
EMERALD ASH BORER INFESTATION OF ASH STUMPS

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ABSTRACT

The emerald ash borer (EAB), *Agrilus planipennis* Fairmaire (Buprestidae), was first found in North America in 2002. Eradication efforts are currently underway for this insect in both Canada and the United States. As part of the eradication program, thousands of ash trees are cut and chipped. Ash trees are known to produce stump sprouts, and therefore, herbicides are often applied to the cut surface of the stump to inhibit sprouting. In 2004, we initiated three studies in southern Michigan to evaluate the degree of stump sprouting and subsequent EAB infestation in relation to 1) time of felling, 2) stump height, 3) tree species, and 4) application of herbicide (Garlon).

In the first study, we cut green ash trees at three Michigan sites during April, June, and September 2004. The trees were cut at three different heights (0-5 cm, 10-15 cm, 20-25 cm) during each felling period. We cut 9-11 trees per stump height class and cut date. EAB adults were free to lay eggs on the stumps of trees cut in April and June. However, for the trees cut in September, we had screened the lower trunk of each tree throughout the summer months of 2004 to protect them against EAB colonization. In late summer 2005, we will record the degree of sprouting on all stumps and inspect them for EAB exit holes. We will also debark half the stumps and inspect them for EAB larvae. In 2006, we will determine EAB adult emergence from the remaining stumps.

In the second study, we focused on the degree of sprouting and subsequent EAB attack in relation to tree species. We felled three black ash, green ash, and white ash trees of similar size at one site during June 2004. The stump height for all trees was 20-25 cm. In 2005, we will record the degree of stump sprouting and EAB colonization.

In the third study, we will evaluate the effectiveness of Garlon 3A in inhibiting stump sprouting and the ability of EAB to colonize Garlon-treated stumps. In this study, we cut green ash trees at three sites during May and June 2004. The stumps were cut to a uniform height of 20-25 cm. Garlon was applied to the freshly cut surface of half the stumps. We will record the degree of stump sprouting and EAB colonization in 2005.