TAXATION OF FOREST AND ASSOCIATED LAND IN ILLINOIS

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During the 1960's, a series of forest taxation studies was conducted by graduate students in forestry and economics at Southern Illinois University at Carbondale under the direction of Dr. Ronald Beazley. Nacker (1967) studied the administration and burden of property taxes on forest and associated land in southern Illinois. He also developed and tested a model for predicting forest and associated land values from published data. Hickman (1970) refined this model while investigating the feasibility of statistically predicting forest and associated land values and developing land value maps that would be useful in assessment. Baumgartner (1972) considered the Illinois property tax situation in light of forest and associated land owner objectives and behavior.

Combined with other information obtained from small, private woodland owner research in Illinois and elsewhere, these studies provide a fairly complete picture of forest and associated land taxation in Illinois. In view of an increasing interest in tax adjustments as an incentive to improve woodland use and management (reflected in current legislative proposals) it seems appropriate to review the findings of these studies.

DEPARTURES FROM CONVENTIONAL FOREST TAX PROBLEM APPROACHES

All of the above studies utilized the term "forest and associated land" rather than "forest land" or "woodland". Beazley (1965) pointed out that when one is concerned with all Illinois lands that are interdependent in the production of wood, recreation, esthetics, wildlife, erosion control, and water, the concept of forest land should include what he has termed "forest and associated land" (FAL). This includes conventionally defined forest land, plus brush land, unimproved pasture, and much land on noncommercial farms. In other words, all nonurban, nontransportation or service, and non-commercial agricultural land. These lands are sufficiently similar to be considered as an entity for multiple-use, integrated land-use planning and management. Beazley estimated that roughly 9 million acres or 25 percent of the State land area is forest and associated land (FAL). This is more than twice the conventionally defined forest land estimate of 10.5 percent of the State, and closely

1Because "forest and associated land" is the subject of this paper and the term is used many times, we have resorted to the use of an abbreviation in the interest of brevity and simplicity.

Beazley arrived at his estimate as follows: (1) The ratio of land in commercial farms to all land in all farms was first determined. Call it "R" (2) The following areas were summed: woodland, pastured and not pastured; other pasture, not cropland or improved pasture; and wasteland ("other land" less 2 percent of farm area for buildings and roads). Call this total "W". (3) An estimate of the acreage of actual commercial farm land in commercial farms was then determined by subtracting the proportional amount of "W". That is, commercial land = land in commercial farms - (R x W). (4) An estimate of urban, service, and transportation land (6 percent for the State) was added to commercial farm land to provide an estimate of "urban, service, and (genuinely) agricultural land". (5) The figure for urban, service, and agricultural land area was subtracted from the total land area in each case to arrive at the figure for area in forest and associated land.
approximates the total of what assessors call "un-

improved land", thus providing a useful frame of

reference for taxation studies.

In many past forest land tax studies it was as-

sumed that the land involved is clearly best suited

for wood production and that it is owned and man-

aged for this purpose. In Illinois and most of the

Midwest, however, this assumption may be mis-

leading for tax purposes. At best it would be true

for only a few large tracts. Baumgartner evaluated

the importance of the conventionally defined for-

est tax problems in Illinois, given the well docu-

mented fact that most forest land in Illinois is

owned for a combination of uses. These include

water and erosion control, recreation, rural resi-

dences, forage, and speculation. Marketing of tim-

ber products may, or may not be included.

RESULTS OF ILLINOIS

TAXATION STUDIES

The Illinois Department of Revenue provides
detailed maps and records to help assessors in the
valuation of rural land in Illinois. Although the
materials provided are generally much better
suited to valuation of agricultural land, some
guidelines are outlined for appraising land con-
taining merchantable timber (Appendix I). How-
ever, Nacker (1967) found that assessor practice
deviated considerably (particularly for FAL) both
from Illinois statutory requirements and from rec-
ommendations of the Department of Revenue.
Part of his study dealt specifically with the ass-
essment of FAL. Assessors in the 17 southernmost
counts of Illinois were interviewed using a ques-
tionnaire designed to obtain information on the
characteristics of assessors, on how each adminis-
tered his position, and on the techniques used in
assessing FAL. Eighty-three of the 90 assessors in
the study area were contacted. Nacker reported a
large measure of assessor indifference to and
noncompliance with Department of Revenue pro-
cedures. He found that 32 of the 83 assessors inter-
viewed applied a flat rate valuation (10 of these
would make an adjustment upon complaint or spe-
cial circumstances) to all unimproved land in their
taxing jurisdiction and another flat rate to all
improved land. Twenty-eight of the 83 assessors
admitted that they did no assessing, but merely
copied the figures from the preceding assessment
period. The remaining 23 assessors made some
effort to obtain an individual value for each parcel,
but only four came close to using the recommended
Department of Revenue procedures. Only a few
assessors considered the value of standing timber
at all in their valuations and none considered the
annual growth of trees.

Admittedly, strict adherence to Department of
Revenue criteria would not necessarily result in a
greatly improved assessment of FAL values. The
standards that have been devised are strongly di-
rected toward determining the potential of land to
produce annual crops, and sales value is assumed
to be closely related to annual income-producing
capacity. FAL values may have little correlation
with the land's potential to produce income from
sales of wood.

In addition to providing information on the ac-
tivities of assessors, Nacker's work included the
computation of tax burdens for 314 land transac-
tions in southern Illinois. He found a highly signif-
icant inverse relation between tax burden and sale
value. Thus, to the degree that FAL was low priced
in southern Illinois, it appears it was over-as-
essed compared with farmland, which, in general,
is higher priced.

Both Nacker (1967) and Hickman (1970) used
linear multiple regression analysis to develop
FAL value prediction models. Sales value data
were obtained from the county records of transac-
tions that took place during the years 1959-1965.
Both studies utilized the same sample units.
Nacker developed a list of 38 independent vari-
ables thought to be related to sales value. These
variables (Appendix II) included measures of ac-
cessibility to urban areas, proximity to unique
physical features, existing land-use patterns, and
others. He then derived a prediction equation for
each of the nine sample units, as well as for the
aggregate, showing those variables that contrib-
uted significantly to variation in the dependent
variable (i.e., sales value). He was able to account
for significant amounts of sales value variation,
particularly within individual sample units (Ap-
pendix III), and he concluded that even better pre-
dictive models could be developed.

Hickman selected two of Nacker's more promis-
ing sample units and, using stepwise linear multi-
ple regression analysis, attempted to develop a
better predictive model. Using his new model, he
estimated sales values within a sample unit and
constructed a value map identifying areas of homogeneous land values. He accounted for 70 percent of the total variation in sales value in one of his sample units and 52 percent in the other. However, he also found that the standard error of the estimate and the standard errors of the partial regression coefficients were large. In general, the predictive models were inferior to assessor performance. His value map did not show large areas of uniform value.

Hickman reasoned that the poor prediction was due to improvements (mainly buildings) on the sale properties, the value of which he was able to estimate only generally with available data. He felt that the bare land rental value would be much more predictable and show larger homogeneous areas of value.

Although the results of both Nacker's and Hickman's work indicate that difficulties still remain in constructing precise value prediction models, they do suggest that some combination of predictive models, evidence of transactions, and good assessor performance could probably be more accurate than any of the three individually.

In Illinois, the calculation of separate value for trees is rare. It is doubtful that any assessors have ever computed, or even imputed, the value of the annual growth on the trees of Illinois land, even though a strict interpretation of Illinois' tax law would require that they do so. Because of the complexity of the measurements involved, there is little reason to expect practice to change in the near future.

Assessments and taxes on FAL in Illinois do, of course, change roughly in relation to land values, although far from consistently. The value of the trees growing on the land may, or may not, be generally considered by the assessor in arriving at the total value of a parcel of land.

In light of all this, owners could not reduce taxes by liquidating trees, shortening rotation periods, or reducing inputs for the production of any FAL outputs. If, however, the tax laws were rigidly enforced, a problem (at least a theoretical one) could exist for those owners having significant tree growth on their land.

**Time Bias**

A common forest taxation problem is that of "time bias". Unlike producers of other farm crops, who receive income annually, timber growers may have to wait several years (or decades) before selling a crop. Owners, who must meet annual tax payments are, in theory, encouraged to harvest prematurely. Some States have devised yield tax laws to reduce time bias. In these States, land remains subject to the annual property tax while trees are exempted until harvest.

To the extent that most assessors in Illinois ignore the value of the trees on a parcel of land there would be no time bias. Other assessors do, at least subjectively, include the value of the trees on a parcel of land in arriving at its value. Moreover, the land itself is taxed annually, so time bias could apply, at least partially, on all FAL in Illinois.

How important time bias is in a given area depends greatly on how many single-purpose owners are in that area. Time bias is usually associated with timber growers whose only income and reason for ownership are the production of timber. Illinois probably has no such owners. Most have other sources of income and only a few owners hold FAL primarily for commercial timber growing.
Alternative uses bring greater returns than single-purpose timber management for most Illinois FAL owners. A study in the early 1960's in Jackson County (a county with a high concentration of FAL) showed that only about one woodland owner in three received continuing income from wood products (Baumgartner 1963). The same study indicated that only 43 percent of woodland owners considered farming their major occupation. A 1970 study of new landowners in southern Illinois (Neuzil 1970) showed that only 36 percent were farmers.

Theoretically time bias may exist in Illinois, at least for the land component of FAL. But, the single-purpose ownership assumptions necessary to show the harmful effects of time bias on forestry are not reasonable in Illinois.

Although the problem of distinguishing between the capital investment and the return in forestry is often discussed independently in the forestry literature, it is little more than a specific example of time bias. Trees, it is said, are the return to an investment in forestry. Landowners, however, cannot take the return without taking the investment too. To tax 30-year-old trees at their current value is to tax all the value produced in 30 years. Each year the growth of all previous years is retaxed. However, as already discussed under time bias, when actual assessor behavior is examined, and the realism of single-purpose ownership assumptions is considered, no problem is apparent in Illinois.

Separating land and tree values is said to cause another forest property taxation problem. If land value were computed on the basis of expected future timber yields discounted to the present, a kind of double counting could occur. Timber as productive capital could be included in both the land and the timber components of value. Again, because assessors seldom consider the value of trees, no apparent problem exists along these lines for owners of FAL in Illinois.

The Amount of the Tax

The traditional procedure of relating property taxes to the wood-producing potential of a parcel of land has little relevance in Illinois. The potential rates of return from single-purpose woodland management in the midwest (Callahan 1966) are low and could be eliminated by even moderate property taxation. When the tax is as high as the property's net income before the tax, owners tend to abandon the land or find another use for it, after liquidating any merchantable timber. However, no land has been abandoned or confiscated in Illinois since the early 1930's. Some FAL has been cleared for farming, but at the same time, other land is reverting to FAL. There seems to be little relation between trends in the price of FAL and the profitability of growing timber for sale in Illinois, even though both land prices and the prices of most primary wood products have gradually increased. Thus, it is obvious that if the sales price of land represents the sum of all future net revenues discounted to the present, then revenue (which may be intrinsic) other than income from wood products is involved. Much of this revenue cannot be measured in monetary terms nor on an annual basis.

Given that FAL values have little relation to timber growing potential, forest taxation problems involving time bias are not really pertinent in Illinois. Likewise, the often-suggested solutions to forest taxation problems, including yield taxes, deferred taxes, and taxes based on timber growing potential, offer little hope of encouraging Illinois FAL owners to make "desired" investments in their land. It is not surprising that these special taxes have had little acceptance and effectiveness where they have been used. Taxation problems involving the quality of assessment are, of course, relevant, and the modified tax laws, most of which resemble the "present use" taxes, deserve further attention.

IMPACT AND IMPORTANCE OF FOREST AND ASSOCIATED LAND TAXES IN ILLINOIS

It has been shown that assessment problems, including a consistent "parcel bias", exist for owners of FAL in Illinois. A "time bias" also exists for land (but not for growing stock) because the tax must be paid annually while income from sales of wood occurs at long intervals. Taxes on FAL are high compared with cropland in terms of income-producing capability. However, when the tax problems associated with time and productivity are
considered in the context of multipurpose ownership and the concept of FAL, they seem irrelevant in Illinois.

Impacts of the property tax on the management of FAL appear to have been minimal. In one Illinois study (Baumgartner 1976) 27 of 121 Jackson County woodland owners had some complaint apart from the standard one that taxes are too high. Of the 27, 17 felt that assessment was worse for woodland than for agricultural land. Six felt that the tax should be based on income or potential income from the woodland. Two expressed in vague terms that somehow the tax did not favor forestry. One felt that the tax should vary with what use is being made of the woodland, and one felt that there should be no tax at all on woodland. It is striking that nearly the whole range of conventionally defined forest property tax problems was expressed, but more important is the fact that only 20 percent of the owners expressed any concern at all, and this concern was primarily with inconsistent assessment.

This same study correlated the owners’ attitude toward their woodland taxes and the per-acre woodland taxes themselves with 210 other forestry variables. Neither tax variable showed a high correlation (greater than r=0.25) with any of the other forestry variables. Tax levels or problems neither encouraged nor deterred woodland management.

The effects of the property tax or changes in it on owners of FAL are, of course, not uniform. Christmas tree growers (classic single-use owners) could experience conventionally defined tax problems and impacts. Other types of woodland owners would be affected differently by the tax.

Although the impacts of property taxes on FAL in Illinois do not appear to be large, improved assessment in terms of both uniformity and elimination of “parcel bias” would be a desirable first step in improving the tax.

SUMMARY AND CONCLUSIONS

The results of the Illinois FAL taxation studies can be summarized as follows:

1. Assessment of forest and associated land was found to be generally poor and inconsistent.
2. There was a highly significant tendency for low-value land to be assessed and taxed at higher rates than higher value land.
3. Land value prediction models without on-site inspections and evidence of transactions appeared to offer only a partial solution to assessment problems.
4. Conventionally defined forest taxation problems involving time bias were apparent for land but generally not for trees or for tree growth.
5. The impacts of the ad valorem property tax on the ownership and the intensity of management of FAL did not appear to have been large.

These results do not indicate that conventional types of forest land property tax adjustments would provide incentive to more intensive FAL management in Illinois. The poor acceptance of optional forest tax plans in other States (Appendix IV) supports this conclusion. Smith (1965) also concluded that the most significant improvement in forest taxation in Missouri could be achieved through more accurate assessment.

Current interest in improving forest land taxation centers on “modified tax laws” most of which resemble present-use valuation and taxation laws. The experience of other States indicates that present-use tax laws have been fairly effective in preserving high quality farmland near developing areas that almost certainly would remain in agriculture under a comprehensive land-use plan. Even here their use appears to be primarily a tactic to delay development and allow time for more careful planning. Their present potential in Illinois for FAL would seem limited to providing such a delay in a fairly small area of rural-urban fringe situations.

REFERENCES


APPENDIX I

PROCEDURE FOR APPRAISAL OF MERCHANTABLE TIMBER

The following outlines the procedure for valuing merchantable timber. The base land value of merchantable timberland on any tract is determined by adding the value of merchantable timber to the base land capability value as described in the paragraphs on rural land valuation.

The general practice provides that merchantable timber is not valued separately unless such tracts have pole size and saw log size stands and are used exclusively for the growing of timber. Thus, young timberland or small windbreaks and cattle shelter timber tracts are not considered in valuing merchantable timber.

The value of merchantable timber depends on the kind and size of trees and the number of acres of such trees. While young timberland containing small growing trees has some value separable from the land, such value cannot be realized without reducing the productive value of the timberland. Therefore, the smaller trees should be included in the valuation of the land, and a separate value should be added only for pole size and saw log stands of merchantable timber.

Following are the main steps for the appraisal of such merchantable timber:

1. Determine the approximate number of acres covered with merchantable timber. Aerial photographs, in addition to field checks, furnish this information and the use of a planimeter or grid gives the number of acres.

2. Estimate the number of pole size and saw log trees on each acre of the tract. Again the aerial photograph and the field inspection assist in furnishing information on the number of acres of such mature trees.

3. Multiply the total number of acres having such merchantable timber on the tract by the average value per acre. The average value per acre is estimated according to the quality and average number of pole size and saw log tree per acre.

4. Add the total value of the merchantable timber on the tract to the base land capability value to obtain the total land value of the tract.

The Illinois Department of Revenue will give necessary technical assistance on the valuation of merchantable timber, when requested by the assessing official.
APPENDIX II

NACKER'S ORIGINAL PREDICTIVE MODEL

General formulation of predictive model:
\[ X_1 = b_0 + b_2 X_2 + b_3 X_3 + \ldots + b_{39} X_{39} \]

where:
- \( X_1 = \) sales value/acre (market value) (nearest dollar)
- \( X_2 = \) size of sale (acres)
- \( X_3 = \) date of sale (coded 1-14)
- \( X_4 = \) tax rate, year of sale
- \( X_5 = \) assessed unimproved acreage/sale (percent)
- \( X_6 = \) assessed value of improvements, year of sale (nearest dollar)
- \( X_7 = \) assessed unimproved acreage/sale (acres)
- \( X_8 = \) improvements, year of sale (yes=1, no=0)
- \( X_9 = F_1 \) acreage (80 to 100 percent forested) (acres)
- \( X_{10} = F_2 \) acreage (50 to 80 percent forested) (acres)
- \( X_{11} = F_3 \) acreage (30 to 50 percent forested) (acres)
- \( X_{12} = F_4 \) acreage (less than 30 percent forested) (acres)
- \( X_{13} = \) land resource type A (coded)
- \( X_{14} = \) land resource type B (coded)
- \( X_{15} = \) assessment ratio
- \( X_{16} = \) tax burden
- \( X_{17} = \) owners with same last name (yes=0, no=1)
- \( X_{18} = \) number of ponds/sale
- \( X_{19} = \) distance to the nearest gravel road (tenths of miles)
- \( X_{21} = \) distance to the nearest hardtop road (tenths of miles)
- \( X_{22} = \) distance to the nearest State or federal highway (tenths of miles)
- \( X_{23} = \) distance to nearest town (miles)
- \( X_{24} = \) proximity to water bodies of 40 to 800 acres in size (precision of 5 miles)
- \( X_{25} = \) proximity to the Ohio or Mississippi Rivers (precision of 5 miles)
- \( X_{26} = \) proximity to the Crab Orchard complex (precision of 5 miles)
- \( X_{27} = \) total recreation resource acreage by county (percent)
- \( X_{28} = \) Shawnee National Forest acreage by county (percent)
- \( X_{29} = \) forested land acreage by county (percent)
- \( X_{30} = \) forest and associated land acreage by county (percent)
- \( X_{31} = \) proximity to urban places of 100,000 population or more (precision of 5 miles)
- \( X_{32} = \) proximity to urban places of 10,000 to 50,000 population (precision of 5 miles)
- \( X_{33} = \) total population/county (person/square mile)
- \( X_{34} = \) county acreage in farms (percent)
- \( X_{35} = \) mean individual income/county: 1959 (dollars)
- \( X_{36} = \) assessed net worth of county: 1960 (dollars/acre)
- \( X_{37} = \) total acreage/county (acres)
- \( X_{38} = \) commission or township county (comm.=0, twp.=1)
- \( X_{39} = \) urban population, by county (percent)
APPENDIX III
RESULTS OF INITIAL NACKER MODEL

<table>
<thead>
<tr>
<th>Unit of analysis</th>
<th>n</th>
<th>R²</th>
<th>Significance level</th>
<th>¹Adjusted R²</th>
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<td>0.3007</td>
<td>0.01</td>
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<td>Sample unit:</td>
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<td></td>
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<tr>
<td>1</td>
<td>63</td>
<td>0.4537</td>
<td>0.01</td>
<td>0.4143</td>
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<tr>
<td>2</td>
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<tr>
<td>3</td>
<td>49</td>
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<td>0.01</td>
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</tr>
<tr>
<td>4</td>
<td>83</td>
<td>0.5367</td>
<td>0.01</td>
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<td>5</td>
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<td>36</td>
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<td>0.6508</td>
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<td>13</td>
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</tr>
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<td>8</td>
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<td>9</td>
<td>30</td>
<td>0.7206</td>
<td>0.01</td>
<td>0.6544</td>
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¹The Adjusted R² shows the coefficient of determination with the contributions of tax related variables taken out.
## APPENDIX IV
### APPLICATION OF OPTIONAL STATE FOREST TAX LAWS

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<thead>
<tr>
<th>State</th>
<th>Enacted</th>
<th>Area to which law applied¹</th>
<th>Area of commercial forest land in private ownership, 1963</th>
<th>in private ownership classified under optional laws, 1967</th>
<th>Acres</th>
<th>Percent</th>
</tr>
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<tbody>
<tr>
<td>Delaware</td>
<td>1931</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>—</td>
</tr>
<tr>
<td>Hawaii</td>
<td>1903</td>
<td>(¹) 27,285</td>
<td>593,000</td>
<td>16,964,000</td>
<td>382,000</td>
<td>4.6</td>
</tr>
<tr>
<td>Maine</td>
<td>1872</td>
<td>(¹) 2,300</td>
<td>4,210,000</td>
<td></td>
<td>0</td>
<td>—</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>1903</td>
<td>(¹) 242</td>
<td>2,683,000</td>
<td></td>
<td>0</td>
<td>—</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>1930</td>
<td>670</td>
<td>500,000</td>
<td></td>
<td>0</td>
<td>—</td>
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<tr>
<td>Rhode Island</td>
<td>1878</td>
<td>(¹) 300</td>
<td>404,000</td>
<td></td>
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</table>

**MODIFIED PROPERTY TAX**

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<th>Modified Assessment</th>
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<th>Area to which law applied¹</th>
<th>Area of commercial forest land in private ownership, 1963</th>
<th>in private ownership classified under optional laws, 1967</th>
<th>Acres</th>
<th>Percent</th>
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<tbody>
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<td>1963</td>
<td></td>
<td></td>
<td></td>
<td>48,363</td>
<td>2.7</td>
</tr>
<tr>
<td>Hawaii</td>
<td>1961</td>
<td></td>
<td></td>
<td></td>
<td>593,000</td>
<td>—</td>
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<tr>
<td>Indiana</td>
<td>1921</td>
<td>172,950</td>
<td>3,666,000</td>
<td></td>
<td>257,250</td>
<td>7.0</td>
</tr>
<tr>
<td>Iowa</td>
<td>1906</td>
<td>85,864</td>
<td>2,558,000</td>
<td></td>
<td>93,155</td>
<td>3.6</td>
</tr>
<tr>
<td>Maryland</td>
<td>1963</td>
<td></td>
<td></td>
<td></td>
<td>242</td>
<td>—</td>
</tr>
<tr>
<td>New Jersey</td>
<td>1964</td>
<td>(¹)</td>
<td>1,866,000</td>
<td></td>
<td>(¹)</td>
<td>—</td>
</tr>
<tr>
<td>Oregon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>—</td>
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<tr>
<td>Western Oregon Small tract optional Tax</td>
<td>1961</td>
<td></td>
<td></td>
<td></td>
<td>50,000</td>
<td>0.5</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>1965</td>
<td></td>
<td></td>
<td></td>
<td>11,789,000</td>
<td>—</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>1925</td>
<td></td>
<td></td>
<td></td>
<td>500,000</td>
<td>—</td>
</tr>
</tbody>
</table>

**Deferred Payment**

| Minnesota                    |         |                             |                                                           |                                                          | 0     | —       |
| Minnesota Tree Growth Tax Law| 1957    |                             |                                                           |                                                          | 287,977 | 3.8     |
| North Dakota                 | 1967    |                             |                                                           |                                                          | 269,000 | —       |
| Ohio                         | 1925    | 98,939                      | 4,761,000                                                 |                                                          | 235,753 | 5.0     |
| Wisconsin                    | 1953    | 29,547                      | 10,330,000                                                |                                                          | 133,809 | 1.3     |

**YIELD TAX**

| Alabama                      | 1923    | 44,680                      | 20,741,000                                                |                                                          | 5,000 | —       |
| Connecticut                  | 1913    | 1,093                       | 1,818,000                                                 |                                                          | 24,745 | 1.4     |
| Hawaii                       | 1963    |                             |                                                           |                                                          | 0     | —       |
| Idaho                        | 1929    | 156,958                     | 3,066,000                                                 |                                                          | 144,001 | 4.7     |
| Louisiana                    | 1910    | 380,979                     | 15,627,000                                                |                                                          | 745,100 | 2.9     |
| Massachusetts                | 1914    | *56,530 (²)                 | 2,860,000                                                 |                                                          | (²)    | —       |
| Michigan                     |         |                             |                                                           |                                                          | 0     | —       |
| Commercial forests           | 1925    | 301,212                     | 12,801,000                                                |                                                          | 630,000 | 4.9     |
| Woodlots                     | 1917    | (²)                         |                                                           |                                                          | (²)    | —       |
| Minnesota                    | 1927    | 220,196                     | 7,523,000                                                 |                                                          | 269,544 | 3.6     |
| Missouri                     | 1946    | 301,075                     | 13,392,000                                                |                                                          | 517,637 | 3.9     |
| New York                     | 1926    | 38,867                      | 11,107,000                                                |                                                          | 265,292 | 2.4     |
| Oregon                       |         |                             |                                                           |                                                          | 0     | —       |
| Forest Fee & Yield Tax       | 1929    | 968,716                     | 10,311,000                                                |                                                          | 995,346 | 9.7     |
| Washington                   | 1931    | 479,310                     | 9,151,000                                                 |                                                          | 541,014 | 5.9     |
| Wisconsin                    | 1927    | 333,536                     | 10,330,000                                                |                                                          | 576,873 | 5.6     |

²Source: State Foresters and State Tax Commissions.
³Not available.
⁴"Very small".
⁵Less than 0.1.
⁶Contracts not effective until January 1, 1968.
⁷1965
⁸139 of 355 towns (1950).
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