

Managing Emerald Ash Borer

by Dan Balser

Emerald Ash Borer (EAB) continues to infest Ohio ash trees since its discovery in Lucas County in 2003. The Ohio Department of Agriculture (ODA) vigilantly monitors ash trees to determine if EAB is present in Ohio counties and tracks the insect's spread in the state. Natural spread of EAB is relatively slow, but human-assisted movement on things like firewood or nursery stock can move the insect to a brand new territory literally overnight. To reduce the risks associated with this artificial spread, ODA has implemented a quarantine program that regulates the movement of materials that pose a risk of moving EAB. These regulations must also be considered when planning activities aimed at managing EAB.

These monitoring and regulatory activities certainly help Ohio keep track of EAB populations, but the most often asked question is what can be done to manage the insect when it infests ash trees on my property? We have learned a lot since 2003, but five years is not enough time to yield all the answers. Communities are busy preparing management plans to reduce the hazard potential of dead ash trees along streets, in parks, and in home landscapes. Insecticide treatments have shown some promise for protecting individual landscape trees, particularly if applied before the tree is heavily infested. While effective, these treatments can be expensive and must be applied annually to ensure adequate tree protection. The big question regarding these treatments is whether they will continue to be effective over an extended period of time or can EAB eventually infest and kill a tree even if it is treated regularly.

Complicated questions also exist for people managing forested areas threatened by EAB. Ash trees may be numerous in some woodlands. While these trees may not pose a hazard to property if they die and fall, they still have an intrinsic economic and ecological value to the property owner and Ohioans. How can these values be protected? The factor that makes this a complex question is the composition of the woodland. Each forested area is unique, and the number and size of the ash trees growing in the forest largely determines what can and should be done to manage the resource. An individual's land management objectives and the local wood market will also influence how a property owner responds to the EAB threat. A professional forester can help you evaluate your forest composition and help you consider other influencing factors. They can also use the information gathered to develop a management plan that fits your property and your objectives.

A woodland management plan clearly helps a property owner organize their thoughts, weigh their options, and devise an action plan, but what does it do to protect a forest from EAB? Emerald ash borer larvae feed on the phloem found under the bark of ash trees. A study completed at Michigan State University (McCullough and Siegert) found that 89 EAB could successfully develop in 1 square meter (surface area) of ash tree phloem. The surface area of phloem limits the number of EAB that can grow in a woodland area. Reduction of phloem surface area in an area can, in turn, reduce the number of EAB emerging from ash trees during an outbreak. This means less EAB pressure on un-infested ash trees on the site and fewer EAB spreading from the site to new areas. The study also indicates that the larger ash trees contain the vast majority of the phloem in a forest. More than 65% of the surface area of phloem is found in trees greater than 10 inches DBH (diameter at breast height). Trees of this size often make up less than 10% of the total number of ash trees in the forest, but their removal accounts for large reductions in phloem available for EAB infestation. In addition, larger trees produce 30% more EAB on average due to the increased thickness of the phloem layer in larger trees.

What does all this mean to a woodland owner? It essentially means that removal of merchantable ash trees from a forest as part of a comprehensive forest management plan can be an effective way to reduce the size of potential EAB infestations on your property. Depending on the composition of the forest and local market conditions, this offers a practical way to take positive and proactive action against EAB. Again, this may not work for every forest because each one is unique. If you need help contacting a professional forester for assistance, please visit <http://callb4ucut.com/>.

As mentioned earlier, local market conditions will affect your ability to find a buyer for ash trees from your forest. These conditions will vary from place to place, but recent market reports have been very encouraging. During the past several months, ash lumber has been in demand according to *Hardwood Review Weekly*. A recent issue of this industry publication stated "Ash is the only species with good demand across all grades" and "Ash is the only item with any real upward price movement." Given these market comments, maybe the time to take action is now.

