

# Strategic Tree Selection

SIDE VIEW

TOP VIEW

VALUE  
POTENTIAL

GROWTH  
POTENTIAL

HARVEST  
SYSTEMS

## Before

*Selected tree to promote* ← - - -



- ▷ Crowded canopies limit growth of the best trees and wildflowers in your woods.
- ▷ Promote trees that help accomplish your goals by removing trees that compete for sunlight and nutrients.
- ▷ 20-50 trees per acre are selected for promotion.
- ▷ Some landowners select for oak, walnut, and hickory, which are valuable timber species.

## After

- - - ▷ *Growth potential*



- ▷ Thinned woodlands make more sunlight available to selected trees, and increase their rate of growth.
- ▷ Oak trees require direct sunlight to regenerate.

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Before



Selected tree

▷ Selected trees grow faster, and more wildflowers can thrive in the sunny understory of a thinned canopy.

**Why Strategic Tree Selection?**

▷ **Produce More Nuts**

Walnut, oak, and hickory trees provide a critical source of food for wildlife. Thinning increases nut production 2-7x.

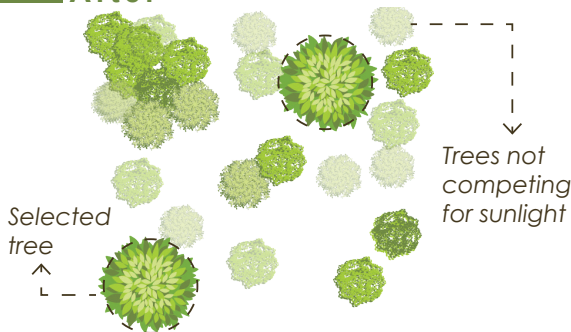
▷ **Double Rate of Growth**

Thinning more than doubles the rate of growth of selected trees.

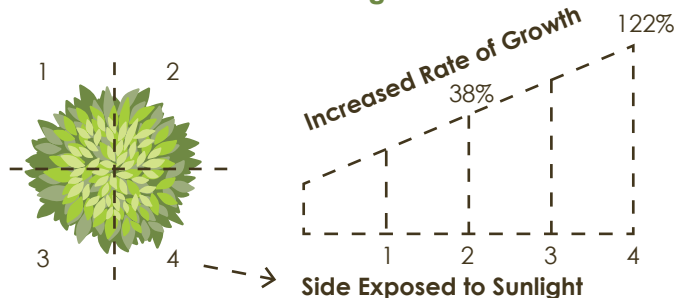
▷ **Higher Quality Timber**

When all four sides of a tree are free to grow, they create more valuable, quality timber.

After



**Free to Grow Rating**



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## Forestry Pays Long-term Dividends

Black Walnut  
No Management



**Age at Harvest:**  
125 yrs  
**Est. Tree Value:**  
\$0-700

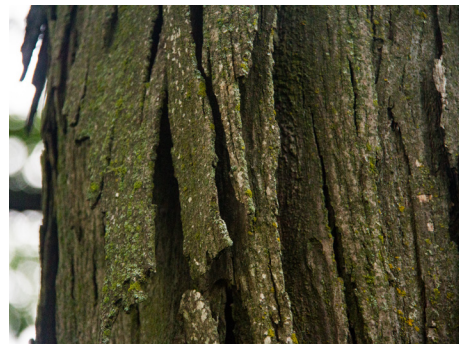
Black Walnut  
With Management



**Age at Harvest:**  
60 yr  
**Est. Tree Value:**  
\$3,300-10,000

### Common Iowa trees to select for:

- ▷ **Black walnut:** Highest value tree for timber. Produces nuts that are an important food source for wildlife.
- ▷ **White oak:** Second most valuable tree for timber. Acorns are a preferred food source for wild turkeys and other wildlife.
- ▷ **Shagbark hickory:** Nuts are a premium source of food for wildlife. Bats make a home underneath the loosely hanging bark.
- ▷ **Basswood:** Soft, easily rotting wood makes this a great wildlife den tree. Its flowers provide forage for pollinators each spring.



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SIDE VIEW

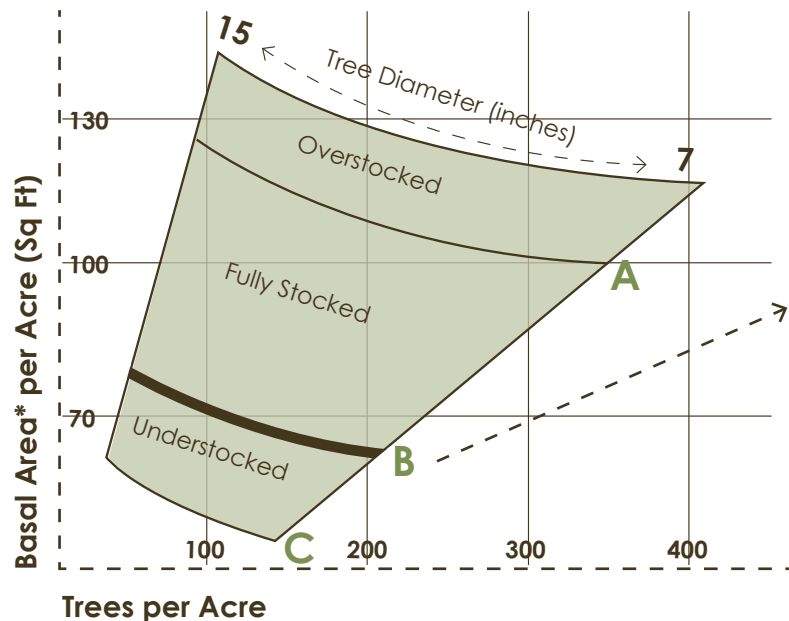
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## Growth Potential with Management



Trees grow most quickly when just fully stocked (the B line). The number of trees per acre and the diameter of the trees (measured in basal area\*) determine whether a woodland is understocked, fully stocked, or overstocked.

- ▷ **A Line:** Slowest growth of trees, fewest seeds produced before being dangerous for tree health (overstocked).
- ▷ **B Line:** Fastest growth of timber, most abundant nuts produced, and most vigorous growth.
- ▷ **C Line:** Too few trees and of too small diameter to be a healthy forest.

**\*Basal Area** - The area occupied by tree trunks. Measured by the cross-sectional area of each tree trunk at 4.5 feet above the ground.

Graph adapted from Iowa Foresters' Handbook by the Iowa DNR.