



# Determining Tax Basis of Timber

*William L. Hoover, Professor of Forestry and Natural Resources, Purdue University*

When an asset, such as timber, is sold or otherwise disposed of, income tax is due on the difference between the amount received for the timber and its “basis.” Basis is the book value of the timber. It’s usually determined by how much you paid for the timber. In the case of an inheritance, it is the fair market value of the timber on the date the person leaving it to you died. The estate’s records must be reviewed to make this determination. If you acquired the timber as a gift, your basis is the basis of the timber in the hands of the person giving it to you at the time they made the gift. Their basis carries over to you. If the person making the gift didn’t have a basis, then the recipient has no basis. There may be an increase in the basis of gifts for a portion of any gift tax paid.

This fact sheet focuses on what you should do if at the time you acquired the timber, you didn’t determine the basis of the timber separately from the basis of the land underneath the timber and any other assets acquired at the same time. The law allows the basis determination to be made some time after the date of acquisition. Regardless of when it’s done, the determination must be based on conditions on the date of acquisition. This makes it necessary to estimate the quantity and fair market value of the timber on the date of acquisition. It’s also necessary to know the fair market value of the timberland and any other assets acquired for a lump-sum amount.

The simplest case is when only timberland and timber are acquired. Example 1 shows what to do once you know the necessary information.

## Example 1

Joe Smith paid \$23,000 for 35 acres of timberland in 1982. He also paid \$800 for legal fees and other costs to acquire title to the property. He determined the basis of the timber shortly after buying it. The timberland itself, not considering the timber, had an approximate fair market value of \$350 per acre in 1982. The total fair market value of the land was therefore \$12,250. There were approximately 63 MBF<sup>1</sup> of average quality timber on the land in 1982. The value of timber in 1982 averaged \$200 per MBF, giving a total value of \$12,600 for the timber.

The basis of the timber is determined by calculating the percentage of the total fair market value attributable to the timber and applying this percentage to the total acquisition cost. The total fair market value of \$24,850 is the sum of the fair market values for the individual assets \$12,250 for the land plus \$12,600 for the timber. The timber accounts for 51% of this total (\$12,600 divided by \$24,800). The basis of the timber is \$12,068, 51% of the \$23,800 acquisition cost ( $0.51 \times 23,800$ ). The basis of the land is \$11,732, 49% of the \$23,800 acquisition cost ( $0.49 \times 23,800$ ). The sum of the two percentages is 100 and the sum of the two bases is \$23,800, the acquisition cost.

If the total basis is determined and allocated after the year of acquisition, it’s necessary to “grow the timber in reverse” to determine the volume present

at the time of acquisition. This requires knowing the volume present now and the growth rate for the timber. The volume present now is the total volume, not just the volume marked for sale. Hardwood timber volume typically increases between 2% (poor sites) and 4% (good sites) per year. The volume at the time of acquisition is determined by discounting the current volume at the applicable growth rate, as shown in Example 2.

### Example 2

Joe Smith sold 28 MBF of timber in 1995. He had not determined the basis of the timber in 1982 when he bought the timberland. The total volume on the tract in 1995 was 93 MBF before the timber sale and his forester told him that the approximate volume growth rate on his site was 3% per annum. The volume in 1982 is determined by dividing the current volume by the discount factor of  $(1 + r)^n$ , where  $r$  is the assumed growth rate and  $n$  is the number of years the timber has grown since 1982. Dividing 93 MBF by  $(1.03)^{13}$  gives an approximate volume in 1982 of 63 MBF. The value of the timber in 1982 was estimated using the *Indiana Forest Products Price Report*, published by Purdue's Department of Forestry and Natural Resources since 1957. The average price reported for 1982 was \$201 per MBF. Joe Smith now has the information needed to determine the basis of the timber using the procedure shown in Example 1. The land value in 1982 would need to be estimated by consulting with a real estate agent or other person knowledgeable about land values in the area.

The law requires that the basis be determined using the best available information. Thus, if possible, the 1982 timber values used in Example 2 should consider the species and quality of timber, not just an overall average. Prices by species and log grade are reported in the *Indiana Forest Products Price Report*.

Also, note that Example 2 assumed timber hadn't been harvested between the time of purchase and the time when the basis is being determined (1982 and 1995) in this case. If the timber volume had changed because of a previous timber sale, for example, it's necessary to adjust the growth estimate accordingly. This may mean growing in reverse until the previous harvest, adjusting for the harvest volume, and then growing back until the acquisition date. A professional forester will most likely be needed to help with this process. Also note that the basis of timber sold is not the entire basis of the timber, unless the entire merchantable volume is sold. The basis of the timber sold is determined by calculating the "allowable basis" of the timber sold. This amount is determined by multiplying the number of MBF sold by the depletion unit for your timber. The depletion unit is the basis of the timber in the year sold divided by the total MBF of timber you own. This process is described in greater detail in the FNR-FAQ-3, *How to Treat Timber Sale Income*, or the National Timber Tax Website.

### For Further Information see:

National Timber Tax Web site, [www.timbertax.org](http://www.timbertax.org)

<sup>1</sup> MBF means thousand board feet, the standard unit of measure for logs and stumpage (trees standing on the stump). The Doyle log rule is used to convert the diameter and length of a log to board feet.

New 4/07