

# Homeowner Trees and Ornamentals

Insect Control Recommendations for 2008

# **INSECT CONTROL**

Homeowner T	Homeowner Trees and Ornamentals: Insect Control			
Insect	Insecticide and Formulation	Amount per Gallon	Comments	
ARBORVITAE (	CEDAR			
			gworms on Ornamentals. "Homeowners can handpick bags. in the spring (May) or summer (June) while caterpillars are	
acephate BONIDE S CONTRO	SYSTEMIC INSECT	3 T.		
	fenbutatin oxide YSTEMIC INSECT	3 T.		
		 4 t. 1-4 t.	Use according to label directions.	
BARYL ( HI-YIELD GARDEN HI-YIELD	ME LIQUID CAR- GARDEN Spray 10% CARBARYL I AND PET DUST 5% CARBARYL I AND PET DUST	4 t. See label.		
	DVANCED FORCE® MULTI- KILLER	Concentrate, 1 T.	Apply to flowering plants during early morning or late evening when bees are not present. <b>DO NOT</b> spray into fish pools, ponds, streams, or lakes. Remove animal feeding dishes before applying. Keep children and pets	

**NOTE:** Before using any insecticide on a species **NOT** listed on the label, spray a small inconspicuous portion of the plant's foliage, wait 48 hours, and see if any signs of spray damage appear. Apply spray only if no signs of spray damage appear. Rates apply only to formulations listed in the table. If other formulations are used, apply at rates specified on the container.

away from treated areas until spray has dried.

SPRAY

	secticide and rmulation	Amount per Gallon	Comments
ARBORVITAE CEDAR (co	ont.)		
Bagworms (cont.)			
esfenvalerate ORTHO BUG-B-GO GARDEN AND LA INSECT KILLER R USE	NDSCAPE	2 T.	
gamma-cyhalothrin SPECTRACIDE TRI ONCE AND DONE KILLER		See label.	Apply when bagworm larvae begin to hatch.
malathion HI-YIELD 5% MAL. DUST	ATHION		Treat in spring or early summer when bagworms are small. Repeat in 10 to 14 days if necessary.
HI-YIELD 55% MAI SPRAY	LATHION		
SPECTRACIDE MA INSECT SPRAY	LATHION	See label.	
CONCENTRATE ORTHO MALATHIO INSECT SPRAY CONCENTRATE	ON PLUS		
neem BIONEEM ROSE, FLOWER, AI VEGETABLE SPR		6 T. 2 T.	
permethrin HI-YIELD KILL-A-I HI-YIELD KILL-A-I RTU		2 T.	
HI-YIELD PERMET CONCENTRATE L GARDEN, PET AN STOCK INSECT SI	LAWN, ID LIVE-	1.5 t.	
SPECTRICIDE ANT HOME BARRIER I KILLER	SHIELD	See label.	
pyrethrins CONCERN MULTI- INSECT KILLER	PURPOSE	See label.	
spinosad CONSERVE NATUI YTE INSECT CON		4 T.	
FERTI-LOME BORE BAGWORM, LEAI AND TENT CATEI	FMINER	4 T.	

Insecticide and Amount Insect Formulation per Gallon Comments

# **BOXELDERS**

## **Boxelder Bugs**

Boxelder bugs are more of a nuisance when insects congregate on buildings and indoors in the fall than they are a pest of plants. Bugs can be vacuumed when they enter buildings. See the North Carolina Cooperative Extension Service Web publication "Boxelder Bug" for more information on the bug's biology and control. The following insecticide recommendations are for outdoor use.

commendations are for outdoor use.		
carbaryl HI-YIELD 10% CARBARYL GARDEN AND PET DUST HI-YIELD 5% CARBARYL GARDEN AND PET DUST		
cyfluthrin BAYER ADVANCED POWERFORCE® MULTI- INSECT KILLER	Concentrate, 1 T.	Apply to flowering plants during early morning or late evening when bees are not present. <b>DO NOT</b> spray cyfluthrin into fish pools, ponds, streams, or lakes. Remove animal feeding dishes before applying. Keep children and pets away from treated areas until spray has completely dried.
endosulfan THIODAN GARDEN DUST		
gamma-cyhalothrin SPECTRACIDE TRIAZICIDE ONCE AND DONE! INSECT KILLER	See label.	
malathion ORTHO MALATHION PLUS INSECT SPRAY CONCENTRATE	1 T.	
permethrin HI-YIELD PERMETHTIN CONCENTRATE LAWN, GARDEN, PET, AND LIVESTOCK INSECT SPRAY	1.5 t.	
HI-YIELD KILL-A-BUG II	2 T.	
HI-YIELD KILL-A-BUG II RTU SPECTRACIDE ANT SHIELD HOME BARRIER INSECT KILLER	See label.	
rotenone + pyrethrin BONIDE LIQUID ROTENONE PYRETHRINS SPRAY CONCENTRATE	2 t.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
DOGWOODS			

## **Dogwood Borers**

endosulfan

THIODAN GARDEN DUST

#### **Dogwood Club Gall**

See Comments.

No pesticides are recommended. Pruning and removal of

galls may be helpful.

# **Oystershell Scale**

carbaryl

LIQUID CARBARYL GARDEN

SPRAY

cyfluthrin

POWERFORCE® MULTI-

For use on crawlers only.

BAYER ADVANCED

INSECT KILLER

Concentrate, 1 T.

For use on crawlers only. Apply to flowering plants during early morning or late evening when bees are not present. **DO NOT** spray cyfluthrin into fish pools, ponds, streams, or lakes. Remove animal feeding dishes before applying. Keep children and pets away from treated areas until spray

has dried.

horticultural oil

DORMANT SPRAY AND SUMMER OIL SPRAY

ORTHO VOLCK OIL SPRAY

3 T.

2.5 fl.oz.

Dormant Season:

5.3 fl.oz. Growing Season:

above 85°F. Spray in late afternoon or early morning. DO

Apply oil as a dormant spray and/or when crawlers are active. Dormant Spray and Summer Oil Spray may be mixed with other insecticides and with fungicides other than those containing sulphur. It may cause plant injury in house plants such as ivy, ferns, and the like. DO NOT spray plants in mid-day with this spray if temperature is

NOT spray when temperatures are below 40°F.

malathion

HI-YIELD 5% MALATHION

DUST

HI-YIELD 55% MALATHION

SPRAY

SPECTRACIDE MALATHION

INSECT SPRAY

CONCENTRATE

ORTHO MALATHION PLUS

**INSECT SPRAY** 

CONCENTRATE

See label.

## **ELMS**

#### Elm Bark Beetles

See Comments.

Pesticides for this pest are for use by professionals only. Keep trees growing vigorously to prevent infestations. Remove broken branches and weak trees which may serve as breeding sites.

#### Elm Leaf Beetles

See the Ohio State University Extension Web publication "Elm Leaf Beetle" for more information on the biology and control of the elm leaf beetle.

acephate

BONIDE SYSTEMIC INSECT

3 T.

CONTROL

		Homeowner	Trees and Ornamentals: Insect Control Recommendations for 2003
Insect	Insecticide and Formulation	Amount per Gallon	Comments
ELMS (cont.)			
Elm Leaf Beetles (d	cont.)		
carbaryl ELIMINATOR ELIMINATOR DUST	R 5% SEVIN DUST R 10% SEVIN		
cyfluthrin BAYER ADV POWERFOR INSECT KIL	CE® MULTI-	Concentrate, 1 T.	Apply to flowering plants during early morning or late evening when bees are not present. <b>DO NOT</b> spray the product into fish pools, ponds, streams, or lakes. Remove animal feeding dishes before applying. Keep children and pets away from treated areas until the spray has dried.
disulfoton 2-IN-1 SYSTE AND FLOWI READY-TO-		8 T. per foot of plant height	<b>DO NOT</b> apply near fish pools, ponds, streams, or lakes.
imidacloprid BAYER ADVANCED GAR- DEN TREE AND SHRUB INSECT CONTROL CONCENTRATE		See label for rates and use.	When applied to soil, insecticide is absorbed by plants. Once absorbed, it moves throughout the plant.
MAGNOLIAS			
	nformation on the bi lia Scale and Its Con		magnolia scale, see Ohio State University Extension Web
acephate BONIDE SYS' CONTROL	TEMIC INSECT	3 T.	
cyfluthrin			Use for crawlers only. Apply to flowering plants in early

acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	
cyfluthrin BAYER ADVANCED POWERFORCE® MULTI- INSECT KILLER	Concentrate, 1 T.	Use for crawlers only. Apply to flowering plants in early morning or late evening when bees are not present. <b>DO NOT</b> spray into fish pools, ponds, streams, or lakes. Remove animal feeding dishes before applying. Keep children and pets away from treated areas until the spray has dried.
imidacloprid BAYER ADVANCED GAR- DEN TREE AND SHRUB INSECT CONTROL CONCENTRATE	See label for rates and use.	When applied to soil, insecticide is absorbed by plants. Once absorbed, it moves throughout the plant.

	Insecticide		
	and	Amount	
Insect	Formulation	per Gallon	Comments
MAGNOLIA (cont.)			
Magnolia Scale (cont.)	)		
malathion HI-YIELD 5% M. DUST HI-YIELD 55% M. SPRAY SPECTRACIDE M. INSECT SPRAY CONCENTRAT	MALATHION MALATHION	See label.	Treat when crawlers are active, normally in August and September.
ORTHO MALAT INSECT SPRAY CONCENTRAT	7		
PINES			
Aphids For more info "Controlling Aphids or acephate BONIDE SYSTEL CONTROL	ornamentals."	olling aphids, see Ala 2 T.	bama Cooperative Extension System publication ANR-189,
cotton seed oil, clo extract		6 T	
MITEX CONCEN	NTRATE	6 T.	
cyfluthrin BAYER ADVAN POWERFORCE INSECT KILLE	® MULTI-	Concentrate, 1 T.	Apply to flowering plants during early morning or late evening when bees are not present. <b>DO NOT</b> spray into fish pools, ponds, streams, or lakes. Remove animal feeding dishes before applying. Keep children and pets away from treated areas until the spray has dried.
disulfoton 2-IN-1 SYSTEMI AND FLOWER READY-TO-US	CARE		DO NOT apply near fish pools, ponds, streams, or lakes.
imidacloprid BAYER ADVAN DEN TREE ANI INSECT CONTI CONCENTRAT	D SHRUB ROL	See label for rates and use.	When applied to soil, insecticide is absorbed by plants. Once absorbed, it moves throughout the plant.
malathion HI-YIELD 5% M. DUST HI-YIELD 55% M. SPRAY SPECTRACIDE M. INSECT SPRAY CONCENTRAT ORTHO MALAT INSECT SPRAY	MALATHION MALATHION E HION PLUS	See label.	
neem BIONEEM ROSE, FLOWER VEGETABLE S		6 T. 2 T.	

	Homeown	er Trees and Ornamentals: Insect Control Recommendations for 2008
Insecticide and Insect Formulation	Amount per Gallon	Comments
PINES (cont.)		
Black Turpentine Beetles		
permethrin HI-YIELD PERMETHTIN CONCENTRATE LAWN, GARDEN, PET, AND LIVESTOCK INSECT SPRAY	1.5 t.	
HI-YIELD KILL-A-BUG II HI-YIELD KILL-A-BUG II RTU	2 T.	
SPECTRACIDE ANT SHIELD HOME BARRIER INSECT KILLER	See label.	
Ips Engraver Beetles And Southern I  For more information, see Ala  Beetles Attacking Landscape Pines."  permethrin HI-YIELD PERMETHTIN CONCENTRATE LAWN, GARDEN, PET, AND LIVESTOCK INSECT SPRAY HI-YIELD KILL-A-BUG II HI-YIELD KILL-A-BUG II RTU SPECTRACIDE ANT SHIELD HOME BARRIER INSECT KILLER  Sawflies		Trees should be kept vigorous and free of injury. Spray trees adjacent to infested trees to prevent attack. Rapid tree removal is the only control once beetles have attacked. Spraying should be done by commercial applicators. In forest stands, promptly salvage all merchantable infested trees. Cut remaining trees and destroy the infestation in these and all remaining slash by burning.
	iology and control o	f pine sawflies, see University of Kentucky Web publication
acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	Treat when larvae are first detected.
acephate + fenbutatin oxide ORTHO SYSTEMIC INSECT KILLER	3 T.	

esfenvalerate

USE

ORTHO BUG-B-GON MAX

GARDEN AND LANDSCAPE INSECT KILLER READY-TO-

2 T.

DORMANT SPRAY AND

SUMMER OIL SPRAY

FERTILOME SCALECIDE

CONCERN PESTICIDAL

ORTHO VOLCK OIL

SPRAY

SPRAY OIL

3 T.

Dormant Season:

5.3 fl.oz. Growing Season:

2.5 fl.oz.

5-7.6 T.

5 T.

Insect	Insecticide and Formulation	Amount per Gallon	Comments
PINES (cont.)			
Sawflies (cont.	.)		
DEN TR INSECT	id ADVANCED GAR- EE AND SHRUB CONTROL NTRATE	See label for rates and use.	When applied to soil, insecticide is absorbed by plants. Once absorbed, it moves throughout the plant.
DUST HI-YIELI SPRAY SPECTRA INSECT CONCE ORTHO M INSECT	NTRATE MALATHION PLUS	See label.	
	ore information on the bicice Web publication <u>"Scal</u>		scale insects on ornamental plants, see Texas Agricultural
acephate	SYSTEMIC INSECT	3 T.	For treatment of crawlers, only.
carbaryl LIQUID ( SPRAY	CARBARYL GARDEN	4 t.	For treatment of crawlers, only.
POWER	ADVANCED FORCE® MULTI- KILLER	Concentrate, 1 T.	For treatment of crawlers, only. Apply to flowering plants during early morning or late evening when bees are not present. <b>DO NOT</b> spray into fish pools, ponds, streams, clakes. Remove animal feeding dishes before applying. Keep children and pets away from treated areas until sprahas dried.
	halothrin ACIDE TRIAZICIDE ND DONE! INSECT	See label.	
KILLER			

active. Dormant Spray and Summer Oil Spray may be

those containing sulphur. It may cause plant injury in house plants such as ivy, ferns, and the like. DO NOT

mixed with other insecticides and with fungicides except

spray plants in midday with Dormant Spray if temperature

is above 90°F. Spray in late afternoon or early morning.

Fertilome Scalecide is a dormant spray oil. Spray when temperature is above 40°F. and there is no danger of

freezing. DO NOT apply as a foliar spray when

temperature is above 80°F.

	Insecticide	Amount	
Insect	and Formulation	Amount per Gallon	Comments
PINES (cont.)			
Scale (cont.)			
DUST HI-YIEL SPRAY SPECTR INSECT CONCE ORTHO INSECT	D 5% MALATHION D 55% MALATHION	See label.	
pyrethrins YARD A KILLEF	ND GARDEN INSECT	10 T.	
For n	ncluding Nantucket Pine nore information on the bi antucket Pine Tip Moth."		f pine tip moths, see the USDA Forest Disease and Insect Web
acephate BONIDE CONTR	SYSTEMIC INSECT	3 T.	
AND FI	YSTEMIC ROSE LOWER CARE Y-TO-USE GRANULES		<b>DO NOT</b> apply near fish pools, ponds, streams, or lakes.
DEN TE INSECT	rid ADVANCED GAR- REE AND SHRUB I CONTROL ENTRATE	See label for rates and use.	When applied to soil, insecticide is absorbed by plants. Once absorbed, it moves throughout the plant.
SYCAMORES			
	nore information on the bi		f lace bugs on ornamentals, see Alabama Cooperative ace Bugs on Ornamentals."
acephate BONIDE CONTI	SYSTEMIC INSECT	3 T.	
CONCE	ARDEN LIQUID ENTRATE	4 t.	When insects are noticed, treat by covering foliage well with spray.
	N TECH SEVIN ENTRATE BUG	3 T.	

KILLER

GARDEN TECH SEVIN READY-TO-USE

	Insecticide	A 4				
Insect	and Formulation	Amount per Gallon	Comments			
SYCAMORES (conf	·					
Sycamore Lace Bu	<u> </u>		_			
cyfluthrin BAYER ADV	ANCED CE® MULTI-	Concentrate, 1 T.	Apply to flowering plants during early morning or late evening when bees are not present. <b>DO NOT</b> spray into fish pools, ponds, streams, or lakes. Remove animal feeding dishes before applying. Keep children and pets away from treated areas until spray has dried.			
disulfoton 2-IN-1 SYSTEMIC ROSE AND FLOWER CARE READY-TO-USE GRANULES			<b>DO NOT</b> apply near fish pools, ponds, streams, or lakes.			
imidacloprid BAYER ADVA DEN TREE A INSECT CON CONCENTRA	AND SHRUB NTROL	See label for rates and use.	When applied to soil, insecticide is absorbed by plants. Once absorbed, it moves throughout the plant.			
malathion HI-YIELD 5% MALATHION DUST HI-YIELD 55% MALATHION SPRAY SPECTRACIDE MALATHION INSECT SPRAY CONCENTRATE ORTHO MALATHION PLUS INSECT SPRAY		See label.	Treat foliage thoroughly, especially the undersides of leaves, when insects are detected. Repeat if needed.			
VARIOUS TREES A	ND SHRUBS					
<b>Aphids</b> See Alaban	Aphids See Alabama Cooperative Extension System publication ANR-189, "Controlling Aphids on Ornamentals."					
acephate BONIDE SYS' CONTROL	TEMIC INSECT	2 T.	Treat infested trees and shrubs in the fall to reduce the number producing over-wintering eggs. Begin treatment when aphids appear in the spring.			
cotton seed oil, extract MITEX CONC	clove oil, garlic	6 T.				
cyfluthrin BAYER ADVANCED POWERFORCE® MULTI- INSECT KILLER		See label.	Apply in early morning or late evening when bees are not present.			

	Insecticide and	Amount	
Insect	Formulation	per Gallon	Comments
VARIOUS TRE	EES AND SHRUBS (cont.	.)	
Aphids (cont.)	)		
AND FL	YSTEMIC ROSE LOWER CARE -TO-USE GRANULES	See label for rates and directions for use.	<b>DO NOT</b> apply near fish pools, ponds, streams, or lakes.
GARDE	ate BUG-B-GON MAX EN AND LANDSCAPE KILLER READY-TO-	2 T.	
DEN TR INSECT	rid ADVANCED GAR- REE AND SHRUB CONTROL NTRATE	See label for rates and directions for use.	When applied to soil, insecticide is absorbed by plants. Once absorbed, it moves throughout the plant.
KILLIN SAFER®	ll soap BRAND INSECT G SOAP BRAND ROSE AND R INSECT KILLER	5 T.	Examine plants after two days and spray again if needed. For other pests, spray weekly as needed up to three times <b>DO NOT</b> make repeated sprays at short intervals withouthoroughly rinsing foliage.
SAFER®	ll soap + pyrethrins BRAND YARD AND N INSECT KILLER		
DUST HI-YIELI SPRAY SPECTRA INSECT CONCE ORTHO I INSECT	D 5% MALATHION D 55% MALATHION ACIDE MALATHION SPRAY NTRATE MALATHION PLUS SPRAY NTRATE	See label.	Treat foliage thoroughly, especially the undersides of leaves, when insects are detected. Repeat if needed.
	M LOWER, AND 'ABLE SPRAY	6 T. 2 T.	
insecticida FERTILC	al oil DME SCALECIDE	5-7.6 T.	Fertilome Scalecide is a dormant spray oil. Spray when t temperature is above 40°F, and there is no danger of freezing. <b>DO NOT</b> apply as a foliar spray when temperature is above 80°F.
pyrethrum GORDON	N GARDEN GUARD	See label.	
Asian Ambros	sia Beetles		
See Comm	nents.		Cut and destroy infested plants. No chemical control is

recommended.

Insecticide and Amount Insect Formulation per Gallon Comments
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# VARIOUS TREES AND SHRUBS (cont.)

# **Azalea Caterpillars**

Caterpillars may be removed by hand. Treat when larvae are small. For more information about the biology and control of the azalea caterpillar, see North Carolina State University Web publication <u>"Azalea Caterpillar."</u>

Bacillus thuringiensis		Use according to label directions.
AMERICAN BRAND THURI-	4 t.	
CIDE CONCENTRATE SAFER® BRAND CATER-	1-4 t.	
PILLAR KILLER	- · ··	
FERTILOME DIPEL DUST		
bifenthrin ORTHO BUG-B-GON MAX LAWN AND GARDEN INSECT KILLER CONCENTRATE		
carbaryl		
EASY GARDEN LIQUID CONCENTRATE	4 t.	When insects are noticed, treat by covering foliage well with spray.
FERTILOME LIQUID CAR- BARYL GARDEN SPRAY GARDEN TECH SEVIN READY-TO-USE	4 t.	
GARDEN TECH SEVIN CONCENTRATE BUG KILLER	3 T.	
HI-YIELD 10% CARBARYL GARDEN AND PET DUST	See label.	
HI-YIELD 5% CARBARYL GARDEN AND PET DUST		
cyfluthrin BAYER ADVANCED POWERFORCE® MULTI- INSECT KILLER	Concentrate, 1 T.	Apply in early morning or late evening when bees are not present.
esfenvalerate ORTHO BUG-B-GON MAX GARDEN AND LANDSCAPE INSECT KILLER READY-TO- USE	2 T.	
gamma-cyhalothrin SPECTRACIDE TRIAZICIDE ONCE AND DONE! INSECT KILLER	See label.	
neem	6 T	
BIONEEM ROSE, FLOWER, AND	6 T. 2 T.	
VEGETABLE SPRAY	۷.	

# VARIOUS TREES AND SHRUBS (cont.)

## Bagworms

Insecticides may be used to control bagworms if applied early in the spring (May) or summer (June) while caterpillars are small. Also, homeowners may want to handpick the bags. See the Alabama Cooperative Extension System Web publication ANR-191. "Controlling Bagworms on Ornamentals."

llars are small. Also, homeowners may ublication ANR-191, <u>"Controlling Bag</u> u		e bags. See the Alabama Cooperative Extension System Webls."
acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	
acephate + fenbutatin oxide ORTHO SYSTEMIC INSECT KILLER	3 T.	
Bacillus thuringiensis AMERICAN BRAND THURI- CIDE CONCENTRATE	4 t.	Use according to label directions.
SAFER® BRAND CATER- PILLAR KILLER	1-4 t.	
bifenthrin ORTHO BUG-B-GON MAX LAWN AND GARDEN INSECT KILLER CONCENTRATE		
carbaryl FERTILOME LIQUID CAR- BARYL GARDEN SPRAY	4 t.	
HI-YIELD 5% CARBARYL GARDEN AND PET DUST		
HI-YIELD 10% CARBARYL GARDEN AND PET DUST	See label.	
cyfluthrin BAYER ADVANCED POWERFORCE® MULTI- INSECT KILLER	Concentrate, 1 T.	Apply to flowering plants during early morning or late evening when bees are not present. <b>DO NOT</b> spray into fish pools, ponds, streams, or lakes. Remove animal feeding dishes before applying. Keep children and pets away from treated areas until spray has dried.
gamma-cyhalothrin SPECTRACIDE TRIAZIDE ONCE AND DONE! INSECT KILLER	See label.	For bagworm control, apply when bagworm larvae begin to hatch.
malathion HI-YIELD 5% MALATHION DUST HI-YIELD 55% MALATHION	See label.	Treat in spring or early summer when bagworms are small. Repeat in 10 to 14 days if necessary.
SPRAY SPECTRACIDE MALATHION INSECT SPRAY CONCENTRATE		
ORTHO MALATHION PLUS INSECT SPRAY CONCENTRATE		

POWERFORCE® MULTI-

INSECT KILLER

Insect	Insecticide and Formulation	Amount per Gallon	Comments
		·	Comments
	EES AND SHRUBS (cont.	)	
Bagworms (co	ont.)		
	M LOWER, AND ABLE SPRAY	6 T. 2 T.	
	n D KILL-A-BUG II D KILL-A-BUG II	2 T.	
CONCE GARDE	D PERMETHRIN ENTRATE LAWN, EN, PET AND LIVE- INSECT SPRAY	1.5 t.	
SPECTR	ACIDE ANT SHIELD BARRIER INSECT	See label.	
	RN MULTI-PURPOSE KILLER	See label.	
WORM	OME BORER, BAG- , LEAFMINER AND	4 T.	
TENT CATERPILLAR SPRAY CONSERVE NATURALYTE INSECT CONTROL		4 T.	
Black Twig B	orers		
See Comn	nents.		Prune and burn infested twigs. No chemical control is recommended.
	Veb-based information in the cutworm control.	he Alternative Contro	ol Outreach Research Network (ACORN) for pesticide
Bacillus th var. kursta	huringiensis,		
DIPEL D		0.5-1 oz./ 50 sq.ft.	
carbaryl	DM AND CDICKET		For turf applications, use one pound per 1,000 square feet.
BAIT FERTILO	RM AND CRICKET  OME LIQUID  RYL GARDEN SPRAY	4 t.	
	ADVANCED	Concentrate, 1 T.	Apply in early morning or late evening when bees are not present.

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TRE	ES AND SHRUBS (cont.	.)	
Cutworms (co	nt.)		
GARDE	ate BUG-B-GON MAX N AND LANDSCAPE Killer Ready-to-	2 T.	
gamma-cyhalothrin SPECTRACIDE TRIAZICIDE ONCE AND DONE! INSECT KILLER		See label.	
	M LOWER, AND ABLE SPRAY	6 T. 2 T.	
	O KILL-A-BUG II O KILL-A-BUG II RTU	2 T.	

#### **Eastern Tent Caterpillars**

KILLER

HI-YIELD PERMETHRIN

CONCENTRATE LAWN, GARDEN, PET AND LIVE-STOCK INSECT SPRAY SPECTRACIDE ANT SHIELD

HOME BARRIER INSECT

Eastern tent caterpillars are found mostly on flowering fruit trees. Their webs are constructed in forks and crotches of trees in spring. Treat when small webs are noticed. Treat late in the day when larvae are in webs. Direct spray into webs and thoroughly saturate. As an alternative to spraying, webs and larvae can be removed and destroyed by hand late in the day. For more information on the biology and control of the eastern tent caterpillar, see University of Kentucky Web publication "Eastern Tent Caterpillar."

acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	
acephate + fenbutatin oxide ORTHO SYSTEMIC INSECT KILLER	3 T.	
Bacillus thuringiensis,		
var. kurstaki		
DIPEL DUST		
SAFER® BRAND CATER-	1-2 t.	Thoroughly dust plant surfaces.
PILLAR KILLER		
AMERICAN BRAND	4 t.	
THURICIDE CONCENTRATE		
carbaryl		
CARBARYL 10% DUST		
FERTILOME LIQUID	4 t.	
CARBARYL GARDEN SPRAY		

1.5 t.

See label.

INSECT CONTROL

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AI	ND SHRUBS (cont.	)	
Eastern Tent Cater	pillars (cont.)		
cyfluthrin BAYER ADVA POWERFORC INSECT KILL	CE® MULTI-	See label.	Apply in early morning or late evening when bees are no present.
	3-GON MAX D LANDSCAPE ER READY-TO-		
gamma-cyhaloth SPECTRACIDE ONCE AND DO KILLER	E TRIAZICIDE	See label.	
neem			
BIONEEM ROSE, FLOWE VEGETABLE		6 T. 2 T.	
permethrin HI-YIELD KILI HI-YIELD KILI	L-A-BUG II L-A-BUG II RTU	2 T.	
HI-YIELD PER CONCENTRA GARDEN, PE STOCK INSE	METHRIN TE LAWN, T AND LIVE-	1.5 t.	
SPECTRACIDE HOME BARR KILLER	ANT SHIELD	See label.	
spinosad FERTI-LOME I WORM, LEAI TENT CATER SPRAY	FMINER AND	4 T.	
CONSERVE NA	ATURALYTE	4 T.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments	
VARIOUS TRE	EES AND SHRUBS (cont.)			

## Fall Webworms

Fall webworms attack many deciduous trees and shrubs. Their webs enclose the foliage on ends of branches and are seen in summer and fall. Treat when webs are noticed and saturate thoroughly. As an alternative to spraying, webs and larvae can be removed and destroyed by hand late in the day. For more information on the biology and control of the fall webworm, see Ohio State University Extension Fact Sheet "Fall Webworm Management."

,		
acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	
acephate + fenbutatin oxide ORTHO SYSTEMIC INSECT KILLER	3 T.	
Bacillus thuringiensis, var. kurstaki DIPEL DUST		Thoroughly dust plant surfaces.
SAFER® BRAND CATER-	1-2 t.	
PILLAR KILLER AMERICAN BRAND THURICIDE CONCENTRATE	4 t.	
carbaryl FERTILOME LIQUID CAR- BARYL GARDEN SPRAY	4 t.	
cyfluthrin BAYER ADVANCED POWERFORCE® MULTI- INSECT KILLER	See label.	Apply in early morning or late evening when bees are not present.
esfenvalerate ORTHO BUG-B-GON MAX GARDEN AND LANDSCAPE INSECT KILLER READY-TO- USE	2 T.	
gamma-cyhalothrin SPECTRACIDE TRIAZICIDE ONCE AND DONE! INSECT KILLER	See label.	
neem BIONEEM	6 T.	
ROSE, FLOWER, AND VEGETABLE SPRAY	6 1. 2 T.	

CATERPILLAR SPRAY

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AND	SHRUBS (cont.	.)	
Fall Webworms (cont.)	)		
permethrin HI-YIELD KILL-A HI-YIELD KILL-A HI-YIELD PERMI CONCENTRATE GARDEN, PET A STOCK INSECT SPECTRACIDE AI HOME BARRIEI	A-BUG II RTU ETHRIN E LAWN, AND LIVE- SPRAY NT SHIELD	2 T. 1.5 t. See label.	
spinosad FERTI-LOME BO WORM, LEAFM TENT CATERPI CONSERVE NAT INSECT CONTR	INER AND LLAR SPRAY URALYTE	4 T.	
Gall Insects			
See Comments.			Galls generally do not occur in large numbers. Pruning and removal may be helpful. No insecticide is recommended.
Holly Leafminers For more infor	mation, see Univ	versity of Tennessee	Extension publication "Holly Leafminers."
disulfoton 2-IN-1 SYSTEMIC AND FLOWER C READY-TO-USE FERTI-LOME SYS	CARE E GRANULES STEMIC IN-		<b>DO NOT</b> apply near fish pools, ponds, streams, or lakes.
imidacloprid BAYER ADVANC DEN TREE AND INSECT CONTR CONCENTRATE	SHRUB OL	See label for rates and use.	When applied to soil, insecticide is absorbed by plants. Once absorbed, it moves throughout the plant.
neem BIONEEM ROSE, FLOWER, VEGETABLE SP		6 T. 2 T.	
spinosad CONSERVE NAT INSECT CONTF FERTI-LOME BO WORM, LEAFM	ROL PRER, BAG-	4 T. 4 T.	

# Japanese Beetles

Japanese beetles are not yet found statewide in Alabama but are a problem where they are found. Japanese beetles feed on more than 400 species of plants and can be a pest of turf. For more information on Japanese beetles see "Japanese Beetles in Alabama."

"Japanese Beetles in Alabama." acephate BONIDE SYSTEMIC INSECT 3 T. CONTROL carbaryl FERTILOME LIQUID 4 t. CARBARYL GARDEN SPRAY HI-YIELD 5% CARBARYL GARDEN AND PET DUST HI-YIELD 10% CARBARYL See label. GARDEN AND PET DUST Apply in early morning or late evening when bees are not cyfluthrin BAYER ADVANCED See label. present. POWERFORCE® MULTI-INSECT KILLER When applied to soil, insecticide is absorbed by plants. imidacloprid See label for BAYER ADVANCED GAR-Once absorbed, it moves throughout the plant. rates and use. DEN TREE AND SHRUB INSECT CONTROL CONCENTRATE malathion **HI-YIELD 5% MALATHION** See label. **DUST** HI-YIELD 55% MALATHION SPRAY SPECTRACIDE MALATHION INSECT SPRAY CONCENTRATE ORTHO MALATHION PLUS INSECT SPRAY CONCENTRATE neem Products containing neem are repellant to Japanese BIONEEM 6 T. beetles. ROSE, FLOWER, AND 2 T. VEGETABLE SPRAY pyrethrins JAPANESE BEETLE KILLER

Insect	Insecticide and Formulation	Amount per Gallon	Comments	
VARIOUS TRI	EES AND SHRUBS (cont.)			

# Lace Bugs

Treat when nymphs appear in the spring. Repeat if needed. Be sure to direct spray to the undersides of leaves. For more information on the biology and control of this pest, see Alabama Cooperative Extension System Web publication "Controlling Lace Bugs on Ornamentals."

Controlling Lace Bugs on Ornamentals.	<u>"</u>	
acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	
carbaryl HI-YIELD 5% CARBARYL GARDEN AND PET DUST HI-YIELD 10% CARBARYL GARDEN AND PET DUST		
cyfluthrin BAYER ADVANCED POWERFORCE® MULTI- INSECT KILLER	See label.	Apply in early morning or late evening when bees are not present.
disulfoton 2-IN-1 SYSTEMIC ROSE AND READY-TO-USE GRANULES		<b>DO NOT</b> apply near fish pools, ponds, streams, or lakes.
imidacloprid BAYER ADVANCED GAR- DEN TREE AND SHRUB INSECT CONTROL CONCENTRATE	See label for rates and use.	When applied to soil, insecticide is absorbed by plants. Once absorbed, it moves throughout the plant.
insecticidal soap CONCERN INSECT KILLING SOAP	See label.	
insecticidal soap and pyrethrins YARD AND GARDEN INSECT KILLER	10 T.	
malathion HI-YIELD 5% MALATHION DUST HI-YIELD 55% MALATHION SPRAY SPECTRACIDE MALATHION INSECT SPRAY CONCENTRATE ORTHO MALATHION PLUS INSECT SPRAY CONCENTRATE	See label.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
		·	Comments
	ES AND SHRUBS (cont	)	
Lace Bugs (co	nt.)		
	M LOWER, AND ABLE SPRAY	6 T. 2 T.	
	oyrethrin ROTENONE- HRIN SPRAY	4 t.	
	ore information on contr ication <u>"Leafhoppers in t</u>		n the garden and landscape, see Utah State University
acephate BONIDE CONTR	SYSTEMIC INSECT OL	3 T.	
BONIDE	related compounds HOT PEPPER WAX NTRATE	8-16 T.	
POWER	ADVANCED FORCE® MULTI-	See label.	Apply in early morning or late evening when bees are not present.
FLOWE USE GR	STEMIC ROSE AND R CARE READY-TO-ANULES SYSTEMIC LES		DO NOT apply near fish pools, ponds, streams, or lakes.
GARDE	ate BUG-B-GON MAX N AND LANDSCAPE KILLER READY-TO-	4 T.	
DEN TR INSECT	rid ADVANCED GAR- EE AND SHRUB CONTROL NTRATE	See label for rates and use.	When applied to soil, insecticide is absorbed by plants. Once absorbed, it moves throughout the plant.
	M LOWER, AND	6 T. 2 T.	

VEGETABLE SPRAY

neem BIONEEM

ROSE, FLOWER, AND

VEGETABLE SPRAY

	nsecticide and ormulation	Amount per Gallon	Comments
VARIOUS TREES AND S	SHRUBS (cont.	)	
Leafhoppers (cont.)			
permethrin HI-YIELD KILL-A- HI-YIELD KILL-A- HI-YIELD PERME CONCENTRATE GARDEN, PET A- STOCK INSECT S	-BUG II RTU THRIN LAWN, ND LIVE- SPRAY	2 T. 1.5 t.	
SPECTRACIDE AN HOME BARRIER KILLER		See label.	
pyrethrins and soap YARD AND GARE KILLER	DEN INSECT	10 T.	
rotenone and pyrethr ROTENONE-PYRE SPRAY		1 t.	
Leafminers  For more inform  Boxwood Leafminer."	nation on contro	olling the boxwood l	eafminer, see North Carolina Extension Service publication
acephate BONIDE SYSTEM CONTROL	IC INSECT	3 T.	Make treatments in spring when mines appear. Boxwood leafminer treatments should be applied in late March. A spreader-sticker may be used for plants with slick, waxy leaves.
acephate + fenbutatii ORTHO SYSTEMI KILLER		3 T.	
carbaryl LIQUID CARBARY SPRAY	YL GARDEN	4 t.	
imidacloprid BAYER ADVANC DEN TREE AND INSECT CONTRO CONCENTRATE	SHRUB	See label for rates and use.	When applied to soil, insecticide is absorbed by plants. Once absorbed, it moves throughout the plant.
malathion HI-YIELD 55% MALATHION SP	RAY	2 t.	

6 T.

2 T.

	Insecticide and	Amount		
Insect	Formulation	per Gallon	Comments	
VARIOUS TREES AND SHRUBS (cont.)				

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# Leafrollers

For more information on the biology and control of the canna leafroller, see the University of Florida Web publications <u>"Larger Canna Leafroller"</u> and <u>"Lesser Canna Leafroller."</u>

iblications "Larger Canna Leafroller"		eafroller."
acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	
acephate + fenbutatin oxide ORTHO SYSTEMIC INSECT KILLER	3 T.	
Bacillus thuringiensis, var. kurstaki SAFER® BRAND CATER- PILLAR KILLER	1-2 t.	
cyfluthrin BAYER ADVANCED POWERFORCE® MULTI- INSECT KILLER	See label.	Apply in early morning or late evening when bees are not present.
neem BIONEEM ROSE, FLOWER, AND VEGETABLE SPRAY	6 T. 2 T.	
permethrin HI-YIELD KILL-A-BUG II	2 T.	
HI-YIELD KILL-A-BUG II RTU HI-YIELD PERMETHRIN CONCENTRATE LAWN, GARDEN, PET AND LIVE- STOCK INSECT SPRAY	1.5 t.	
SPECTRACIDE ANT SHIELD HOME BARRIER INSECT KILLER	See label.	
rotenone and pyrethrins ROTENONE-PYRETHRINS SPRAY	1 t.	

CONCENTRATE

INSECT SPRAY CONCENTRATE

ORTHO MALATHION PLUS

	ecticide and nulation	Amount per Gallon	Comments
VARIOUS TREES AND SHI		per Gallon	Comments
Leafrollers (cont.)	(		
spinosad FERTI-LOME BOREF WORM, LEAFMINE TENT CATERPILLA	ER AND	4 T.	
Mealybugs For more informate Extension's Web publication			f mealybugs, see North Carolina State University Cooperative
acephate BONIDE SYSTEMIC CONTROL	INSECT	3 T.	
acephate + fenbutatin o ORTHO SYSTEMIC KILLER		3 T.	
cyfluthrin BAYER ADVANCED POWERFORCE® M INSECT KILLER		See label.	Apply in early morning or late evening when bees are not present.
imidacloprid BAYER ADVANCED DEN TREE AND SH INSECT CONTROL CONCENTRATE		See label for rates and use.	When applied to soil, insecticide is absorbed by plants. Once absorbed, it moves throughout the plant.
insecticidal oil CONCERN PESTICIE SPRAY OIL	OAL	5 T.	
insecticidal soap CONCERN INSECT KILLING SOAP		5 T.	
malathion HI-YIELD 5% MALA DUST HI-YIELD 55% MALA SPRAY SPECTRACIDE MAL INSECT SPRAY	ATHION	See label.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TRE	EES AND SHRUBS (cor	nt.)	
Mealybugs (co	ont.)		
neem			
BIONEE	M	6 T.	
ROSE, FI	ROSE, FLOWER, AND		
VEGET	VEGETABLE SPRAY		
rotenone a	and pyrethrins		
YARD A	YARD AND GARDEN		
INSECT KILLER			
permethrii	1		
PERMETROL LAWN		See label.	
INSECT	INSECTICIDE		

Mimosa Webworms-See pesticide recommendations for Fall Webworms.

Nantucket Pine Tip Moth-See pesticide recommendations for Pine Tip Moths in the Pines section.

**Other Foliage-Feeding Caterpillars**—See pesticide recommendations for other caterpillars in this section, such as Fall Webworm, Leaf Rollers, or Eastern Tent Caterpillar.

Pine Bark Beetles-See Ips Engraver Beetles and Southern Pine Beetles in the Pines section.

#### Saw flies

For more information on sawflies, see the University of Minnesota's Web publication <u>"Sawflies of Trees and Shrubs."</u>

acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	
imidacloprid BAYER ADVANCED GAR- DEN TREE AND SHRUB INSECT CONTROL CONCENTRATE	See label for rates and directions for use.	When applied to soil, insecticide is absorbed by plants. Once absorbed, it moves throughout the treated plant.
neem		
BIONEEM	6 T.	
ROSE, FLOWER, AND	2 T.	
VEGETABLE SPRAY		

Insect	Insecticide and Formulation	Amount per Gallon	Comments	
VARIOUS TRE	ES AND SHRUBS (cont.)		_	

Scale Insects-See pesticide recommendations for scale insects in the Pines section.

#### Slugs and Snails

For more information on biology and control of slugs and snails, see the University of California's <u>Pest</u> Management Guidelines for Slugs and Snails.

iron phosphate
SLUGGO See label.
GARDEN SAFE SLUG
AND SNAIL BAIT

metaldehyde
BONIDE SLUG AND SNAIL
BAIT
DEADLINE SLUG BAIT
ELIMINATE SNAIL AND
SLUG
ORTHO'S BUG GETA
--metaldehyde + carbaryl
SLUG, SNAIL, SOWBUG BAIT
ORTHO BUG GETA PLUS

#### **Spidermites**

For more information on spidermites, see the Colorado State University Web publication "Spider Mites."

acephate + fenbutatin oxide
ORTHO SYSTEMIC INSECT 3 T.
KILLER

Inspect plants in April for presence of two-spotted spidermites. Use insecticidal soaps and/or oils early in the season in order to preserve beneficials. See label for restrictions for using oils on evergreens and for temperature requirements. Spruce spidermites are active on evergreens in the spring and, sometimes, in the fall. Shake foliage over white paper to verify presence of spidermites. Alternate miticides once or twice during the season if mites continue to be a problem. Spray twice at 10-day intervals or as label specifies.

cotton seed oil, clove oil, garlic extract

MITEX CONCENTRATE 6 T.

	Insecticide		
	and	Amount	
Insect	Formulation	per Gallon	Comments
VARIOUS TRE	EES AND SHRUBS (cont	.)	
Spidermites (	cont.)		
disulfoton			<b>DO NOT</b> apply near fish pools, ponds, streams, or lakes.
2-IN-1 SY	YSTEMIC ROSE		
AND FLOWER CARE			
READY	READY-TO-USE GRANULES		
BONIDE SYSTEMIC			
GRANU	GRANULES 2%		
insecticida	al oil		
CONCERN PESTICIDAL		5 T.	
SPRAY	OIL		
insecticida	al soap		
CONCER	RN INSECT	5 T.	

# Spittlebugs-See pesticide recommendations for Leafhoppers.

For information on the two-lined spittlebug, see North Carolina State University's Web publication "Managing the Two-Lined Spittlebug in the Home Landscape."

# Thrips

KILLING SOAP

For more information on controlling thrips in the landscape, see the university of Florida's Web publication "Thrips on Ornamental Plants."

acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	Destroy old blossoms. Treat weekly during the growing season.
acephate + fenbutatin oxide ORTHO SYSTEMIC INSECT KILLER	3 T.	
capsaicin and related compounds BONIDE HOT PEPPER WAX CONCENTRATE	8-16 T.	
cotton seed oil, clove oil, garlic extract MITEX CONCENTRATE	6 T.	
cyfluthrin BAYER ADVANCED POWERFORCE® MULTI- INSECT KILLER	See label.	Apply in early morning or late evening when bees are not present.

Insecticide	A	
and Insect Formulation	Amount per Gallon	Comments
VARIOUS TREES AND SHRUBS (cont.)		
Thrips (cont.)		
disulfoton 2-IN-1 SYSTEMIC ROSE AND FLOWER CARE READY-TO-USE GRANULES		<b>DO NOT</b> apply near fish pools, ponds, streams, or lakes.
imidacloprid BAYER ADVANCED GAR- DEN TREE AND SHRUB INSECT CONTROL CONCENTRATE	See label for rates and use.	When applied to soil, insecticide is absorbed by plants. Once absorbed, it moves throughout the plant.
neem BIONEEM ROSE, FLOWER, AND VEGETABLE SPRAY	6 T. 2 T.	
spinosad FERTI-LOME BORER, BAG- WORM, LEAFMINER AND TENT CATERPILLAR SPRAY CONSERVE NATURALYTE INSECT CONTROL	4 T. 4 T.	
Whiteflies	ly biology and control	, see the University of California <u>Pest Management</u>
acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	
acephate + fenbutatin oxide ORTHO SYSTEMIC INSECT KILLER	3 T.	
cyfluthrin BAYER ADVANCED POWERFORCE® MULTI- INSECT KILLER	See label.	Apply in early morning or late evening when bees are not present.
disulfoton 2-IN-1 SYSTEMIC ROSE AND FLOWER CARE READY-TO-USE GRANULES	See label.	<b>DO NOT</b> apply near fish pools, ponds, streams, or lakes.
horticultural oil, such as CONCERN PESTICIDAL SPRAY OIL	5 T.	Spray as for scale control.

Insect	Insecticide and Formulation	Amount per Gallon	Comments		
VARIOUS TREES AND SHRUBS (cont.)					
Whiteflies (cont.)					
imidacloprid BAYER ADVA DEN TREE AN INSECT CON CONCENTRA	ND SHRUB ΓROL	See label for rates and use.	When applied to soil, insecticide is absorbed by plants. Once absorbed, it moves throughout the plant.		
neem BIONEEM ROSE, FLOWE TABLE SPRA		6 T. 2 T.			
permethrin BONIDE EIGH CONTROL VE FRUIT AND F CONCENTRA	EGETABLE, LOWER	4 T.			
soap INSECTICIDAI	_ SOAP	5 T.			

Note: See labels for use information, including phytotoxicity to certain plants.

**Note:** Some insecticides are broken down in alkaline conditions (high pH). Therefore, it is best to apply spray mixtures soon after mixing and prepare only the needed amount of spray material. For more information on this topic, see the Mississippi State University Web publication, "Water pH Affects Fungicide and Insecticide Performance."

**Note:** Pesticide recommendations are based on the best information currently available. No endorsement of named products is intended nor is criticism implied of similar products which are not mentioned

For disease and nematode control, see recommendations for Commercial Ornamentals.

## 2008IPM-1304

**For more information,** call your county Extension office. It is listed in your telephone directory under your county's name.

Use pesticides **only** according to the directions on the label. Follow all directions, precautions, and restrictions that are listed. Do not use pesticides on plants that are not listed on the label.

The pesticide rates in this publication are recommended **only** if they are registered with the Environmental Protection Agency or the Alabama Department of Agriculture and Industries. If a registration is changed or cancelled, the rate listed here is no longer recommended. Before you apply **any** pesticide, check with your county Extension agent for the latest information.

Trade names are used **only** to give specific information. The Alabama Cooperative Extension System does not endorse or guarantee any product and does not recommend one product instead of another that might be similar.

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