

FORESTRY FACTS



UW
Extension

COLLEGE OF
AGRICULTURAL
& LIFE SCIENCES
UNIVERSITY OF WISCONSIN-MADISON

Department of Forest Ecology and Management • School of Natural Resources

No. 71

January, 1994

Determine Your Basis And Keep More Timber Income

Jeff Martin

Do You Know Your Basis?

Wow! It finally happened! You are now the proud owner of some woodland acres. Like most new owners, you cannot wait to enjoy the property. Therefore, you pull on your boots, file the sale papers and head for the woods.

This is what all too often happens when a new owner takes title to forestland. However, you should place the joys of ownership on hold for one very important determination. A new owner should first determine the original basis, or value, of all merchantable timber at the time of acquisition.

Before explaining the basis in detail, let's quickly see why it's so important. If you conduct a timber sale and receive income your adjusted (updated) basis, for that portion of your timber sold, is deducted from the sale income before computing income tax.

Since knowing your basis can reduce your tax bill, it's very important to make the necessary calculations when you acquire woodland property!

Your Original Basis

When a capital asset (such as timber or land) is acquired, the amount to be entered into your ledger or system of accounts depends on how the asset was obtained. This amount is the original basis of the acquired property. If you **purchase the asset**, the original basis is its acquisition cost, plus any additional costs incurred in the sale process (for example: attorney fees, surveying, timber cruising, etc.).

If you should happen to inherit the asset, the original basis is its fair market value on the date the decedent died or on the alternate valuation date provided by Federal estate tax law. The latter, if elected, is the earlier of: 1) 6 months after the decedent's death, or 2) the date an estate asset is sold. The basis of an inherited asset is usually greater than when it was in the decedent's hands. This "stepped-up" value can benefit the new owner, by reducing taxes, if he or she sells all or part of the asset.

You might also **acquire an asset as a gift**. If so, the following rules apply:

- If the fair market value of the gift, at the time it was made, is more than the donor's adjusted basis, and
- You received the gift before 1976; your original basis would be the donor's adjusted basis plus all of the gift tax paid, not to exceed the fair market value.
- You received the gift after 1976; your original basis would, be the donor's adjusted basis plus the gift tax on the difference between the donor's basis and fair market value.
- If the fair market value is less than the donor's basis, your original basis would, be this fair market value.

Allocating Your Basis

When timberland is acquired, you really obtain at least two assets, land and trees. Your first task, before cutting any firewood or taking a long hike, is to determine what portion of your property's original basis to assign to the land and what portion to the trees (timber). It is unlikely that your sales contract will list this breakdown.

Example 1 shows the procedures for making these computations for a simple purchase that includes only land and timber. Note that the allocation between land and timber is based upon the separate fair market values of each at the time of acquisition. This applies even if you allocate the basis many years after acquiring the assets.

EXAMPLE 1 ALLOCATING THE BASIS

You purchased 80 acres of forestland for \$47,000. A boundary survey for \$650, and a timber inventory for \$1,350, was conducted in conjunction with the sale. Therefore, your total acquisition was \$49,000.

Your timber inventory showed a volume of 90,000 board feet (90mbf) of mixed oak (mostly red oak) on 30 acres, and 1,100 cords of red pine pulpwood on 50 acres. Fair market values were \$175/mbf for oak, \$15/cord for pine and \$300/acre for the land itself. Total fair market value would be \$56,250.

To allocate your acquisition cost, compute the proportion of fair market value attributable to both land and timber; Land = $24,000/56,250 = 0.4267$, Sawtimber = $15,750/56,250 = 0.2800$ and Pulpwood = $16,500/56,250 = 0.2933$. Next, multiply these proportions by the total acquisition cost, as was done in the following table. Your original cost basis for all timber would be \$28,093.

	Fair market <u>Value</u>	<u>Proportion</u>	Original <u>Basis</u>
Land	\$24,000	0.4267	\$20,907
Sawtimber	15,750	0.2800	13,720
Pulpwood	<u>16,500</u>	<u>0.2933</u>	<u>14,373</u>
Total	\$56,250	1.0000	\$49,000

You are expected to make a "reasonable effort" to estimate fair market values. Sales of similar property may be your best indication. A rough estimate based on published information may be adequate for small tracts of low-value timber. However, an experienced forester's appraisal would be appropriate, for larger tracts of high value timber. Do not expect the IRS to accept "guesses" that are unsubstantiated.

You may include only that timber with a fair market value at time of acquisition. If the timber value was substantial when you acquired the property, but you are not sure what the volume or value really was, you will probably need a forester's help to reconstruct past conditions. Read the section, Resurrect Your Basis, for more details.

Your Adjusted Basis

The value of your basis can change over time. Disposing of timber through a sale or by other means reduces your basis. Acquiring more merchantable timber increases your basis. However, growth does not increase the basis.

Update your accounts or record keeping anytime a change occurs. Then you will be ready to properly use the basis if you have a timber sale.

Using Your Basis

The adjusted basis becomes a valuable item whenever you have timber sale income. You can deduct some or all of the adjusted basis from sale income to reduce taxes.

To see just how this works we need to introduce the **depletion allowance**. The depletion allowance is that part of your adjusted basis that you can deduct from your timber sale income. The depletion allowance equals:

$$\text{Adjusted Basis} \times \frac{\text{Volume Sold}}{\text{Present Total Volume}}$$

To determine your taxable timber sale income, subtract the depletion allowance from gross timber sale income:

$$\begin{array}{r} \text{Gross Timber Sale Income} \\ - \text{Depletion Allowance} \\ \hline \text{Taxable Timber Sale Income} \end{array}$$

Example 2 shows tax computations for a typical timber sale. After computing, your tax liability, be sure to adjust your basis, again and note the new value in your records.

In all likelihood you will have income from other sources. Add all other income to your timber income before computing taxes.

You may also have expenses associated with the timber sale that are deductible from income. For example, if you hired a consulting forester to inventory, mark and administer the sale, you could deduct these sale expenses from income. Other forestry expenses not directly related to the sale may also be deductible (check other tax publications or with your tax preparer for more details).

Resurrect Your Basis?

What happens if you are like most landowners and do not determine an original basis when you acquire the property? Can you determine the basis at a later date? The answer is "yes" if only a few years have passed, probably "no" if many years have gone by and "maybe" if the time is within this range.

The problem is further complicated by the timber values and tract size involved. With relatively high value timber such as large walnut trees, it may be worth your time and effort to resurrect the original basis after many years have past. On the other hand, for small tracts of low-value timber such as aspen pulpwood, the effort is probably not worth it, even if you can resurrect the basis.

Unfortunately, there are no hard and fast rules that govern how far back you can go. Each case is different. In general, the larger the tract and/or the more valuable the timber, the farther back, in time it pays to go to resurrect your original basis. A forester can help you decide whether the effort will be worth the trouble.

To resurrect your original basis, estimate the timber's fair market value at time of acquisition. However, before assigning value you must estimate timber volume, by species and sizes, that was present at the time.

EXAMPLE 2 USING THE BASIS

Ten years after purchasing the land and timber in Example 1, you conduct a timber sale. A timber inventory just before harvest reveals the 30-acre oak stand now contains 150,000 board feet.

Your adjusted basis, at the time of sale, is still \$13,720 for the oak sawtimber because this is your first sale and you have not purchased additional timberland. Tree growth does not increase the basis.

Not all trees are cut in the harvest; therefore, only 100,000 board feet are sold. You receive \$250/mbf or a total of \$25,000 for the timber sold. Your depletion allowance is:

$$= \$13,720 \times 100,000/150,000 = \$9,147$$

Your taxable timber income is:

$$= \$25,000 - \$9,147 = \$15,853$$

Your new adjusted basis for the 30-acre oak stand is:

$$= \$13,720 - \$9,147 = \$4,573$$

NOTE: You might have deductible expenses associated with your sale that would further reduce your taxable income.

If inventory records do not exist, it will be necessary to use accepted forestry techniques to "grow" the present forest in reverse. This task is relatively easy if your stand is fairly uniform and has not been cut during the period. However, the task may be quite difficult if cutting did occur and records were not kept.

One approach is to estimate past volume growth in board feet or cords and subtract it from present volume. Growth depends on many factors such as species, tree size, stocking, soils and site quality. Example 3 shows this approach.

Your forester may be able to estimate growth for your property. Many forestry publications predict volume growth by species, site index, etc. Otherwise, you may be able to use the values in the Soil Survey for your county (available at the county Soil Conservation Service Office).

EXAMPLE 3 PAST FAIR MARKET VALUE

A timber inventory indicates present stand volume is 75,000 board feet in the 10-acre woodlot you purchased 12 years ago. Your forester says that since site index is 65, volume growth during the past 12 years has probably averaged 200 bf/acre/year. Therefore, estimate past volume as follows:

$$= 75,000 - (10 \times 12 \times 200)$$

$$= 75,000 - 24,000 = 51,000 \text{ board feet}$$

Your forester says that prices averaged \$90/mbf 12 years ago for the species you have. Therefore, 12 years ago, fair market value for your timber = \$90 x 51.0 = \$4,590.

Another approach is to apply average volume growth rates (percentages). You can discount the present volume with an appropriate rate to estimate the past volume. Discounting is the reverse of the compounding that occurs with investment deposits. Use the following formula to estimate past volume:

$$\text{Past Volume} = \frac{\text{Present volume}}{(1+i)^n}$$

**Where: i the past rate of growth (in percent);
n = the length of the period (in years).**

Many hand calculators have special keys or functions that will easily compute $(1+i)^n$ for you. Otherwise use the tables in UW-Extension publication G3476. Example 4 illustrates how to apply this approach.

If you have difficulty determining an appropriate growth rate, you may want to use average values if species and other conditions are similar. For example, research at UW-Madison has found that in Wisconsin many northern hardwood species (maple, birch, basswood, red oak, aspen, and elm) grow at an average annual rate of 2 percent for sawtimber (with a high of 3.5 and a low of 1.8) and 3 percent for poletimber (with a high of 4.1 and a low of 2.3).

After you determine past volume(s) you must then estimate past timber prices for the species and products you had. Use the best available evidence of values on this date. It is best to use prices paid for similar timber in the same area. However, you may not easily find this information. Consultants and/or timber buyers who have operated in the area for many years may share old records with you.

Published price reports that cover the time period and area may be another source of information. Adjust these prices if your timber is "above" or "below" average in quality or size.

EXAMPLE 4 PAST FAIR MARKET VALUE

A timber inventory shows present stand volume at 75,000 board feet. Your forester says that volume growth during the 12 years since you purchased the property has averaged 3 percent per year. Use the discount formula to estimate past volume as follows:

$$= 75,000 / (1.03)^{12} = 75,000 / 1.4258$$

$$= 52,602 \text{ board feet}$$

Your forester says prices averaged \$90/mbf 12 years ago for the species you have. Therefore, your timber's past fair market value = \$90 x 52.6 = \$4,734.

After estimating past fair market value of your timber, estimate the fair market value of bare land and then use the methods shown in Example 1 to resurrect your original basis. Document your sources of growth and value information; if you are audited, good factual documentation is important.