

Status and Plans for Burnham Park Ash Trees

Three ash trees in Burnham Park have recently been classified as Heritage Trees for their historic significance. The Ash Tree Borer infestation and its effect on these trees was addressed at the September 10, 2019, meeting of Morristown's Shade Tree Commission.

Dr. George C. Hamilton, chair of the Department of Entomology, director of the Graduate Program in Entomology, and extension specialist in pest management, and Robert Lindsley, an I.S.A. Certified Arborist and New Jersey Certified Tree Expert who is an Arborist Representative for Bartlett Tree Experts were present to discuss treatment options for ash trees, focusing on the organic NEEM product.

Dr. Hamilton said that NEEM (or azadirachtin) is a botanical insect growth inhibitor that has been around for ten years. Its primary effect is to reduce the number of eggs and emerald ash borer lays; it is only somewhat effective against adult ash borers as it does not kill them. It is best administered by injection in the spring, preferably in May, and must be used every year.

NEEM's toxicity category is "caution", the least problematic category that includes many chemicals sold for household use. It does affect pollinators and can affect arthropods if it enters bodies of water. These are not generally issues for ash tree treatment, proper injection practice minimizes any exposure to the rest of the environment and since ash trees are wind pollinated, pollinators do not attract pollinators. Leaf litter from a treated tree will not cause problems.

The alternate treatment is emamectin benzoate. It also is in the "caution" toxicity category and is preferably applied via injection, for the same safety reasons that NEEM is. It does kill adult emerald ash borers and prevents larvae from getting into the tree. It has a wider timeframe for application than NEEM (it can be applied any time the tree is in full leaf) and needs to be applied every two (and possibly) three years.

The cost of application is roughly the same for both NEEM and emamectin benzoate but, since the latter needs to be applied only half as often at worst, it is the cheaper option overall.

Rob Lindsley backed up many of Dr. Hamilton's comments adding that according to studies he has seen, NEEM has been undetectable in bodies of water or in the ground near treated trees. He said that he has seen little difference in effectiveness between the two treatments but that the NEEM sample size is small; most of Bartlett's customers opt for the less expensive emamectin benzoate treatments.

Both experts emphasized that treatments of any kind are most effective before a tree shows any signs of attack and chances of success decrease rapidly with increased evidence of crown dieback. Once dieback reaches 25 to 30% there is essentially no hope of saving the tree.

Rob Lindsley noted that there was already 30% or more die back in two of the three Heritage trees (consistent with the estimate by Rich Wolowicz, Morristown's arborist). He also indicated that it would not make sense to try to treat the one good tree this fall as it is too late in the season and would just be a waste of money. The optimum treatment time – for either method - would be May.

After hearing from Dr. Hamilton and Rob Lindsley, the Shade Tree Commission indicated it will re-evaluate the condition of the one good tree in March or April to determine whether they might go ahead with treatment. No decision was formally made concerning the use of NEEM vs. emamectin benzoate. Rich Wolowicz, the arborist, was at the meeting and will clearly bring his own expertise to the decision. Kristen Ace, the Shade Commission chair, said that they would keep the Burnham Park Association informed.