

Although this document focuses on the use of insecticides for emerald ash borer management, the guidance it contains regarding annual per acre use limits also applies to insecticide use for the control of hemlock woolly adelgid. Note: The 'total treatable DBH inches' columns in the 'Calculating Use Limits' table in this document are specific to rates of application for emerald ash borer treatments and may not necessarily apply to rates used for hemlock woolly adelgid treatments. Separate calculations may be needed.



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Always read and follow the label

## Emerald Ash Borer Insecticides: Label Guidance for Use Limits



### Overview

Some insecticides used to control emerald ash borer (EAB) have annual per acre use limits. The Minnesota Department of Agriculture (MDA) offers this label guidance to help applicators and others comply with label directions, meet tree treatment objectives, and minimize environmental impacts. The MDA completed a special registration review of EAB insecticides in 2011. The review concluded that insecticides commonly used to control EAB are not likely to harm human health or the environment when used according to label directions. Please remember, applicators have a legal responsibility to read, understand, and follow all current label directions for the specific insecticide product being used.

- ✓ A treatment area is the total area within the boundaries of a property where a single treatment will occur. Include all surfaces (e.g., paved surfaces and buildings) and water bodies in treatment area delineations. Adjacent, not-to-be treated properties cannot be included in the calculation of the total treatment area or the annual per acre use limits.
- ✓ Annual per acre active ingredient (a.i.) use limits may mean that not all ash trees in a treatment area can be treated in the same year using the same product. If previous use of an insecticide with a per acre use limit in the treatment area is known, include it in the calculation of the annual per acre use limit for that insecticide.
- ✓ When an annual per acre use limit in a treatment area is reached using soil-applied or basal trunk spray methods, a different product (with a different a.i. or application method) can be used to treat additional trees.
- ✓ Along with other application information, applicators must record units (acres) treated when completing a category E pesticide application record.

### Treatment Areas

#### Less than One Acre



Pro-rate the per acre use limit to correspond to the size of the treatment area.

#### Greater than One Acre



Each acre is subject to annual per acre use limits. Divide the treatment area into approximately equal one-acre sections before an insecticide application, and adhere to the use limit for each one-acre section.

It is not appropriate to calculate the total acreage on a multi-acre treatment area, determine a volume of insecticide allowed based on that acreage, and then apply that volume to a section of the treatment area.

#### Miscellaneous (e.g., along a city boulevard)



Each acre is subject to annual per acre use limits. Divide the treatment area into approximately equal one-acre sections before an insecticide application, and adhere to the use limit for each one-acre section.

Treatment areas may be defined in a variety of ways. It is the responsibility of the applicator to be familiar with the boundaries of the treatment area.

For Example: An applicator has a contract to treat all trees between the sidewalks on both sides of a boulevard. The boulevard stretches for 2 miles. The distance between the far edges of the treatment area is 50 ft., so one acre is 50 ft. by approximately 870 ft. Under this contract there are approximately 12 acres to be treated (i.e., treatment area). The area can be divided into approximately equal one-acre sections along the contours of the boulevard.

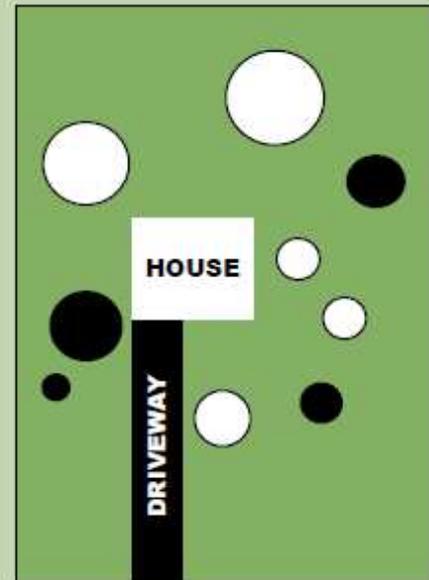
## Annual Per Acre Use Limit Example

The figure at right depicts a treatment area. Circles represent ash trees. The applicator chooses to treat ash trees with an insecticide product that has an annual per acre use limit. To remain compliant with the label, not all ash trees in the treatment area can be treated with the chosen insecticide product before reaching the use limit.

-  White circles indicate ash trees chosen to be treated with the insecticide product based on the size of the tree—calculated as the diameter of the trunk at breast height (DBH inches)—and the amount of insecticide allowed per acre.
-  Black circles indicate trees that cannot be treated with the chosen insecticide product because the annual per acre limit has already been reached in the treatment area.

When not all trees in a treatment area can be treated with insecticide products having per acre annual use limits, consider these options:

- Other active ingredients can be used in the treatment area
- Insecticides with application methods that do not have use limits can be used
- Some trees may be candidates for removal



## Calculating Use Limits

**Use Limits for Soil Applied and Basal Trunk Spray Applications  
Expressed as Diameter at Breast Height (DBH) inches**

Active Ingredient	Formulations	Max/Acre/Year	Annual/Acre Use Limit (Lbs a.i.)	Treatment Area (Acre)	Max Product/Area/Year	Total Treatable DBH Inches Using the Min Label Rate	Total Treatable DBH Inches Using the Max Label Rate	Total Treatable DBH Inches for Imidacloprid Products With an Increased Max Label Rate for Trees > 15 inches DBH
Imidacloprid	2 F	1.6 pints (25.6 fl oz)	0.4	¼	3.2 fl oz	32	16	Exceeds Use Limit
				½	12.8 fl oz	128	64	32
				1	25.6 fl oz	256	128	64
	75 WSP / 75 WP	0.53 lbs (8.5 oz)		¼	1.1 oz	32	16	Exceeds Use Limit
				½	4.2 oz	128	64	32
				1	8.5 oz	256	128	64
Dinotefuran	20 SG	2.7 lbs (43.2 oz)	0.54	¼	5.4 oz	51	13	Not Applicable to Dinotefuran Products
				½	21.6 oz	206	52	
				1	43.2 oz	412	104	
	70 WSP	0.77 lbs (12.3 oz)		¼	1.5 oz	44	13	
				½	6.2 oz	176	52	
				1	12.3 oz	352	104	

## Read the label!

It is your legal responsibility to read, understand and follow all current label directions for the specific insecticide product being used.

### Additional Emerald Ash Borer Insecticide Information

- "Frequently Asked Questions Regarding Potential Side Effects of Systemic Insecticides Used to Control Emerald Ash Borer" [http://www.extension.umn.edu/issues/eab/potential\\_side\\_effects\\_of\\_eab\\_insecticides\\_faqqfinal.pdf](http://www.extension.umn.edu/issues/eab/potential_side_effects_of_eab_insecticides_faqqfinal.pdf)
- MDA "Homeowner Guide to Insecticide Selection, Use, and Environmental Protection" <http://www.mda.state.mn.us/en/plants/pestmanagement/~media/Files/plants/eab/eabtreatmentguide2.ashx>
- For label compliance questions please contact the Pesticide and Fertilizer Management Division at 651-201-6121.

*In accordance with the Americans with Disabilities Act, an alternative form of communication is available upon request.  
TDD: 1-800-627-3529. MDA is an Equal Opportunity Employer and Provider.*