



FOREST2MARKET

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## HOW TO SELL TIMBER

### Making the Decision to Sell Timber

Whether your decision to harvest timber is the result of a multi-year forest management plan or precipitated by a need to raise emergency funds, getting market value for your timber should be the primary consideration when making a decision to harvest. Why? In the South, the amount of time it takes to grow pine sawtimber sized is between 25-30 years. What that means for most people is that they will conduct just one or (if they are lucky) two sales from an individual timber tract in their lifetimes. Getting full market value for the timber is therefore critical.

At Forest2Market, we hear from dozens of landowners each month who are thinking of selling their timber. Two of the most common circumstances come from landowners who are just beginning to understand the value of their timber and the necessity of becoming actively involved in managing their timber for production:

- Scenario 1: Timberland owner Dan Dunsmore owns 31 forested acres. In season, he and his buddies hunt on the property, and he would like to maintain this tradition. One afternoon, a stranger knocks on his door, introduces himself as a wood dealer, and asks Dan if he is interested in selling his timber. It turns out the dealer has a crew working in the area and says he will offer a better price as a result. Dan has never considered selling his trees before. What should he do?
- Scenario 2: Audrey Watkins just received her acceptance letter to college. Her parents, Chris and Amy, figure they have enough money saved to pay for two of Audrey's four years at school, but need to raise the rest of the money some other way. Fortunately, Chris inherited 97-acres of timberland from his uncle. He pulls out the forest management plan in his uncle's papers, sees that a final harvest is scheduled for next year. He makes a trip out-of-state to check on the property and decides that selling the timber on the land will not only help pay for the rest of Audrey's college education, but also help them put aside extra money for retirement. How does he proceed?

The most common questions we receive from timberland owners like Dunsmore and Watkins include:

- How do I know how much merchantable timber I have?
- How much is that timber worth?
- How do I go about selling my timber?
- What is a timber sale agreement and how do I make sure it protects me?
- How do I ensure the job is done right?
- What do I do once the harvest is done?

This publication seeks to help timberland owners make better decisions about their timber harvests by answering these questions.



## How Much Merchantable Timber Do I Have?

Timberland owners determine both which timber is ready for harvest and how much of that timber is merchantable by conducting a timber inventory or “cruise.”

Since it is usually not economically feasible to count and measure all trees, a forester’s only recourse is to sample the property to estimate the volume of wood products on the entire tract. There are various sampling methods and designs that involve traversing the property in a systematic grid-like pattern and counting and measuring trees in plots or strips at predetermined intervals along the grid lines.

In plot cruising, plot lines are laid out across the tract and individual circular plots are laid out at predetermined areas. Spacing is dependent on the variability of the timber and the sampling intensity that is desired. Then, the DBH and height of all individual trees that lie within plots are tallied. Commonly, 10-20% of the timber is sampled employing 1/10th acre plots.

Another related method used is the point method, which involves using a wedge shaped piece of glass to determine which trees to tally at systematic points along the grid lines. Again, 10-20% of the timber should be sampled.

Strip cruising typically involves measuring all trees within various product classes (pulpwood, sawtimber, chip-n-saw, etc.) that lie within 33 feet (1/2 chain) of either or both sides of the traverse line. If 1 chain sample strips are placed 5 chains apart, then the sample size will be 1/5 or 20% of the entire tract.

In both of these methods, the DBH (diameter at breast height) and the height of all individual trees that lie within the strip or plot are measured. Volume tables are then used to measure each tree’s volume and the strip’s or plot’s total volume is calculated by adding the volume of each individual tree. To compute the volume estimate for the total tract, the accumulated sample volume is multiplied by 5 if 20% is sampled and 10 if 10% was sampled.

## THE VALUE OF HIRING A CONSULTING FORESTER

Consulting foresters provide critical technical assistance in all phases of forest management and timber sale administration that will increase the value of your investment and save you money in the long run.

Their services include: detailed forest products inventory; property boundary surveying; handling all facets of timber sales administration from advertising the sale to managing the bidding process; timber sale contract preparation and management; logging performance inspections; harvest coordination in conjunction with procurement forester/logging crew leader; marking sale boundaries (including Streamside Management Zones); determining thinning requirements, harvest method, skid trail layout, location and quantities of decks, road building, intensity of tree removal and density of residual stand; post-harvest clean-up; site preparation; reforestation; herbicide and fertilizer application; prescribed burns for hazardous fuel reduction and hardwood control; mapping; management plan preparation; wildlife habitat improvement (deer, turkey, quail, ducks, etc.); tax guidance and estate planning.

Fee arrangements vary by the type of service. They may be charged on an hourly, daily or per acre basis, or the fee may be determined as a set amount for a complete project. For timber sales, the fee is often a percentage of sale receipts, from 3- 10%, depending on the work involved and the size and value of the sale.

Some states do not require consulting foresters to be registered, licensed, or certified which means that consultants have varying qualifications, credentials, and standards with respect to the way they conduct their business. It is therefore important to explore available services and choose carefully the individual or firm that can best meet your specific needs.

You can find certified consulting foresters on the following websites:

[Association of Consulting Foresters](http://www.acf-foresters.org)  
www.acf-foresters.org

[Society of American Foresters](http://www.safnet.org)  
www.safnet.org



The volume estimate is central to estimates of the value of the timber and serves as an important data point when making many of the other decisions that are required once you decide to sell your timber.

The volume estimate for the Watkins tract mentioned above (Scenario 2) might look like the table to the right.

Conducting an accurate timber inventory is key to getting maximum value from your timber sale. Because it requires specialized knowledge and equipment, we recommend that timberland owners without this expertise hire a certified consulting forester to conduct the inventory (see sidebar).

Watkins Tract: 97 acres	
Product	Volume (Tons)
Pine Sawtimber	4,054
Pine Chip-n-Saw	1,678
Pine Pulpwood	276
Hardwood Sawtimber	188
Hardwood Pulpwood	201

To ensure greater accuracy of the volume estimate you receive, be sure to request the cruise statistics from your forester. This will give you a better indication of the quality and reliability of your timber volume estimate.

## How Do I Determine the Fair Market Value of My Timber?

Once the timber cruise has been completed and total volume by product has been determined, the value of the timber can then be estimated.

Timber prices are negotiated between the seller and the buyer based on the relationship between supply and demand factors. As a result, every sale price is influenced by a large range of variables that are unique to each timber tract: species, tree size, tree quality, volume of sale, distance to market, site accessibility, logging difficulty, market conditions, current mill inventory levels, and any restrictions the landowner may have placed on the site in order to protect residual trees. Because all these factors may be taken into consideration, determining the fair market value can be a complex undertaking.

All valuations should start with the most recent local market prices available. During the process of determining the value of the timber, however, adjustments may need to be made to these numbers to account for changing external factors and the unique characteristics of the tract itself.

The primary external factors are changes in demand and supply. The general economy, the performance of housing, paper and packaging, export and wood bioenergy industries all affect demand in individual markets. As new facilities open or close, demand expands or shrinks. If a particular class of timber is being used by several competitors, it will be in high demand and the price may need to be adjusted upward. If a mill closes in the area, however, demand will contract and therefore prices may need to be adjusted downward.

Changes in supply have a similar effect. If plenty of timber is being offered for sale in the area, the market price may be lower than the published number, as inventories at area mills will be sufficient to meet demand. If facilities are having difficulty finding timber, the opposite may be true. Timber buyers often pay more for logs when inventories are low.



These changes in supply and demand will necessitate adjustments in price only if changes have occurred in the market. If these factors have remained stable over the previous months, the published price will likely reflect the current market.

Other variables affecting market value have to do with the tract of timber being sold. Each tract is characterized by a large range of variables that are unique. Each of these characteristics may require an adjustment to published prices:

- Species. Prices for individual species will differ widely depending on location and as a result of changing market demand. A local consulting forester and your state forestry commission and association are good sources of information about timber markets in your local area.
- Size. Height and diameter matter. Taller, larger diameter trees contain higher usable volumes than smaller ones, and trees with higher volumes and use value bring higher prices. As a result, veneer-sized logs are more valuable than sawlogs, and sawlogs are more valuable than pulpwood.
- Quality. Large, knot-free trees bring higher prices. High quality trees are straight, with few branches on the lower portion of the tree (12 - 36 feet). Any defects or bends reduce the value of the trees.
- Volume of sale. Logging operations are capital intensive. Equipment costs, costs to construct roads and loading decks, drainage structures and moving equipment between jobs add up. With large volume tracts, buyers can afford to pay more for stumpage since their fixed costs are much lower per unit of volume.
- Site accessibility. Tracts with access roads and easy access to highways make it easier for log trucks to get in and out of a site, thereby reducing the cost of logging and increasing tract desirability.
- Logging difficulty. Ease of logging also affects market value. Flat, well-drained tracts generate more interest and higher prices than tracts with steep slopes and high levels of soil moisture.
- Contractual restrictions. Requesting specific harvesting and skidding techniques to protect residual trees, water sources and soil conditions can affect price, as they may add to the cost of logging.

Ultimately, the market value of timber is whatever the buyer and seller agree to. Armed with the published price, an assessment of the changes that have occurred in supply and demand in the area and a knowledge of the positive and negative characteristics of the timber tract, timber sellers can proceed through the negotiating process confident that the timber's fair market value will be realized.

Watkins Tract: 97 acres			
Product	Volume (Tons)	\$/Ton	Value
Pine Sawtimber	4,054	\$ 28.42	\$ 115,215
Pine Chip-n-Saw	1,678	\$ 16.67	\$ 27,972
Pine Pulpwood	276	\$ 13.20	\$ 3,643
Hardwood Sawtimber	188	\$ 31.12	\$ 5,851
Hardwood Pulpwood	201	\$ 4.23	\$ 850
Total			\$ 153,531

Once the prices have been negotiated, a total value of the sale can be estimated. The table above shows the results for the 97-acre Watkins tract.



## Selecting the Method of Sale and Payment

Once the timber's value has been determined, the next step is to determine the proper timber sale and payment methods. These choices will determine the amount of time and energy the landowner will need to expend in order to complete the sale, the price that will be paid for the timber and the amount

### Method of Sale

The two most common methods for selling timber are the negotiated single offer and sealed bids. A single offer sale occurs when a seller contacts or is contacted by a buyer (as is the case of Dan Dunsmore in Scenario 1 above), and the buyer makes an offer to purchase the timber at a specific price. Sometimes, the single offer is a first and final offer. Other times, negotiations are undertaken until the buyer and seller agree to a price. Single offer sales are a good option if the seller already knows a buyer with a good reputation and wants to work with that buyer. One drawback to this type of sale is that unless the seller and his or her representative is knowledgeable about the local market and market prices, the lack of competition—where multiple buyers are bidding against each other—may result in a lower sales price. As a result, sellers like Dunsmore must perform due diligence to determine that the dealer is reputable and that the price offered accurately reflects the volume of timber on his 31-acre tract and that the price reflects current and local market prices.

The other type of sale is the sealed bid sale. In most situations, written sealed bids provide the most desirable results for timberland owners. With this type of sale, potential buyers are notified of the sale, given a period of time to examine and value the timber and submit bids. Then, at a specified time and place, the bids are opened and the winning bidder is chosen. Sealed bid sales generally attract the highest number of buyers. The resulting competition may increase the price. Sealed bid sales simplify administration of the sale, are convenient for both buyers and sellers and protect the seller by requiring the payment of earnest money.

### Method of Payment

There are two payment methods for stumpage: lump sum and pay-as-cut. With a lump sum sale, the buyer agrees to pay a fixed amount for the timber, prior to harvest. The sale price is based on the timber inventory, and therefore, it is important that both the seller and the buyer have an accurate inventory prior to agreeing on a price. One advantage of the lump sum sale for the timberland owner is that, once full payment is made, the buyer assumes all the risk of timber loss from damage, theft or overestimation of value. This assumption of risk, as well as the costs of financing the pre-payment, timber inventory, title search and road work, can reduce the price paid to the seller.

With a pay-as-cut sale, also known as a sale-by-unit or scale sale, a specific amount of money is paid for each unit of product cut. While an initial partial payment is made, the rest of the contract amount is paid as timber is harvested. The disadvantages for timberland owners for this type of sale include:

- 1) The seller retains the risk of loss until the timber is harvested
- 2) Close monitoring of the sale is critical in order to ensure an accurate accounting
- 3) The total income from harvest cannot be known until the last log is harvested



As a result, pay-as-cut sales are best when time is of the essence or when either inventorying or harvesting the tract will be difficult.

## The Timber Sales Notice

Once a timberland owner makes a decision to sell a specific timber tract and determines the sale method, the next step is to notify buyers with a timber sales notice. A timber sales notice that covers the owner's requirements in detail will help ensure a smooth bidding and contracting process. The following items should be included when writing a timber sales notice.

- The name and address of the seller, as well as the name and address of the forester who is managing the sale.
- The location of the timber being sold, including a legal description, map, directions and how the sale boundaries will be marked.
- A description of the timber to be sold, either generally (all trees within the marked plot) or specific (the timber inventory report provided by a forester).
- The type of sale—lump sum or pay-as-cut.
- The times when prospective buyers can inspect the trees for sale.
- The type of sale, including the date, time and place when written sealed bids will be opened or when and where oral bids and negotiations will take place. Also include the length of time before the successful bidder will be notified (generally 7 days) and the length of time the buyer has to sign the sales contract (generally 10 days).
- Whether a down payment (usually 5 or 10 percent of bid price) is required; if so, notice that the down payment will be returned to unsuccessful bidders.
- A description of how payment is to be made, including both the timing of payment and method (personal or certified cashier's check).
- Specification of the time a buyer has to harvest the timber, usually one to three years in the South.
- A description of any harvesting conditions or restrictions, including best management practices, harvesting deadlines, access restrictions, times when loggers cannot operate, trees to be left for wildlife, restoring roads, etc.
- Request proof of insurance, including worker's compensation, general liability and equipment.
- A requirement for a performance bond, which will be held in escrow by seller to assure that the buyer fulfills the requirements of the contract (usually 10 percent of the sale price). It is returned to the buyer once a conforming harvest is completed.
- A clause that informs the buyer of the seller's right to refuse all bids.

Supporting attachments for a timber sale notice include maps of the sale area, one specifying the sale area and surrounding tracts and one showing the location of the sale area in relation to surrounding towns and highways; the summary stand tables from the timber cruise, including the number of trees by diameter, species and product class; a sample timber sales contract; and a sample bid form (which allows the timberland owner to make an apples-to-apples comparison of the bids).

The timber sales notice should be sent to a list of potential buyers that can be compiled by a consulting forester, through the state forestry commission or the Cooperative Extension Service. A short advertisement



in the classified section of a local newspaper may generate more interest. The ad should direct potential buyers to the seller for the complete timber sales notice.

## Choosing the Winning Bidder in a Sealed Bid Sale

Some things to take into consideration before choosing the successful bidder include:

- Price—if the price is below reported prices in the area; the “right to refuse all bids” notice in the timber sales notice can be exercised.
- Reputation of the bidders—new operators or operators new to the area represent larger risks for timberland owners. For timber stand improvements or thinning’s intended to leave the most valuable trees standing, more experienced buyers are preferable. In addition, if the bid comes from someone other than the logger—in other words, a dealer or broker—you should know who does the buyer’s harvesting. Before making a final decision, visiting a tract owned by a previous customer may help identify whether best practices were used; bad signs include trees with scraped bark, damaged or destroyed small trees, excessive rutting or trash left behind.

Based on the price offered and a knowledge of the bidders, choose the winning bidder according to the terms outlined in the timber sales notice, then schedule a meeting with the successful bidder to discuss the contents and signing of the sales contract. Finally, notify unsuccessful bidders promptly.

## The Timber Sale Contract

Unmarked trees mysteriously disappear. Residual trees are damaged or destroyed. The forest floor is crosshatched with deep rutting; a result of logging equipment being operated under very wet conditions. Roads are impassable, littered with trash and debris. Having a strong timber sale contract can help you avoid these types of horror stories.

The purpose of a timber sales contract is to reduce the possibility of misunderstandings and make sure both the seller and the buyer are protected. If timber owners rely on a handshake instead of a timber sale contract to govern their dealings with timber buyers, they have no recourse if something goes wrong.

A good timber sales contract, one that protects sellers instead of making them stars in their very own horror stories, saves time and money by eradicating problems that can lead to litigation. A strong timber sale contract outlines the rights and responsibilities of each of the parties to the agreement.

## Components of a Timber Sale Contract

- Names and addresses of the buyer and the seller.
- Date of contract execution.
- Legal description of the location of the timber being sold; this can be found in a warranty deed or from a county plat book.
- Description of the trees being sold, including a description of how boundaries are being marked. The inventory, or a list of species, number, size and volume of trees, is ideal.
- Guarantee of ownership and right to convey, generally in the form of a title search and abstract.
- Payment amount and due date.



- A clause providing the buyer with entrances and exits (rights of ingress and egress, in legalese); includes any restrictions, whether rights-of-way will need to be secured from other landowners and who will be responsible for acquiring and paying for them.
- Method of harvest; use of best management practices to limit water pollution and site degradation, the layout of roads and logging decks and special provisions for hunting season or very wet weather.
- Penalties for non-performance, including compensation for excessive damage to or cutting of trees that were not marked for harvest.
- Provision for use of an arbitration panel for settling disputes.
- Statement that the seller will not be held accountable for personal injuries during the contract period, and that the buyer is required to carry adequate insurance. Could include a performance bond that is held in escrow until all contractual obligations have been met.
- Statement that the buyer will comply with all federal, state and local laws.
- Provision either for or against the buyer being able to resell the timber or part of the timber (like the tops and limbs) and whether the timber owner must be notified. Since the wood bioenergy industry is becoming more widespread, this provision has gained in importance. Specifically, the Biomass Crop Assistance Program has made collecting and delivering logging residues more lucrative for timber buyers; timber owners may have additional room for negotiation here.
- Agreement about who will bear the loss in case the timber is destroyed or stolen during the contract period.
- Deadline for harvest completion; reasons extensions will be granted and additional costs associated with extension.
- Notarized signatures of all parties. Registration of the contract, generally at the county recorder's office.

While many of these provisions are straight-forward, others require negotiation with the buyer. Some sellers may need additional provisions for special circumstances.

Many buyers come prepared with their own contracts. This can be a good starting point for negotiations, but it is important to read the contract carefully in order to avoid a timber sale horror story. If your terms diverge widely from the buyer's contract, an attorney who is familiar not just with contracts but also with timber sales can draw up a more appropriate contract. In addition, many state forestry websites contain sample timber sale contracts that can be customized to suit individual circumstances.

## Monitoring the Timber Harvest

Once a timber harvest begins, frequent site visits will be required to make sure everything is proceeding according to the contract. Staying involved in the process from selecting the trees for harvesting to watching the last log truck roll off your property will help maximize the size of the check that will be deposited in your bank account and the health of the forest left behind.



## Before Harvest

Often the actual logging crew working on the harvest site is not aware of all the terms of the contract. Before the harvest begins the seller should schedule a meeting with the logging contractor to discuss the particulars of the harvest operation such as the number and location of landings, skid trails, and haul roads; any sensitive areas; and streamside management zones. A harvest plan will include all of these details, and now is the time to review it. Make certain that the contractor knows where the harvest boundaries are and what practices are acceptable under the contract. This meeting should include a visit to the harvest site where there can be no misunderstanding of the locations of the property boundaries and trees to be cut.

## During Harvest

Both the owner and the forester should visit the harvest site regularly. By seeing how the harvest is proceeding, the landowner or forester can address questions early before they become something more serious. Visiting the site often and talking with the logger has an added bonus. The operator will see that you care about what is going on and likely think of you as someone interested in more than a check.

When visiting the site, check for compliance with the contract and with best harvesting practices and ask for feedback from the logger, who may have some suggestions that could expedite the process. While the owner and forester should work cooperatively with the logger, they should not feel obligated to give in to requests to change the terms of the contract.

Should a serious concern arise, which cannot be worked out, the matter should be turned over to the arbitration board designated in the contract.

## After the Harvest

Once harvesting has been completed, the harvested area should be inspected to make sure all contractual obligations have been met and that all equipment has been removed from the site. Streams should be free of logging debris and temporary crossing should be removed. Landings, skid trails, and temporary roads should be seeded to ground cover to prevent erosion, and water bars should be constructed where needed. All logging equipment and refuse associated with the maintenance and operation of such equipment should be removed from the property. If everything is in order, a letter releasing the buyer from the contract should be written, and any performance bond returned.

