

LANDS AND FORESTS CONSULTINGS' GUIDE FOR MANAGING YOUR WOODLOT



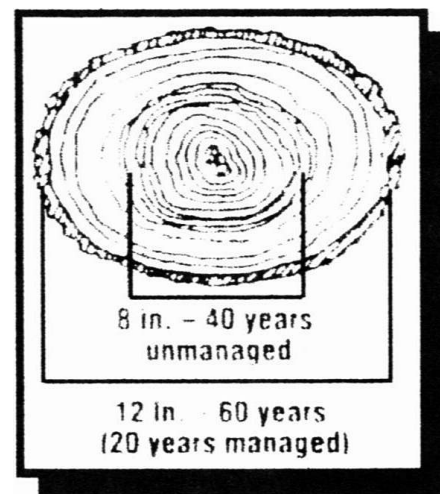
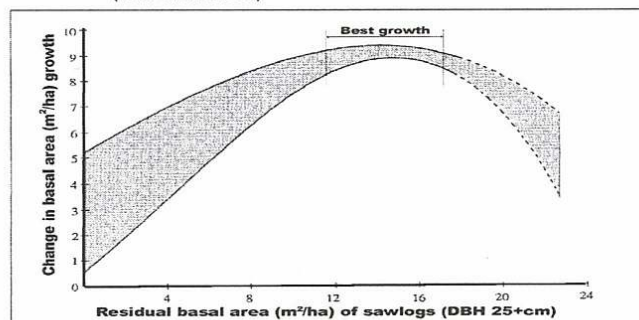
MOST OWNERS OF FORESTLAND ARE AWARE OF THE POTENTIAL FOR INCOME FROM THEIR PROPERTY. HOWEVER, MANY ARE NOT AWARE THAT THEIR FOREST CAN BE MANAGED TO INCREASE THE RETURNS DERIVED FROM THEIR WOODLOT. A WELL-PLANNED FOREST MANAGEMENT PROGRAM CAN PROVIDE A VARIETY OF ECONOMIC AND ENVIRONMENTAL BENEFITS TO THE LANDOWNER.

HOW DOES YOUR FOREST GROW?

A forest grows like a garden. Where there are lots of trees, they compete for light, water and nutrients – and the result is a lot of slow-growing trees of moderate timber quality. When there are too few trees, much of the growth is concentrated in young seedlings, again of varying quality. In either case, the forest is not producing timber at its maximum potential.

To optimize the long-term financial return to the landowner, a forest should be managed to maximize the growth of the trees, which can be used to produce high quality timber (sawlogs). This growth can be measured in board feet (the amount of wood needed to make a board with dimensions one foot by one foot by one inch.) Figure one shows that a woodlot can be managed to produce an additional sixty board feet per acre per year by removing low quality trees (thinning) and retaining an optimal number of sawlog quality trees. Over a period of twenty years, a landowner with one hundred acres could realize an additional 120,000 board feet worth approximately \$120,000 to \$150,000 (in today's dollars) through good management.

Figure 1 : 20-year change in basal area (m²), following cutting to various levels of residual basal area (m²), for trees 25 cm DBH and greater (from OMNR 1983).



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THE BENEFITS OF THINNING:

Thinning is the removal of low-quality trees to increase the amount of light, water and nutrients to the remaining trees. Thinning results in an increase in the growth rate of the remaining trees; if these trees have been selected to remain because of their timber potential, this increase in growth provides an investment return to the landowner.

Trees between twelve inches and twenty inches can easily grow two inches in diameter every ten years. At this rate, they almost double in value every ten years because:

- 1) They are growing large amounts of high value wood suitable for lumber
- 2) The quality of the lumber, as reflected in log grade, is improving.

Hence, not only are the trees accumulating board feet rapidly, but the price per board foot in the tree is also increasing. This results in an average real rate of return (above and beyond inflation) of 6% for trees between twelve and twenty inches in diameter. This compares favourably to investments such as Canada Savings Bonds, which provide a real return rate of around 3-4%.

OPTIONS OPEN TO THE LANDOWNER:

Most forests in Southern Ontario are managed using either a diameter limit system or based on a forest management prescription. Under a diameter limit cut, all trees above a preset diameter at chest height (usually fourteen to sixteen inches) are cut. Under forest management prescription, specific trees are selected to be cut or left based on their growth potential, or benefit for providing seed or wildlife benefits in the woodlot. This selection process is based on numerous individual tree characteristics, not only tree size. Each tree to be cut is marked with paint to ensure that the prescription is followed. There are five good reasons to follow a management prescription:

I. FINANCIAL BENEFITS

Diameter limit cutting reduces the long-term financial benefits, which can be derived from a managed woodlot. Under this system, most trees greater than sixteen inches in diameter are harvested. Many of these trees would respond well to thinning and could produce a very high rate of return to the landowner if left to grow into maturity.

2. FUTURE GROWTH

The thinning provided by a diameter cut is not uniform; it is simply a result of cutting wherever there are large trees. As a result, some areas of the forest with large trees are clear cut and other areas are not cut at all. In the uncut areas the forest will continue to grow slowly because of over-crowding, and the

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financial benefits of thinning will not be achieved. Poor quality, small diameter trees with no potential of developing into sawlogs should be cut and removed from the woodlot to increase growth and quality of the remaining timber trees. There are ample markets for fuelwood and pulpwood in Grey County to permit sale of these smaller trees.

In areas, which are cut too heavily, there will be insufficient large trees to capture the increased light, moisture and nutrients available from thinning, and growth will occur largely among the young seedlings. In addition, the remaining trees may not be of high sawlog potential. The lumber producing capability of the forest will be reduced significantly.

Heavy cutting also results in a loss of the potential value of the high value trees left behind. Trees less than ten inches in diameter tend to have branches located low on the stem. In an uncut or managed woodlot, sufficient other trees are present to shade these young trees, causing the lower branches to fall off due to a lack of sunlight. This results in an increase of “clear length” in a tree over time (the length of the pole with no branches) with a resulting increase in high-quality, knot-free logs for lumber. After a heavier cut, these small trees are exposed too much more sunlight. As a result they tend to keep their lower limbs and lose their potential to develop further clear length. In fact, many trees develop new branches on the trunk after heavy cutting, which actually will reduce the “clear length.”

3. FOREST REGENERATION

A Forest Management Prescription can be prepared to ensure that a New Forest of desirable species grows after cutting. In a diameter limit cut, the forest generally regenerates with whatever young trees are present on the forest floor at the time of cutting; the open conditions resulting from heavy cutting often favour the regeneration of low value timber species.

4. WILDLIFE VALUES

Landowners may wish to leave some trees in their forest, which are providing wildlife habitat and food. These include nest trees, nut and berry trees, or trees with nest cavities, and must be addressed with specific forest management prescriptions.

5. TREE CUTTING BY-LAW

Grey County By-Law 3558-96 states that no one shall cut merchantable timber trees (for example: pine, maple, oak) with a stump diameter of less than 18 inches (which translates into a diameter at chest height of approximately 14-16 inches), unless cut in accordance with good forestry practices. Diameter limit cuts below this limit are in contravention of this by-law and subject to fines.

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WHERE TO GET HELP

LANDS AND FORESTS CONSULTING WANTS YOU, THE PRIVATE LANDOWNER, TO MAKE AN INFORMED DECISION REGARDING YOUR WOODLOT. TODAY'S WOODLOTS REPRESENT CONSIDERABLE PRESENT AND FUTURE ASSETS – IF PROPERLY MANAGED - FOR YOU, THE LANDOWNER. THE WAY IN WHICH TODAY'S WOODLOTS ARE MANAGED WILL DICTATE YOUR FUTURE RETURNS AND OUR FUTURE TIMBER SUPPLY. A LEGAL DIAMETER CUT IS SELDOM THE BEST WOODLOT MANAGEMENT PRESCRIPTION TO FOLLOW CONSIDERING THE POINTS DISCUSSED IN THIS ARTICLE. LANDS AND FORESTS CONSULTING IS QUALIFIED TO INSPECT YOUR WOODLOT TO HELP YOU DETERMINE THE BEST POSSIBLE FOREST MANAGEMENT PLAN FOR YOUR PROPERTY.

HARVESTING ADVICE FOR THE LANDOWNER: “13 TIPS”

Lands & Forests Consulting is a professional resource management company with forty-five years of experience. Lands & Forests Consulting wants you, the private landowner, to make an informed decision about your woodlot. Today's woodlots represent a considerable present and future asset – if managed properly - for you, the landowner. The way in which your woodlot is managed today will dictate your future returns and the future timber supply.

A proper forest management prescription will address present and future financial returns through:



1. Thinning for growth
2. Removing deformed or diseased trees
3. Canopy closure and canopy height
4. Species proportions and regeneration
5. Wildlife habitat and food sources.

The “diameter limit cut” approach to harvesting is seldom the best avenue to harvesting hardwood because it ignores the above five points and concentrates solely on the given legal minimum diameter cut. Diameter limit cutting significantly reduces the long-term financial benefits, which can be derived from a managed woodlot. It is far better to have several smaller selective harvests in a given woodlot spread over the landowner's lifetime than to have one massive diameter cut that which can harm, stunt, and degrade a woodlot for generations.

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Lands & Forests Consulting offers woodlot inspections with the landowner to help determine a sound forest management plan by marking and tallying all trees to be removed to increase quality and growth on all remaining trees. Lands & Forests Consulting will also market your woodlot by advertising the volumes to approximately eighty-five log buyers in Southwestern Ontario. Lands & Forests Consulting believes that a few simple but essential tips should be followed when marketing a woodlot:

1. DEMAND A *PROPERLY WRITTEN CONTRACT* (NOT VERBAL) AND *CONSULT YOUR LAWYER*
2. SPECIFY THE NUMBER OF TREES TO BE HARVESTED BY SPECIES.
3. SPECIFY THE TOTAL PURCHASE PRICE OF THE WOODLOT AND DEMAND PAYMENT **BEFORE** HARVESTING BEGINS.
4. SPECIFY THE TIME OF THE CONTRACT DURATION (USUALLY 6 MONTHS TO 1 YEAR)
5. REQUIRE SIGNATURES OF BOTH BUYER AND SELLER AND A DATE
6. EACH PARTY GETS A COPY OF THE FORMAL CONTRACT
7. ASK FOR REFERENCES, INCLUDING RECENT LANDOWNERS AND THE TREE COMMISSIONER
8. ASK FOR A COPY OF WCB COVERAGE/INSURANCE COVERAGE OR ELSE YOU ARE **LIABLE**
9. AVOID 60%-40% DEALS. THESE DEALS MAKE YOU A PARTNER, AND THEREFORE **LIABLE**
10. AVOID SELLING A BUSH "LEGAL DIAMETER SIZE"
11. OBTAIN AT LEAST THREE QUOTES BEFORE DECIDING TO HARVEST, OR ELSE BE SURE YOU **KNOW** AND **TRUST** THE HARVESTER.
12. ASK THE HARVESTING LOGGER IF A "NOTICE OF INTENT TO CUT" HAS BEEN FORWARDED TO THE COUNTY'S TREE COMMISSIONER WHO MONITORS ALL HARVESTING OPERATIONS AND ENFORCES THE COUNTY TREE CUTTING BY-LAW.
13. ASK THE HARVESTING LOGGER FOR A COPY OF THEIR "CUTTER/SKIDDER CERTIFICATION". THIS CERTIFICATE IS REQUIRED UNDER ONTARIO LAW.

These 13 Tips will help any woodlot owner achieve a successful and smooth harvesting operation. Also, these tips will provide the landowner with extensive measure of security if some unfortunate event does occur. Lands & Forests Consulting supplies formal written contract proposals, which specify the above items.

The exact price of any log is most dependent upon the log grade. High prices can be paid for high-grade logs of any species (including Soft Maple, Beech, and Basswood) during almost any market period. In order to maximize economic returns, it should be the goal of every landowner to manage their woodlot to maximize log grade through proper forest management.

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TIMBER STAND IMPROVEMENT HARVESTING

If you have timber on your property, you are the owner and steward of a very valuable resource, which can produce one quick monetary return with little chance of additional return during your lifetime, or through careful management you may produce several smaller monetary returns in the same time span. In addition, you are creating and maintaining a valuable asset for you and your heirs.

Timber is a renewable resource if managed properly.

Perhaps one of the best analogies for describing your woodlot is your own personal garden. Both are crops, but one matures in about eighty days and the other in approximately eighty years. If one of your tomatoes ripens, you don't run out to your garden and pick them all! On the other hand, you don't wait until they all ripen before you pick any of them! Instead, you pick only the ripe ones, removing at the same time any deformed or rotten ones.

We apply the same basic idea to Timber Harvesting. In the forestry industry we term this type of harvest a *selective cut (harvest)* or a *Timber Stand Improvement (TSI)*.

You may have had a *diameter cut* (i.e., all trees 16" DBH and up may be cut) suggested to you. A diameter cut is very similar to the concept of picking all the tomatoes from your garden if one is ripe, and since a diameter cut will normally not remove deformed and diseased trees, you're left with an extremely under-stocked and poor quality forest.



In a TSI Timber Harvest, some of the mature trees are removed along with some non-mature trees, and some, if not all, of the damaged and diseased trees. A TSI Timber Harvest helps you maintain and improve the health and quality of your residual timber for future harvests.

Some of the qualities of a timber stand that a logger would like to buy and consequently what the landowner would like to be able to sell are: valuable species, healthy, tall, straight and large diameter trees with minimal defects, free of rot, etc. A TSI Timber Harvest will produce the potential for most of these qualities to exist within your stand -- depending, of course, on what is initially within the stand before the TSI. A diameter cut virtually eliminates all of the above. Also, instead of another harvest in perhaps fifteen to twenty years, the diameter cut normally eliminates any future cuts for as long as fifty years...and possibly a whole lot longer.

One of the most devastating results of a diameter cut is the amount of "open sky" that it produces. It is true that a certain amount of sunlight must reach the forest floor to start young seedlings, but an overabundance of sunlight results in the growth of any herbaceous plants. These plants (i.e., ferns, grapevines,

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berries, etc.) then compete with and retard the establishment and growth of the future crop of trees. Another result of too much light is that it encourages the residual trees to produce new branches on the trunk of the tree, producing of course defects in the timber that makes the tree less valuable when harvested. For an example of this, consider that nice shade tree your neighbours may have in their yard. While it may provide lots of shade and enjoyment, it wouldn't produce a single knot-free board for a piece of furniture. If you grew that tree in a well-managed timber lot, it would be at least 50% taller and most of the limbs would be at or near the top of the tree.

This is the result we strive for in a TSI harvest.

LANDS AND FORESTS CONSULTING HOPES THIS BRIEF EXPLANATION WILL HELP YOU WITH YOUR DECISION ABOUT A POTENTIAL HARVEST OF YOUR TIMBER. WE ARE A LOCAL COMPANY WITH A HIGHLY SKILLED, PROFESSIONAL WORKFORCE, AND OUR PROVINCIAALLY CERTIFIED TREE MARKERS ARE DEDICATED TO FIRST CLASS FOREST MANAGEMENT AND HRVESTING OF YOUR WOODLOT.



**SERVICES PROVIDED
BY LANDS & FORESTS CONSULTING...**

-  **FOREST MANAGEMENT**
-  **PROPERTY ASSESSMENT**
-  **ADVERTISING TIMBER VALUES**
-  **ECOLOGICAL & SILVICULTURAL
PRESCRIBED BURNS**
-  **MANAGED FOREST TAX
INCENTIVE PROGRAM**
-  **TREE MARKING**
-  **HARVEST SUPERVISION**
-  **TREE PLANTING**



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