

Timber Value Fundamentals

Thomas J. Straka, Professor of Forestry

FNR 101

Forestry and Natural Resources

August 2013

Many forest owners harvest timber and the event is often a significant financial transaction. It is prudent for these owners to know how their timber is actually valued.

Timber Mart-South lists two types of timber prices: delivered and stumpage. Delivered is the price if you deliver the timber to a mill; stumpage price is for timber as it sits on the stump in the woods. Stumpage price is less than delivered price as someone has to harvest and transport stumpage to the mill. What factors influence the price you'll receive for your timber?

Timber Volume. You should get paid for the amount of timber you are selling. Two ways to sell timber are lump sum and "per unit." With lump sum you sell the timber on a specific area or marked timber for a negotiated price and the buyer obtains ownership for whatever timber volume is actually there. A professional forester needs to perform a timber cruise to ensure the owner knows the volume being sold. With a per unit sale the owner receives periodic payment for the actual timber cut as it is delivered. That means you need some sort of security to see you get paid for all loads from your tract.

Is the timber properly merchandized (e.g., is there sawtimber in a load of pulpwood?). What unit is your wood measured in (e.g., cords, MBF, tons, cubic feet)?

If it is MBF, what scale is being used (there are many "log rules" and they vary). Is there a conversion between volumes? MBF is often converted into tons for payment purposes. Some timber species are worth more than others. As average diameter increases on your tract, so should the price of your timber. Larger diameter logs have much greater board foot volumes and value; both size and quality contribute to this value. Even the length of your timber sale contract can impact timber volume. If you allow the buyer a couple of years to get all the timber off your tract, and logging occurs at the end of the contract period, there would be two years of extra growth you never get paid for if it were a lump sum sale.

Harvesting Costs. Timber value is based on the value of wood delivered to a processing facility, minus harvesting costs and transportation costs. The company that buys a tract of timber incurs costs (overhead cost of personnel and vehicles, timber cruising, bidding, legal work, and the cost of unsuccessful bids). These costs are deducted from a bid. The largest cost deducted from log values is the actual cost of harvesting the timber, which is influenced by many factors. The type of harvest has a huge impact (a partial cut is much more expensive than a

clearcut). Timber size and species also affect the costs of harvesting. On a per unit of volume basis, large timber is less expensive to harvest than small timber. Hardwood species require more time to delimb than do pines and are, therefore, more expensive to harvest.

Weather conditions directly influence harvesting costs. Wet weather probably increases harvesting costs more than any other single factor. Wet weather reduces skidder capacity and some owners ban logging during wet weather to minimize soil damage. Any sales restriction will result in lower timber prices. As mills can only stockpile so much timber to carry them through wet periods, tracts that can be efficiently logged in wet weather often earn premium timber prices.

The physical condition of a tract affects logging. Fragile soils require special care. Steep slopes also require special care and extra effort from machine operators. Access can add costs. Rights-of-way may need to be acquired and logging roads constructed. Any constraint on the logger adds costs (e.g., gas lines, power lines, and streams decrease productivity and increase hazard). Landowner restrictions on length of work day or work week, condition of fences, ponds, and logging roads, aesthetic barriers, or game habitat all increase harvesting costs.

Transportation Costs. Costs of moving loggers to and from various timber tracts can vary greatly. The distance that equipment must be moved to begin logging a tract and the number of machines to be moved affect total harvesting costs. As the amount of wood to be moved from a tract increases, however, the influence of moving costs is greatly reduced (the cost per unit of production goes down).



Transportation from the tract to the mill is another significant cost. Factors that influence this cost are distance to the mill on public roads, condition of public roads and bridges, urban areas between the tract and mill, and distance and condition of woods roads. Gross truck weight laws can also be a factor.

Forest owners need to be aware that stumpage price is derived from delivery value minus the costs of purchasing, harvesting, and hauling timber from a tract. Owners can control only a few of the factors, like contract restrictions. Sometimes fewer restrictions can produce both better timber prices and after-harvest tract conditions, as often it is cheaper for loggers to accomplish the desired results as part of the logging operation. Professional assistance is usually well worth the investment and can ensure timber sale security and top timber value.