

# High-Grading

By: Terence E. Hanley



Let's say you are cleaning out your attic one day when you come across an old shoebox containing a buried treasure: your old baseball card collection, forgotten for decades in the dust. You recline in a bed of nostalgia, recalling the joy of opening a new pack in hopes of getting a Larry Doby, Roberto Clemente, or Johnny Bench. For the first time in your life, you realize the monetary value of these cards and wish you had treated them better. You cringe at memories of inserting them in the spokes of your bicycle just to hear them clack, clack, clack as you roamed on two wheels over the old neighborhood. "What was I thinking?" you ask yourself. These cards are like stock certificates, but in your blithe childhood way, you failed to see their value.

Despite the abuse and neglect, your collection starts to look better as you go through it. There are good rookie cards and hall-of-famers, all-stars and team cards. There are lots of not so good ones, too, but the good ones are enough to make this a

valuable collection. You know that much, even if you are not an expert. You haven't done anything to make these cards more valuable except hold onto them for years. Your investment is mostly in the time you have waited to reach this point. You are poised for a windfall. The question is: What do you do with your collection? Do you keep it? Sell the whole thing? Sell only a few, select cards? If you think about your collection as a long-term investment, you realize that you stand to gain a lot by holding on to the best cards, the ones earning you a return comparable to a money market account or other investment.

If you want to liquidate the value of your entire collection, you will sell it, good and bad alike. If you want only what you can get right now, you will sell the best cards, the ones that will find their way most easily into the market. The others will probably never amount to much. All the wrinkled, folded, and worn cards, the ones on which you drew moustaches and blacked out teeth, the run-of-the-mill players that no one knows anymore--those will just go back in the box. You will turn a tidy profit by selling your most valuable cards, but your collection will then be almost worthless, with no investment value at all. You will have made some short-term gain, but you will have nothing for the future. In other words, you will have high-graded your collection.

## What Is High-Grading?

If you are thinking mostly of what you can get right now, you are likely to high-grade whatever you have, whether it is a baseball card collection, a herd of livestock, an investment portfolio, or a even a pie sliced into unequal-sized pieces. Timber is no exception. In fact, the term "high-grading" is most often used in reference to timber. If you have ever heard the expression "cut the best and leave the rest," you might guess that high-grading means cutting the best, most valuable trees and leaving low quality, low value timber in the woods. Despite the fact that it depletes the supply of good timber and reduces the quality and productivity of our forest land, high-grading is standard practice in Ohio. It is unsound and unsustainable, yet almost everyone does it, landowner, logger, timber buyer, and forester alike.

High-grading goes by many disguises, but the results are always the same: the best trees are removed, and everything else remains. So how do you recognize high-grading when you see it? Look for:

**Diameter-limit cutting**, a practice whereby trees over a certain diameter are cut. Diameter-limit cutting is *always* a high-grade cutting. If you have doubts about that, remember that diameter is not a good indicator of the age of a tree. Two trees of the same age and the same species growing on the same site can vary considerably in diameter, yet they are probably the same age. If you cut the large one and leave the small one, you have removed the tree that has demonstrated its superiority, and you have left the runt. Your herd of cattle won't be very valuable if you always hold onto the runts. Neither will your woods.

**High-grading by species**, in which all your good oak, walnut, cherry, and sugar maple are cut, while beech, buckeye, red maple, and sycamore are left. Even if you cut the white oak and leave the red oak, you are still high-grading.

**“Select cutting.”** If someone uses the terms “select cut,” watch out! What he or she wants to “select” for cutting are your best, most valuable trees. Foresters sometimes practice single-tree selection and group selection, but for very specific purposes. Don’t confuse a “select cut” with single-tree selection or group selection.

**High-grading by timber quality** occurs when you cut the best and leave the rest, regardless of species or size. A proper harvest takes in trees with a full range of quality, just as it takes in a full range of diameters.

**Logger’s choice.** If you allow a timber buyer or logger his choice of trees to cut, don’t be surprised when he high-grades your woods.

### Why Do People High-Grade the Woods?

Next to short-term gain, lack of knowledge is probably the most common reason for high-grading. For example, many people believe you are *supposed* to diameter-limit cut your woods so that you can harvest trees that are “ready” (because they have reached a certain diameter) and allow smaller trees room to grow. The fact that there are trees left after a diameter-limit cut—in other words, that a diameter-limit cut is a “select cut” rather than a clearcut—only adds to the attraction. All this brings us to three myths about trees and forests:

**Myth No. 1—Large trees have to be cut to allow smaller trees to grow.** On the contrary, small trees growing in the shade of large trees are often old and are usually stunted or suppressed. Suppressed trees do not respond well to increased sunlight after a harvest. Cutting large trees that are overtopping small trees does little to improve productivity and is usually just a way of high-grading the woods.\*

\*There are exceptions. Sometimes large cull trees or so-called “wolf trees” overtop younger, more vigorous trees and can be cut to release those younger trees from competition. Cutting culls and “wolf trees” is one of many practices covered under timber stand improvement (TSI). Another is the completion of a regeneration opening, described below.

**Myth No. 2—Diameter is an indicator of the age or maturity of a tree.** Not true. If it were, diameter-limit cutting might have some merit. As it is, using diameter as the sole criterion for deciding whether a tree should be cut is simply a form of high-grading. There is no science or reason to it. Diameter-limit cutting is simply nonsense.

**Myth No. 3—“Select cutting” is better than clearcutting.** Clearcutting has gotten a bad name for different reasons, one of which is its unsightliness. However, clearcutting under certain circumstances is an acceptable option for managing the woods, whereas “select cutting” is just a thinly disguised high-grade.

High-grading comes naturally to us whenever we engage in economic activity. There are hidden costs to high-grading, though, at least for a commodity that continues to increase in value. Like a good baseball card collection, good timber makes for a good investment. If you cash in your investment prematurely, you pay a penalty. When you high-grade your woods, you lose out on their future value, quality, and productivity. The loss may be considerable, maybe even unrecoverable in your lifetime. If you want to maximize the return on your investment of owning timber, you will manage your woods and avoid the temptation to high-grade.

### How Do You Avoid High-Grading?

It may occur to you that anyone with a short-term stake in your timber has an incentive to high-grade your woods. *That includes you!* The difference between you and timber buyers, loggers, and foresters is that once they leave your property, they never again have to look upon their handiwork. You, on the other hand, will be living with the consequences of high-grading for a long time to come. If you want to keep your woods productive, you will resist the temptation to make a short-term gain and instead set out on long-term management. That means talking to a professional forester and developing a management plan for your woods.

A management plan is a guide for you in reaching your goals of ownership. It includes a prescription of management activities, two of which are key to avoiding high-grade cutting. The first is timber stand improvement (TSI), a series of practices aimed at improving the quality and productivity of your woods. In general, TSI is a non-commercial activity, meaning you don’t make any money at it. Think of it instead as an investment with a date of maturity sometime in the future. Second is harvesting timber, a commercial activity with one of two aims: a) to improve the quality and productivity of the woods (an improvement harvest or intermediate harvest), or b) to regenerate the woods (a regeneration harvest). Whether you are performing TSI or conducting a timber harvest, the objective is not short-term gain as in high-grading. The objective is to manage your woods well for all the benefits owning woods provides.

So if you want to avoid high-grading and you don’t want to clearcut, what do you do? The answer is to conduct another kind of harvest in which you leave plenty of big trees at the same time you improve your woods. Think of it as the opposite of high-grading. If the time is right and you decide to go ahead with a timber sale, have your forester mark the trees you want to sell and make sure



those are the only trees you sell. Trees marked for sale should include a range of sizes, species, and quality. Remember, the objective is always to improve your woods. In other words, your woods should be better after you cut than before.

**Candidates for cutting include trees that are:**

- ✓ Rotten, hollow, dying, and diseased
- ✓ Past maturity or in decline
- ✓ Broken, cracked, split, or otherwise badly damaged
- ✓ Forked, crooked, bent, bowed, twisted, or otherwise poorly formed
- ✓ Multi-stemmed
- ✓ Uprooted
- ✓ Lacking in vigor, stunted, spindly, suppressed, or slow growing
- ✓ Extremely branchy, especially if the branches are low on the trunk
- ✓ Weedy
- ✓ Competing with trees you want to grow to maturity because they help you meet your goals of ownership



You can also cut mature trees, but be aware that “mature” means different things to different people. One of the reasons people diameter-limit cut their woods is that they believe a tree 16 or 18 inches in diameter is mature, while smaller trees are immature. In many cases, the opposite is true. The smaller tree may have topped out in its growth or value, while the larger tree is still going strong. As an investment, the smaller tree--the poorer performer--is mature. It is time to cash it in. A good forester can make determinations about what makes a mature tree in your woods.

Again, be aware that a forester who stands to profit from your timber sale may be tempted to high-grade your woods. You should suspect the motives of the forester who does not divulge this potential conflict of interest to you. A good forester will resist the temptation; the bad one may not. Likewise, you should suspect the wisdom and character of anyone who proposes a high-grade cutting, especially diameter-limit cutting. **Diameter-limit cutting is not forestry, and anyone who diameter-limit cuts the woods is not practicing forestry, even if that person calls himself or herself a forester.** Keep in mind also that TSI and timber harvesting go together. Beware of the forester who talks about harvesting timber and says nothing about TSI.

### **What Are Some Guidelines for Selling Timber?**

Selling timber can be one of the biggest financial transactions you make in your life. Be sure to do it right by following these guidelines:

- ✓ Work with a professional forester committed to doing what is best for you and your woods.
  - ✓ Harvest timber under an approved management plan. Be sure to do timber stand improvement (TSI) before you begin (if needed), including controlling non-native, invasive species; weed species; and grapevines.
  - ✓ Mark the timber you want to sell and sell *only* the trees that are marked. Include a clause in the contract penalizing the timber buyer for damage to trees not marked for sale, and don’t allow him to take any damaged trees.
  - ✓ Draw up a detailed timber sale advertisement, including contact information for you and your forester, the location of your timber, a tally of trees offered for sale, their estimated volume, and instructions on how to bid on your timber. Also include a map.
  - ✓ Send your timber sale advertisement to as many prospective buyers as you can.
  - ✓ Conduct a sealed-bid sale of your timber. A sealed-bid sale sets timber buyers up in competition with each other and transfers the burden of establishing a price for your timber from you to them.
  - ✓ Sell your timber *only* under a written contract that you have prepared and presented to the successful bidder. A sound contract will prevent all kinds of headaches later on.
  - ✓ Require payment in full before any timber is cut. Also require the payment of a performance bond.
  - ✓ Require proof of insurance and all other necessary coverage from the timber buyer.
  - ✓ Meet with the buyer and the logger at the outset of the logging operation so that you can go over the land, the contract, and what is expected of all parties.
  - ✓ Monitor the logging operation and enforce the contract until both are closed.
  - ✓ Require the implementation of logging best management practices (BMPs) for erosion control and water quality.
  - ✓ Once the contract has closed, look over your woods with your forester. If necessary, undertake another round of TSI.
- Candidates for cutting include: a) trees marked for harvest that were not cut by the logger; b) cull trees; c) trees damaged in

the logging operation; d) remaining weed trees and other undesirable trees. Keep in mind that TSI helps guarantee better returns at the next harvest.

- ✓ Update your management plan if necessary.



### What Do You Do if Your Woods Have Been High-Graded?

If you are like most landowners in Ohio, you have come into possession of high-graded woods. You cannot turn back the clock of course, but you can still make the most of what you have. Your options at this point are threefold:

**Do nothing**, always the least-cost option, at least in the short term. Keep in mind that timber is a long-term investment. Doing nothing will probably not pay off when it comes to high-graded woods. Left alone, your woods may improve, but that could take decades if not centuries.

**Regenerate the woods** by cutting all or most of the remaining trees and clearing the way for a new generation of trees. Many of our best oak woods have developed from regeneration cutting.

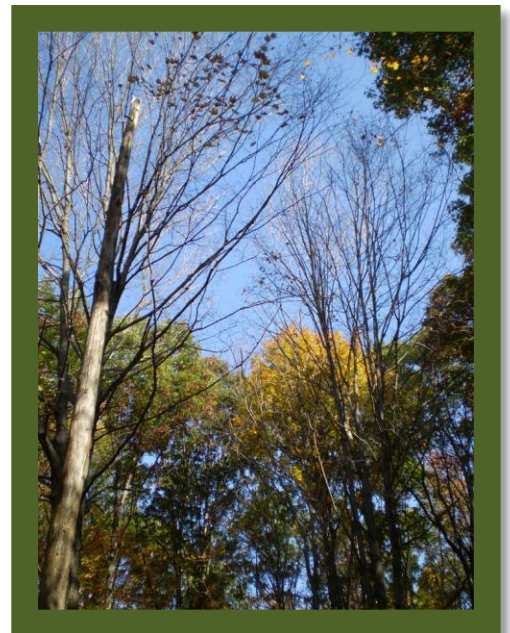
**Rehabilitate the woods**, the toughest option, but perhaps the most rewarding if you can make it work. Rehabilitating the woods involves further cutting by a combination of improvement harvesting and timber stand improvement (TSI).

If you want to manage your woods well, doing nothing is not a good option. That leaves you with a choice between regenerating the woods and rehabilitating the woods. Your forester can help you decide where the break point is between regeneration and rehabilitation.

*Regeneration* is a forestry term for starting over again with a new generation of seedlings. There are several ways of cutting to regenerate the woods. Clearcutting, in which every tree larger than two or three inches in diameter is cut, is the most extreme. By definition, high-grading results in a stand that is in worse shape after the cutting than it was before. If the woods are bad enough, regeneration might be the best option. However, not all high-graded woods are in such bad shape that they should be clearcut--at least over the whole woods. However, a heavy cutting--especially a diameter-limit cutting--can result in large gaps or openings in which you will find only a few, scattered, low value trees. Remember that we have eliminated doing nothing as an option. In an area that has been cut heavily, regeneration might be the best option, perhaps the only option remaining.

So how do you regenerate the woods? First, ask your forester for advice. If you and your forester make the determination that there are not enough good trees in a given area to support a commercial improvement harvest and that regeneration is your best option:

- Flag any trees you would like to keep, including: a) sources of seed for the next generation, especially heavy seed (oak, hickory, walnut, persimmon), and b) any other tree that will help you reach your goals of ownership.
- Cut all other trees larger than two or three inches in diameter.
- Control any non-native, invasive species you find.
- Control grapevines that threaten to overtake the next generation of trees.
- If necessary, use chemical control on non-native, invasive species; grapevines; and other weed species.
- Make coppice cuts on preferred species. A coppice cut is a cut made low to the ground, through the stem of the tree so as to remove a poorly formed or damaged top and to promote the growth of a good stump sprout. Coppicing works best on small, vigorous trees and only on hardwoods. It may not work well on large trees and will not work on conifers.
- If you are completing an opening, make your opening large enough so that sunlight reaches the ground a good portion of the day. A rule of thumb is to make the opening twice as wide as the height of the surrounding trees. For example, if the surrounding trees are 50 feet tall, your opening should be at least 100 feet wide.
- There is no need to plant trees in an opening, but if you do, keep in mind that planted trees are at a distinct disadvantage to trees growing there on their own. You may have very little success with planted trees unless you baby-sit them for the first few years of their lives.



In many cases following high-grading, the woods can be rehabilitated. You may still have to complete some openings, but there are otherwise enough good trees to work with. If you decide on rehabilitation, your forester can help you figure out which trees to cut and which trees to leave. Sometimes high-graded woods can support a second commercial timber harvest. If so, follow the guidelines in

the section on selling timber. Keep in mind that it can be difficult to sell low value timber, especially on a sealed-bid, lump-sum basis. Talk to your forester about your options. If a commercial harvest is out of the question, you are left with TSI.



Above, under the question, “How Do You Avoid High-Grading,” you will find a list of guidelines--a prescription for marking your woods for improvement cutting. That prescription works as well for TSI as it does for improvement harvesting. Rehabilitation means something more, though, including:

- Cutting trees that have been badly damaged by logging. Make coppice cuts on desired species as you would in a regeneration opening.
- Cutting and controlling grapevines.
- Controlling non-native, invasive species.
- Completing regeneration openings if necessary.
- Keeping stocking levels high enough so that trees that remain are forced to grow straight and tall rather than become branchy and poorly formed. Your woods have been thinned once by high-grading. Your TSI operation means more thinning. If you are not careful, you may end up thinning too much. In other words, you may be forced to hang on to some trees (for the sake of stocking) that you would otherwise cut (for the sake of improving the woods). Be sure to work closely with your forester and avoid thinning too heavily.

High-grading is a scourge in the woods, and it is something we can put behind us. If you would like to find out more about how to avoid high-grading, how to improve your woods, and how to conduct a timber sale, contact a professional forester. You can begin with:

**Ohio Division of Forestry**

2045 Morse Road  
Building H1  
Columbus, OH 43224  
(877) 247-8733

**Rural Action, Inc.**

P.O. Box 157  
Trimble, OH 45782  
(740) 767-4938

**Further Reading**

- *Diameter-Limit Cutting and Silviculture in Northeastern Forests: A Primer for Landowners, Practitioners, and Policymakers* by Laura S. Kenefic and Ralph D. Nyland, USDA Forest Service, Northeastern Area State and Private Forestry, NA-TP-02-05, Aug. 2005.
- *Evaluating High-Graded Hardwood Stands* by Andrew W. Ezell, Mississippi State University Extension Service, P1834, no date.
- *A Landowner's Guide to Sustainable Forestry in Indiana: Part 3. Keeping the Forest Healthy and Productive* by Ron Rathfon and Lenny Farlee, Purdue University Cooperative Extension Service, FNR-182, Jan. 2002.
- *Proceedings of the Conference on Diameter-Limit Cutting in Northeastern Forests* compiled by Laura S. Kenefic and Ralph D. Nyland, USDA Forest Service, Northeastern Research Station, General Technical Report NE-342, May 2005.
- *Treatments for Improving Degraded Hardwood Stands* by Wayne K. Clatterbuck, University of Tennessee Extension, SP680, June 2006.

**About the Author:** Terence E. Hanley is a consulting forester living in Athens Ohio. He is the Owner of Professional Forestry LLC. Mr. Hanley has a degree in Forestry from Purdue University and worked for many years as a service forester in Indiana, Missouri and Ohio prior to his current work. He can be contacted at [professionalforestry@yahoo.com](mailto:professionalforestry@yahoo.com) about forestry consultations.

**All photos except “marked trees” by:** Susi Rankis

Marked trees photo (second page) from: [www.forestryimages.org](http://www.forestryimages.org)

© 2010 Terence E. Hanley, Printed with permission

A previous version of this article appeared in the Spring 2008 issue of *The Ohio Woodland Journal*