

Recommendations for Ash Management in Kentucky

by Jeff Stringer



EAB infested woodlands.

Photo courtesy: Leah Bauer, USDA Forest Service Northern Research Station, Bugwood.org

With the emerald ash borer (EAB) slowly spreading in Kentucky, woodland owners are increasingly faced with deciding how to manage their ash. This article provides information and recommendations for those who have ash in their woodlands and those who are contemplating establishing hardwood plantations.

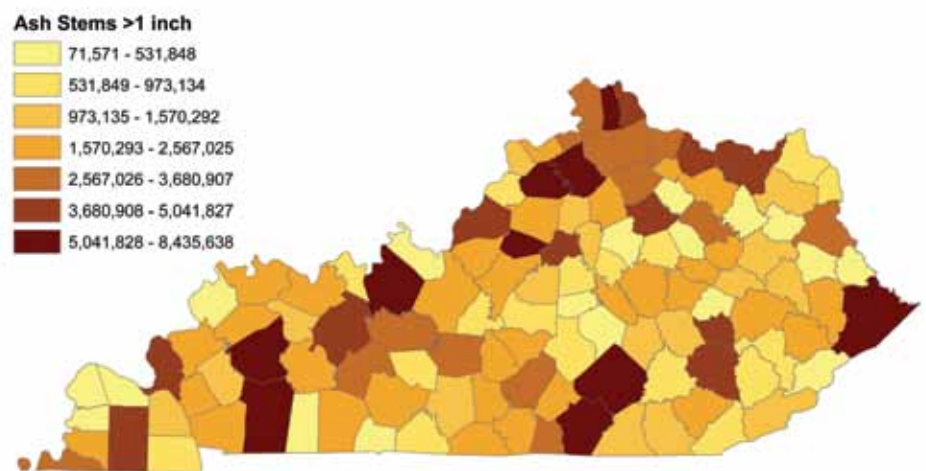
Background

Kentucky has two widely spread ash species, white and green, and blue ash that is common to the central bluegrass region of the Commonwealth. All of these species are susceptible to being killed by EAB. White ash is an upland ash found throughout the state but is particularly plentiful in northern Kentucky. Green ash is typically found along the river and stream bottoms of Kentucky. Interestingly there is also an upland variety of green ash called red ash that also occurs in conjunction with white ash on upland sites. Regardless, woodland owners must make decisions on how to manage in the face of invasion by the emerald ash borer. Figure 1 shows the distribution of ash in Kentucky. The map shows that ash occurs throughout the state at a relatively low level; however, there are areas where it is clearly prominent. Some

woodland owners in northern Kentucky, for example, may have as much as 20 or 30 percent ash in the main canopy of their woods. However, there are other regions where ash is scarce and woodland owners may not have any present in their stands. Regardless, there are thousands of woodland owners throughout Kentucky that have ash and must make decisions regarding its future in light of EAB invasion.

EAB is a small insect that attacks trees of all ash species regardless of size or vigor. Left untreated trees that are infested will die. The small 1-inch-long emerald-colored

Figure 1. Distribution of Ash Stems in Kentucky (2011)



Source: Kentucky Division of Forestry and the U.S. Forest Service Forest Inventory Analysis Program

flying adult lays eggs in the bark of ash trees, and the 1- to 1.5-inch white larvae grub eats and tunnels around in the inner bark. Multitudes of feeding larva ultimately girdle the inner bark of the tree, starving the roots of food produced by the leaves. Over the course of several years the tree dies. The wood, however, is not directly harmed by the grub. Although treatments have been approved to keep EAB out of smaller yard and urban trees, there are not similar approved treatments that can be used in the woods or in forestry plantations. Therefore, as of right now woodland ash is at risk. The risk is based on the local presence of EAB.

As of 2012, there are large regions of the state that are still EAB free and may remain so for some time. In counties where EAB has been found, a quarantine is required. Understanding how the EAB quarantine works will allow woodland owners to make good management decisions. The quarantine places a restriction on the movement of ash logs, lumber and all hardwood firewood from the quarantined area. The restriction on hardwood firewood is because pieces of ash are too difficult to recognize when mixed in with other species.

To move any ash out of a quarantined area, the owner of the ash logs, lumber or hardwood firewood (generally a logger or sawmill) must get a compliance agreement. This compliance agreement is free of charge and easy to obtain, however it is a binding document that requires specific procedures for moving ash from the quarantined area. In the winter (October to April) the Compliance Agreement allows the movement of ash untreated but requires the place where the ash is going to also have a Compliance Agreement. The summer (April to October) is flight season for the EAB adults and those having a Compliance Agreement are required to heat treat, fumigate or, in the case of logs, debark all ash before it can be moved out of the quarantined area. These requirements normally stop loggers from cutting ash in the quarantined area in the summer when the logs have to be transported outside of the quarantined area. Woodland owners located in a quarantined area and that have a significant amount of ash in their stands should develop timber harvest agreements that provide enough time for cutting ash during October to April.

A Compliance Agreement is required only when ash or hardwood firewood is moved out of the quarantined area. Cutting and hauling ash or firewood within the quarantined area is business as usual and no Compliance Agreement is required.


The by-product of quarantine stipulations can be a reduction in the stumpage value (the value of timber as standing in the woods) of ash. Initially when the quarantine occurs, stumpage values can go down dramatically, especially if the quarantined area is small, like one or a few counties. Loggers will often not have a Compliance Agreement nor will local sawmills. Once they have them, ash can legally start moving again.

If the quarantined area is relatively large with one or more sawmills located in the quarantined area, loggers


can cut and haul ash without a Compliance Agreement. However, there is still a reduction in stumpage value for ash even in large quarantine areas because sawmills are required to ensure that all green or air-dried ash boards they produce are wane free if they are in a quarantined area and are shipping outside of the quarantine. They must have squared and clean edges if they are going to ship the lumber, and this requirement reduces yield by 15 to 20 percent and reduces the money they will pay for logs brought to them by loggers. Consequently the logger, or anyone buying timber, will pay less for ash stumpage. Mills that kiln-dry ash are required to have the ash certified before shipping outside of a quarantine area. The requirements create more handling and paperwork for ash, which tends to soften log values.

Managing Ash

Management of ash should consider the size and merchantability of ash trees within a woodlands as well as the threat from EAB. These two factors guide the recommendation for ash management through three different threat levels: green, yellow, and red.



**No EAB in
Your Woodlands**



**No EAB
in Region**

Threat Level: Green

In woodlands with no EAB infestation that are located in regions of the state where no EAB has been found, existing ash can continue to be managed as usual. If you are interested in timber revenue, cut ash when it is economically mature, typically 18 to 20 inches in diameter and up. However, ash this size can also be retained unless EAB conditions change. Immature ash can be allowed to grow, however, money and effort should not be spent in developing ash in these woodlands. For example, it is not recommended to conduct a crop-tree release and select ash as a crop tree. There is no problem with leaving uninfested ash in the stand, but spending money on these trees may not be prudent. Note that there is no evidence that improving the vigor of ash trees, which could be accomplished with a crop-tree release, will render them more resistant to EAB infestation or subsequent mortality. However, if you leave ash in your woodlands but have not spent money on it or have not increased the proportion of ash, you will develop mature ash if no EAB shows up, and you have not lost anything significant if it does. If you are considering planting a mixed hardwood stand, including ash in the mix may be problematic. However, as long as the percentage of ash is relatively low, planting is not a problem. It is not recommended to establish single species plantings of ash (which is typically not done) or to establish plantings where ash is a significant proportion of the planting. Since ash is not a particularly important wildlife food, the issue of reducing ash in mixed species plantings is not a significant issue.

*No EAB in
Your Woodlands*

*Region Infested
but Not Local*

Threat Level: Yellow

In woodlands where EAB has not been found but the region contains EAB, it is important to plan for eventual EAB infestation. Use a forester to help provide advice and specifically a consulting forester to determine the current value of ash sawlogs and veneer. If their value is not extremely low, consider selling the mature ash. Immature ash can be retained and allowed to continue growing. If your woodlands is in a quarantined area, allow enough time in the timber harvest agreement to allow the logger to cut and haul between October and April, the only feasible time that they are allowed to haul ash outside of the quarantine area.

No money should be spent on treatments to encourage ash growth, as discussed previously. If you have a significant amount of economically immature ash, discuss this issue with your local forester and develop a plan to deal with small diameter ash if an EAB infestation develops locally or in your woodlands. Planting of ash is not recommended.

*EAB in Your
Woodlands*

*Locally
Present*

Threat Level: Red

In woodlands where there is an infestation of EAB or if an EAB infestation is in close proximity, all ash, including both economically mature and immature, should be cut and sold. The timing of this activity should be determined with the assistance of a forester. Merchantable sawlogs of ash (greater than 12 or 14 inches in diameter) can retain solid wood even after EAB is present or after they have been dead for a short period of time (up to one year). It is important to consider logging these trees even if timber is not your primary objective. Leaving standing dead trees (snags) provides food and habitat for some wildlife species and a certain number of snags are typically recommended for wildlife management. However, a large number of snags represents a safety hazard from widow makers (dead branches), and removal of trees within two years after they have died is recommended. As indicated previously, provide enough time in a timber harvest agreement for loggers to remove ash from October to April if they are hauling the ash outside of the quarantine area. No effort should be directed towards trying to culture ash in these woodlands either through planting, timber stand improvement or crop-tree release.

Summary

EAB continues to spread in Kentucky. Ultimately how many counties will be infested is unknown. This predator poses a risk for woodland owners who have ash in their woodlands and is especially important for woodland owners in central and northern Kentucky.



Photo courtesy: Joseph O'Brien, USDA Forest Service, Bugwood.org

If you have ash in your woodlands, have a plan in place for how you are going to deal with the emerald ash borer. Don't wait until all your ash trees look like this.

If you have ash present you should consult with your forester to plan for its management and make contingency plans. Generally if no EAB is present in your region you can continue to feel comfortable with business as usual with the exception of not spending a significant amount of money improving your ash. If EAB is present in your region you need to start to consider selling your mature ash. If you have EAB in your woodlands or it is present locally you may want to consider liquidating both your mature and immature ash. Remember to provide enough time in timber harvest agreements so that loggers can cut and haul ash from October to April. Recognize that every woodland is different and timber markets and the EAB infestations can change quickly. Discussing your options and making contingency plans with a forester that is up-to-speed on the EAB situation is recommended.

For more information about the Emerald Ash Borer and how to deal with ash on your property please visit:

- www.ca.uky.edu/forestryextension/EAB.php
- <http://forestry.ky.gov>
- www.kacf.org

About the Author:

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From the Woods...

Kentucky Woodlands Magazine interviewed Dr. Maurice Cook, Franklin County woodland owner, to learn about his experiences with the emerald ash borer on his property.

KWM: Please tell us a little about the management objectives for your property.

Maurice Cook: My primary objective is to have a healthy, sustainable woodland that will produce good timber and also enhance related natural resources. To achieve this objective, I have done (or am doing) the following things: 1) Completed a post-harvest timber stand improvement program following a timber harvest in 2000; 2) Currently practicing hardwood crop tree release through the Conservation Stewardship Program administered by NRCS; 3) Currently implementing Forestry BMPs for soil erosion control and watershed protection.



Maurice Cook, his wife and granddaughter.

KWM: How did you learn you had emerald ash borer on your property?

Maurice Cook: Ben Lyle, Forester with the Kentucky Division of Forestry (KDF), advised me of that fact some time in 2008. Ben had observed signs of declining ash trees in 2006. However, the presence of emerald ash borer (EAB) was not confirmed until two years later. I understand that my property has the dubious distinction of being the first confirmed EAB site in Franklin County.

KWM: Has the presence of emerald ash borer impacted the management of your property? If so, how?

Maurice Cook: It has modified the timetable for my next timber harvest. Ash was a significant tree species on the property and much of it would have been ready for harvest in the next 3-4 years. When the presence of the EAB was confirmed, Ben Lyle and I discussed the situation and decided that the volume of ash trees was too low to justify a harvest. Furthermore, the modest amount of revenue generated from an ash tree harvest would have been offset by damage to saplings and crop trees. Oak regeneration on the ash tree sites is going extremely well. The consequence, though, is that the next harvest is now about 10 years away in order for more of the oak trees to reach a desired size for harvest, and for the very small (1-2 inch diameter) oaks to become large enough to avoid being uprooted or permanently damaged by the timber harvesting process.

KWM: What advice do you have for other woodland owners that are currently dealing with emerald ash borer or might have to in the future?

Maurice Cook: FIRST AND FOREMOST, get assistance from a professional forester. That individual can tell you if you have the EAB, which gives you a starting point in planning how to deal with it. Even if you don't have the EAB, a professional forester can help you plan in the event you do have it---which is highly probable considering the aggressiveness of the EAB being what it is. I am an absentee landowner. Thus, I have found the services of the KDF absolutely essential in enabling me to achieve the objectives I have for my woodland.