

## Key Points and Summary Recommendation

- Insecticides can effectively and consistently protect even very large ash trees from EAB, even under intense pest pressure.
- Drought stress inhibits uptake and transport of systemic insecticides. Supplemental irrigation will be needed during dry periods.
- Unnecessary insecticide applications waste money. However, EAB infestations are very difficult to detect when populations are low. Once EAB has been detected within 10-15 miles, your trees may be at risk. Be aware of the status of EAB in your location. Current maps of counties and states where EAB has been found are available at [www.emeraldashborer.info](http://www.emeraldashborer.info). Remember, however, that once a county is quarantined, regulatory surveys end and maps for that county are no longer updated. In some areas, local information on EAB infestations may be available from city, county or state officials.
- Trees exhibiting more than 50 percent canopy decline (thinning or dieback) are unlikely to recover even if treated with a highly effective systemic insecticide. Trees that are already infested and showing signs of canopy decline when treatments are initiated may continue to decline the first year after treatment, and then begin to improve the second year, as the trees recover. Effectiveness of products varies and depending on the product applied and the pest pressure, trees with lower levels of canopy decline may not recover despite treatment.
- Emamectin benzoate consistently provides at least two years of EAB control with a single application, even in large and very large trees under intense pest pressure. It also provided a higher level of control than other products in side-by-side studies.
- Trunk injections of azadirachtin affect EAB differently than other systemic insecticides. Results from a recent study indicate azadirachtin should provide effective protection for one to two years, depending on EAB pressure.
- Basal trunk sprays with dinotefuran applied annually effectively protected ash trees up to 22 inches DBH in several studies. It is important to calibrate sprayers to ensure the proper rate of the formulated product is applied.
- Imidacloprid and dinotefuran soil applications provided effective EAB control of trees up to 22 inches DBH (larger trees were not tested) when applied annually at the highest labeled rate, even under intense pest pressure. Soil drenches and injections are most effective when the product is applied at the base of the trunk. Generally, imidacloprid soil applications are more effective when applied in the spring than in the fall. Soil injections should be no more than 2-4 inches deep, to avoid placing the insecticide beneath feeder roots of the tree. To facilitate uptake, systemic trunk and soil insecticides should be applied when the soil is moist but not saturated or excessively dry.
- When treating trees greater than 15 inches DBH with imidacloprid soil applications, select a product that allows a higher rate (2X rate) to be used. Not all imidacloprid products can be applied at that rate, so check the label carefully. Users must comply with all restrictions on the frequency of applications and the amount of insecticide that can be applied per acre in a given year.