possible. Not only is timberland

owned by large landowners taxed annually on the full market value in its highest and best use, Georgia also taxes the production off those lands which is completely unlike the tax treatment afforded agricultural landowners. In this case, the timber produced is nothing more than "inventory" or "goods-in-process" and should not be subject to property taxation. Clearly the tax imposed on the land and harvested timber argues for a case of "double-taxation," a case that can be argued as strongly in Georgia as in any state (except possibly Washington) in the U.S. In fact, similar arguments exist for other states like Washington, California, and Louisiana. Each of these states continue to tax timberland and harvested timber and this tax treatment clearly produces a tax burden far in excess of what an ad valorem tax burden would produce if these states were to be treated similar to agricultural land.

### **Recent Developments in Forest Taxation Policy**

This comparative overview of forest taxation policies for the selected states discussed in this article clearly shows how forest taxation continues to be in a state of disarray. Clearly, such large disparities in tax per acre levels between states are not simply because timberland in one state is more productive or the current stumpage price is higher, but that the individual tax policies significantly contribute to these disparities. A number of these states have attempted to address the obsolete or flawed policies that have existed for several decades. Examples would include Oregon, Arkansas, and West Virginia.

Recently, these states have enacted, either legislatively or administratively, tax policy changes for timberland. As mentioned earlier, Oregon adopted an ad valorem approach in 1993. However, the payment of the tax continued to look like the previous combined system, e.g., the annual tax payment was split between a small annual tax on the land (20%) and the remainder paid at time of harvest (80%). The intent was to create a system whereby the taxpayers' total tax burden did not exceed the amount that would have been due under a "pure" ad valorem tax system. The timberland values were determined using a discounted cashflow method and attempted to consider all costs associated with investing in a tree farm enterprise.

Arkansas' Assessment Coordination Division of the Public Service Commission in 1996 adopted a discounted cashflow method for determining timberland values and currently is in the process of implementing those new values. The West Virginia Legislature in 1998 also adopted a discounted cashflow method to determine

timberland values. Those values will be implemented in the future.

Each of these states recognized that in order to determine the tax burden for timberland fairly, it was necessary to fully understand the full investment costs incurred by the landowner over the entire growing cycle. The most important of these costs turned out to be the accrued interest or financial carrying cost for all of the out-of-pocket expenses including site preparation, planting, annual administrative, insect/weed/disease/animal damage control, intermediate stand management and last but not least, annual property tax costs. Clearly the accrued interest costs over the growing cycle, which could range from 30 to 70 years, could easily determine whether producing a timber crop would generate a competitive return or make timber production simply uneconomic. While these states have recently attempted to address obsolete or flawed tax policies, clearly considerable research is still necessary to fully understand, from a theoretical perspective, the tax equity and efficiency concerns for a sound and correct tax policy. In addition to the theoretical considerations, the practical considerations related to political expediency and administrative institutional arrangements must also be kept in mind. Some long time participants in tax policy discussions have noted that “the devil you know may be better than the one you don’t.”

## LITERATURE CITED

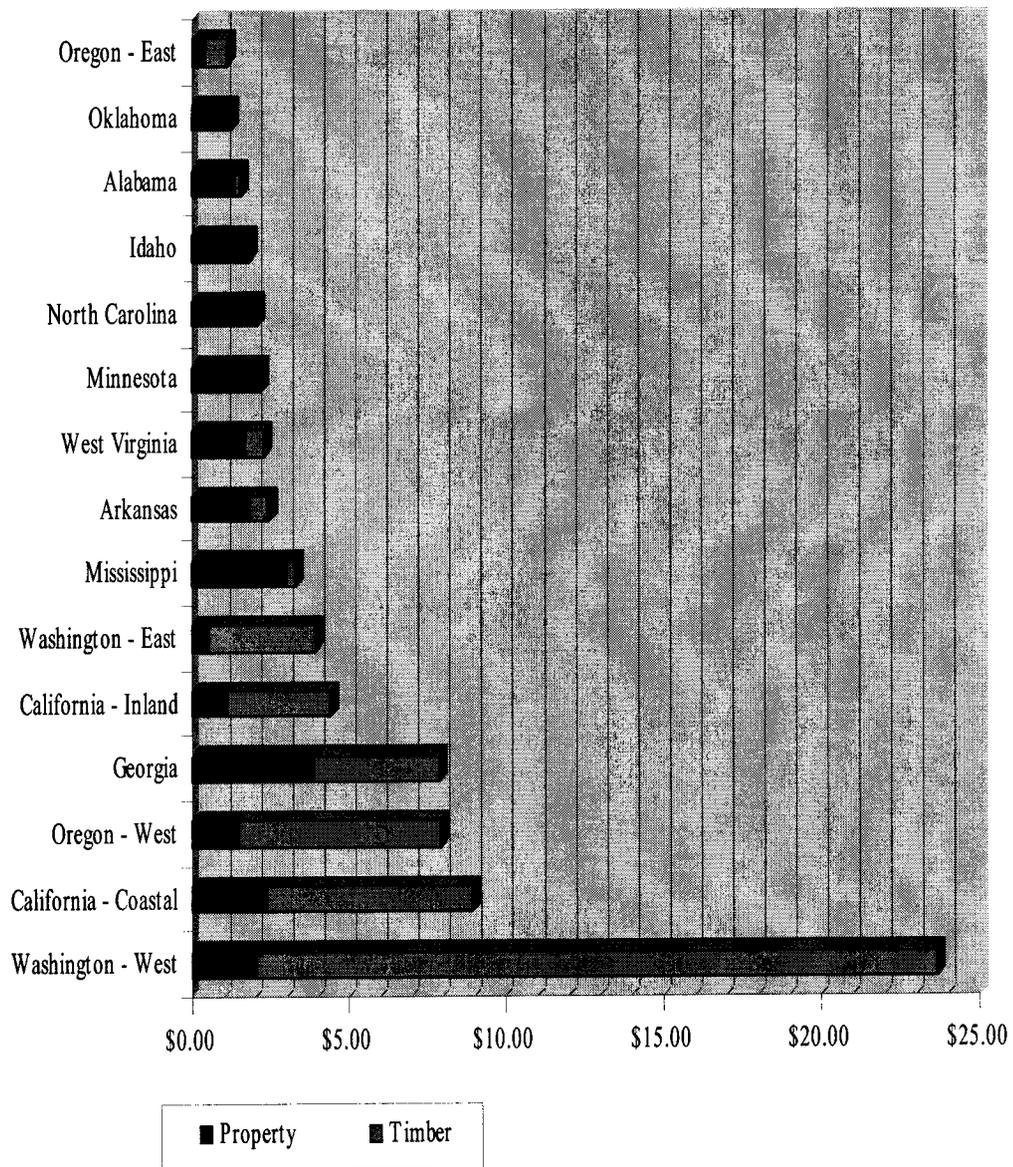
- Alabama Forestry Association. 1991. Tax Comparison for Southern Timberlands
- Dowdle, B. 1992. Taxing Tree Farm Property: An Oregon Case Study
- Dowdle, B. 1995. Reforming Washington’s Forest Property Tax: Background, Theory and A Guide to Policy.
- Forest Industries Committee on Timber Valuation and Taxation. 1984. *Timber Tax Journal: Survey of State Forest Tax Laws.*
- Hickman, C. 1982. A Survey of Ad Valorem, Modified Ad Valorem and Yield Tax Systems in the U.S.
- Northern Forest Lands Council. 1992. Taxing Forest Lands in Maine, New Hampshire, New York and Vermont.
- Oregon Forest Industries Council. 1991. A study of Timber and Timberland Tax Treatment in 22 Major Timber States in 1991.

Table 1. List of states offering “agricultural use” valuation for property tax purposes.

State	Use value offered	Type of program	Statute
Alabama	Yes	Current-Use	40-7-25.1
Alaska	Yes	Farm or Agriculture Land Use Value	Sec 29.45.060
Arizona	Yes	Farm or Agriculture Use Value	Sec 42-167
Arkansas	Yes	Agriculture Use Value	Sec 26-26-407
California	Yes	Timber Production Zone	Sec 51104
Colorado	Yes	Agriculture Use Value	Sec 39-1-102
Connecticut	Yes	Farm Land Classification	Sec 12-107c
Delaware	Yes	Agriculture Use Value	Sec 1
Florida	Yes	Greenbelt	Sec 193.461
Georgia	Yes	Conservation Use	Sec 48-5-7.4
Hawaii	Yes	Dedicated Lands	Sec 246-12
Idaho	Yes	Use Value	Sec 63-602K
Illinois	Yes	Farmland, Open Space, and Forestry Management Plan	Sec 10-125
Indiana	Yes	Agriculture Use Value	6-1.1-4-13
Louisiana	Yes	Use Value	Sec 2301
Kansas	Yes	Agriculture Use Value	Sec 79-1476
Kentucky	Yes	Agriculture Use Value	Sec 132.450
Maine	Yes	Tree Growth Law	Sec 1105 &
Maryland	Yes	Farm or Agriculture Use	Sec 8-209
Massachusetts	Yes	Farmland	Sec 11
Michigan	Yes	Commercial Forests	Sec 324.51103
Minnesota	Yes	Tree Growth Forest Land	Chap 270.31
Missouri	Yes	Use Value	Sec 137.021
Mississippi	Yes	Agriculture Use Value	Sec 27-35-50
Montana	Yes	Forest Lands Tax	15-7-201
Nebraska	Yes	Agriculture Use Value	Sec 77-1363
Nevada	Yes	Agriculture or Open Space Valuation	Sec 361A.130
New Hampshire	Yes	Current Use or Open Space Valuation	Sec 79
New Mexico	Yes	Agriculture Use Value	Sec 7-36-20
New Jersey	Yes	Assessment of Farm Land	Sec 54:4-23.20
New York	Yes	Agricultural Use Value	Sec 481
North Carolina	Yes	Agriculture, Horticulture & Forest Land Use Value	Sec 105-277.2
Ohio	Yes	Agriculture Use Value	Sec 5713.23
Oklahoma	Yes	Agriculture Use Value	Sec 2817
Oregon	Yes	Farm and Forest Land Valuation	Sec 321
Pennsylvania	Yes	Agriculture/Forest Reserve	Sec 3
Rhode Island	Yes	Farm, Forest & Open Space Land	Sec 44-27-2
South Carolina	Yes	Agriculture Use Value	Sec 12-43.220
South Dakota	Yes	Agriculture Use Value	Sec 10-6-33
Tennessee	Yes	Agriculture, Forest, and Open Space Valuation	Sec 67-5-1005
Texas	Yes	Current Use	Sec 23.41/23.73
Vermont	Yes	Agriculture and Managed Forest Land Use Value Program	Sec 3752
Virginia	Yes	Land Use	Sec 58.1-3239
Washington	Yes	Current Use - Agriculture Land and Forest Land	Sec 84.34.300
West Virginia	Yes	Managed Forest Land & Farm Use	Sec 11-1C-5
Wisconsin	Yes	Managed Forest Land	Sec 77.84
Wyoming	Yes	Agriculture Use Value	Sec 39-2-103

Use value criteria is defined as a state program providing for the special property tax valuation of farmland, open space land, and/or forest land.

Figure 1.—Estimated tax per acre for selected major timber-producing states illustrates the wide disparity in how timberland in general is taxed.



Estimated Tax Per Acre Including Both the Annual Land Tax and an Annual Timber Harvest Tax, if Imposed.