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# Marketing Forest Products



# Selling Timber and Logs

Seven Steps to Success

D.A. Cleaves

Marketing timber is a complex process with many twists and turns. Most woodland owners are infrequent participants in the market (every 7 to 10 years) who must deal with experienced, savvy buyers. Experienced timber sellers have a plan and use a systematic selling strategy to gain control of the marketing process.

To be successful, you, too, must be informed. Look at more options. Take more control. Seek more advice. Follow the basic steps outlined in this publication, whether you're selling standing timber or selling logs directly to the mill.

These steps distill suggestions gathered from landowners, consultants, log buyers, and loggers. Even if you don't sell your timber yourself, you can benefit by knowing what's involved when you hire an adviser.

Selling your timber may involve the most important decisions you'll make. It may represent thousands of dollars, perhaps the largest financial transaction in your lifetime. Years of painstaking silviculture work depend on harvesting practices that reflect your intentions for the stand.

How many and which trees are taken as well as how they're removed are questions you must answer with the realities of the market in full play. The consequences of being fully informed, of taking your time, expanding your options, and using good advice are financially large and critical to the health of your woodlands.

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Figure 1.—The seven steps that successful timber sellers follow.

This publication has three purposes:

- 1. Outline a basic process for selling timber and logs, organized as seven steps. Each step requires some information and/or skill, which you can develop on your own or acquire from advisers.
- 2. Refer you to sources of information and assistance in carrying out those steps.

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- Help you appreciate the benefits of a systematic approach to selling timber, such as:
  - · higher returns;
  - greater conviction that you've been fair in dealing with others and have been treated fairly;
  - greater confidence in dealing with log buyers, loggers, and others in the timber market;
  - · less hassle and frustration;
  - greater protection for the amenities of your woodland;
  - or others.

Successful timber sellers achieve the highest net return for their timber that's consistent with their goals for owning their woodland. They follow the seven steps (figure 1 on Page 1), even though they may not give equal emphasis to each one—or they may not do them in the order described here.

Unsuccessful sellers omit steps or do them with little awareness or attention to detail. Good advice on all steps is "Start early and don't hurry." You can't sell timber overnight and be successful. Talk with advisers, buyers, and loggers early under relaxed conditions. Ask many questions.

Don't let anyone rush you. Unless you or your woodlands are in serious physical or financial distress, you can usually delay the harvest until prices or other aspects of the sale are in your favor.



#### Step 1

## Clarify goals and strategies

The harvest of your timber should be consistent with your long-term goals. Can you describe them? If you can't, you may be at the mercy of personal events such as death, illness, or personal emergency in deciding when to sell—or you may be tempted by offers from aggressive buyers.

You must define what's important to you in making the sale, and you must recognize that meeting some of these goals sometimes involves trade-offs (figure 2). For example:

- Top dollar may not be possible with small, poorly formed trees or with a logger who doesn't buck logs according to the buyer's needs.
- You may want to achieve minimum disturbance to your land and remaining trees during logging—but that usually means higher logging costs; consequently, returns to you are lower.
- You may want the maximum income immediately—but that may not allow you to maintain the beauty of your woodland with a constant tree cover.

List and rank your expectations for your woodlands, so you can make informed trade-offs. From these goals, you can develop a plan that allows you to balance short-term financial needs with your long-term desires.

It also helps you respond to events—rather than rush a timber sale toward some needed dollar amount, without knowing what your timber is worth or protecting your woodland's long-term growth potential. Worksheet 1 presents some questions you should answer in clarifying your goals. EC 1125, Management Planning for Woodland Owners: Why and How, contains a more complete list of points to consider

in goal setting and management planning.

#### **Marketing strategy**

You do have a marketing strategy, although you may not even be aware of it. A strategy defines the actions your timber marketing will take to meet financial and land ownership goals.

It's expressed by the products you sell, how you compete in the market-place, how you serve particular buyers' needs, and how much of the timber's value you capture. A strategy allows you to control—rather than be controlled by—forces in the timber market.



Figure 2.—A good advisor can help you develop and implement a marketing plan that accomplishes financial and other land ownership objectives. You may choose a full-service advisor, such as a reputable forestry consultant or rely on different sources of advice for different phases of the marketing process.

#### Worksheet 1

## Questions for timber sale planning

Directions: Answer the questions below in relation to the next stand of timber you'll probably sell (or sell timber from):

0	Grow timber for profit
a. b.	Personal or family recreation (including wildlife viewing)
c.	Income from sale of other forest products
٠.	(greenery, firewood, Christmas trees, etc.)
d.	Improve the land and protect from abuse
	Derive income from recreation, wildlife, or other land uses
e. f.	Hold land as an investment
	Pass land on to heirs
g. h.	Experience joy of working on my own land
i.	Create pleasant surroundings for my residence
ı. j.	Other goals:
	nat are my objectives in making this timber sale? Rank the top 3 as you did above
a.	nat are my objectives in making this timber sale? Rank the top 3 as you did above  Net top dollar for each sale  Receive a steady income (over a series of sales)
a. b.	Net top dollar for each sale
a. b. c.	Net top dollar for each sale  Receive a steady income (over a series of sales)
a. b. c.	Net top dollar for each sale  Receive a steady income (over a series of sales)  Get a "fair" price not feeling cheated
a. b. c. d.	Net top dollar for each sale  Receive a steady income (over a series of sales)  Get a "fair" price not feeling cheated  Minimize hassle
a. b. c. d. e.	Net top dollar for each sale  Receive a steady income (over a series of sales)  Get a "fair" price not feeling cheated  Minimize hassle  Minimize tax impacts
a. b. c. d. e. f. g.	Net top dollar for each sale  Receive a steady income (over a series of sales)  Get a "fair" price not feeling cheated  Minimize hassle  Minimize tax impacts  Protect my woodlands from damage
	Net top dollar for each sale  Receive a steady income (over a series of sales)  Get a "fair" price not feeling cheated  Minimize hassle  Minimize tax impacts  Protect my woodlands from damage  Complete the sale quickly
a. b. c. d. e. f. g. h.	Net top dollar for each sale  Receive a steady income (over a series of sales)  Get a "fair" price not feeling cheated  Minimize hassle  Minimize tax impacts  Protect my woodlands from damage  Complete the sale quickly  Follow my silvicultural plan
a. b. c. d. e. f. g. h.	Net top dollar for each sale  Receive a steady income (over a series of sales)  Get a "fair" price not feeling cheated  Minimize hassle  Minimize tax impacts  Protect my woodlands from damage  Complete the sale quickly  Follow my silvicultural plan

#### Worksheet 2

#### Market timing

#### Do I really need to sell my timber at this time?

What would be the consequence of delaying the sale for 6 months, 1 year, 2 years, or more? In the spaces on the left, assign a number between 0 and 5 that relates how important each situation might be. A situation of most importance would receive a 5; of no importance, a 0.

Now, in the spaces at the right, place a (+) beside those situations you think will change for the better, a (-) beside those you think will get worse, and (?) beside those about whose future you can't guess.

#### Importance (0-5)

	Situation	Better/Worse (+) (-)
	Log prices may change	
	Markets for my products may/may not develop	Sale Land
	My trees will/will not grow into more valuable sizes	
	I can learn more about marketing	
	Tax laws may change	ALL THE LINE OF
	My tax bracket may change	
	My immediate financial needs may change	
	My long term financial needs may change	
	My health may change	1 20-12
	Insect, disease, or fire may damage my woodland	
	More information on markets may be available	A STATE OF THE STA
	Regulations restricting harvesting may change	
100	New markets may develop	

Add up the total +'s and -'s weighted by their importance values; for example, four 5-point positives would equal 20 positive points (4 x 5 = 20), and seven 3-point negatives would equal 21 negative points (7 x -3 = 21).

Count all ?'s as 0, but pay careful attention to areas where you may need more or better information. Which total (+, -, or ?) is highest? Does this give you any insight about whether to sell now, wait, or seek further information?

If the positives are substantially higher than the negatives, you feel that the future may offer better conditions for selling your trees. You may want to delay the harvest.

If the negatives outweigh the positives, you should consider proceeding with harvest plans. A majority in question marks indicates that it may be time to consult a professional adviser.

Marketing strategy should be consistent with your most important land management goals, and it should be tempered by the realities of the market and marketing logistics.

- You may want to even the flow of income or target some expected cash need, such as retirement or your children's education. To accomplish this, your marketing strategy might be aimed at selling some saw logs and fiber (pulp) logs at high points in their respective price cycles, mixing commercial thinning with final harvests at regular intervals.
- Your goal may be to use as much as possible of the wood fiber that grows, which you might serve by selling species such as alder or maple when prices are high enough to cover their logging cost.
- You may want to extract the highest value for the best trees, which may mean letting selected trees grow into sizes that deliver more export or high grade domestic logs, or shift some of the saw log harvest to poles by maintaining some reserve of high quality trees and holding them from the market during low prices.
- Your goals may be motivated by after-tax returns on your woodland investment. Your marketing strategy can influence how much Federal and State income tax you pay. You may gain tax savings by timing sales to spread returns over several years and keep you in a lower tax bracket.

You should change your strategy periodically as markets, your woodlands, or your personal situation changes. Having a strategy doesn't ensure success, but it has several advantages. Your strategy:

- increases attractiveness to buyers—it helps differentiate your timber and woodland from others (most woodland owners don't have an explicit strategy);
- forces you to collect your thoughts and develop better information (your strategy makes it much easier to communicate your desires to advisers);
- focuses your energy on your strong points or on the biggest payoffs;
- helps you to expand your range of options; and
- builds a better bargaining position for you as a seller because it requires you to know your customer and to recognize opportunities.

## Adding and capturing value

Your trees gain value as they're logged, hauled, and processed into wood products. You *add* value when you send trees to the those mills best equipped to use their specific qualities.

You may also *capture* value by doing your own logging. But evaluate carefully whether the value captured is worth the extra time, effort, cost, risk, and physical danger.

There are many specialists in logging and consulting who can capture value more efficiently because of their equipment, expertise, and other factors. Your time may be better spent in selecting these people than in doing the actual work.

#### Market timing

When to harvest is an agonizing question. It's tied to the question of how much to harvest. Don't assume you have to cut all your timber just because prices seem high or you need some money.

Consider alternatives like partial cutting or borrowing the needed money. These decisions require information on:

- the level of prices and the direction of their expected movement;
- rates of growth of your trees and their expected total value;
- alternative sources of needed cash and their costs (interests, fees, etc.);
- 4. alternative investments and their expected rates of return; and
- the minimum periods during which you and your trees can "ride out" the market.

There are no magic answers to the timing question, but be sure your timing is consistent with your goals and marketing strategy. Worksheet 2 has some questions to answer when you think about market timing.



## Step 2

## Find the right advice

People who regularly buy and sell timber seem to handle the details with ease. You may benefit from advice and services available from other landowners, reputable loggers, public and industry landowner assistance foresters, private consultants, and log buyers themselves (figure 2 on page 2).

When you select any professional advice, the best procedure is to ask for references and to follow up with a call or

visit to the recommended professionals. Advice can range from written educational material and informal personal contact to supervision of all the details of the sale. Table 1 on page 3 lists specific activities for which you may need assistance.

Worksheet 3 on page 7 asks you some important questions in assessing how much advice you need. You can use the most important expectations

you list in worksheet 3 as criteria in choosing an adviser. Talk them over with a prospective adviser. He or she can advise you on realistic levels of performance.

Supervision of the logging process is a critical role for a full-service adviser.

Logging can take weeks or months. Many questions and difficulties arise that you or your adviser may have to handle. Believe that "if something can go wrong, it will."

You or your adviser should be prepared to make frequent visits to the logging operation to:

- Establish your image with the logger as a concerned landowner whose inquiries are difficult to ignore. Loggers take more care if they know the landowner cares.
- 2. Alert you to emerging problems and misunderstandings while they're small enough to handle easily. You can also monitor timber trespass or concerns about theft, safety, fire prevention, and wildlife habitat. You can change your plans more easily if the logging becomes more destructive than you can tolerate, or if markets change unexpectedly.
- Allow you or your adviser to talk with both logger and log buyer(s) and require bucking practices for higher returns.

#### Log theft

This is sometimes a problem, especially with high quality logs. Although most loggers are honest, high timber prices at times leads a small minority to divert logs to undesignated mills or to cut and sell trees not indicated by the landowner.

Measures to avoid this include preparatory marking with spray paint and (in the case of selling logs) closely checking truckload tickets with scale tickets.

You prepare a serially numbered log load ticket for each load before it leaves the property. This ticket shows the date and hour loaded out, log brand, number of logs and species on load, load destination, and signature of the driver

At the mill, the purchaser retains one copy and forwards it to the landowner with the scaling certificate. Your adviser should check to see if any load tickets in a series are missing, and that the load number matches that on the scaling certificate.

Branding the ends of logs with a special hammer is legally required, and it helps deter theft. Evidence of theft at the site might include new paint marks on trees, boundary markers moved, discarded truck load tickets, or unfamiliar branding devices. It's best to have an experienced adviser conduct these inspections.

#### Sources of advice

#### Service and Extension Foresters

Oregon Department of Forestry service foresters and Oregon State University Extension foresters are legally limited to educating landowners and helping them contact buyers and harvesters. These agencies can't supervise individual timber sales or recommend individual advisers.

#### Log buyers

Log buyers provide information about prices and their mills' requirements. They may sometimes buy standing trees or arrange logging for the landowner. Their first allegiance is to the mill, however, so they won't necessarily assist a landowner in soliciting offers from their competitors. They may help find markets for the products they don't need.

#### Loggers

Many loggers have marketing savvy and experience in helping landowners. They work for a share of the mill-delivered proceeds or charge a flat per MBF or per-truckload rate. The best procedure is to ask for references and to follow up.

#### Consulting foresters

Some consultants are very adept marketers. They can assume the burden of marketing logistics and arrangements, save you money by getting the most effective logger, and fetch higher prices with their knowledge of mill requirements. They can also follow through by supervising the harvesting.

The increased return from these and other benefits normally exceed the consultant's fee. Consultants represent you, so through them you have control

over log allocation to mills and harvesting. Consulting foresters keep abreast of rapid changes in prices and mill requirements, and they maintain their selling skills and an active network of personal contacts.

Some people call themselves consultants but may not be able to provide all the services you may need. You may need to make a few well-placed inquiries to find out how much marketing experience a consultant has.

Always ask prospective advisers and consultants for names of a few recent clients for whom they've marketed. Log buyers themselves are very familiar with local consultants and know which ones do good work. Some consulting foresters charge by the hour; others charge a percentage of net return to the landowner; and still others are paid a percentage of the value of the logs delivered to the mill. You should completely understand what the fee is and what they provide for it.

Lists of consultants serving your area may be available from your county office of the OSU Extension Service.

The Oregon Department of Forestry (2600 State St., Salem, OR 97310) produces the *Catalog of Woodland Assistance* that contains names and addresses of more than 60 consulting foresters who offer marketing assistance in Oregon.

The Association of Consulting Foresters of America (ACFA), publishes a brochure that lists its members and describes consulting forester services. It's available from ACFA, 5410 Grosvenor Lane Suite 205, Bethesda, MD 20814-2194; phone (301) 530-6795. Their toll-free referral number is 1-800-783-1629; if in Springfield, 683-0177.

#### **Industry foresters**

Industry foresters represent landowner-assistance programs of individual companies. These programs may be called tree farm families, management assistance programs, or other names.

Some programs assist in marketing. For help in cruising and marking timber and in facilitating the landowner's management plan, the company usually requires the right to match the highest offer the owner would receive on a timber sale.

Worksheet 3

#### Timber sale advice: A self-assessment

#### Can I do the marketing job myself, or do I need help from an adviser or consultant?

That depends in part on how comfortable you feel with different aspects of the process. Please check for each task whether you have had experience, feel comfortable, and have the time to complete it.

			Experience?	Comfort?	Time?
•	Cruising timber				233
•	Dealing with log buyers			1	
•	Researching prices				
	and mill specifications			P. J. W. W.	ST BELL
•	Selecting a logger			\$7'11 Seson	
•	Soliciting and evaluating prices			1 1 1 1	
•	Dealing with loggers			A LOCAL	
•	Negotiating legal arrangements				
•	Supervising harvest		LAU FE	THE YEAR	11 33
•	Keeping records			A CONTRACTOR	0 6 24 5
		Total	75	F 49 5	

Add the number of checks in each column. If you didn't check at least five in each column, you may want to consider professional help. You may still want to do these tasks to learn more about them, but professional guidance can make the learning experience less traumatic and more rewarding.

#### What do I expect of a consultant or adviser?

Check from this list of benefits those you'd expect to gain from an adviser compared with doing the marketing yourself.

•	higher net returns
•	time savings
•	fewer unexpected hassles
•	protection from logging damage
•	advocacy in legal arrangements
•	consistency with your long-term management plan.
•	availability to talk
•	help in clarifying landownership objectives
•	new alternatives and points of view
•	protection from liability
•	protection from timber theft.
•	other benefits (explain):

Table I.—Marketing services and sources of assistance<sup>a</sup>

General marketing education	Е
Ownership goals clarification	A
Marketing strategy	A
Cruising and boundary marking	I, C, L
Appraisal of timber	C C
Tree marking	I, C, O
Market reconnaissance	A
Timber sale contract consideration	A
Timber sale contract preparation	Attorneys, I, C
Logger selection	E and O (educational only);
	L, B ,I ,C
Show sale to buyers	L, B, I, C
Solicit offers	L, B, I, C
Evaluate offers & log allocations	L, I, C
Supervise logging process	L, B, I, C
Supervise delivery & log accountability	L, I, C
Pay logging, service fees	L, I, C
Pay severance taxes	L, C
Represent buyer in disputes	L, I, C

<sup>&</sup>lt;sup>a</sup> A, all; B, log buyers; C, consultants; E, OSU Extension Service; I, industry landowner-assistance foresters; L, logger; O, Oregon Department of Forestry.

Only you can decide whether this arrangement suits you. It provides a consistent adviser and freedom from hassle, but it may take away some of your control of the marketing process. A landowner-assistance forester may be understandably reluctant to aggressively solicit high offers.

He or she may not want to participate in the solicitation process at all. Competing mills may be reluctant to seriously bid on landowner assistance tracts, because they know their offers can be bettered.

#### Friends and neighbors

Friends and neighbors can provide you with marketing advice gleaned from past experiences. Don't expect a neighbor to actually lead you through the steps as a consultant would. However, by talking with a few well-respected landowners, you can get a clearer picture of where to go for further information and advice.

Talk with a variety of neighbors to get a feel for the way different ownership sizes, logging conditions, levels of experience, and other factors shaped their marketing strategies and experiences. Extension forestry agents can provide you with names of some local landowners.



## Step 3

#### Structure the sale

You can structure your timber sale for the market in several different ways. Likewise, there are several paths for determining the price you'll receive. You gain more control if you know the options and can structure the sale to fit your needs.

Too many landowners continually use the same methods without considering the advantages and disadvantages of others.

#### Pricing methods

You can arrive at a price in several different ways.

 Blind delivery. You take logs to the mill and accept what the buyer pays for whatever volume the scaler tallies. This is the simplest approach, but it gives you no chance to offer your trees to different buyers. The price can change without notification, unless you arrange a specific guarantee or lock-in period, usually 30 to 90 days.

- Price quotes. You survey local mills to ascertain their advertised prices. Prices aren't guaranteed, but there's a chance to match material with the right buyer for a higher net return. You get information with which to calculate the impact of hauling costs to different mills.
- Negotiation. You and the buyer work out a mutually agreeable price. This is *not* necessarily a competitive price—imbalances in

- bargaining power, experience, and information control are usually present. Most landowners market so infrequently, and most buyers are so experienced, that negotiation often works to the buyer's advantage.
- Sealed bids or prospectus offers. This is the formal process of asking a number of potential buyers for bids on a well-defined timber sale. Bids are returned sealed, one bid per buyer, and you open all bids at the same time. Buyers have no opportunity to respond to each other's offers. Offers are based primarily on the quality and quantity of the material and the mills' own costs of operation. This is the best way to arrive at a competitive price.

#### Sale structure stumpage or logs?

You can structure your timber for marketing in one of two basic ways. The most common method is to sell it as logs delivered to the mill, or in some cases to the roadside landing. You or your adviser arrange for the logging and hauling. Most log sales are paid for by the number of units (say, MBF) delivered.

The other method is to sell the trees before they're cut; this is often called a *stumpage sale*. These sales can be paid for by the units delivered to the mill ("scale" sale), or at one "lump-sum" price for the entire sale.

Consider several factors in deciding what kind of sale to use:

- Measurement. Will measurement costs be a major expense?
   Can you find an independent party to do the measurement? Do the parties agree on conversion factors?
- Utilization. Does it allow you to cut only the trees you want? Must there be an additional incentive or provision to remove material from the site that you don't want?
- Physical risk. Who bears the risk of fire, insect, disease, windfall, and other natural disasters after the timber is cut but not yet delivered? How serious is this risk?
- Market risk. Who bears the risk of prices plummeting? Who gains if prices skyrocket? Are unit prices any different because of this or other risks?
- Cash flow. When will you be paid—in advance, after the harvest, or at intervals during the harvest?
- Contracts. How detailed must the written contract be? What provisions of the contract are most critical?
- Supervision. Who oversees the logging operation? How much control over the marketing and logging process do you have?

#### Stumpage sales

When you sell stumpage, the mill or a logger agrees to log it before a specified date, usually up to a year or more later. You can receive a lump sum payment in advance, or a down payment with the balance due by the unit as the logs are delivered.

## Stumpage sales have some advantages:

- They often involve a cash down payment.
- They require less marketing skill from you. Log allocation, negotiation, supervision, and other decisions are shifted to the buyer.
- They may encourage speculation about future prices, which sometimes drives up the price paid.
- They fix a price that can benefit you if market prices drop.
- They may encourage removal of all merchantable material.
- They avoid some scaling and costs of tracking logs to their destinations.
- The buyer must file the forest practices notification and usually must pay the State severance and harvest taxes.

## Stumpage sales have several disadvantages:

- Since buyers assume more of the responsibility and risk, they tend to discount the value of the timber to allow for a "profit and risk" margin—commonly 10 to 15%. This is especially true where the landowner's inventory data lacks credibility.
- Few buyers may be interested in your timber during poor markets.
   Some buyers may not be able to contend for large sales because they lack the down payment.
   However, most reputable buyers have adequate financial resources.

- Unrealistic optimism about future prices may result in purchases that can't be economically logged if markets drop. Unrealistic pessimism about the future may reduce prices below what the market is currently paying. Ultimately, some buyers could default on the sale.
- The fixed price is an opportunity lost to you if prices rise.
- Some buyers don't want the mix of species and grades you offer, so they don't bid.
- The buyer, not you, chooses and supervises the logger. The logger's allegiance is to the timber buyer, so the logger may be difficult for you to work with if things go wrong.
- It's difficult to get the highest prices for several different wood product types from one purchaser on the same sale.

#### Log sales

## Advantages of selling logs directly to the mills:

- You retain flexibility to switch buyers (mills) if relative prices change or if payment problems arise
- If general log prices rise during harvesting, buyers may adjust their prices upward.
- You and/or your agent select the logger and supervise logging according to your goals.
- You control merchandising steps.
   You decide how to sort logs to the best combination of markets.
- It's possible to interest buyers in smaller volumes.

## Disadvantages of selling the delivered logs:

 It's very detailed and requires lots of supervision. Many landowners don't have the time to sell their own logs.

- It requires skills and experience that you may not have or want to develop, especially if you won't be marketing again for many years.
- If prices drop during the sale, the buyers may adjust their price downward.
- Loggers may charge you more than a timber buyer with a more continuous stream of work to offer.

Table 2 on Page 11 summarizes some of the more important differences between log and stumpage sales from the landowner's perspective.



#### Step 4

## Scope out the market

#### **Market conditions**

#### Establish Market Area

First, establish the geographic area that contains prospective buyers.

Consider more than just one or two local mills. Timber prices have risen faster than transportation costs, creating a larger radius around each sale within which timber can be economically hauled and delivered.

The larger the market area, the more mills will compete for your timber and the more likely they'll offer competitive prices.

#### **Evaluate Price Information.**

Information is your best ally (figure 3). Don't leave important decisions to

chance or depend on buyers to keep you informed. You can't control factors like business cycles, export activity, or changing consumer preferences—but you can control what you deliver to the local market, who you sell it to, and when you sell it.

To do that well, you must ask questions.

Prices paid for delivered logs can vary greatly from mill to mill within a local market. Prices paid for live timber can vary even more because of great differences in haul distance, logging conditions, timber sizes, timber volume estimates, and other cost factors.

Ranges in price depend on the level of competition, what buyers need in terms of species and quality, how much time is available for harvest, and how dependable and consistent the buyers perceive the seller to be. There's no fixed price for either logs or stumpage.

Price trends are important, such as whether the prices are rising or falling or whether some species or grades are worth more than others. Advertised "average" prices and quotes by timber buyers may be helpful, but these figures represent averages from a wide variety of sales

Ask questions about lengths and types of logs needed and what factors most commonly cause prices to differ from market averages.

Local prices may be quickly and strongly affected by demand factors like new or expanded mills, mill log inventories, surges in export log market, or by supply factors like fire or insect salvage activities.

Seasonal factors (wet weather, winter or fire closures) may also influence log prices and harvesting costs.

Collecting information about the market can help you:

- Understand how and why different mills require different lengths and diameters of logs and how to match their needs.
- Determine the range of prices that's fair for your trees, so you can confidently dismiss unreasonable offers.
- 3. Form tactics on how to approach prospective buyers.
- 4. Establish yourself as an informed seller—buyers are less inclined to offer noncompetitive prices and are more assured that you appreciate their problems and unique requirements.



Figure 3.—"Know the buyer's needs" should be your basic motto. Check out the market by visiting log buyers before you start the sale and harvesting process. Ask them to explain log quality, pricing, payment procedures and other important details of the sale. Most buyers will be happy to visit your timber before it is cut.

Table 2.—Comparison of different timber sale structure aspects (see "Structure the sale" page 8, for more information)

Aspect	Stumpage sale	Log sale
Measurement	landowner and buyer measure standing trees.	scale logs in woods or at mill
Utilization	incentive for close utiliza- tion (with proper contract)	incentive to take the best
Physical risk (winds, insects, fire, etc.)	passed to buyer	stays with landowner
Market risk	passed to buyer	stays with landowner, who controls log flow to the market
Price	may be reduced at buyer's risk	no reduction
Cash flow	cash up front to seller	buyer pays with delivery
Competitive bids	variable, especially for very small and large sales	many, steadier
Logging provisions	simpler: buyer chooses logger	more complex: owner contracts logging
Control over logging	buyer	landowner
Log allocation skills	buyer	landowner
Benefits of merchandisng	shared with the buyer, or none	possibly high for land- owner
Payment of severance and harvest taxes	buyer	landowner

#### Buyers' needs

Understanding buyers' needs is the basis of all marketing. Try thinking not about selling logs, but about bundles of attributes needed by the log buyer—volume, species, dimension, grade, grain, etc.

Changes in demand or supply can trigger either more rigid or more flexible requirements for these attributes and changes in price. Talk with log buyers about their needs *before* you decide what to sell, when to sell it, and how

Establishing contact early in the decision process is a proven policy that can pay off handsomely.

Try to look beyond price—try to understand what log characteristics or aspects of the log delivery may influence prices from each buyer. Small bits of information gleaned from several buyers can reveal patterns in use and price that suggest particular marketing tactics.

Let the buyer know that you're trying to do a better job of delivering the material he or she needs with a minimum of waste and misunderstanding.

Differences in preferences for log characteristics can be confusing even to the experienced marketer. Basically, all mills want straight logs, bucked flush on the ends, with the limbs cleaned off to the bark, with no metal material (nails, bullets, etc.) embedded in the bark or wood.

All require at least some "trim" or extra length to allow for processing reductions. This usually is 10 to 12 inches per log. A 36-foot log, for example, should actually be 36 feet 10 inches long.

Mills have different minimum lengths, but all prefer longer logs for two reasons: They give more options in manufacturing, and the Scribner log rule estimates lower board foot volumes for longer logs.

Though almost all mills offer different prices for short and long logs, the break point varies considerably. Some specify a minimum average log length (say, 36 feet) that must be attained for each truck load, or a minimum percentage of target length logs (for example, 70% in logs 32 feet and longer). Otherwise, they reduce the price.

Some mills will state *camp run* prices conditional on some percentage of the mix in specific grades. This means that the price applies to the mixture of logs you have, not to a specific grade or size. The minimum diameter accepted may vary.

A number of companies have formal log quality programs, offering premiums for well manufactured logs. This may be explained in their offers.

Worksheet 4 on pages 13 and 14 is a list of questions you should ask of log and timber buyers.

There are numerous sources of valuable information about market conditions and buyers' needs:

- Local professional foresters monitor the timber market and can answer some of your questions.
- Other woodland owners who have recently sold trees can provide another perspective and suggest how to avoid mistakes. They can also refer you to loggers, consultants, and others. Lists of such landowners are

- found in the local Oregon Department of Forestry offices. These are notifications of intent to harvest filed by the landowner or timber operator under Oregon's Forest Practices Law.
- Local newspapers often carry classified ads offering to buy timber.
- Extension forestry agents talk with buyers regularly and may report local prices for logs and timber in their newsletters.
- 5. Price reporting services (privately operated) are available.

  They may be too expensive to justify on small ownerships, but several landowners could share the cost and benefit. A price report doesn't reduce the need to
- phone local buyers for current information. Most of these services collect data on sales made weeks or months previously, but they can indicate trends over time. Three such services are:
- Loglines, Arbor Pacific Forestry Services, PO Box 1234, Mt.
   Vernon, WA 98273; phone (206) 336-2836.
- Pacific Rim Wood Market Report, Jay Gruenfeld Associates Inc., PO Box 66836, Seattle, WA 98166; phone (206) 242-3551.
- Northwest Timber Review, PO Box 5785, Bend, OR 97708; phone (503) 389-2307.



Step 5

#### Measure and mark the timber

Before you sell, know the volume and relative quality of the trees you're considering for market. These trees may contain several different products, each with different values. A single tree may contain saw logs and poles or several grades of saw logs, or it may be merchantable as sawtimber or pulp fiber.

An estimate of the volume of products is valuable:

- in describing the timber to prospective buyers,
- in judging the fairness of offers to buy, or
- in making arrangements with the logger.

Also important is the growth rate of these trees. They may be accumulating volume and value fast enough to offer a higher return by waiting for a later harvest, especially if they're nearly large enough to produce a higher grade log or pole.

#### Measure timber

Woodlots vary greatly in timber volume because of different cutting histories and site quality. If you sell standing timber for a lump sum, knowing how much you have is crucial.

Buyers will certainly estimate the volume, but it's not their responsibility to reveal their figures to you. If you sell by the thousand board feet (MBF), cord, or ton, knowing how much you're selling may be helpful in attracting buyers or in converting across the various units in which their offers are written.

Prices may be offered by grade, by MBF, by the ton, or as a lump sum. Without a volume estimate, it's difficult to compare net returns. Many mills will offer premium prices for sales with greater volume. Loggers figure costs based on volume per acre and log size.

If mills or loggers are uncertain about what volume they may be dealing with, they'll incorporate a "risk" factor in their prices that may mean fewer dollars to you.

Knowing tree volume and growth also assists your silvicultural planning. How much to remove in thinnings and partial harvests or whether to harvest or wait are decisions with important silvicultural impacts.

Timber cruisers are available for more sophisticated cruises, and they usually charge hourly or daily fees. A detailed and expensive timber cruise isn't always necessary; sometimes, an estimate based on measurement of relatively few representative trees can act as a guide. (figure 4 on Page 15)

EC 1190, Stand Volume and Growth: Getting the Numbers, describes one method that landowners themselves can use to estimate volume and growth.

#### Mark trees

You should know what trees you want to remove in the sale and communicate this clearly to your logger or timber buyer. The first step is to lay out the sale area carefully and clearly define the boundaries. The best way to designate trees is by spray painting each below stump height and at eye level on the stem of the tree.

You can mark trees when the volume is measured. Marking removes doubt in the buyer's and the logger's minds about what's to be sold and gives you more control in the logging process. You can mark either the trees to be removed or those to be left.

#### Worksheet 4

# Market research interview: Questions to ask local timber buyers (use this form to record the results of each interview)

Company					
Log buyer's name		The Park			
Address					
Telephone day		Telephone ni	ght		
Do you buy: Deliv		, logs at the landing	, stum	page	.,
Will you arrange for	a logger if a	a landowner doesn't hav	e one?		
Will you arrange for	a self-loade	r log truck?			
Do you purchase log	gs by MBF_	, ton, cubic fo	ot, or	other uni	ts?
What is your paymen	nt schedule?	weekly, biweekl	y, mo	onthly	_, other
What log species, lea	ngths (plus t	rim), and diameters wil	l you buy?		
					neter (in)
Species purchased	Min	og length plus trim (ft) Preferred	Max	Min top	Maximum large end

	you have special preferences or requirements for percentage mixes of certain lengths?  % of volume infoot logs; an average log length of feet.
	ut how much do you cut the price for mixes with insufficient volume in preferred lengths % or \$ per (MBF or ton)
_	you have other requirements for log mixes (for example, grade or diameter targets)? se explain:
	at log characteristics are most important to avoid when selling to you? Answer for the ies you buy the most of. Please indicate any characteristics that you will not accept.
1	
2.	
3.	
4.	
	you offer quality price premiums for:  Grain (rings per inch) yes, no, If yes, how much?
В. (	Clean logs (free of protruding knots and limbs)?
C. (	Other factors (explain):
Wha	at additional advice could you offer for selling logs to your firm?



An alternative is to paint a sample of trees to show the logger the types of trees you've targeted. Do this marking with some knowledge of logging practices and constraints. Marking too few or sparsely distributed trees could turn loggers away—or actually encourage damage to the residual trees.

Figure 4.—A timber inventory can give you valuable information about timber volumes and growth condition. This information can be valuable in deciding when to market, in describing timber to buyers and loggers, and in evaluating offers.



# Step 6 Select a logger

The logger's role is very important. The prices you receive may depend on how well logs are bucked or on the logger's reputation for fair dealing and ethical practice. Premium prices often go to logs processed by loggers whose work the buyers know and trust.

If you allow the logger to select the mills you sell to, marketing skills alone could make or lose you thousands of dollars. Also, the difference between a logged stand that's been left in decent condition and one that's a disaster may hinge on who you select.

Not all loggers are the same. Among them, you'll find great differences in skill, experience, attitude, and equipment. You must match the operation with *your* trees, terrain, and objectives.

Local OSU Extension Service and Oregon Department of Forestry (ODF) offices maintain lists of loggers. Forest practices foresters with ODF work with loggers daily, and they can provide information on performance—they can't recommend individual loggers, but they can list

those who consistently comply with Forest Practices regulations.

Consulting foresters or industry landowner-assistance foresters can help you select a logger for your conditions.

The Associated Oregon Loggers, 1045 Gateway Loop, Springfield, OR 97477 (phone 503-746-4311), also has a membership roster available to the public.

Always ask a logger for references to previous clients (figure 5 on Page 16). Ask those landowners about their experiences—better, visit their property to see the results of logging. Here are some questions you could ask these landowners, as well as some questions for prospective loggers.

#### Selecting a logger: Questions to ask landowner references

- 1. Who selected the mills to which the logs were hauled? What were the reasons for this selection?
- 2. On what basis was the logger paid—a percentage of the

- mill-delivered proceeds, a dollarper-MBF charge, or another basis? What was the logger's percentage or charge (for example, 50% or \$110/MBF)? Who paid the trucker and how often?
- 3. Did the logger keep promises about use, cleanup, and other business agreements?
- 4. Did the logger have a written contract and abide by its terms? Who provided it—the logger or you?
- 5. Was the logger willing to listen to your needs and answer your questions directly?
- 6. Did the logger get the job done efficiently and meet the time limit mutually agreed to? If not, why?
- 7. Did the logger give the job priority and complete it once it was started—or delay the work by sporadically skipping to other jobs?
- 8. Did the logger take pride in his or her equipment and in previous logging jobs? Was the logger willing to show you any of these operations?



Figure 5.—The logger is a key player in implementing your marketing plan. The logger should be able to point out opportunities and problems that can influence your marketing decisions and to work well with your advisor and the log buyers. Ask prospective loggers for references and ask plenty of questions early in the process.

- 9. Did the logger buck and sort logs to get higher returns and/or minimize waste—or just take the most valuable logs and leave lower grade material in the woods? What instructions did you provide about log bucking and removal?
- 10. Did the logger damage many residual trees or improvements (fences, gates, culverts, etc.)? If so, why did this occur? Did the logger make appropriate repairs?
- 11. Did the logger seem concerned about environmental matters like wildlife habitat or visual quality? Were you concerned?
- 12. How well did the logger communicate to you the way the job was going? Were necessary changes in the operation clearly explained? Was the logger flexible enough to respond to changes you needed?
- 13. Did the logger leave litter and equipment parts at the log landing or clean up the site after the logging was completed? Was all broken cable removed?
- 14. How were the logger's relations with forest practices foresters and neighboring landowners? Were there any violations or trespass problems?

#### Selecting a logger: Questions to discuss about practices

- 1. What are your terms of payment?
  Are you buying the timber on the stump or contracting only to log it? Would you accept a lower percentage of the value for valuable, easily logged timber?
  What are your logging charges?
  How often do you need to be paid?
- 2. What parts of the logging process do you handle? (Some loggers can execute only parts of the process.) Do you have the equipment or a subcontractor available to fell, buck, yard, load, and haul? Will you build roads and dispose of slash? What control do you have over subcontractors?
- Do you have a standard written contract? May I review it? (There may be provisions that don't suit my situation and need to be modified.)
- 4. Do you have liability insurance? What are the dollar limits of liability? Who's covered? What kinds of accidents does the policy cover? Am I liable for logging accidents that might occur while

- you operate on my property? May I get a copy of the insurance policy?
- 5. How do you prefer to handle disputes over timber trespass or cutting practices? What options do I have if my or a neighbor's property is damaged?
- 6. Do you have fire equipment? Do you take fire prevention measures?
- 7. Will you handle the Forest Practices Act operation notification? Will you work with the local forest practices forester?
- 8. What kind of equipment do you use? Is it well matched to the conditions and requirements of my site?

#### Written agreements

Selecting a logger includes forging a mutual understanding with him or her about what should be done during harvest. There's no better way to implement this than a written legal agreement.

This agreement is called a *logging* contract, and it's written with the logger you're hiring to cut and take the logs directly to the mill.

It might be called a *sale agreement* if it's written with a timber buyer to whom you're selling standing trees because the buyer is selecting and supervising the logger.

Don't confuse these timber sale agreements and contracts with the *purchase order*. This is written by the log buyer and covers the price, quantity, quality, and delivery aspects of the log sale—but it doesn't protect you or your property during the logging and hauling process.

Timber sale agreements and logging contracts cover items such as description of the timber and property, measuring and marking methods, cutting restrictions, road construction, fire control, and liability contingencies. See EC 1192, Contracts for Woodland Owners and Christmas Tree Growers, for more information. Worksheet 5 on Pages 18 through 20 is a list of items that you could include.

A contract in writing is safer than relying on a verbal agreement. Writing forces all parties to think through their part of the agreement and provides for—if it doesn't eliminate—many unpleasant surprises. Your lawyer can help you determine how much detail to include in an agreement.

Some educational agencies and publications provide sample contracts with fill-in-the-blanks sections. A danger in using sample contracts is that you may not fully consider the unique characteristics of your timber or the selling situation. Even if you modify a sample contract, consult a lawyer who's familiar with timber sales.



#### Step 7

## Solicit and evaluate offers

Don't be satisfied with a single offer to buy your timber. Apply the same skills and thinking to selling timber that you'd apply to selling a house or a car, or to making a major purchase.

More mills may be able and willing to buy your timber than you expected. Different mills have different needs that translate to very different offered prices, but you won't know unless you approach them all in a *systematic* way (figure 6).

#### Develop a prospectus

A prospectus is a written description of what you have for sale and how you want to sell it. Using a prospectus to communicate your sale often can help you think through and control the marketing process.

You send the prospectus directly to individual buyers and you summarize it in an advertisement that you post or place in the classified section of the newspaper, or both. It can be a formal document or an informal letter.

You can use it in selling stumpage or delivered logs. The prospectus goes a step beyond soliciting offers on the phone, and it's much better than not shopping around at all.

Writing a prospectus has several advantages.

- 1. It forces you to think about your options and objectives. These might otherwise remain as foggy notions that you don't put into action.
- 2. The prospectus notifies all buyers at the same time with the same information about your timber. It sends the message that you're playing fair and allows the competitive system to work for you. All buyers see what you have and know that other buyers see the same description. You'll be more likely to receive an offer based on the mill's ability to pay than on individual buyers' assessments of what you don't know about the current market.
- 3. The prospectus helps to minimize guesswork for the buyers, and it can open a dialog for you to understand their needs—if not on this sale, in future transactions.

The prospectus has three disadvantages.

 It takes time, and perhaps money, to collect the necessary information and to "soul search" your needs. (continued on page 21)



Figure 6.—Offer your timber for sale to a variety of buyers with a written prospectus. This allows you to stimulate a high level of competition in a fair and open manner and to maintain good long-term relationships with your prospective buyers. When you have received all offers, you can compare them for their net stumpage value and how well they achieve other marketing and land ownership objectives.

Worksheet 5 Checklist for developing and evaluating agreements and logging contracts <sup>a</sup>	timber	sale

Imhan	
☐ Timber	Guarantee of timber ownership
	When does title pass?
	Method of designating trees to be cut (or left):
	Diameter limit
	Species
	Marked trees
	Dead timber
	Other
☐ Taxes	IN HOLD WITH YORK THE REAL PROPERTY OF THE PARTY OF THE P
	General tax provisions
10	Severance and harvest taxes—who pays?
Liabil	ity and insurance
LIAUII.	Description of buyer's or logger's required insurance
	Public liability and property, including
	automobile (limits)
	Excess property damage (limits)
	Workers' compensation
	Provision for certificates in evidence
	Owner's protection from legal claims and labor liens
Fire pi	recautions  Compliance with federal and other government regulations
	Water provided at landings? Who initiates suppression action? Who is notified immediately when a fire is detected?
	Who initiates suppression action? Who is notified immediately when a fire is detected?
	Who initiates suppression action?
	Who initiates suppression action? Who is notified immediately when a fire is detected? Who pays for fire fighting? (usually owner pays for fires not attributable to purchaser)
	Who initiates suppression action? Who is notified immediately when a fire is detected? Who pays for fire fighting? (usually owner pays for fires not
	Who initiates suppression action? Who is notified immediately when a fire is detected? Who pays for fire fighting? (usually owner pays for fires not attributable to purchaser) Slash burning only with consent of owner Hazard abatement activities as requested by the owner up to
	Who initiates suppression action? Who is notified immediately when a fire is detected? Who pays for fire fighting? (usually owner pays for fires not attributable to purchaser) Slash burning only with consent of owner
	Who initiates suppression action? Who is notified immediately when a fire is detected? Who pays for fire fighting? (usually owner pays for fires not attributable to purchaser) Slash burning only with consent of owner Hazard abatement activities as requested by the owner up to some limit (for example, \$.50/MBF).
	Who initiates suppression action? Who is notified immediately when a fire is detected? Who pays for fire fighting? (usually owner pays for fires not attributable to purchaser) Slash burning only with consent of owner Hazard abatement activities as requested by the owner up to some limit (for example, \$.50/MBF). Who pays for above activities? (usually included in stumpage or logging cost estimates)
Loggi	Who initiates suppression action? Who is notified immediately when a fire is detected? Who pays for fire fighting? (usually owner pays for fires not attributable to purchaser) Slash burning only with consent of owner Hazard abatement activities as requested by the owner up to some limit (for example, \$.50/MBF). Who pays for above activities? (usually included in stumpage or logging cost estimates)  In operations
Loggin	Who initiates suppression action? Who is notified immediately when a fire is detected? Who pays for fire fighting? (usually owner pays for fires not attributable to purchaser) Slash burning only with consent of owner Hazard abatement activities as requested by the owner up to some limit (for example, \$.50/MBF). Who pays for above activities? (usually included in stumpage or logging cost estimates)  In operations Method or equipment specified (cable, tractor, horse, etc.)
Loggin	Who initiates suppression action? Who is notified immediately when a fire is detected? Who pays for fire fighting? (usually owner pays for fires not attributable to purchaser) Slash burning only with consent of owner Hazard abatement activities as requested by the owner up to some limit (for example, \$.50/MBF). Who pays for above activities? (usually included in stumpage or logging cost estimates)  In a operations Method or equipment specified (cable, tractor, horse, etc.) Protection for property markers and survey corners
Loggin	Who initiates suppression action? Who is notified immediately when a fire is detected? Who pays for fire fighting? (usually owner pays for fires not attributable to purchaser) Slash burning only with consent of owner Hazard abatement activities as requested by the owner up to some limit (for example, \$.50/MBF). Who pays for above activities? (usually included in stumpage or logging cost estimates)  In operations Method or equipment specified (cable, tractor, horse, etc.) Protection for property markers and survey corners Landing sizes (maximums) and locations
Loggin	Who initiates suppression action? Who is notified immediately when a fire is detected? Who pays for fire fighting? (usually owner pays for fires not attributable to purchaser) Slash burning only with consent of owner Hazard abatement activities as requested by the owner up to some limit (for example, \$.50/MBF). Who pays for above activities? (usually included in stumpage or logging cost estimates)  In operations Method or equipment specified (cable, tractor, horse, etc.) Protection for property markers and survey corners Landing sizes (maximums) and locations Felling requirements (for example, directional)
Loggin	Who initiates suppression action? Who is notified immediately when a fire is detected? Who pays for fire fighting? (usually owner pays for fires not attributable to purchaser) Slash burning only with consent of owner Hazard abatement activities as requested by the owner up to some limit (for example, \$.50/MBF). Who pays for above activities? (usually included in stumpage or logging cost estimates)  In goperations Method or equipment specified (cable, tractor, horse, etc.) Protection for property markers and survey corners Landing sizes (maximums) and locations Felling requirements (for example, directional) Disposition of windfalls
Loggin	Who initiates suppression action? Who is notified immediately when a fire is detected? Who pays for fire fighting? (usually owner pays for fires not attributable to purchaser) Slash burning only with consent of owner Hazard abatement activities as requested by the owner up to some limit (for example, \$.50/MBF). Who pays for above activities? (usually included in stumpage or logging cost estimates)  In operations Method or equipment specified (cable, tractor, horse, etc.) Protection for property markers and survey corners Landing sizes (maximums) and locations Felling requirements (for example, directional) Disposition of windfalls Definition of merchantable material (% sound or minimum volume)
I Loggin	Who initiates suppression action? Who is notified immediately when a fire is detected? Who pays for fire fighting? (usually owner pays for fires not attributable to purchaser) Slash burning only with consent of owner Hazard abatement activities as requested by the owner up to some limit (for example, \$.50/MBF). Who pays for above activities? (usually included in stumpage or logging cost estimates)  In goperations Method or equipment specified (cable, tractor, horse, etc.) Protection for property markers and survey corners Landing sizes (maximums) and locations Felling requirements (for example, directional) Disposition of windfalls

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
_ Log	branding responsibilities
-	_ Designated skid trails
Pen	alty payments for
	damage
	material left in woods
	unauthorized removal
	replacement costs for property damage
	_ Disposal of nonmerchantable material
<b>5</b>	_ Notification to Department of Forestry for Forest Practices Act Permit
Road	ls
	When roads are to be laid out (before cutting begins)
	_ Locations and sizes of roads and skidroads
E III	Provision for owner approval on road construction
	_ Road maintenance standards
	_ Provision to leave roads open or restore to working condition
1	_ Right of way agreements with adjacent landowners
Sales	sperformance
	_ Guarantee of faithful performance of all provisions
	_ Performance bond
	_ Cash deposit for timber
☐ Timi	ng
	_ Effective dates of sale
	_ Termination date
	_ Completion (full or partial) date
	_ Provision for altering time limit or suspension
	_ Termination for failure to comply
1	_ Title to remaining timber after termination date
] Spec	ial requirements
100	_ Subcontracting
	_ Use of property or roads by third parties
- 40	_ Arbitration procedures
- 90	_ Silvicultural prescription
☐ Sign	atures
	_ Buyer
	Seller

<sup>a</sup>This form is intended as a checklist only. It's not a sample contract, and it contains no legally defensible language. You can use the form to outline content for an actual contract or to guide discussion in less formal arrangements with loggers or buyers. This content could be customized for either stumpage (written with timber buyer) or log sales (written with the logger). Many consultants have a standard contract that they can modify to your needs.

- You give up the option of keeping buyers in the dark while you negotiate a price. (This rarely works, anyway.)
- You risk rejection—nobody responds to your letter. In some locations or during very poor timber markets, that could happen, but you could also take it as a signal to delay the sale for better conditions.

Worksheet 6 on page 22 shows prospectus features. A typical package includes a cover letter (figure 7 on Page 23) that briefly describes the volume of timber, species, location, and type of harvest (for example, thinnings vs. clearcut). Separate paragraphs cover price quotation, logging, scaling, and payment procedures.

Two important requirements are a waiver that your volume estimate isn't guaranteed and a statement of your right to refuse any and all offers. Your objective is to be specific enough to interest buyers but not so detailed as to scare buyers away with complexity and demands.

Attach these papers to your letter:

- 1. a map of the sale area with driving directions,
- 2. a copy of the timber sale agreement, and
- 3. a form for buyers to write in their offers. (figure 8 on pages 24 and 25)

Buyers then return this form or their own standard price sheets to you.

#### Soliciting offers

Your objective is to find buyers. You do this by contacting as many prospective buyers as possible. You never know what prices exist unless you ask. Unfortunately, most landowners contact three or fewer buyers when they sell. Expand your market area out 50, 75, or more miles away. Higher prices allow good logs to be hauled longer distances.

Be open and consistent. You're selling in a market, not just to an individual. This may not be the last time you sell timber, so you want to develop a positive reputation—and keep your future options open. The guidelines offered here are ethical and effective ways to tap whatever competition exists in the market.

Provide all buyers with the same information at the same time. Don't create the impression that other buyers have already had the first shot or will be offered the last chance. Buyers may rightfully feel they're being used to "set" a price for preferred customers.

Furthermore, it's very difficult for you to compare price quotes you receive when you offer the timber to different mills in different market conditions.

State your sale terms and stick to them. Accept only one offer from each buyer. State the period during which the price quotes should be effective. Set a specific closing date and allow no late offers

Don't let buyers think you're just fishing for starting prices and that you plan to hit them up individually later. If you aren't satisfied with any of the offers, your prospectus has reserved the right to reject any and all offers and start over.

You should do just that if, for example, you feel the market has taken a sudden surge at the end of the offering period. If it's necessary to change the conditions of the sale, let all buyers know.

Offer a guided tour of the sale timber. Name a day and time at least a week before the closing date. Include a map showing directions to the property or some common meeting place. Many buyers may take you up on it; others will have already seen the timber on their own.

All buyers should understand from your prospectus that you don't guarantee a particular log volume, grade, or species mix. It's important that they see what you couldn't describe in the prospectus.

The tour is a good way for you to get some advice from them about preferred log lengths, diameters, and other details of log manufacturing. It may be helpful to have your logger in attendance. You might also discuss payment schedules, scaling procedures, and other aspects with the buyers who attend.

Select the best offer(s) quickly and notify the winner(s). Your prospectus should state the date you'll notify the selected buyer(s), perhaps a week or two after the closing. As a professional courtesy, notify *all* buyers when you have decided who to sell to.

You may decide to merchandise your logs to more than one buyer, but your negotiations for this should be as

open as possible. Many buyers won't accept only the low quality material—or if they do, only at a reduced price.

Don't try to bargain for higher prices after the closing date by pitting the top buyers against one another. This will only create bad feelings and long memories. Those who don't buy your timber this time are potential customers for the next timber sale.

#### Summary of basic steps for conducting timber sales

- 1. Send prospectus letter to all prospective buyers at the same time. (Review the contents of worksheet 6.)
- Allow each buyer to make only one bid.
- 3. Set a closing date and allow no offers after this date.
- Reserve the right to reject any or all offers.
- State that you assume no responsibility or liability for accuracy of volume estimates.
- 6. Offer a guided tour of sale area.
- 7. Set a specific date by which you'll make your acceptance decision. Evaluate all offers at the same time. (In sealed bid sales, bids are opened in public, preferably by a third party, at a specified time and place, and each bid is announced as it's opened.)
- Notify all buyer(s) of the results—a courtesy that may serve you well in future sales.
- 9. Don't bargain for price after you've made your acceptance decision.
- 10. If your offering conditions change in any way, notify all buyers.

#### Evaluate the offers

Stumpage recovery value. Financially, you should seek to recover the highest value for your trees as they stand in the woods. Stumpage recovery value (SRV) is the estimated or offered price of the logs less the cost of felling, bucking, skidding, loading, and hauling the logs to the mill.

#### Worksheet 6

## Checklist for a timber (log) sale prospectus

	1.	A map and legal description of the area to be harvested. Include access details, your proposed woods road layout, and a location map showing how to get there.
	2.	An estimate of volume and a description of the timber. For stumpage sales, a listing of volumes by species, diameter class, and log grade.
7	3.	A copy of the timber sale agreement (if this is a stumpage sale, or if you're selling through a logger)
	4.	Details on bidding or quotation procedures, including  a. closing dates for quotations b. notification date for selection of offers c. time, date, and location for bid openings or selection of offers d. period during which prices are guaranteed
	5.	Logging details (if it's a log sale), including your designated logger (if one exists)
	6.	Waiver of guaranteed estimate of log volume/grade
	7.	Scaling details (if it's a log sale), including provision for collecting bureau certificates and truck scale tickets
Ta	8.	Payment details, including payment date (for logs) or specified down payment (for stumpage)
	9.	Adequate form or space on the prospectus for buyers to state their offers or bids.
	10.	Reservation of right to refuse any or all offers
	11.	Special requirements such as ownership of tops, location of roads and trails, culvert specifications, protection of crop fields and fences, etc.
-	12.	Provision for a "show me" trip for interested buyers (time, date, place)

#### DO NOT SEND! This is a sample only—for education purposes

1234 East Eden Greenborough, OR 00000 June 18, 199\_

To: John Woodsrun, Log Buyer Timber Mill Corp. 3436 Spur Road Branchville, OR

Dear Mr. Woodsrun:

We invite you to give us a log price quotation for logs to be delivered from our Backacher property in Benton County. The logs will be harvested from a thinning of Douglas-fir and hemlock trees that are about 40 years old. We estimate the volume of this sale to be about 500 MBF.

Deliveries will begin on September 30, 199\_. We'll conduct a "show me" trip for interested buyers on September 1 at 10:30 a.m. We'll meet you and any other buyers at Twisted Fir campground and take you to the property. A map is attached. Feel free to visit the property on your own. Please close all gates.

Please submit your prices on the enclosed form. Specify all conditions such as: length, species sorts, and delivery points. Use the back of the form if necessary. Prices quoted must be firm and remain in effect until November 15, 199\_ and cover all logs. All price quotes must be received by mail or telephone by September 15, 199\_. If we accept your price, we'll notify you by September 20, 199\_ to formalize the agreement and begin log delivery.

We reserve the right to refuse any or all quotations. We make no guarantee of log volume or grade. We wish all logs to be scaled by a certified bureau scaler or a scaler acceptable to both you and us. All logs should be scaled to show net and gross Scribner Decimal C. We will be sent a copy of each Bureau certificate and a copy of each log truck scale ticket as the delivery progresses. The following special conditions will also apply.

- 1. All logging and delivery will be performed by CBA logging of Sourmash, Oregon. Changes or problems in logging should be taken up with us, not with the CBA representative.
- Payment for logs shall be made based on the purchaser's policy. We request that logs
  delivered in one month be paid for by the 10th of the following month. Checks should be
  made payable to East of Eden Tree Farm.

Please send your quotation sheet and additional information to: Bill Wiseacre, 1234 East Eden, Greenborough, OR 00000

Thank you,

Bill Wiseacre

Enclosure

Figure 7.—Sample prospectus letter.

	1234 East Eden Greenborough, OR	<u>00000</u>	Date <u>6/18</u>	<u>/89</u>
	Telephone (503) 77	77-1111 (home) <u>sam</u>	ne (work	)
Buyer name		-		
Telephone(s)	;;			
	Softwoods			
Price per MBF		Price per MBF		
Douglas-fir grades	Camp run	hemlock/white fir grades		Camp run
Special mill \$		Special mill \$		
#2 sawmill \$	-	#2 sawmill		
#3 sawmill \$	\$	#3 sawmill		\$
#4 sawmill \$		#4 sawmill		
Jtility \$ (describe)	per MBF ton	Utility \$(describe)		per MBF ton
Other grades		Other grades		
	\$ per \$ per \$ per		\$\$ \$\$	per per
Please describe you		I grade mixes and how		Frank hore.
hose quoted above.				

Figure 8A. Log price quiestation sheet (second growth legs and harawoods).

#### Hardwoods Log size **Species** Price (for diameter classes) length diameter • \$\_\_\_\_ alder inches Camp run long logs price to inches \_\_ to \_\_\_ feet \$ per\_ (MBF,ton, other) short logs less than • larger than \_\_\_inches feet maple other hardwoods

Figure 8B.-Log price quotation sheet (second growth logs and hardwoods).

You also subtract a reasonable profit for the logger, and any fees, commissions and taxes. Calculate the SRV for each offer instead of accepting:

- · the first offer,
- · highest delivered price,
- the closest mill,
- the buyer you sold to on the last harvest, or
- allowing the logger to select the buyer for a predetermined split of the proceeds.

None of these strategies is necessarily faulty, provided you have evaluated SRV's of the alternatives.

Example. Landowner Green has 40 acres to harvest. The average volume is 10,000 board feet per acre Scribner, and the average log is 11" in diameter and 30 feet long, yielding about 110 board feet, a relatively even mix of #3 and #4 Douglas-fir saw logs.

Logging costs in Green's area for his conditions may range from \$90 to \$120 per MBF (including profit). Hauling costs average about \$1.50 per MBF per mile for round trips of 20 miles or less and about \$.50 per MBF per additional mile for round trips of more than 20 miles (differences in per mile rates come from loading and unloading times on the shorter trips).

Green sends a prospectus to four mills within a 60-mile radius. At \$100 logging costs, the offers and their SRV's are as follows:

Mill	Distance (roundtrip miles)	Offer (\$/N	SRV MBF)
A	120	380	220
В	100	375	225
C	80	350	210
D	20	340	210

Example 1.—Supporting data.

Mill B's offer is the highest. If Green had solicited only one offer, there are at least three chances in four it wouldn't have been Mill B's. If Green had selected the closest mill (D), he'd have forgone \$15 per MBF or about \$6,000 for his 40-acre 400 MBF sale.

Even selecting the highest price (Mill A), without considering hauling costs, would have meant \$5 less per MBF or \$2,000 less overall. Variability

and volatility in the local market scene make it doubly important to evaluate as many offers as possible.

Some landowners pick a logger and let him or her market the logs. Many loggers work on a proceeds-split basis, dividing the delivered values with the landowner. Splits range from 10 to 90% (to the landowner), so it's important to agree on a split that accurately reflects the logging and marketing situation on your property.

In Green's example, the ratio worked out closer to 60% to the landowner and 40% to the logger. A 50-50 split would have guided Green to choose Mill A at an SRV of \$190.00 or \$35.00 less per MBF (\$15,000 total).

With more difficult logging or a less efficient logger (costs of \$120 per MBF), the ratio is closer to 55-45; with easy logging or a more efficient logger (\$90 per MBF), or with both, the ratio is close to the 63-37.

If you market on a proceeds split, select a logger who not only can market logs well but also knows his or her costs and how to log cost-effectively.

# Material characteristics and prices

Saw logs are usually priced by MBF (Scribner scale). Pulp logs and some small logs are priced by the ton. You'll have to convert from one unit to another for comparison.

Some conversion factors are provided in EC 1127, Measuring Timber Products Harvested from Your Woodland. Tree characteristics and local practices can determine exact conversion factors. Verify these factors by talking with log buyers or consultants

Worksheet 7 on Pages 28 and 29 is a sample form for recording offers and calculating their SRV's. A blank form, for your own use, is at the end of this publication. Offers may come as either camp run (one price applied to the mixture of sizes and grades within a species) or grade-priced (specific to a domestic or export log grade).

You can convert grade prices to a camp run equivalent price by multiplying the price for each grade by the decimal fraction of the sales volume in that grade and then adding these

fractional volumes. The form includes an example.

After reconciling offers to a common unit, prices may be quite different. The highest offer may be two to three times the lowest because mills with different product mixes, equipment, and inventory, as well as different perceptions of your timber, all determine independently what they can pay.

#### Merchandising

Merchandising, or sorting logs by type (species, grade, or size) to their respective highest offers, may be a viable option. The merchandise (sorting) comparison is an additional sample form for constructing sorting alternatives (worksheet 8 on Page 30). A blank form, for your own use, is at the end of this publication. Typically, you can gain 10 to 20% more value by sorting.

Sorting allows you to carry greater volumes per truckload in larger diameter logs, thereby reducing the transport cost.

Disadvantages include extra sorting costs, larger landings, greater complexity, and the chance that mills getting only low grade material will reduce their prices or harbor bad feelings.

Whether to sort and where to send logs are decisions that you should base on your calculation of stumpage recovery value for each mill/sort combination. A mill that offers a high delivered price for one type of log might not be the best destination if distance or road conditions create high transportation costs.

#### Intangible factors

Several intangible factors may enter into your evaluation of offers. Some may be strong enough to warrant selecting a buyer whose price isn't highest, but who offers other important services or benefits.

Some of these intangible factors are:

- maintaining a long-term relationship and prospects for future sales for a particular buyer;
- ability of the log buyer to take small volumes and/or smaller material;

- the buyer's openness in explaining pricing systems and in clarifying procedures;
- arrangements for services such as logging, slash disposal, and others;
- prompt payment after log scaling; and
- reputation and record of performance.

#### Summary

You've completed the timber selling process. Were you satisfied with the financial outcome and the physical condition of our woodland? If so, remember what you learned so you can repeat it in your next timber sale. One good way is to store the worksheets and forms you worked through here with other paperwork from the sale and refer to these records whenever you're considering another sale.

If certain aspects were unsatisfactory, use these records to pinpoint what went wrong. Sit down with an adviser and show him (her) where you're most disappointed or concerned.

Marketing is like dancing—it goes smoother the more you study and practice the steps!

#### **For More Information**

- Bondi, Michael C., and Chal G. Landgren, Management Planning for Woodland Owners: Why and How, Oregon State University Extension Service Circular 1125 (Corvallis, 1983), 75¢
- Fletcher, Richard A., William H. Emmingham, and Steve Woodard, Stand Volume and Growth: Getting the Numbers, Oregon State University Extension Service Circular 1190 (Corvallis, 1989). \$1.75
- Mukatis, W. Alfred, and Charles F. Sutherland, Jr., Contracts for Woodland Owners and Christmas Tree Growers, Oregon State University Extension Service Circular 1192 (Corvallis, 1986). \$1.00
- Oester, Paul, Measuring Timber Products Harvested from Your Woodland, Oregon State University Extension Service Circular 1127 (Corvallis, 1984). \$1.75

#### Ordering information

These publications are available from Publications Orders, Agricultural Communications, Oregon State University, Admin. Services 422A, Corvallis, OR 97331-2119.

Shipping and handling rates are as follows:

- For orders up to \$3.50, please include 50¢.
- For orders between \$3.50 and \$100, include 15%.
- For orders of \$100 or more, or for 100 copies or more, call Agricultural Communications (503-737-2513) for a quote on reduced shipping and handling rates.

# Worksheet 7 Sample Sample Timber Sale Evaluation Form

	Sale or property			
	• Date	offers closed)		
	<ul> <li>Product(s) sawtimber</li> <li>Volume (approx.)</li> </ul>	00 mbf Spe	ecies Doug fir	
	(4)			
	Species/Grade	Percent of Total Volume	Volume in Grade Species	- -/ -/
	Species/Grade	500 mbf	Volume	
xample:	Doug fir Ino. 2		MBF	ST.
	Doug fir Ino. 3	65 % =	325 MBF	
	Doug fir 1 no. 4		MB	F
		% =	=MBF	
		% =	=MBF	
		% =	=MBF	176
		%	=MB	F
		% =	= MBF	
xample:	Buyer Reference (write ou  A Buymore Timber Compa  B Saw Tim Co. P. O. Bo	му. Р. О. Вох Х	43. Anytown. U.S.;	4. 99999
xample:	A Buymore Timber Compa  B Saw Tim Co. P. O. Bo	му. Р. О. Вох Х	43. Anytown. U.S.;	4. 99999
xample:	A Buymore Timber Compa  B Saw Tim Co. P. O. Bo	му. Р. О. Вох Х	43. Anytown. U.S.;	4. 99999
xample:	A Buymore Timber Compa  B Saw Tim Co. P. O. Bo  C D	му. Р. О. Вох Х	43. Anytown. U.S.;	4. 99999
kample:	A Buymore Timber Compa  B Saw Tim Co. P. O. Bo  C D	му. Р. О. Вох Х	43. Anytown. U.S.;	4. 99999
xample:	A Buymore Timber Compa  B Saw Tim Co. P. O. Bo  C D  E	му. Р. О. Вох Х	43. Anytown. U.S.;	4. 99999
ample:	A Buymore Timber Compa  B Saw Tim Co. P. O. Bo  C D  E F  G	му. Р. О. Вох Х	43. Anytown. U.S.;	4. 99999
ample:	A Buymore Timber Compa  B Saw Tim Co. P. O. Bo  C D  E F  G	му. Р. О. Вох Х	43. Anytown. U.S.;	4. 99999

#### Worksheet 7 Sample (cont.)

#### Single Offer Selection

(All Logs are Sent to One Mill)

(1) Buyer	(2) Distance from tract (miles one-way)	(3) \$ Per Unit (CRE) Camp run equivalent (delivered price)	(4) \$ Total Offer (price X volume) 500 MBF	(5) Logging & Hauling Costs	( 6) Fees	(7) Stumpage Recovery value (4-5-6)
<u>ABuymore</u>	20 miles	\$415.00	\$207,500	\$83,000	\$14,525	\$109,975
В						
С						
D						2 3
E	15/4					
F						
G			4.765		Do.	
Н			i fla			
1						
J	Shire-				Y IIII	A 17-15
K		11/4	120		7	

#### Instructions/Example

CRE is camprun equivalent, an average of the per unit offers for each grade or species weighted by the percentage volume in the various grades. Take for example a 500 MBF Douglas-fir sale with 25% #2's, 65% #3's and 10% #4 sawlogs A buyer's offer is \$500 for (#2's), \$400 for (#3's) and \$300 (#4's). The CRE would be:
 (\$500 X .25) + (\$400 X .65) + (\$300 X .10) = \$125.00 + \$260.00 + \$30.00 = \$415.00

Some mills offer a straight camprun price which would be entered in this column.

- Total volume multiplied by the camprun equivalent price, e.g 500 MBF X \$415.00 = \$207,500.
- Can be expressed directly on a per unit basis (if costs are known) or derived from a
  proceeds split agreement with the logger. For example a 60/40 split would give a
  logging/hauling cost of \$83,000 (.40 x \$207,500). The logger's share should include a
  profit/risk margin for the logger.
- Consulting forester commissions, filing fees, etc. For example, a consultant's commission of 7% of delivered price offer = .07 X \$207,500 = \$14,525
- Stumpage recovery value is the expected net value of the trees before they are harvested. Calculated as offer in column 4, less costs in column 5, less fees column 6. For example \$207,500(col. 4) - \$83,000 (col. 5) - \$14,525 (col. 6) = (col. 7) = \$109,975.

#### Merchandising (sorting) comparison

Stumpage Recovery Values

(Logs sent to various mills)

SAMPLL		Species	Doug fir				Species		The same
Buyer	(1) Costs		Grade Prices \$/M	18F	CamprunPrices \$/MBF		Grade Prices \$/	<b>MBF</b>	CamprunPrices \$/MBF
A Buymore	\$125	Gr. <u>#2</u> \$ \$375	Gr. <u>#3</u> \$ <b>\$275</b>	Gr. <u>#4</u> \$ \$175	\$	Gr.#	Gr.#	Gr.#	s s
B Saw 7im Co	\$150	\$420	\$275	\$100					
С	400	12/2/			Marie II.	E 1			
D									
E						9=54			
F					Est 199		9 30		
G									
Buyer (A, B, C, or D,	etc.)	- 8	A or B	A					
	$\preceq$	\$420	\$275	\$175		41.4.		1 33	100
Highest Stump Price (\$ per un		- 125 mbf	325 mbf	50 mbf	AT L				
Volume (in grade, or total for Camp		\$ 52,500	\$ 89,375	\$ 8,750	\$	\$	\$	\$	\$
Best Stumpage Reco Value for this grade (price X volume)	overy	3				(	Total Stumpage Recovery Value	of the sort	150,625

- Costs Include logging, hauling and logger's profit to harvest and send logs to the designated buyer. Hauling costs vary because mills are at different distances from the property. This is expressed above as a per unit cost, which is the same for each log grade. The user is encouraged to modify this to suit his or her needs.
- The delivered price quoted for this species/grade/size combination less costs in ① above. For example, \$500 per MBF for #2 sawlogs less \$125 in logging and hauling costs equals \$375 per MBF stumpage recovery value from Buyer A. \$400 for #3's gives \$275 in stumpage, etc. Buyer B offered \$570, \$425, and \$250, respectively.
- This is the total value of sorting logs to their highest paying destination. In this case, \$52,500 (B) + \$89,375 (A or B) + \$8,750 (A) = \$150,625. Subtract from this amount any commissions, fees, taxes, etc., to arrive at a total net stumpage recovery value.

Worksheet 7 Blank

## Timber Sale Evaluation Form

Sale or property Date Product(s) Volume (approx.)	(offers closed)	
Product(s)	;	
Volume (approx.)	Spe	ecies
Grade/Species	Percent of Total Volume 500 mbf	Volume in Grade or Species Volume
	% =	MBF
	% =	MBF
	% :	=MBF
500 100 387	% =	MBF
	% =	MBF
	% =	MBF
	% :	=MBF
	% =	MBF
uyer Reference (write		
		Total Marie
	- Marian Inc	
j	DE A SEL	

#### Single Offer Selection

(All Logs Are Sent To One Mill)

(1) Buyer	(2) Distance from tract (miles one-way)	(3) \$ Per Unit (CRE) Camp run equivalent (delivered price)	(4) \$ Total Offer (price X volume) 500 MBF	(5) Logging & Hauling Costs	(6) Fees	(7) Stumpage Recovery value (4-5-6)
<u>A</u>						
В	Tues		100			
С						
D	No.			100		
<u>E</u>	A Provide		14-15			
F						
G						
Н	350.1567					
1						
J			-46			Mally!
K	1300		I Carol			

#### Instructions

CRE is camprun equivalent, an average of the per unit offers for each grade or species weighted by the percentage volume in the various grades. Take for example a 500 MBF Douglas-fir sale with 25% #2's, 65% #3's and 10% #4 sawlogs A buyer's offer is \$500 for (#2's), \$400 for (#3's) and \$300 (#4's). The CRE would be: (\$500 X .25) + (\$400 X .65) + (\$300 X .10) = \$125.00 + \$260.00 + \$30.00 = \$415.00

Some mills offer a straight camprun price which would be entered in this column.

- Total volume multiplied by the camprun equivalent price, e.g 500 MBF X \$415.00 = \$207,500.
- Can be expressed directly on a per unit basis (if costs are known) or derived from a
  proceeds split agreement with the logger. For example a 60/40 split would give a
  logging/hauling cost of \$83,000 (.40 x \$207,500). The logger's share should include a
  profit/risk margin for the logger.
- Consulting forester commissions, filing fees, etc. For example, a consultant's commission of 7% of delivered price offer = .07 X \$207,500 = \$14,525
- Stumpage recovery value is the expected net value of the trees before they are harvested. Calculated as offer in column 4, less costs in column 5, less fees column 6. For example \$207,500(col. 4) - \$83,000 (col. 5) - \$14,525 (col. 6) = (col. 7) = \$109,975.

# Worksheet 8 Blank

## Merchandising (sorting) comparison

#### Stumpage Recovery Values

(Logs sent to various mills)

		Species				Species				
Buyer	Costs		Grade Price	s \$/MBF	CamprunPrices \$/MBF		Grade Prices \$/N	ИВF	CamprunPrices \$/MBF	
		Gr	Gr	Gr	\$	Gr.#	Gr.#	Gr.#	- \$	
Α		2	I TOWN			10 H				
В								- Gent	3535.0	
С	1 3 50						654.13			
D										
E								8 1411		
F										
G									The second	
Buyer (A, or B, o	r C, or D, etc.)	Health		11 28 Long	3 10			S Inch		
Highest Stumpag	e Price									
(\$ per unit) • Volume (in grade Camprun)	/size or total for									
Total Stumpage Recovery     Value for this grade (price X volume)		\$	\$	\$	\$	\$	\$	\$	\$	

- Costs include logging, hauling, logger's profit, commissions and fees to harvest and send logs to the designated buyer. Hauling costs vary because mills are at different distances from the property. This is expressed on a per unit basis or for the entire volume in this log type.
- The delivered price quoted for this species/grade/size combination less costs in above. For example, \$500 per MBF for #2 sawlogs less \$125 in logging and hauling costs equals \$375 per MBF stumpage recovery value from Buyer A. \$400 for #3's gives \$275 in stumpage, etc. Buyer B offered \$570, \$425, and \$250, respectively.

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The Woodland Workbook is a collection of publications prepared by the Oregon State University Extension Service specifically for owners and managers of private, nonindustrial woodlands. The Workbook is organized into 11 sections, containing information of long-range and day-to-day value for anyone interested in wise management, conservation, and use of woodland properties. It's available in a three-ring binder with tabbed dividers for each section.

For information about how to order, and for a current list of titles and prices, inquire at the office of the OSU Extension Service that serves your county.

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