



Monitoring for Emerald Ash Borer with Traps

Introduction:

Emerald ash borer (EAB) is spreading within Maine (www.maine.gov/eab). Some towns may wish to use traps to monitor for EAB. While the Maine Forest Service does not recommend trapping to be used *in place of* girdled trap trees, it can be used in conjunction with them. A girdled trap tree is more sensitive in detecting EAB, but the results are not seen until autumn when the trees are felled and peeled. Results from traps can be seen throughout the summer. Hanging a trap in a girdled tree may increase effectiveness of the trap and provide results before autumn (the tree itself becomes the most attractive 'lure'.)

The number of traps hung will depend on your budget. Traps should be hung on ash trees near high-risk areas such as:

1. Wood waste disposal sites including transfer stations,
2. Campground, recreation area, cottage community, summer camp;
3. Major transportation artery, rest area, truck stop;
4. Sawmill, firewood dealer, nursery, tree care company;
5. Residential or commercial property with recently planted ash;
6. Site of high attendance/ high profile cultural event that may be associated with movement of firewood: Pow-Wow ground, hunting lodge, NASCAR track, horse trail ride site, motor cross site, rafting and fishing camp.
7. Commercial site that brings high volume of product in on pallets or other solid wood material.

Types of traps:

Two types of traps are used for monitoring EAB, funnel traps and sticky-coated prism traps. Because of efficiency over a broad area and with many traps, USDA APHIS and cooperators have typically relied on the sticky prism traps. They require only 3 visits per season and screening at two dates. Funnel traps have a longer useful life but require many more visits. They may be the most economical for organizations covering a small area in their monitoring. If using the funnel trap, opt for models with at least 8 funnels. A comparison of prism and funnel traps is provided in the table below.

Type of trap	Pros	Cons	Notes on Maintenance
Prism (sticky coated corrugated plastic)*	One-time use (trap cheaper in long term, fewer visits/season)	Sticky glue can be difficult to work with	3 visits (deploy/ check and rebait/ remove)
Green Funnel**	Reusable (trap cheaper in long term, but more visits/season)	Multiple visits, additional material needed (paint filters, sample cups or bags, antifreeze, alcohol)	Visit every 2 weeks (up to 9 visits)

* Prism traps come in green and purple. There are several studies comparing the efficacy of the two; with inconsistent results. Prices range from approximately \$20-\$30,

** Maine Forest Service has a limited supply of funnel traps to lend cooperators. If you wish to buy them, prices range from approximately \$55-\$65.

Types of Lures:

There are two types of lures available. One is a single lure consisting of an ash leaf volatile, (Z) 3-Hexanol ("leaf lure" in table below). The other is a combination lure of the ash leaf volatile plus an emerald ash borer pheromone, (3Z)-Lactone ("combination lure" in table below), which some studies show can significantly increase the trapping success at low populations (from 60% of traps positive to 88% of traps positive).

All lures should be changed halfway through the trapping season (order 2 lures/trap for each season).

Sources for EAB monitoring supplies:

(This is not an exhaustive list of suppliers, nor is it an endorsement.)

Name	Web Address	Phone	Trap Types	Lure Types
AgBio Inc. (Colorado)	http://www.agbio-inc.com/	303 469-9221	Funnel traps, purple and green prism traps	Leaf lure
Synergy Semiochemicals Corp. (British Columbia, Canada)	https://semiochemical.com/	604 454-1122	Funnel traps, green prism traps	Combination lure, Leaf lure
Sylvar (New Brunswick, Canada)	www.sylvar.ca	504 444-5690	Funnel traps, green prism traps	Combination lure, Leaf lure

How to hang traps:

Traps MUST be hung in ash trees. Regardless of trap type, all are most effective if deployed in the open, sunny side of the ash tree, near the edge of the canopy, in the top half of the crown. Traps should be hung by the beginning of June and removed in mid-September.



Videos from the Province of Ontario demonstrate how to assemble and hang traps:

Part 1: <https://www.youtube.com/watch?v=w1yjWGqUYoI>,

Part 2: <https://www.youtube.com/watch?v=UFv3JAeGSeU>.

Other systems can be used such as a bucket truck or lift and throw weight or slingshot and ropes.

Further instructions and information can be found on the USDA_APHIS website: https://www.aphis.usda.gov/plant_health/plant_pest_info/emerald_ash_b/downloads/eab-survey-guidelines.pdf.

Maine Forest Service will provide technical support to those embarking on municipal trapping. Please contact (207) 287-2431 or email forestinfo@maine.gov if your town decides to conduct monitoring.

When examining traps, collect all suspect insects and place them in a small bag (zip top) labeled with date, town and trap location. Refrigerate or keep in a cool place and contact MFS for instructions for confirmation of identity.

Left: An example of the purple prism trap, hung high in the canopy of the sunny, exposed side of an ash tree (Courtesy USDA Forest Service).

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