

## *Third Crop Options* **High Value Hardwoods**

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### ***Background:***

Hardwood trees have long been valued not only for their lumber but also for their beneficial effect on aesthetics, wildlife habitat, soil stabilization, and biological diversity. The following trees are considered high value hardwoods in southern MN:

- Black Walnut
- Bur, White, and Red (the most valuable) Oak
- Black Cherry
- Hard Maple
- Basswood
- White, Black, and Green Ash

Planting high value hardwood trees is truly a long-term investment. Although some benefits can be realized rather quickly (i.e. aesthetics, establishing a windbreak or an area for hunting or wildlife habitat), significant economic returns from planting high value hardwoods will not be seen for at least 50 to 80 years. Planting an area of high value hardwood trees can, in part, be considered an investment for your children and future generations.

### ***Uses:***

- **Veneer (thin sheets of high quality wood)**
- **Carving Wood**
- **High and Low Grade Lumber**
- **Furniture, Cabinets, Doors, Handles, Interior finishing, etc.**
- **Cooperage (barrel making)**
- **Flooring**
- **Plywood**
- **Firewood**
- **Pallet wood**
- **Poles, Posts, Railroad Ties, Pilings**
- **Woodchips or Wood Shavings**
- **Biomass Energy**
- **Maple syrup, Nuts**
- **Aesthetics, Wildlife Habitat**
- **Recreation and Agro-Tourism**

### ***Production and Management Considerations:***

Hardwoods can be established by planting seedlings in rows or by randomly spreading seeds on the ground (direct seeding or broadcasting). Tree species should be selected according to site conditions. Populations should be greater during establishment than at harvest to promote tall growth, reduce lower branches, and to allow for thinning. Weed control during establishment is also beneficial.

Proper stand management is an important step in producing high quality timber. Stands should be scouted for diseases, pests, and other concerns at least once a year, and trees should be thinned and pruned as needed to increase the value of the stand.

To provide income while trees mature, alley cropping (growing another crop between tree rows), forest farming (growing a crop like ginseng or mushrooms under the forest's cover), or recreational/tourism fees could be used. Planting trees as part of a windbreak or riparian buffer would also generate value while trees mature. Silvopasture (combining trees with forage and livestock production) is another option, although livestock can have a negative impact on tree stands and growth.

It is highly recommended to work with your DNR forester or a private forestry consultant for forestry advice and assistance. The University of Minnesota Extension Service can also provide forestry information. Refer to the Resources and References section for several other resources.

The goal is to produce trees that are:

- Straight (no sweep or crook)
- Clear of knots or branches (lower 9 to 17 feet)
- Solid (no damage or rot)
- Large (minimum diameter of 10 inches for saw-timber, about 14 inches for veneer, and 18–22 inches for high-value veneer)

Improper cutting, handling or transport of high-value logs can greatly reduce their value. It is recommended to leave the logging of high value material, such as veneer-quality black walnut or oak, to a qualified logger.

## ***Profit Potential:***

Veneer-quality timber offers the greatest profit potential, with a value that may be several times that of sawtimber. Profits can also be high for carving wood, such as high quality basswood, or novelty wood like burls although these markets are limited.

Black walnut tends to have the greatest high end profit potential of the hardwoods grown in southern Minnesota, but prices can be quite variable. Red oak (especially veneer-quality) offers good profit potential with more price stability. Hard maple, ash, and black cherry are similar in profit potential, and generally fall in same range as regular sawtimber. It is difficult to produce high quality black cherry in Minnesota, however, which influences the prices received for this wood.

Overall, the estimated rate of return for growing high value hardwoods, adjusted for inflation, is about 5 to 6% per year. The following describes several factors that affect selling price:

### **Factors Affecting Tree Selling Price:**

**Species:** i.e. Black walnut is more valuable than ash.

**Tree Size:** Potential tree value increases with size.

**Tree Quality:** Higher quality = greater value.

**Volume of Sale:** Logger's fixed costs per tree are less with larger volumes.

**Distance to Market:** Greater distance = higher costs.

**Site Accessibility:** Hard-to-access sites = higher costs.

**Logging Difficulty:** Affects costs by influencing equipment that can be used and harvest rates.

**Market Conditions:** Better conditions = better prices.

**Mill's Log Inventory:** Price received tends to be higher when inventories are low.

**Harvesting and Skidding Technique Restrictions:** Restrictions tend to increase logging costs.

Various programs may provide financial assistance for establishing trees, depending on the site, management, and landowner goals. See your local Soil and Water Conservation District, NRCS, or DNR personnel, and the References and Resources section for further details.

## ***Market Opportunities, Development, and Challenges:***

A major market challenge in the production of high value hardwoods is that it is difficult if not impossible to predict what the price of wood will be in 50 to 80 years. Changes in supply and demand, the economy, global competition, land prices, tax laws, and the use of wood and tree by-products make it difficult to predict the long-term economics of high value hardwood production.

Using historical trends as a guide, red oak and black walnut appear to have the best market potential of high value hardwoods in southern Minnesota. Hard maple, cherry, and ash also appear to have relatively strong market potential. The basswood market, however, has been more unstable. Even though Minnesota produces some of the highest quality basswood in the world, transfer of the blind manufacturing industry (historically a major use of basswood) to Asia has depressed prices in the United States.

An advantage with high value hardwoods is that trees can be left to grow and increase in value if the market is not satisfactory when harvest is considered. Also, high value hardwoods will provide many benefits during their long life, regardless of potential future financial benefits.

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*Funding for this project was recommended by the Legislative Commission on Minnesota Resources from (the) Environmental and Natural Resources Trust Fund and the Bush Foundation* **July 16, 2007**