

Studies have shown that trees keep streams cooler in the summer months and warmer during the winter. This is important information to remember if fisheries are a consideration. If water temperatures are too warm, preferred fish species stop reproductive activities. On the other hand, cooler water temperatures prevent undesirable fish species from increasing in the aquatic community. Therefore, trees

along a stream play a vital role in establishing and maintaining desirable fish habitat.



The cooling effectiveness of trees decreases with increasing stream size. However, if temperature control is accomplished in the smaller streams, it will help reduce temperature-

associated problems in larger downstream locations.

If water temperature isn't a primary concern, there is more flexibility in the number of crop trees that can be released adjacent to waterways. In most Eastern hardwood forests, applying a crown-touching release to more than 25 crop trees per acre admits sufficient light to encourage patches of dense understory development.

Some landowners may not realize the cooling effect trees along waterways can have on the water – and the beneficial influence that results for the aquatic life that inhabits the stream.

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V. Managing Aesthetic Crop Trees

Aesthetic enhancement is an idea that appeals to many private, non-industrial landowners. They may not want timber production as a primary objective because they know their forestlands can also produce non-priced benefits such as spring blossoms and colorful fall foliage. The beauty of the forest increases recreational enjoyment of the property, which encourages stewardship of the forest resource.

Following is an *example* of selection criteria developed for aesthetic crop trees.

Aesthetic Crop Tree Selection Criteria

- Species that produce attractive flowers or colorful foliage
 - Healthy crowns; large relative to dbh
 - A few dead, upper-crown branches are acceptable
 - Stump-sprout or seedling-origin stems are acceptable
 - Understory trees acceptable if release is not high risk
- Visible from travelways and adjacent to streams, when opportunity exists
- In many cases, expected longevity of 20+ years
- Unique trees (old pasture trees with spreading branches, unusually shaped trees, trees with attractive bark characteristics, etc.)

Although many of the flowering species are understory trees such as dogwood, serviceberry, and redbud, it is still important to make your crop tree selections from the trees that have the best crowns. Expose them as fully as possible to the sunlight for more abundant blossoms.

Species that provide pleasing fall colors, such as maples, sourwood, and black gum, should also have good crowns. When these trees exist in a dominant or codominant position, they are likely to have the best advantage for rapid growth following release. The better they are released, the more visual benefits they will produce.

If aesthetic crop tree release is to be done in conjunction with a harvesting operation, you may want to caution the landowner beforehand that this is not an easy task. Understory trees are especially susceptible to damage from logging equipment and falling trees, sometimes making their release a high-risk activity that can result in loss of the tree.



Trees that provide fall colors and spring blossoms are especially attractive along streams and travelways where there is more opportunity to view them.



If the landowner enjoys spring blossoms, exposing the crowns of trees like this serviceberry to full sunlight will produce an abundance of beautiful flowers.



These old, open-grown sugar maples have been identified as aesthetic crop trees because the landowner likes their shape and size. They are also a reminder of the agricultural heritage of this landscape and the days when a farmer's children climbed on their branches.

The location of aesthetic crop trees can significantly affect their value and importance. When visible from travelways, they can be enjoyed by a greater number of people. Trees with attractive fall foliage or spring flowers are particularly desirable along streams where their reflections in the water add to the beauty of the landscape.

Because trees are phototropic and grow in response to varying amounts of light, those located along streams, lakes, and ponds can develop some interesting shapes. These unusual trees contribute to the aesthetic attractiveness of riparian areas and are frequently endearing to landowners.

There may be a few trees that are considered special by the landowner, perhaps because of size, uniqueness, or other distinctive characteristics. Usually, managing these aesthetic crop trees is simply a matter of retaining them in the stand, regardless of their crown position or expected longevity.

Another consideration of special interest to landowners is the density of understory in the wooded area along waterways. Generally, landowners prefer a park-like environment near the water's edge so they can walk along unimpeded by thick brush.

This does not mean, however, that aesthetic crop trees near water can't be managed. When a relatively low number of crop trees per acre receive a crown-touching release, understory development is limited.

Aesthetic crop trees that are visible from trails and waterways can be enjoyed by a greater number of people.

This small, blooming serviceberry has been released so its crown will expand. It is adjacent to a stream and visible from the road. Slash from the cut trees has been pulled out of the stream and piled to provide habitat and minimize the negative appearance of the debris.

