

An economic analysis of Emerald Ash Borer management options

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This is the Emerald ash borer, *Agrilus planipennis*.
Credit: Stephen Ausmus

A new study in the *Journal of Economic Entomology* examines several options for managing the Emerald Ash Borer, an invasive insect that is destroying US ash trees.

The [emerald ash borer](#), *Agrilus planipennis* (Fairmaire), an invasive insect from Asia which was first found in the U.S. in the 1990s, has since spread to 15 states and is responsible for the deaths of millions of [ash trees](#). This insect has the potential to kill billions more trees and to do several billions of dollars worth of damage.

In "[Economic Analysis](#) of Emerald Ash Borer Management Options," a recent study published in the [Journal of Economic Entomology](#), the authors performed an economic analysis of management options to aid [decision makers](#) in preparing for likely future infestations. A relative economic analysis was used to compare a control option (do-nothing approach, only removing ash trees as they die) to three distinct management options: 1) preemptive removal of all ash trees over a 5 yr period, 2) preemptive removal of all ash trees and replacement with comparable nonash trees, or 3)

treating the entire population of ash trees with [insecticides](#) to minimize mortality.

The results show that the retention of ash trees using insecticide treatments typically retained greater urban forest value, followed by doing nothing, which was better than preemptive removal and replacement.

Preemptive removal without tree replacement, which was the least expensive management option, also provided the lowest net urban forest value over the 20-yr simulation.

The authors conclude that communities can prepare for emerald ash borer and attempt to minimize a significant loss in canopy in a narrow window of time through the treatment of ash, the preemptive replacement (underplanting) of nonash before ash trees die, the removal of the worst condition ash first, and the development of an emerald ash borer management plan in advance.

More information: dx.doi.org/10.1603/EC11130

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