

Wildcat District Ag News Report



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Emerald Borer Attacking Ash Trees

The Emerald Ash Borer (EAB) is likely to become a very serious pest locally within the next few years. In October of 2016, an adult EAB beetle was captured in a trap in Delaware County, Oklahoma. This insect will have a devastating effect on our urban forest communities.

The EAB beetle is a fairly small, slender insect. From head to tail it reaches about two-thirds the width of a penny. It is somewhat bullet-shaped in appearance with the tail end narrowing to a blunt point. It is about one-fourth as wide as it is long. Although small in size, this insect's brilliant metallic green wing cover and bronze colored head will certainly garner your attention. The EAB is not easily confused with other metallic green beetles in the area including the green June beetle and Japanese beetle, which are much larger and broad bodied.

The EAB beetles are typically present during the summer months. Beetles emerge from infested trees in the spring and feed on the foliage. The small, D-shaped exit holes in the bark and chewed notches in the foliage are signs that the EAB may be present. After mating the female beetles deposit their eggs on the bark of ash trees. The eggs hatch and the tiny, legless larvae chew their way into the inner bark tissues (cambium and phloem) of the trees where they feed throughout the remainder of the growing season. The larval feeding disrupts the flow of water and nutrients within the trees. At the season's end, fully developed larvae chew pupation cavities deep into the wood and overwinter. Pupation and emergence of adult EAB begins the following spring.

The crowns of infested ash trees gradually become noticeably thin over a two to three year period. The loss of foliage in the infested trees is a response to the reduced flow of water and nutrients. Branch dieback begins and eventually encompasses the major limbs. In response to the die back the trees develop epicormic shoots along the main limbs, trunks and root crowns. The foliage of epicormic shoots is usually much larger than what normally occurs on the branches of healthy ash trees. Heavily infested trees become severely weakened and eventually die.

Complete containment of the EAB is likely to no longer be possible; this pest will eventually reach the ash trees in our communities. The economic cost of removing dead and dying ash trees will be significant. The spread of EAB can be significantly slowed by not moving harvested wood (i.e., fire wood) out of quarantined areas. When a local infestation develops, valuable ash trees can be protected with systemic insecticide treatments. Unfortunately, insecticide treatments must be renewed every year for the life of the trees; this will be a very expensive option.

Research into a biological control of EAB is on-going; parasitic insects of EAB are being identified and studied; some introductions are currently being evaluated. If successful, biological control may prove to be the best hope for preventing the decimation of the North American ash tree population.

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