



Wildlife 101

Some Like it Dry, Some Like it Sweet: Balancing Grapevine Presence in Your Woods

by Matthew T. Springer

Many times in natural resource management, decisions are situational and dependent on either the site-specific environment or the overall goals of the landowner. A prime example of this is dealing with, and finding a balance with, wild grapevines (*Vitis spp.*) in your woods. Some of us may be more familiar with the benefits of the cultivated grapevine (*Vitis vinefera*), but there are over a dozen identified species of wild grapevines in the eastern United States. Grapevines can be viewed negatively by foresters from a timber-production standpoint. However, those with a wildlife interest believe they are an integral food and cover component within a forest. Where you fall is dependent completely on the goals of your forest management plan, but there are ways to balance both timber production and having a healthy amount of grapevines in the woods to provide wildlife benefits.

Wildlife Value

Before we get into why grapevines are a problem, let us start with the positives of grapevines. Grapevines offer a highly nutritious and reliable food source for more than 80 wildlife species. This generally takes the form of the soft mast that the vines produce, but the foliage can be consumed as forage by many different species as well as the insects that live on the vines and become food for birds. For birds, the vines offer escape cover from predators as well as nesting material. In Kentucky, grapevines are especially important to many bird species and mammals including wild turkey, ruffed grouse, squirrels, rabbits, white-tailed deer, black bear, elk, and many species of songbirds.

Timber Production Issue

While grapevines may be good for wildlife, they may cause damage to trees. With grapevines, it usually is situationally dependent on how negative their presence is, but they can be incredibly harmful to certain

forest-management goals. Grapevines can damage hardwood trees by breaking tops and limbs, twisting and bending the tree's bole, and uprooting trees. Unfortunately, these things negatively impact tree and timber quality, and in some cases even kill the tree.

Grapevines do incredibly well on high-quality sites and locations with ample sun. They compete for light and canopy space as they grow in a stand which may result in creating dense amounts of vines and foliage in tree branches creating a major issue in extreme weather events as the extra weight may cause those tree branches or tops to fail. Unfortunately, many woodland owners experienced a prime example of this following the last few ice storms in Kentucky.

One of the issues with managing grapevines is their ability to be prolific. Grapevine density is usually highest within the 10- to 20-year-old stands when an aggressive harvest has previously occurred. In a study on their presence and treatment in young forest stands in the Hoo-sier National Forest, stand densities reached upwards of 1,200 vines per hectare within this stand age class. This density quickly dropped off to almost 10% of that in stands 10 years older (Morrissey et al. 2009). Older stands or those that had not been as heavily harvested will have a substantially lower density of vines.

Finding a Balance

Ultimately, managing grapevines will come down to two primary issues: 1) goals of the landowner and 2) logistical limitations in treating grapevines within the stand. From the standpoint of the landowner, if the goal is timber production, then an aggressive removal approach of grapevines is warranted. If wildlife is a component of the forest-management plan, then leaving some grapevines is warranted. The amount should be based on the habitat needed to meet the wildlife-management goals for species being managed. Some species such as wild turkey or ruffed grouse will require more grapevines on



the property than white-tailed deer.

The good news is that both timber production and wildlife can be balanced when it comes to grapevine management. You can leave grapevines in areas where stands are lower quality, riparian areas, or on the edges of the forest where the grapevine will thrive making management difficult. In high-value stands that are within a few years of a harvest or areas immediately adjacent to regularly traveled trails that may present a safety hazard if a tree falls, a more aggressive treatment approach is warranted.

One strategy is to manage areas called "arbors." Arbors are open areas within the canopy where grapevines will become incredibly dense and thick making it almost impossible to treat. These areas will provide good cover and ample food for wildlife. To mitigate the vines growing into surrounding trees, you can remove border trees to restrict the spread of the vines and keep the arbor where you want it to occur. Active management to reduce or eliminate grapevines outside of these designated arbors ensure other areas do not become arbors, helping to create the balance between wildlife and timber production.

How to Treat Grapevines

Timing for treating grapevines will vary by method during the year, but a good guideline is to treat grapevines at around five years before the stand will be harvested. Multiple types of treatments are effective, including mechanical and chemical. For mechanical treatment, use loppers, brush axes, machetes, or handsaws, while chainsaws should be avoided for safety concerns. Make two cuts on the vine to help keep track of treated plants, one at about head height and another cut a few inches to a foot off the ground. If the vines contact the ground in multiple areas, then you want to treat them at each point they are contacting the ground. Regardless of size, make sure every vine is severed. Grapevines do not tolerate shade well, so they are easier to treat in forested sections with a full canopy. After grapevines are cut they will sprout, but in the areas with little sunlight these sprouts will die off in a few years. For wildlife, they are also great browse, which also aids in killing the vine off. In areas of higher light, a chemical treatment will be required. Chemically, you can treat grapevines using 2,4-D or Tordon101R using the cut stump method during the early spring and fall. A 20% solution of glyphosate can be applied as a basal spray to cut stumps. As with all herbicide applications, make sure to follow the label. Remember the label is the law.

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