



CENTRAL HARDWOOD NOTES

Improving Quality And Value Of Future Hardwoods

The central hardwood area is highly regarded both in this country and abroad for the high quality timber grown on both public and private lands. Buyers of standing timber and logs for lumber and veneer often look to this region first to meet their needs for raw materials. And these buyers have traditionally paid a lot more for quality timber than the usual market price for ordinary trees and logs. As world-wide supplies of quality timber continue to shrink, the demand for quality central hardwoods will grow. A strong potential demand coupled with rapidly growing young stands throughout the entire region, will provide abundant opportunities to encourage the production of high quality hardwoods for future harvests. The knowledge and technology are available-waiting to be put to use.

A General Strategy

- Grow the best trees on the best sites. Most landowners of central hardwoods will have some forest land suitable for growing high quality trees.
- Identify the best areas and prepare a plan with professional forestry assistance.
- Concentrate efforts and extend rotations on north and east slopes and on areas with deep, well-drained soils.
- Manage the poorer areas for other essential forest products on shorter rotations at less cost. Incorporate wildlife treatments and other uses on these areas as far as possible.
- Do not ignore small tracts and small stands. Small tracts are essential to the total supply of quality hardwoods.
- Exclude all livestock from all hardwood forests; control grapevines and wild-fires.
- Treat areas designated for high quality hardwood production very gently. Do not thin past the pole stage. Intermediate treatments or harvests should be light. Keep growth rates a moderate eight rings to the inch for best color and texture.
- Keep roads and trails on poorer sites, not on good tree-growing sites.
- Find ways to insure continuity of management for long term crops despite ownership changes through sales or inheritance. We need to learn from European experiences. Family forestry ethics had more influence in the past; today's society has tended to weaken appreciation for land stewardship.
- Except for the last one, apply these strategies to public as well as private ownerships. Growing high value hardwoods for longer rotations on good sites helps support domestic industry. It also provides export for a more favorable balance of trade and is an appropriate role for public forests. These kinds of production areas also have high aesthetic appeal.

What is High Quality?

The best quality lumber and veneer logs come from trees with straight, limb-free boles with no signs of internal defects. These characteristics are only found on fairly large trees that have grown in closed forest stands on average to good sites.

A veneer log is hard to quantify or describe because of the large number of variables that determine what veneer looks like after it is processed. Written veneer log specifications tend to vary with supply and demand. The more demand, the greater the flexibility in grading standards for species, within limits. Generally, veneer logs must be at least 14 inches in diameter inside the bark at the small end. Ideally, logs should average 18 to 20 inches. They should be at least 8 feet long but length varies according to the kind of veneer being sliced for the near-term market. Log length and trim allowance of an additional 3 to 5 inches are very important to log quality and price; consequently, landowners and others not familiar with industry standards and current requirements should not fell and buck veneer trees.

Veneer logs often are only butt logs but occasionally second and third logs in very high quality trees of the best species will qualify. Veneer logs must be free of sweep, crook, spiral-grain, worm holes, bird peck, pin-knots, limb scars, frost cracks, lightning scars, and other surface indicators of interior defects.

Currently the greatest user demand is for veneer with a uniform look. So the veneer buyer looks for trees with bark patterns and overall characteristics that indicate the tree has grown under uniform conditions with even growth for a long time. If the buyer is looking at cut logs, he can easily determine these characteristics from the growth rings.

Lumber log requirements are similar to veneer logs, except that more defects are allowed because log yield is based on cuttings rather than use of the entire piece as in veneer. Most of the high quality hardwood lumber sawmills use at least four log grades: prime, #1, #2, and #3. It is often difficult to justify the labor necessary to extract #2 and #3 grade logs from the woods. This decision will often be based on species, log size, and available markets for the lower grade logs or the boards they might produce.

Select the Best Trees

Since quality depends upon the characteristics of individual trees, the timberland manager needs to select the best trees in the woods for special attention. In many respects you also need to identify the worst trees, plan for their removal and use them as firewood but not for lumber and veneer. When developing the management plan and selecting the best trees, make sure that:

1. The major species are growing in their natural environment, on the proper site.
2. They outwardly appear healthy and vigorous.
3. The best trees are dominant or codominant in the stand.
4. They have straight boles with very little sweep or crook, with bark in a straight, not spiraling pattern.
5. Where limbs once grew, the bark shows evidence of good healing.
6. The bark shows little to no evidence of worm holes, bird peck, seepage, bumps, or evidence of decay.
7. Trees exhibit no excessive butt swell, and no basal wounds or scars from fire, livestock grazing, or mechanical damage.

When you select areas for high quality hardwood production, it is also important to: (a) know the soil types and their productivity; (b) verify the fire and grazing history and pass up areas that were badly abused; and (c) avoid areas that will likely be subject to rights-of-way, urban expansion, or other developments.

What About Species?

As individual trees and stands are being selected for special attention, you often must choose among species. However, it would be unwise to recommend long-term management based only on today's popular species. If a tree has good form and is growing well, I believe it will eventually pay its way out of the woods and should be left standing rather than marked for indiscriminate elimination. Some species have fared better than others through the years and that fact needs to be considered when making choices. The most preferred species are:

black walnut	pecan	butternut
red oak group	white oak	the hickories
white oak group	sugar maple	hackberry
black cherry	black maple	American basswood
yellow-poplar (American tulipwood)		

Other species very worth considering are:

sassafras	persimmon	eastern cottonwood
the elms	American beech	sycamore
the soft maples		

"TLC" Needed

Research on black walnut has proved that single trees will respond to tender loving care. Because of the high value of walnut, the chances of increasing profits through cultural practices are excellent. In recent years, white oak and red oak have commanded nearly the same prices as walnut. In fact, I believe all high quality trees will eventually yield higher profits to landowners, unless there is a worldwide movement away from real wood to substitutes because of a shortage of quality timber.

Here are some things you can do to help develop quality trees:

1. Keep them free of vines.
2. Do not permit them to become over-crowded, but keep enough competition to encourage natural pruning and regulate diameter growth. When growth slows find out why (landowners should ask a professional forester); look closely at tree density.
3. Keep mechanical equipment away from the stump and root area.
4. Remove all crooked, hollow, diseased, deformed trees. If needed for wildlife, reserve some of them on west or south exposures where quality trees are already more difficult to grow.
5. Prune forest-grown trees sparingly. Prune only the best species and only when they are saplings or small pole size.
6. Use directional felling to protect high quality residual trees.
7. Do not harvest immature stands; their values and prices will be low. Find a way to wait.
8. Develop a plan that includes treatment schedules. For example, plan to thin and harvest every 10 to 15 years.

Other countries are turning to American hardwood resources for their raw material. The future for quality hardwoods is bright, but the situation demands action now. The real challenge is to encourage basic forest practices that will make common trees an uncommon commodity.

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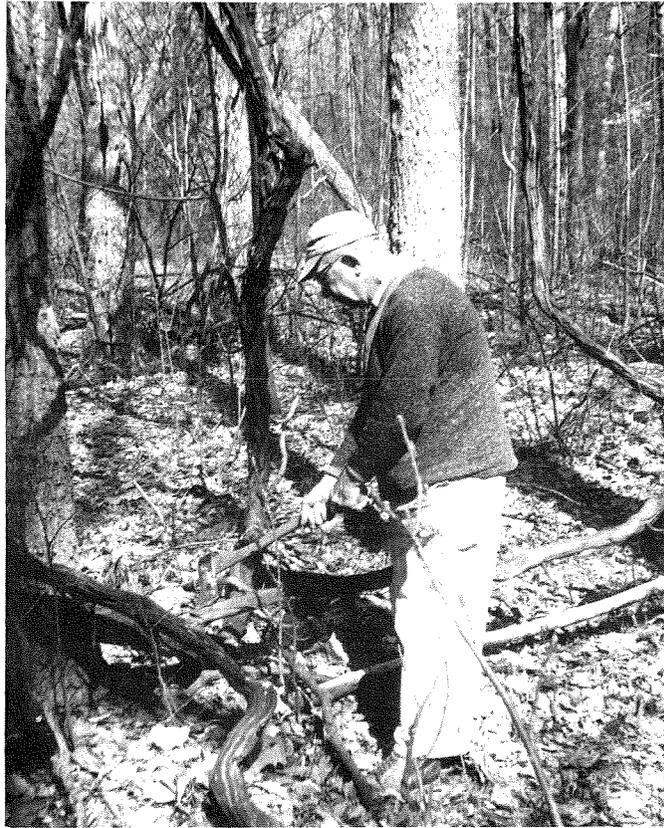
Fence wire is a serious problem when it exists in hardwood trees. (Larry Frye)



Pruning black walnut. (Larry Frye)



Fine furniture begins with well manufactured, high quality veneers and lumber. (Larry Frye)



Cutting a grapevine. (Larry Frye)



A good stand of hardwoods, Kosciusko County, Indiana. (Larry Frye)



Lower quality logs, like this one, are common place. Our forest landowners goals need to be directed toward the growing of high quality trees. (Larry Frye)