Proceedings of the SYMPOSIUM ON INTENSIVE CULTURE OF NORTHERN FOREST TYPES

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FOREST SERVICE, U.S. DEPARTMENT OF AGRICULTURE
NORTHEASTERN FOREST EXPERIMENT STATION
6816 MARKET STREET, UPPER DARBY, PA. 19082

FOREWORD

THE NORTHERN FOREST TYPES constitute a vast natural resource for the United States and Canada. For instance, in the eastern United States there are more than 10 million acres of commercial forest land supporting spruce and fir types alone. The magnitude and variety of this resource is such that treating it in any detail at a 3-day meeting was impossible. Rather, the idea that germinated and developed into this symposium was to present a broad picture of the extent of our knowledge of intensive cultural techniques, the status and trends of our research in the northern forest types, and some actual experiences in managing this resource; and to explore those factors that affect our use of the intensive cultural techniques we have at hand.

There is no doubt that we face a new era in the management of northern forests. The production of wood products is no longer the primary objective of many owners, and increased pressure for the social values of our forests is being felt by all landowners. We must recognize these other forest values, which in turn dictates intensification of all aspects of forest management if we are to meet the future demands of a wood-hungry society.

The enthusiastic efforts of the symposium sponsors—the School of Forest Resources, University of Maine; the Maine Bureau of Forestry; the Maine Forest Products Council; and the U.S.D.A. Forest Service—and the individuals behind those efforts, should be commended. Special thanks are due to Great Northern Nekoosa, Inc., and Brooks B. Mills for their help in providing interesting field trips, and to the Casco Bank and Trust Co. for sponsoring the symposium brochure. Also, without the enthusiastic participation of the experts invited to present papers, and the moderators of each session, the Symposium could not have taken place.

—BARTON M. BLUM
Symposium Chairman

PUBLISHER'S NOTE

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Proceedings of the SYMPOSIUM ON INTENSIVE CULTURE OF NORTHERN FOREST TYPES

held 20-22 July 1976 at Nutting Hall, University of Maine, at Orono.

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EFFECTS OF TAXATION ON THE PLANNING AND IMPLEMENTATION OF INTENSIVE TIMBER MANAGEMENT

by David B. Field, Associate Research Professor, School of Forest Resources, University of Maine, Orono

Abstract

Taxes on forest properties and on income from timber disposal impose one of the most significant kinds of cost burden faced by owners of interests in forest lands. Local property taxes impose annual charges regardless of the level of management, and may even be increased by intensive practices. Federal and state income taxes are usually second in impact only to property taxes. Federal transfer and state death taxes can seriously endanger the continuity of management programs from one generation to another. Taxpayers can significantly reduce the impacts of these taxes by an awareness of the advantages and pitfalls in each as they apply to timber management.

DESPITE THE FACT that many economic analyses of timber management options omit tax considerations as being "too complex" or "too variable", an oversight or error of judgement in this area can have a far greater impact on the profitability of a venture than will an error in many of the elements of analysis on which a great deal of effort is usually expended. Timber owners judging the desirability of intensifying management practices may fail to take adequate account of probable tax impacts and may fail to recognize readily avoidable pitfalls or available tax advantages. This paper offers a synthesis of the rules and effects of the major taxes faced by forest land managers, of both large and small ownerships, with respect to decision-making on matters of intensive timber culture.

TAX LAW FUNDAMENTALS

Taxes imposed on forest landowners include: 1) income taxes, 2) general property taxes, 3) transfer taxes, and 4) sales, excise, and other special levies.

Special taxes can be substantial, as those paying Maine's spruce budworm charges of 28¢-56¢ per acre would be quick to agree. However, with the possible exception of that complex and still-evolving scheme, special taxes tend to be rather stable and show little change in impact under different management decisions. The remainder of this paper concentrates on the other three types.

Federal Income Taxes

One of the most important tax burdens faced by a forest landowner in the United States is the Federal income tax. Individual taxpayers face a levy (1975) of from 14% to 70% of their adjusted gross income. Corporations pay 20% of the first $25,000 of taxable ordinary income plus surtaxes that increase the rate on the next $25,000 to 22% and on amounts over $50,000 to 48%. (These rates resulted from the Tax Reduction Act of 1975. Unless that law is extended, corporate rates will revert in 1976 to the former levels of 22% of the first $25,000 plus a surtax of 26% of income in excess of $25,000.)

The Federal income tax is levied on net income, that is, on the proceeds of an investment or business venture less the costs of earning those proceeds. The basic idea is that you should not be taxed for income that simply replaces costs of earning that income. Deductible costs include annual outlays for the "ordinary and necessary" expenses of carrying on a trade or business, gradual recovery of investments in long-lived assets, and expenditures for the carrying charges, such as taxes and interest, of holding a business property. Individuals, moreover, may deduct from their ordinary income, from all sources, ordinary and necessary expenses for the production or collection of income, or for the management, conservation, or maintenance of property held for the production of income, even though no formal trade or business is involved.

The ways in which the costs of forest ownership and management may be recovered, for tax purposes, are outlined in Figure 1. Three kinds of expenditure may be involved: 1) capital expenditure, 2) revenue expenditure (expense), and 3) carrying charge. Capital expenditures are costs of acquisition of long-lived property or property rights, or permanent improvements that increase the value or extend the life of property already owned.

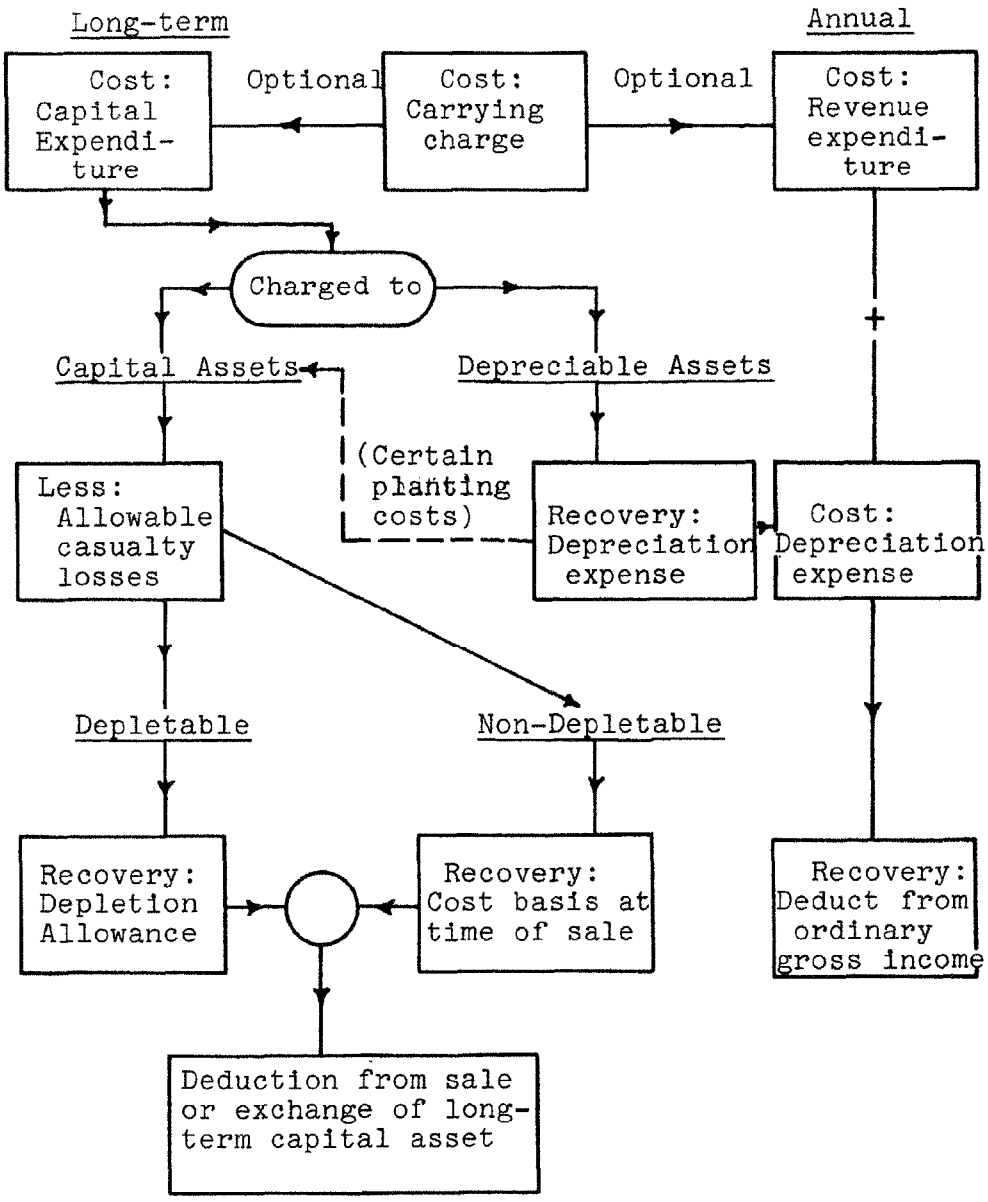

Figure 1. Recovery, as Federal income tax deductions, of the costs of forest ownership and management.

Such assets are classified under tax law as either depreciable or capital. Depreciable assets are defined under Section 167 of the Internal Revenue Service (I.R.S.) 1954 Code as property with a limited and determinable useful life of more than one year which must be used in your trade or business or be held for the production of income. Investments in such property are recovered through a gradual writing off of their cost against ordinary income as the assets wear out or become obsolete. (The term "amortization" is commonly used to refer to the depreciation of intangible assets such as management plans and maps.)

Capital assets are defined by exclusion in Section 1221 of the 1954 Code as any property held by a taxpayer (not necessarily a business property) except: 1) stock in trade or other inventoriable property, 2) property held by the taxpayer primarily for sale to customers in the ordinary course of his trade or business, 3) Section 167 depreciable property used in the taxpayer's trade or business, or real property so used, and 4) accounts or notes receivable acquired in the ordinary course of a trade or business. Investments in capital assets can be recovered only when the assets are disposed of. Costs of "wasting" capital assets, typified by natural resources such as timber and minerals, are recovered by deducting, from disposal proceeds, a pro rata allocation (termed "depletion") of that cost to the units removed from the property, as allowed by Section 611 of the 1954 Code.

Federal income tax law includes three major tax reduction incentives designed to encourage investments in long-lived assets, on the assumption that such investments are beneficial to the health of the national economy. None of these provisions were created to encourage forestry specifically--they apply to all business and other income-producing ventures--but their influence is of great importance to the timber owner. I will discuss, in turn, accelerated depreciation, the investment credit, and the preferential treatment of income from the disposal of capital assets.

Accelerated depreciation. Straight-line depreciation is the regular deduction, from ordinary taxable income, of an equal portion of the cost of a depreciable asset (less any estimated salvage value) over the expected life of that asset. To encourage reinvestment, Federal law allows taxpayers to accelerate the deprecia-

tion write-off by as much as twice the normal rate. Moreover, certain kinds of personal property qualify for a first year deduction of 20% of cost in addition to regular depreciation.

Investment credit. An income tax credit can be a far more significant incentive measure than an expenditure deduction. The latter simply reduces taxable income, hence lowers tax payments only by a multiple of your tax rate. A credit, on the other hand, is a direct deduction from the tax liability itself. The investment credit is applicable to depreciable property with an estimated useful life of three years or more and to "qualifying progress expenditures". Property covered by the credit includes, in part, tangible personal property used as an integral part of manufacturing, production, or extraction activities. Qualifying progress expenditures are amounts actually paid for the construction of these kinds of property if such property has a normal construction period of at least two years and an estimated useful life of at least seven years. The investment credit allows a deduction from your tax bill of 10% of the cost of a qualified investment in covered property for the year in which that property is placed in service, or for 20% of the full amount of qualified progress expenditures made in that year. A qualified investment is one-third of the cost of new or used property with an estimated life of three to five years, two-thirds of the cost of new or used property with an estimated life of five to seven years, and the full cost of property with a useful life of seven or more years. (The full value of used property claimed cannot exceed $100,000.)

Capital gains. Gains or losses from the sale or exchange of capital assets are granted special treatment for tax purposes. This incentive takes the form of a special exclusion for individual taxpayers and a preferential rate for corporations. A capital gain is the excess over the adjusted basis (usually book value) of the amount realized from the disposal of a capital asset. Such a gain is either long-term or short-term, depending on whether the asset has been held for longer than a required holding period (currently six months). If an individual taxpayer's net long-term capital gain exceeds his net short-term capital loss, he may claim as a tax deduction 50% of the difference. This exclusion applies regardless of tax bracket. Thus, the effective tax rate on an individual's net long-term capital gains

is only half that of his ordinary rate.

An individual is entitled to calculate his tax liability in two alternate ways, and to pay according to the approach which yields the smallest tax. By the first method, no tax at all is paid on 50% of the long-term capital gain and ordinary tax rates apply to the balance. In the alternate computation, a taxpayer whose net long-term capital gains do not exceed $50,000 may take the 50% capital gains deduction, compute a partial tax on the residual taxable income, then add 50% of the capital gains deduction to the result, for a maximum effective tax rate of 25%. Taxpayer's with net long-term capital gains of greater than $50,000 may use an alternate computation which, in effect, taxes the first $50,000 at 25% and the balance of the gain at higher rates (maximum of 35%).

The tax rate on net corporate long-term capital gains is a flat 30%. Corporations may also calculate their tax liability in two ways and pay the lesser of the two. The regular tax is found simply by applying the regular rate to total taxable income. The alternate tax is calculated in two steps: 1) Apply the regular tax rate to total taxable income, less the excess of net long-term capital gain over short-term capital loss. 2) Apply the capital gains rate to the long-term capital gain. The alternate tax is the sum of these two. Whether a corporation benefits from the preferential capital gains rate depends on its tax bracket and the relative amounts of its capital gains and net ordinary income.

Clearly, Federal income tax law offers some powerful incentives for long-term capital investments. But, there are two considerations which moderate the beneficial effects. First, current tax law levies a surtax on both individuals and corporations for "tax preference items" in excess of $30,000, less certain deductions. These items include amounts claimed for accelerated depreciation in excess of allowable straight-line deductions, and capital gains allowances. Secondly, deductions for capital expenditures may be used to offset capital gains income only, and may not be charged against ordinary income. Thus, they reduce tax liabilities at capital gains rates rather than the usually higher ordinary rates. This is a key point to keep in mind in the discussion of the effects of Federal income taxes on forest management, presented later.

State Income Taxes

State income tax laws vary so greatly that I will comment only on Maine's law, by way of example. Corporations are taxed 5% of the first $25,000 of Federal taxable income apportioned to Maine (adjusted for Federal tax allowances specific to Maine) and 7% on the excess over $25,000. Individuals, estates, and trusts will pay (for 1976) at rates of 1% to 8% on Federal adjusted gross income (adjusted further for differences between Maine and Federal allowances). An income-splitting provision for married taxpayers filling jointly reduces the effective rate substantially. The rates will go up in 1977.

Property Taxes

Property tax laws vary so much from state to state as to make a comprehensive summary beyond the scope of this paper. From the viewpoint of effects on intensive timber management, the most important types of property tax laws are the conventional ad valorem taxes on land and timber together, yield taxes, productivity taxes, current use laws, and the myriad of special rebates, exemptions, and other direct subsidies which have been tried from time to time to achieve specific forestry objectives.

Transfer Taxes

The Federal government taxes both gifts and bequests. Nearly all of the states impose both an estate tax and an inheritance tax. The Federal transfer taxes are really neither taxes on property nor on a beneficiary or donee's right to receive property. They are excise taxes on the rights to transmit property at death and by gift (Anonymous, 1963).

Federal estate tax. The estate tax is levied on the value of all property, to the extent of the decedent's interest at the time of his death, less certain deductions and exemptions (U.S.D.T., I.R.S., 1971) The gross estate includes all property which passes through the estate, property over which the decedent retained certain rights until his death, and transfers "in contemplation of death". The taxable estate is the gross estate, adjusted for expenses of and claims against the estate, and

reduced by a marital deduction (the lesser of 50% of the adjusted gross estate and the value of all interests passing to the surviving spouse that qualify under I.R.S. rules), a deduction for charitable bequests, and a specific exemption of $60,000. The gross estate tax is calculated on the amount of the taxable estate at a rate varying from 3% (for up to $5000) to 77% (for taxable estates over $10,000,000). The tax actually paid is the gross estate tax less: certain credits for state death taxes, Federal gift taxes on property subsequently included in the decedent's estate, and Federal estate taxes on property bequeathed to the decedent within certain time limits of his death.

Federal gift tax. The Federal gift tax is a levy (upon the donor) imposed upon the value of property or property rights transferred by gift. The tax applies to the total value of the gifts, less: an exclusion of $3,000 of gifts made to any one person during any calendar year, a specific exemption, and a marital deduction. A lifetime exemption of $30,000 is allowed and may be spread over time as the donor sees fit. The marital deduction, in effect, allows a maximum annual gift of $3,000 to a spouse in addition to the $3,000 exclusion. Spouses may pool their allowable deductions in donating to a third party. The tax actually paid is calculated on the taxable gifts at a rate varying from 2.25% (for up to $5,000) to 57.75% (for taxable gifts over $10,000,000).

State death taxes. Most states impose both an inheritance tax (levied on the beneficiaries rather than the estate) and an estate tax. The latter is usually designed simply to obtain for the state the benefit of the credit allowed under Federal estate tax law for state death taxes paid. Maine's inheritance tax, applicable to much the same transfers and kinds of property as the Federal estate tax, recognizes several classes of inheritors, based on closeness of relationship to the decedent. For closest relations, the tax rate varies from 5% on taxable inheritances of less than $25,000 up to 10% on inheritances of $250,000 or more, with exemptions of $50,000 for spouses and a total of $25,000 in the case of natural or adoptive parents and natural or adopted children and grandchildren.

INTENSIVE MANAGEMENT OPTIONS

What do we mean by "intensive timber management"? Obviously, the term can cover a wide range of practices and levels of treatment, but we might reasonably view its scope as including any effort over and above the periodic extraction of timber grown with no deliberate management at all. I will outline the possibilities under five categories: 1) the resource base, 2) stand establishment, 3) stand management, 4) forest management, and 5) indirect influences, with emphasis on topics especially influenced by taxation.

The Resource Base

Management decision associated with land, the forest resource base, may be listed in four categories: 1) land acquisition, 2) land inventory, 3) land development, and 4) land disposal.

From the viewpoint of social welfare, public benefits can result from any acquisition, in fee or in partial right, of bare or poorly-stocked forest land, by an individual or organization determined to actively manage that land for timber. Such activities represent intensification of management of forest lands in general.

Acquisition of stocked forest land, or rights to that land and timber, may also represent an intensification of the level of management on such land. This country's many years of experience with and study of "the small woodland problem" suggest that an aggregation of fragmented parcels into larger management units may offer one of the more promising opportunities for significantly improving the management of those lands. A few successful cooperative associations of landowners themselves exist, but the greatest promise may lie in the leasing of lands from small landowners to block them up into more effective management units under the control of long-lived legal entities with a vested interest in productive timber management.

The device of acquiring partial, rather than full legal interest in land and/or timber may serve the cause of intensive management regardless of the nature of the landowner. The lower capital investment requirements of such arrangements can make affordable practices that would not be possible in cases of fee acquisition.

Information about the resource base is a fundamental prelude to any kind of intensive management. Planimetric surveys, topographic surveys, soils surveys and site mappings of varying intensities may be involved in the land inventory portion of the management program.

A third area of interest associated with the forest land base is land development. Intensive management of timber stands requires access and support facilities. Extending and improving road networks affords access for cultural work and more careful harvesting. Although rare in the Northeast, intensive management in the Lake States and Scandinavia has included land drainage activities.

Finally, a persistent problem of both large and small non-corporate woodland management is that of maintaining continuity from generation to generation. Poor estate planning can force liquidation of family interests in a given land parcel, or premature harvest of timber on that parcel. A carefully-planned forest may be forfeited to pay death taxes that could have been avoided.

Stand Establishment

Management decisions associated with forest regeneration may also be listed in four categories: 1) species selection, 2) genetic tree improvement, 3) site preparation, and 4) methods of sowing, planting or natural regeneration.

The opportunities for intensifying timber management in the area of stand regeneration are many. So far as taxation is concerned, the question of fundamental importance is whether regeneration is artificial, natural, or a combination of these (e.g., site preparation with natural seeding).

Stand Management

Timber stand management options may be listed in three categories: 1) cultural activities, 2) silvicultural systems, and 3) rotation age decisions.

Cultural activities (weeding, thinning, pruning, fertilizing), along with artificial regeneration, are the paths along which most land-owners embark upon intensive timber management.

Silvicultural systems blend consideration of site capability, species choice, regeneration method, product goals, and harvesting economics into prescriptions for individual stand management. Attainable rotation ages can be strongly influenced by intensive management. Taxes are reflected in desirable rotation limits.

Forest Management

Management decisions associated with forests or groups of forest properties may be summarized in four categories: 1) forest inventory and analysis, 2) forest protection, 3) harvest planning and management, 4) timber disposal.

Along with land inventory, a forest manager needs a comprehensive forest inventory system. Information from these inventories may be studied through conventional methods, and by simulation and optimization analyses based on stand and forest models, to develop management plans for individual stands or types, forests, and entire ownerships. Forest protection, through fire prevention and suppression, and insect and disease control, can vary over a wide range of intensity. Harvesting planning must consider long-range impacts on production possibilities, utilization intensities, and salvage of dead or damaged timber. Timber disposal, by use of roundwood in the landowner's own mill, sale of stumpage, sale of logs, or transfer by gift or inheritance, involves taxation effects that can greatly influence the profitability of that disposal.

Indirect Influences

I stopped the management option list at the forest level in order to focus on matters of primary concern to this symposium. However, neither the individual nor the corporation can afford to analyze the impacts of taxes on forest management decisions in a vacuum. The small woodland owner should constantly be aware of the interactions of these decisions and such matters as his other sources of income, his other business activities, and his estate. Ideally, integrated forest products firms should consider interactions within their whole corporate system. For example, land and timber acquisition decisions should not ignore other wood-source options, nor should an optimum rotation question

be studied independently of the timing of mill wood needs. In practice, intelligent judgement seeks the point where the benefits of decision option analysis outweigh the costs.

You should also keep in mind that the effects of taxation on landowners directly are certainly not the only way in which taxes influence management intensity. All costs of harvesting and processing roundwood through to the consumer can influence timber management options throughtheir impact on residual stumpage values. Any knowledge of tax law which allows a reduction of these costs can be beneficial to timber management.

Public forest management, also, can be influenced by tax law in at least three ways: 1) pressure for higher payments to local towns in place of property taxes, 2) Federal capital gains treatment of revenues from National Forest stumpage sales, and 3) the effects of yield taxes on the behavior of loggers harvesting public stumpage.

EFFECTS OF TAXATION ON INTENSIVE TIMBER MANAGEMENT

Let us now see how the various taxes affect the comparative economics of the intensive management options just listed.

Effects of Income Taxes in General

All income taxes, Federal, state, or local, will affect rotation decisions variably, according to the tax bracket and other financial circumstances of the taxpayer. They may shorten or lengthen the rotation, depending on these conditions. Capital gains tax provisions tend to lengthen optimum economic rotations (by comparison with ordinary income taxes) under all circumstances. These effects result from the fundamental criterion underlying the economic rotation decision: So far as mill wood needs or cash flow requirements allow, it makes sense to hold a stand of timber so long as one more year's earnings on growth and/or value appreciation exceed one more year's costs of holding and managing that timber. Income taxes, by reducing net earnings, cause this point in time to be reached earlier than would otherwise be the case. But, preferential capital gains taxation allows a longer rotation than do ordinary income tax rates.

Effects of the Federal Income Tax

My outline of Federal income tax law should have made it clear that it is to the landowner's advantage to try to ensure capital gains treatment of as much of his income as possible, and to try to make as much of his expenditures as possible qualify for deduction against ordinary income.

Keys to the first of these two goals lie in Sections 1221, 1231, and 621 of the 1954 Code. Because Section 1221 excludes from the definition of capital assets any "property held primarily for sale to customers in the ordinary course of his trade or business", disposal of timber for a lump sum price by a dealer in timber properties results in an ordinary gain or loss. But, timber held for investment and not as a business property is a capital asset and qualifies for capital gains treatment. Moreover, Section 1231 states that if the gains on disposal (by sale, exchange, or involuntary conversion such as destruction or theft) of property that is used in a trade or business exceed the losses from such disposals, then both the gains and the losses shall be treated as capital gains and losses regardless of Section 1221. If the losses exceed the gains, both are treated as ordinary. Section 1231 further specifies that timber to which Section 631 applies is defined as property used in the trade or business for the purposes of Section 1231 treatment.

Section 631 (which affords capital gains treatment to timber only through the reference from Section 1231) defines gains and losses under certain kinds of timber disposal. Section 631(a) specifies that one who has owned or held a contract right to cut timber for a period of more than six months before the beginning of the year in which it is cut, and who cuts the timber for sale or for use in his own business, may elect to treat the cutting as a sale or exchange of standing timber. The gain on this fictitious sale is the difference between the cost basis of the standing timber in the taxpayer's hands and the fair market value of that timber as of the first day of the taxable year in which it is cut. Section 631(b) specifies that, in the case of a disposal with a retained economic interest of timber held for more than six months, the difference between the proceeds from that disposal and the

adjusted depletion basis shall be considered as though it were a gain or loss on the sale of the timber. The key to retention of an economic interest is that the income on the sale must depend on the severance of the timber and the payment must be on the basis of the amount actually cut.

The conclusion to be drawn from these sections of the Code is that net timber disposal proceeds--the basic aim of and source of funding for intensive management--can be markedly affected by the nature of the sale arrangements and management activities. Several details are worth further consideration.

Intensive harvesting. Consider intensifying management through increased tree utilization. If you plan to sell tops, limbs, stumps, and/or roots, do so at the same time as the rest of the tree is sold. 631(b) applies only to the disposal of standing timber. 631(a) applies only to the whole tree standing. Sales of residual material after the fact will be treated as ordinary, not capital in nature.

Leases. Lease arrangements must be handled carefully for tax purposes. The lessor should try to retain an economic interest in the timber, in order to qualify for capital gains treatment under Section 631(b). The lessee, on the other hand, should try to obtain a sufficient legal interest in the timber to qualify for the use of Section 631(a) and sufficient interest in the whole property to be able to expense, rather than capitalize, management costs. Generally speaking, it is not possible for both parties to satisfy these interests simultaneously, so the tax effects of a lease agreement can be an important issue in the bargaining process.

Litigation over leasing and other long-term cutting arrangements was summed up, from the lessor's viewpoint, in Revenue Ruling 62-81 and the basic court findings of the Dyal Case in 1965 (Fendig, 1966): 1) A taxpayer is not entitled to capital gains treatment under Section 631 for fixed annual payments to be paid regardless of cutting. 2) A taxpayer is entitled to capital gains treatment for timber sold on a scale basis according to the amount actually cut. 3) Regardless of whether an economic interest is retained, a taxpayer is entitled to claim capital gains treatment to the extent of the fair

market value of the timber on the land at the time the leasing agreement is made. This third circumstance is the only one for which the courts have ruled that the lessor may claim a 631(b) sale even though the lessee is allowed an ordinary expense deduction for the rental fee. In effect, the "sale" (by virtue of the lease) of the initial timber stand is treated separately from the long-term management and harvesting of subsequent growth. Then, the lessee is entitled to ordinary deductions for rental fees and management costs only, in the opinion of Landis (1966), if: 1) he has a possessory interest in the land, not just annual cutting rights; 2)there is a clear limitation of cutting rights to annual growth, or some other device which separates payment for timber on the land at the outset from later annual payments; and 3) the payments must be made regardless of whether the timber is actually cut or even available for cut.

Deductible expenses. The question of which timber management expenditures may be deducted from ordinary income and which must be capitalized, to be recovered through depreciation, depletion, or sale of the asset is covered in Sections 161,162, and 263 of the 1954 Code, applicable to all taxpayers, without specific reference to forestry. Particular concerns have been answered in large part by many years contention between taxpayers and the Internal Revenue Service. The results are of great importance to intensive management interests. In particular, all direct costs (including depreciation of equipment used) of artificial regeneration must be capitalized and can be recovered only through the gradual allocation of the depletion process as the mature timber grown from that regeneration is harvested (or immature or mature timber is destroyed by a natural disaster). When you are pondering the relative merits of natural versus artificial regeneration, you must keep this requirement in mind.

Internal Revenue Service reasoning on these matters is often difficult to predict. Foresters familiar with I.R.S. requirements to capitalize planting costs have reasoned that Forestry Incentives Program cost-share payments should be treated as reductions from capital expenditures and entered in the depletion account. For example, amounts for planting costs would be reduced by the amount of the

government reimbursement. But, I.R.S. representatives have contended that FIP payments must be treated as ordinary income. Moreover, the I.R.S. advises that the entire expense, both the landowner's share and the government's, should be capitalized and recovered through depletion. This treatment "effectively reduces the maximum cost-share payment from the 75 percent intended by Congress to about 52 percent for an average landowner." (Bethune and Fortson, 1975)

The key to these decisions is whether an expenditure is an "ordinary and necessary" cost of maintaining an investment property, or carrying on a business, or is an expenditure that makes permanent improvements in or extends the life of a property. Thus, timber stand improvement expenditures are allowed to be deducted (or capitalized, at your option) only if they are part of a regular program of such treatment, followed consistently from year to year, hence an "ordinary and necessary" part of maintaining the quality of a timber stand. But, infrequent T.S.I. work may be challenged as fundamentally changing and improving the nature of a timber asset. In a famous case of the 1960's, the I.R.S. finally, at the direction of the courts, agreed to allow the expensing of pruning and shearing of Christmas trees, but only if those trees were planted and grown as Christmas trees from the start. If you prune and shear natural stock to convert it to Christmas trees, you will be required to capitalize the initial costs of those activities.

Carrying charges. Carrying charges, such as annual property taxes, interest payments, and protection costs, may be expensed or capitalized as you see fit. Research and experimental expenses may be deducted currently as business expenses, or amortized. Amortization is probably the proper treatment of purchased management plans, maps, aerial photographs, computer models, and so forth, though minor items in these categories may often be expensed.

Roads. Costs of permanent roads must be capitalized, except for depreciable components such as bridges, culverts, and surface gravel. Costs of temporary roads may be amortized over the term of their usefulness, either on a time scale or according to the units of timber harvested.

Cruises. Timber cruises for acquisition of a specific parcel of forest land must be capitalized into the book value of that property. Cruises for ordinary inventory and exploration of owned property may be expensed. You can try to expense the costs of cruises taken in connection with a 631(b) sale, but the I.R.S. will claim that such costs should be used to reduce the net gain on the sale, hence benefit you only at capital gains rates.

Investment credit. The investment credit can be a very significant incentive for intensive management. Perhaps the most important application, especially for larger landowners, is to logging road construction. I.R.S. Revenue Ruling 68-281 held that a certain taxpayer's logging truck roads qualified for the credit since they were an integral part of the operation of sawmills, the production of lumber products or other building materials, or the manufacture of paper (Anonymous, 1969). Whether the road is permanent or temporary, either the cost of the entire road or that of part or all of the depreciable portion may qualify for the credit, depending on the useful life of the portion in question.

In addition to logging roads, the investment credit would apply to many kinds of planting, T.S.I., and harvesting equipment.

Income averaging. The Tax Reform Act of 1969 added capital gains to the income that can be averaged by an individual under Section 1301 of the 1954 Code. This provision could be of significant help to a small woodland owner who makes sizeable, but infrequent timber sales.

Effects of State Income Taxes

The Maine income tax is patterned so closely after the Federal income tax that it can be viewed as a sort of surtax. It will have an effect on the profitability of a timber management investment, on decisions involving acquisition and disposal of timberland, and optimum rotation questions, but should make no differential impact on the outcome of different intensive management activities.

Effects of Property Taxes

James Yoho (1965) has written that there is simply not very much known about the influence of various property tax forms and levels on individual forest investment decisions, or on the magnitude and direction of aggregate forest investment decisions. It can be argued that high land values and consequently high taxes logically force landowners into intensive management in order to minimize the land base necessary to the production of a given volume of timber products. Indeed, it has been argued that intensive forestry is a necessity of coping with property taxes (Miralles, 1971). But, this effect can be overshadowed by taxes so high as to discourage timber management altogether.

General property taxes impose two kinds of cost burden on the forest land owner: 1) that of meeting annual cash flow demands and 2) that of holding costs. The first is especially burdensome to the small woodland owner, who usually does not have enough land to provide annual timber sales revenues to offset these taxes. The second influence can affect both rotation length decisions and judgments on whether to maintain ownership of a given parcel of land. A landowner must be able to manage his property, if it is to be a profitable venture, in such a way as to generate time-adjusted earnings which will cover his property taxes (and other custodial charges), cultural activities, sales expenses, and overhead costs and, in addition, return at least as much as could have been realized on an investment of the same capital in an alternative venture (Field, 1976).

In general, any property tax which includes the current value of the timber crop in its assessment base will penalize intensive management by comparison with lower levels of management and will shorten the optimum economic rotation in the same manner as an income tax. In the case of a productivity tax such as Maine's Tree Growth Tax Law, however, improvements on growth and yield on individual properties would not affect tax rates until enough properties were so treated as to influence the large geographic areas over which growth rates are averaged.

At the very least, property taxes can absorb funds that would otherwise be available for investment in intensive management practices. Partly in recognition of this, many specific property tax exemptions, rebates, and other subsidy measures have been enacted over the years to encourage particular forestry practices. Cumbersome enrollment mechanisms, weakness of the incentives, and fear of local assessor reprisal have combined to make such measures largely ineffective. Large-scale present use and productivity assessments, which are based more on arguments for equity than for subsidy, appear to offer more promise of success in encouraging sound timber management.

I have already stressed the significant impact of income taxes upon the profitability of a forestry venture. It would be well, at this point, to place the relative impact of the property tax burden in perspective. Consider, for example, a private, noncorporate, forest landowner in the 20% Federal income tax bracket who is faced with a 50¢/acre/year general property tax on his land and timber. Suppose he establishes a tree plantation, at a total cost of $50/acre, which he expects to yield 40 cords/acre at the end of a 40-year rotation. Suppose, finally, that the stumpage value of the wood at that time will be $10/cord and that the landowner's cost of capital is 8% per annum. The Federal income tax on the sale of this timber in year 40 will be:

[(40 cords/acre)($10/cord) - ($50/acre depletion)]
X [(.50 capital gains deduction)(.20 tax rate)]
= $35/acre.

The value of annual property tax outlays, compounded to year 40 @ 8%, less the cash flow from annual deductions of these outlays against ordinary income for Federal tax purposes, also compounded to year 40 at 8%, is:

$129.53/acre - $25.91/acre

for net property tax burden of $103.62/acre, nearly three times the Federal income tax burden.

This simple illustration ignores many complexities of forecasting and detail, but the values used are realistic and the message is clear: Property taxes rank high, perhaps highest, for most owners, among the costs of the timber growing enterprise.

Effects of Transfer Taxes

Transfer taxes can seriously disrupt long-range timber management plans. The most common reason for this effect is lack of cash with which to pay transfer taxes on the property. Often, the only way to raise this cash is to liquidate the assets themselves, which can mean premature timber harvest or forced sale of timber (or both land and timber) at bargain prices.

A variety of complex trust arrangements are possible which can lessen or postpone the impact of death taxes on a family's timberlands. But, perhaps the most straightforward approach to the problem of enabling descendents to continue management of a forest property is the lifetime gift. Conway (1974) has noted four advantages, under Federal tax law, of gifts made during the lifetime of the donor: 1) Federal gift tax rates are only 75% of estate tax rates. 2) Property can be shifted from under the burden of the highest tax rate to which an estate will be liable to the lowest gift tax rate possible in view of any previous gifts the donor may have made. 3) The amount of gift taxes paid is not subject to the estate tax. 4) Whereas the estate tax is imposed on the size of the estate, which includes the amount of estate taxes payable, the gift tax is levied only on the amount of the gift.

State death taxes are so similar to and, in some cases, so closely related to Federal estate taxes that management planning can be confined largely to the provisions of the latter.

TAX TRENDS

Future trends in income, property, and transfer taxation are no more certain than other futures, but it is well to monitor proposals for change and to judge the probable impacts on long-range decisions. The two most volatile topics at the moment appear to be the Federal income tax and Federal transfer taxes.

Federal Income Taxes

Capital gains treatment of timber has been criticized regularly over the years. Recent reforms of the percentage depletion allowance for oil wells, a monumental tax loophole with which timber cost

depletion has often been confused, may relieve pressure from that quarter. But, the Congressional Budget Act of 1974 requires an annual summary of "tax expenditures", defined as revenue losses due to provisions of Federal tax law which allow some sort of preferential exclusion or tax rate (Sunley, 1976). The capital gains treatment of timber is a tax expenditure, so is ensured of annual review, but I can see no logical argument for denying or modifying preferential treatment of timber as a capital asset unless all other capital assets are so treated. It might be reasonable, though, to expect a lengthening of the holding period for a long-term capital gain from six months to several years. Such a change would effectively deny capital gains treatment to most stumpage buyers, but should have little if any effect on intensive management.

Investment credit was first allowed under the Revenue Act of 1962. It was suspended, for property costing over $20,000, from October 10, 1966 through March 9, 1967, and was terminated altogether by the Tax Reform Act of 1969. The Revenue Act of 1971 restored a 7% credit for eligible property and the rate was increased to 10%, for most cases, by the Tax Reduction Act of 1975. Presumably, rates will return to the 1971 level if the reduction provisions are not continued.

Federal Transfer Taxes

The last thorough reform of Federal transfer tax law was in 1942. There has been much talk of change but little action since then (Conway, 1974). The Administration's Tax Reform Bill of 1973 emphasized three broad concerns, which are likely to continue: 1) maintenance of existing revenues from these taxes; 2) gradual, rather than abrupt changes, to protect those who have planned their estates under existing law; 3) maintenance of advantages which encourage support of charities. There have been serious proposals to revise the rate structures, eliminate the double benefit afforded by the separate $30,000 and $60,000 exemptions of the gift and estate tax laws, respectively, and to impose a capital gains tax at death on the fair market value of a property, less its cost basis. Perhaps the extreme example of attempts to block transfers of wealth from one generation to another was George McGovern's call a few years ago for a 100% estate tax.

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