

Pennsylvania Woodlands

Number 5

Marketing Products from Your Woodland

Woodlot owners actively managing their resources will eventually have the opportunity to harvest trees on their property. The reasons for harvesting trees will depend on the management goals of the landowner. Some examples are removing mature timber to generate income, removing immature trees to promote growth and vigor of residual trees, removing dead or dying trees in salvage operations, clearing patches of forest to increase woody browse for wildlife, increasing water yield on forested watersheds, or clearing land for a homesite or recreational area.

Cutting trees is the principal means by which a woodland manager can control the composition and quality of the forest vegetation. The decision to harvest trees should always be based on the silvicultural prescription outlined in a management plan that, in turn, is based on the owner's objectives for that particular woodlot. Decisions to harvest should be planned—not merely the result of an offer from a timber buyer or the request of a neighbor to cut firewood on the property. If you do not have a management plan for your woodlot, then you should develop one with the help of a professional forester. Your plan should be flexible, but it should provide the long-term guidance needed to maximize benefits from your woodlot.

The woodlot owner who strives to maximize production of wood products is interested in the financial return from the sale of harvested trees. Landowners who are concerned with the wildlife, recreational, water, or aesthetic values of their woodlots often do not consider income as an objective in owning property. In either case, the sale of wood products will enable woodlot owners to offset the costs of owning and managing forestland.

This publication covers major points that woodlot owners should consider when marketing wood products. It is not a substitute for advice or assistance from a professional forester, but it should provide understanding and guidance for forest landowners who are contemplating the sale of forest crops.

PRECOMMERCIAL TREATMENTS

Trees less than 4 inches dbh (diameter measured at 4.5 feet above the ground, or at breast height) often have no commercial value and generally are removed in cleanings, early thinning, and other similar treatments. Woodland owners must hire labor to do the cutting or invest their own time and labor. Operations requiring investment by the landowners are referred to as precommercial treatments. In some cases, federal subsidies are available to help defray the costs of these treatments.

COMMERCIAL TREATMENTS

Most hardwood trees greater than 4 inches dbh have some commercial value. Small trees and larger trees of inferior quality are frequently sold for firewood. Large trees of moderate to good quality may be used for sawlogs to produce dimension lumber, railroad ties, and pallets. Logs of exceptional quality may be sold for use as veneer.

Selling firewood

Good markets for hardwood firewood exist throughout Pennsylvania. Many silvicultural treatments that were formerly considered precommercial may now provide material that can be sold as firewood. However, a strong demand for firewood has been a mixed blessing for forest managers. Some woodlots have been heavily

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cut with little regard for proper management practices. Furthermore, some people have cut and burned high-quality trees that could have been used to make dimension lumber or veneer. Smaller trees that are removed in intermediate cuttings or larger trees of poor form that are unsuitable for use as sawlogs are appropriate for fuelwood use. The tops, or crowns, of trees left in the woods following a harvesting operation also are an excellent source of firewood.

Forest owners may harvest, process, and sell firewood as a finished product, or they may sell their standing trees as stumpage and allow an outside contractor to do the work. Harvesting and processing trees for firewood are labor-intensive operations—trees must be felled, limbed, bucked, hauled out of the woods, split, and stacked. In most cases, the seller of firewood also is expected to deliver the finished product to the consumer.

Firewood, in accordance with Pennsylvania law, must be sold by the standard cord or a fraction of the standard cord. The present price of hardwood firewood—split, delivered, and stacked—ranges from about \$100 to \$300 per cord. Species with dense wood, such as oak and hickory, generally command a higher price than those with lighter wood, such as red maple and tulip poplar. Prices are usually higher in urban areas than they are in rural areas.



The primary expense incurred in producing firewood is the cost of labor. Depending on the equipment available, it takes from 5 to 15 hours to prepare a cord of firewood. Equipment needed to prepare 5 to 10 cords for individual heating needs would include a chainsaw, axe, wedges, splitting maul, and a small pickup truck or trailer. Commercial firewood producers would also need a mechanical splitter and heavy-duty truck. A tractor or other skidding device may be needed to haul wood out of the forest.

Landowners who do not wish to harvest and process small and poor-quality trees for firewood may be able to sell these trees as stumpage. Selling stumpage is sell-

ing wood contained in standing trees. Since the labor costs of producing firewood are great, stumpage prices for firewood-quality trees are quite low. The value of firewood-quality stumpage generally averages around \$5 to \$10 per cord or as high as \$20 to \$25 per cord if trees are located close to suburban or urban areas.

Previously unmanaged hardwood stands 40 years and older may yield 3 to 8 cords per acre during the initial intermediate treatments. Sustained harvests might range from ½ to 1 cord per acre per year, depending on the site quality and the intensity of management.

Selling other products from small trees

Limited markets exist for products other than fuelwood that may be obtained from trees less than 12 inches dbh. The durability of wood obtained from species such as black locust has resulted in a demand for trees ranging from 4 to 12 inches dbh to be used as fence posts or rails. There is good demand for hardwood pulp throughout the state and localized demand for softwood pulp. Some areas have experienced increased demand for softwood and hardwood chips for use in compost treatment of sewage sludge. Stumpage value for these products is variable but similar to or lower than that obtained for firewood.

Selling timber

Trees of moderate and better quality that are greater than 12 inches dbh and contain at least one 16-foot log may be sold as sawtimber. Private woodlot owners may choose either to harvest their own timber and sell logs at the roadside or directly to a mill, or sell the trees as stumpage and allow the buyer to cut and haul them. Selling large sawtimber-sized trees as stumpage generally is the most practical way to market this material. Logging requires specialized skills and knowledge. Felling large trees is extremely hazardous, and hauling large logs requires specialized and expensive equipment. It is not a job for a novice. Furthermore, miscutting or mishandling logs in the woods may substantially decrease their value. Very few woodlot owners have either the skill or the equipment needed to harvest sawtimber effectively.

Once the landowner has decided to sell sawtimber stumpage, the following procedures should be carried out:

1. Determine volume and quality of timber for sale.
2. Develop a means of controlling the harvest.
3. Notify potential buyers of the sale and solicit bids.
4. Negotiate a contract.
5. Inspect the harvest operation.

Determining volume and quality of timber for sale

When preparing a stand for a timber sale, each tree to be harvested should be marked, tallied, and scaled for board-foot volume using either the international, Scribner, or the Doyle Log Rules. Forest owners should never sell timber without first knowing what they have for sale. Obtain an estimate of both the quantity (board-foot volume) and quality of the trees being sold. You can be sure that the buyer will know the value of the material being purchased. Each year many woodland owners receive unsolicited offers for their trees from timber buyers. Not knowing the value of their product, these owners often sell their timber for a fraction of its true value. A professional forester can help you determine the value of your woodland resources and provide advice on marketing. Woodlot owners who know what they have to sell may increase their income substantially.

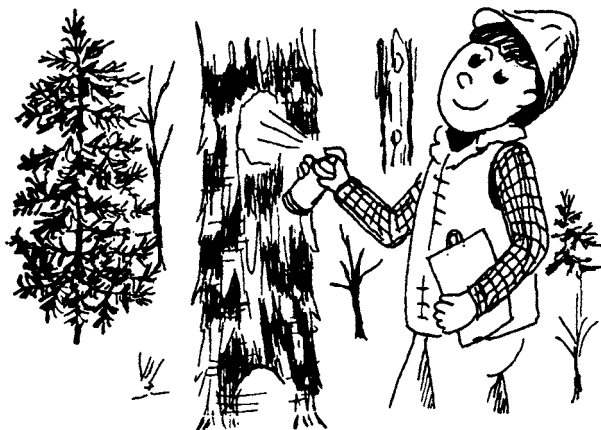


Controlling the harvest

When stumpage is sold, the trees generally are felled and the logs removed by loggers or other laborers who may or may not share the same land management objectives as the landowner. These people frequently are paid according to the volume of material they harvest. Their primary concern is removing the trees as quickly and efficiently as possible. They may have little regard for the condition of the forest following the harvesting operation.

The woodlot owner or a forester must control the cut in order to prevent the destruction or injury of trees that are to remain in the stand after the harvest. In most cases, two paint marks are placed on each tree to be cut. One is placed at eye level where it can be seen clearly. The other is placed on the stump below cutting

level. The lower mark will remain after the harvest as evidence that the cutting was done in accordance with the marking.



Notifying potential buyers and obtaining bids

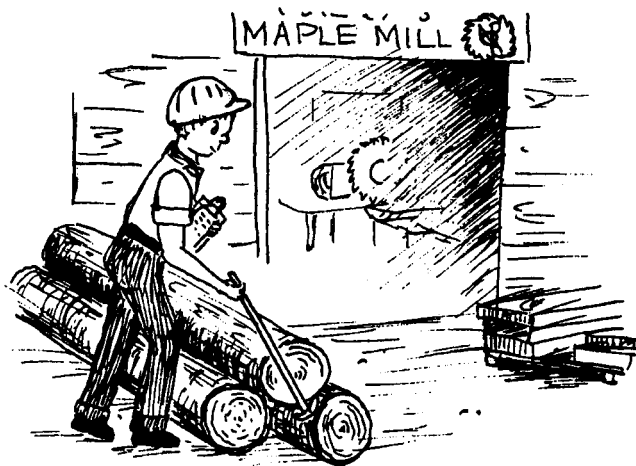
Depending on the quality of the timber marked and the accessibility of the property, a minimum of 20,000 to 50,000 board feet of timber is usually needed to attract suitable buyers. It may be possible for several adjoining landowners to sell their timber collectively. Depending on site quality and past management practices, harvest cuttings in mature hardwood forests generally yield anywhere from 1,000 to 10,000 board feet per acre.

Once timber has been marked and the volume tallied, a prospectus should be prepared. The prospectus describes the location of the property, indicates that certain trees have been marked for cutting, and states that timber will be sold in accordance with a suitable contract. A list should be included indicating the number of trees marked by species and diameter class as well as an estimate of the gross volume of each species. The prospectus should indicate whether a deposit binding the offer must accompany the bid, and if so, the amount of the deposit. Also, the seller should reserve the right to reject any and all bids. This prospectus and a copy of the proposed contract should be sent to all potential buyers within the area several months in advance of the desired sale date.

Type of sale. Woodlot owners can market stumpage using either a lump-sum sale or a sale-by-unit. When the lump-sum sale is used, a single payment is made to the seller for all the trees designated for sale. This is the easiest type of sale to administer. The landowner gets money immediately, scaling problems are eliminated, and receipts are independent of the volume of logs removed from the property. The major disadvan-

tage of this type of sale involves tax treatment of the income received. Under current Internal Revenue Service rules, a landowner may not be able to claim capital gains treatment when frequent timber sales are made by this method.

In a sale-by-unit, the seller is paid a certain amount for each unit of product cut. In the case of a timber sale, this is the number of dollars per thousand board feet of logs harvested. Total income depends on the volume of logs harvested and removed from the property. This type of sale requires that someone scale (measure) the logs after they are harvested. The scaling may be carried out by the owner, a consulting forester, the buyer, or the mill to which the logs are delivered. The questions of who will make an accurate production tally and how, when, and where the scaling will take place make this type of sale more difficult to administer than the lump-sum sale. Furthermore, when loggers fell trees and leave them in the woods, the landowner is not paid for the logs. Despite these problems, sale-by-unit may be the preferred method to use when sellers carry out frequent timber sales and wish to retain the benefits of capital gains treatment for federal income tax purposes.



Bid procedure. Woodlot owners advertising timber stumpage sales generally use the written sealed-bid procedure. Potential buyers are notified of the sale and given 4 to 6 weeks to inspect the timber and submit a written sealed bid. A time may be specified when all potential buyers can inspect the property. Sellers set a time and place at which sealed bids will be opened and successful buyers selected.

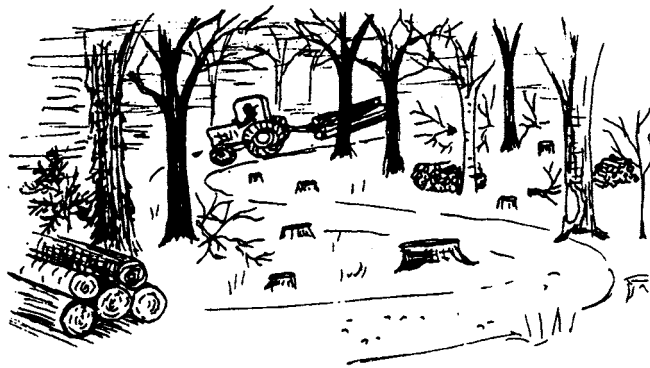
The sale is usually awarded to the highest bidder unless there is some reason to exclude that buyer because of poor performance in past sales or failure

to produce the proper deposit or bond. Examination of past performance by companies bidding on your timber is always a wise precaution.

Factors influencing stumpage prices. Sawtimber stumpage prices depend on species, log quality, logging cost, and fluctuating market demands. Stumpage prices for well-formed, high-quality hardwoods such as red oak, white oak, black cherry, and ash are generally higher than those for the lower-quality species such as red maple, chestnut oak, beech, and black gum. Very high quality stems of white oak, red oak, black cherry, and ash also may be in demand for use as veneer. The price for veneer stumpage may exceed that for sawlogs by two to three times or more. A tree used for veneer generally must be at least 18 inches dbh and its butt log must be straight and completely free of defects.

Sawlogs usually are transported to a sawmill for conversion into a variety of products. The difference between the stumpage price and the mill price is the income the logger receives for harvesting the trees and hauling the logs from the woods to the mill.

The prices the buyer can pay for stumpage will depend on mill prices and logging and transportation costs. Stumpage prices will decrease as logging and transportation costs rise. A buyer will pay less for stumpage located a long distance from the mill, on a site with poor access, and where the terrain is steep or difficult. Higher prices can be paid for stumpage of similar quality on a site close to the mill, on level terrain, and serviced by good roads.



The price a given mill will pay for logs depends on the value of the product being processed by that mill. Some mills produce a variety of products that vary in value, while others specialize and produce only certain products. Mills producing high-value products such as veneer or hardwood dimension stock require high-quality logs and expect to pay high prices for top-grade

material. Mills specializing in lower-value products, including pallets or railroad ties, can use lower-quality logs and will pay correspondingly lower prices.

A woodland owner wanting to maximize the economic return on a timber sale must send the sale prospectus to all potential buyers. There is no one set price for standing timber. The bids for a specific tract of timber from different buyers will often vary in amount by 20 to 100 percent or more. Competitive bidding with all potential buyers notified is the only method that will ensure that woodland owners get maximum economic return for their wood products.

An example of the range of prices recently paid for timber of different species and grades can be obtained from the Pennsylvania *Timber Market Report*. A copy of this quarterly report can be obtained from your county Penn State Cooperative Extension office.

As a seller, you should understand that markets for sawtimber fluctuate widely depending on trends in the economy and, especially, the housing industry. The price of sawtimber stumpage rises gradually during peak building periods and falls during periods of low building activity. However, the price of stumpage also may be affected by international markets or the demand of a local specialty sawmill.

You have a great deal of latitude in deciding when to harvest trees. When prices for sawtimber stumpage are down, delay a timber sale even if the trees have reached maturity. On the other hand, when prices are high, look for areas that need cutting. The long-term income derived from a woodlot may be as dependent on the timing of a timber sale in relationship to market prices as it is on the quality of the trees.

Negotiating a contract

Before a single tree is cut, the landowner and the logger should sign a written agreement that clarifies the responsibilities of both parties. In too many cases, woodlot owners sell by means of an informal, verbal agreement. The results are usually unsatisfactory to both parties. A written contract protects both the buyer and the seller. All parties to the agreement must know, before any cutting takes place, exactly what each expects.

Just as each woodlot and each woodlot owner are unique, so is every timber harvest agreement. Many considerations are common to all timber sales; however, many clauses within a contract will be tailored to your specific management plans and ownership objectives. When preparing the contract, you should consult the *Timber Harvesting Guidelines* established by the



Pennsylvania Forestry Association. These guidelines establish recommendations for harvesting timber that will result in minimal disturbance to the land. A booklet listing these guidelines may be obtained by writing to the Pennsylvania Forestry Association, 56 East Main Street, Mechanicsburg, PA 17055 or by calling 717-766-5371.

Most woodlot owners will benefit from the assistance of a professional forester in drawing up a contract. The forester will provide you with a sample contract that can be modified to meet your specific needs. In some cases, loggers supply their own contracts. You should never sign such a contract unless you are sure that your needs are met and your property is protected. Before signing any contract, you should review it with your lawyer and your forester. The following items should be included in any timber sale agreement:

- Names and addresses of the contracting parties
- Date and place agreement is signed
- Location and description of the property
- Description of the timber being sold, including species, method of marking, and size classes of trees for sale
- Guarantee of ownership of timber
- Guarantee of right-of-way and freedom of entry for buyer
- Price of timber and conditions of payment
- How, when, and where timber will be measured
- Cutting rules and regulations
 - a. beginning and ending dates for all cutting
 - b. requirements for stump heights, top diameters, defective trees, slash treatment, etc.
 - c. penalty clause for cutting or damaging unmarked trees

- Road construction requirements
- Erosion control and stream protection measure
- Amount of bond for performance of agreement
- Procedure for termination of agreement and reversionary rights
- Liability protection from property damage and bodily injury
- Method of arbitration if disagreements arise

Meet with your logger before you draft the final agreement. Make certain that each aspect of the agreement is understood. It is important that you and the logger develop a rapport and are able to work together. Remember, each of you is trying to earn a living. Protect your own interests but try to be sympathetic to the logger's limitations. Being on good terms will help, though not ensure, that the results of the harvest will be acceptable to you. If the logger will not agree to certain aspects of the contract, it is better to deal with this problem before cutting has begun.

Inspecting the harvest operation

The landowner or forester should be at the site on the day the harvesting operation begins to provide an opportunity for either party to discuss any misunderstanding that may exist. Once the harvest operation has begun, the woodlot owner or appointed agent should inspect the logging site at frequent intervals to ensure that the contract terms are being met. When inspecting the site, be reasonable. It is almost impossible to move heavy logging equipment through the woods without causing some damage to the residual stand. Nevertheless, broken tops, scarred tree stems, eroded skid trails, and high stumps should be kept to a minimum. If you think the damage is excessive, then immediately notify the buyer, not one of the workers. Usually, a simple suggestion to the buyer will solve the problem.

You should make your final inspection when the harvest has been completed. If all provisions of the contract have been fulfilled, you should write a letter to the buyer including a release from any obligation to you.

PROFESSIONAL ASSISTANCE

Given the long-term nature of the crop, most woodlot owners carry out a timber sale only once or twice in a lifetime. With such limited activity, even the serious woodlot owner may find it difficult to remain informed on every aspect of selling a crop wisely and profitably. Any timber sale will involve some risk. Productive and aesthetic values of the property are at stake. Mistakes at this point may be costly and long lasting. Seek professional help when you have a substantial amount of timber for sale.

A professional forester can help plan the proper silvicultural treatments needed for your woodlot, as well as mark and tally the trees for sale. The forester can also ensure that the prospectus is sent to qualified loggers. Your forester will ensure that a proper contract is prepared for review by your attorney so that your property is protected and you receive proper compensation for your product. Professional forestry assistance is available from the Pennsylvania Bureau of Forestry, through your local service forester, and from private consulting foresters. Upon request, service foresters will examine your woodlot and make suggestions. However, owners will be asked to retain consulting foresters for commercial timber sales. You can obtain a list of practicing consulting foresters from either the Pennsylvania Bureau of Forestry or cooperative extension.

Marketing forest products can be a profitable and satisfying experience. In addition, the harvest can improve the productive potential of your woodland in future years and help you achieve your management goals. High-quality professional experience will ensure that your marketing experiences provide these satisfactions.

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