**any insecticides** are available to control gypsy moth. However, not all products are created equal—some work better than others or are less expensive or are effective only during certain phases of the insect's life. This brochure lists recommended products, when to apply them, and important considerations. It would be impractical to include all of the brand or trade names, so we've used the product's active ingredient, which is provided on the label of every registered pesticide.

It's important to note that unless your trees are relatively small—less than about 12 feet—you will need to hire an arborist or certified pesticide applicator to thoroughly and safely treat your trees. Contact your Wisconsin Department of Natural Resources urban forester for a list of certified arborists.

Knowledge is the first line of defense for protecting your trees and shrubs from damage by gypsy moth. Understanding the life cycle, the vulnerable stages (eggs and caterpillars, not pupae or adults), and the appropriate control measures or strategies are not only key to successful management, they may also save you considerable investments of time and money.

## To learn more about this pest, visit

www1.uwex.edu/ces/gypsymoth, a web site jointly produced by the University of Wisconsin–Cooperative Extension and the Wisconsin DNR. If your gypsy moth problem is more widespread than just a few trees, call the Wisconsin DNR suppression coordinator to find out about the gypsy moth suppression program. Information about this program is also available online at www.dnr.state.wi.us/org/caer/cfa/LR/gypsy/moth.html.

Regional gypsy moth suppression coordinators: Green Bay—Bill McNee, 920-492-5930 Milwaukee—John Kyhl, 414-263-8744 Madison—Mark Guthmiller, 608-275-3223 Authors: R. Chris Williamson is assistant professor of entomology, College of Agricultural and Life Sciences, University of Wisconsin-Madison and University of Wisconsin-Extension, Cooperative Extension. Andrea Diss is the gypsy moth program coordinator for the Department of Natural Resources.

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## The Wisconsin Department of Natural Resources and

**University of Wisconsin-Extension** provide equal opportunity in employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240. This publication is available in alternative format (large print, Braille, audio tape, etc.) upon request. Please call the Division of Forestry at 608-267-7494 for more information.

This publication is available from the Department of Natural Resources through your local service center or from your Wisconsin county Extension office. For more information on gypsy moths, visit www1.uwex.edu/ces/gypsymoth/ or call your regional suppression coordinator (Green Bay: 920-492-5930, Milwaukee: 414-263-8744, Madison: 608-275-3223). To see more Extension publications, visit www1.uwex.edu/ces/pubs/.







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## Selecting a pesticide for <u>GYDSY</u> <u>control</u>



## Pesticides registered for use on gypsy moths

active ingredient	timing			attributes					
			August to		toxicity to nontarget		mode of toxicity		
	to mid-May	to mid-June	mid-April	activity	organisms	speed of kill	contact	ingested	notes
acephate	•			10–21 days	<b>low</b> —vertebrates <b>high</b> —insects, especially honeybees	hours		•	low cost; strong odor; may be injected by arborist to target only organisms feeding on tree
azadirachtin (neem)	•	-		14–21 days	high—fish, aquatic insects	days	•	•	a plant seed extract that functions as an insect growth regulator; most effective against young caterpillars
Bacillus thuringiensis subsp. kurstaki (Btk)	•			7–10 days	<b>nontoxic</b> —all other insects, fish, vertebrates <b>high</b> —all caterpillars feeding during active period	days		-	naturally occurring soil bacterium; must be applied to young caterpillars
bifenthrin	•	•		7–10 days	<b>low</b> —most vertebrates, honeybees <b>high</b> —fish, insects	immediate			low application rate
carbaryl	•			3–10 days	moderate—vertebrates high—honeybees	hours			low cost
cyfluthrin	•	•		7–10 days	<b>low</b> —most vertebrates, honeybees <b>high</b> —fish, other insects	immediate			low application rate
deltamethrin	•			7–14 days	<b>low</b> —most vertebrates, honeybees <b>high</b> —fish, other insects	immediate			low application rate
diflubenzuron	•			all season	<b>nontoxic</b> —vertebrates, honeybees <b>high</b> —caterpillars, other immature insects	days	•	•	insect growth regulator; most effective on young caterpillars
Golden Pest Spray Oil				N/A	nontoxic—vertebrates, other insects	days			only affects egg masses; must be applied before egg hatch
insecticidal soap	•			less than 24 hours	nontoxic	hours			must be applied directly to caterpillars; more effective on young caterpillars
lambda- cyhalothrin	•	•		7–10 days	<b>low</b> —most vertebrates, honeybees <b>high</b> —fish, other insects	immediate	-	•	low application rate; available only to professional applicators
permethrin	•	•		7–10 days	<b>low</b> —most vertebrates, honeybees <b>high</b> —fish, other insects	immediate	•		low application rate; multiple applications may cause mite problems
spinosad				7–14 days	low—fish, birds, wildlife	hours			naturally occurring soil bacterium; must be applied to young caterpillars
tebufenozide	•			all season	<b>nontoxic</b> —vertebrates, honeybees <b>high</b> —caterpillars, other immature insects	days	•	-	insect growth regulator; most effective on young caterpillars; available only to professional applicators

\*Consult your regional gypsy moth suppression coordinator or county Extension agent to learn when gypsy moth egg hatch occurs in your area.