



Homeowner Trees and Ornamentals

Insect Control Recommendations for 2008

INSECT CONTROL

Homeowner Trees and Ornamentals: Insect Control

Insect	Insecticide and Formulation	Amount per Gallon	Comments
ARBORVITAE CEDAR			
Bagworms			
<i>General Comments: See ANR-191, "Controlling Bagworms on Ornamentals." Homeowners can handpick bags. Insecticides can be used to control bagworms if applied early in the spring (May) or summer (June) while caterpillars are small.</i>			
	acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	
	acephate + fenbutatin oxide ORTHO SYSTEMIC INSECT KILLER	3 T.	
	<i>Bacillus thuringiensis</i> AMERICAN BRAND THURICIDE CONCENTRATE	---	Use according to label directions.
	SAFER® CATERPILLAR KILLER	4 t. 1-4 t.	
	carbaryl FERTILOME LIQUID CARBARYL GARDEN Spray	4 t.	
	HI-YIELD 10% CARBARYL GARDEN AND PET DUST	See label.	
	HI-YIELD 5% CARBARYL GARDEN AND PET DUST		
	bifenthrin ORTHO BUG-B-GON MAX LAWN AND GARDEN INSECT KILLER CONCENTRATE	---	
	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. DO NOT 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.

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.

Insect	Insecticide and Formulation	Amount per Gallon	Comments
ARBORVITAE CEDAR (cont.)			
Bagworms (cont.)			
	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.	Apply when bagworm larvae begin to hatch.
	malathion HI-YIELD 5% MALATHION DUST	---	Treat in spring or early summer when bagworms are small. Repeat in 10 to 14 days if necessary.
	HI-YIELD 55% MALATHION SPRAY	---	
	SPECTRACIDE MALATHION INSECT SPRAY CONCENTRATE	See label.	
	ORTHO MALATHION PLUS INSECT SPRAY CONCENTRATE	---	
	neem BIONEEM	6 T.	
	ROSE, FLOWER, AND VEGETABLE SPRAY	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.	
	SPECTRICIDE ANT SHIELD HOME BARRIER INSECT KILLER	See label.	
	pyrethrins CONCERN MULTI-PURPOSE INSECT KILLER	See label.	
	spinosad CONSERVE NATURAL- YTE INSECT CONTROL	4 T.	
	FERTI-LOME BORER, BAGWORM, LEAFMINER AND TENT CATERPILLAR SPRAY	4 T.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
BOXELDERS			
Boxelder Bugs			
<i>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.</i>			
	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. 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 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 PERMETHIN 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			
<i>See North Carolina State University Web publication "Insects and Related Pests of Shrub," for more information on the biology and control of several dogwood insect pests.</i>			
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		For use on crawlers only.
	cyfluthrin BAYER ADVANCED POWERFORCE® MULTI-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. Dormant Season: 5.3 fl.oz. Growing Season: 2.5 fl.oz.	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 above 85°F. Spray in late afternoon or early morning. DO 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			
<i>See the Ohio State University Extension Web publication "Elm Leaf Beetle" for more information on the biology and control of the elm leaf beetle.</i>			
	acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
ELMS (cont.)			
Elm Leaf Beetles (cont.)			
	carbaryl ELIMINATOR 5% SEVIN DUST ELIMINATOR 10% SEVIN 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. DO NOT 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 SYSTEMIC ROSE AND FLOWER CARE READY-TO-USE GRANULES	8 T. per foot of plant height	DO NOT apply near fish pools, ponds, streams, or lakes.
	imidacloprid BAYER ADVANCED GARDEN 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			
Magnolia Scale			
<i>For more information on the biology and control of magnolia scale, see Ohio State University Extension Web publication "Magnolia Scale and Its Control."</i>			
	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. DO NOT 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 GARDEN 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.

Insect	Insecticide and Formulation	Amount per Gallon	Comments
MAGNOLIA (cont.)			
Magnolia Scale (cont.)			
	malathion HI-YIELD 5% MALATHION DUST HI-YIELD 55% MALATHION SPRAY SPECTRACIDE MALATHION INSECT SPRAY CONCENTRATE ORTHO MALATHION PLUS INSECT SPRAY CONCENTRATE	See label.	Treat when crawlers are active, normally in August and September.
PINES			
Aphids			
<i>For more information on controlling aphids, see Alabama Cooperative Extension System publication ANR-189, "Controlling Aphids on Ornamentals."</i>			
	acephate BONIDE SYSTEMIC INSECT CONTROL	2 T.	
	cotton seed oil, clove oil, garlic extract MITEX CONCENTRATE	6 T.	
	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. DO NOT 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 SYSTEMIC ROSE AND FLOWER CARE READY-TO-USE GRANULES	---	DO NOT 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.
	malathion HI-YIELD 5% MALATHION DUST HI-YIELD 55% MALATHION SPRAY SPECTRACIDE MALATHION INSECT SPRAY CONCENTRATE ORTHO MALATHION PLUS INSECT SPRAY CONCENTRATE	See label.	
	neem BIONEEM ROSE, FLOWER, AND VEGETABLE SPRAY	6 T. 2 T.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
PINES (cont.)			
Black Turpentine Beetles			
	permethrin HI-YIELD PERMETHIN 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 Pine Beetles			
<i>For more information, see Alabama Cooperative Extension System publication "Management of Pine Bark Beetles Attacking Landscape Pines."</i>			
	permethrin HI-YIELD PERMETHIN CONCENTRATE LAWN, GARDEN, PET, AND LIVESTOCK INSECT SPRAY	1.5 t.	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.
	HI-YIELD KILL-A-BUG II HI-YIELD KILL-A-BUG II RTU	2 T.	
	SPECTRACIDE ANT SHIELD HOME BARRIER INSECT KILLER	See label.	
Sawflies			
<i>For more information on the biology and control of pine sawflies, see University of Kentucky Web publication "Pine Sawflies."</i>			
	acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	Treat when larvae are first detected.
	acephate + fenbutatin oxide ORTHO SYSTEMIC INSECT KILLER	3 T.	
	esfenvalerate ORTHO BUG-B-GON MAX GARDEN AND LANDSCAPE INSECT KILLER READY-TO- USE	2 T.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
PINES (cont.)			
Sawflies (cont.)			
	imidacloprid BAYER ADVANCED GARDEN 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.
	malathion HI-YIELD 5% MALATHION DUST HI-YIELD 55% MALATHION SPRAY SPECTRACIDE MALATHION INSECT SPRAY CONCENTRATE ORTHO MALATHION PLUS INSECT SPRAY CONCENTRATE	See label.	
Scale			
<i>For more information on the biology and control of scale insects on ornamental plants, see Texas Agricultural Extension Service Web publication "Scale Insects on Ornamental Plants."</i>			
	acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	For treatment of crawlers, only.
	carbaryl LIQUID CARBARYL GARDEN SPRAY	4 t.	For treatment of crawlers, only.
	cyfluthrin BAYER ADVANCED POWERFORCE® MULTI-INSECT KILLER	Concentrate, 1 T.	For treatment of crawlers, only. Apply to flowering plants during early morning or late evening when bees are not present. DO NOT 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 TRIAZICIDE ONCE AND DONE! INSECT KILLER	See label.	
	oil DORMANT SPRAY AND SUMMER OIL SPRAY ORTHO VOLCK OIL SPRAY FERTILOME SCALECID CONCERN PESTICIDAL SPRAY OIL	3 T. Dormant Season: 5.3 fl.oz. Growing Season: 2.5 fl.oz. 5-7.6 T. 5 T.	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 except those containing sulphur. It may cause plant injury in house plants such as ivy, ferns, and the like. DO NOT 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.

Insect	Insecticide and Formulation	Amount per Gallon	Comments
PINES (cont.)			
Scale (cont.)			
	malathion HI-YIELD 5% MALATHION DUST	See label.	
	HI-YIELD 55% MALATHION SPRAY		
	SPECTRACIDE MALATHION INSECT SPRAY CONCENTRATE		
	ORTHO MALATHION PLUS INSECT SPRAY CONCENTRATE		
	pyrethrins and soap YARD AND GARDEN INSECT KILLER	10 T.	
Tip Moths (Including Nantucket Pine Tip Moths)			
<i>For more information on the biology and control of pine tip moths, see the USDA Forest Disease and Insect Web publication "Nantucket Pine Tip Moth."</i>			
	acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	
	disulfoton 2-IN-1 SYSTEMIC ROSE AND FLOWER CARE READY-TO-USE GRANULES	---	DO NOT 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.
SYCAMORES			
Sycamore Lace Bugs			
<i>For more information on the biology and control of lace bugs on ornamentals, see Alabama Cooperative Extension System Web publication ANR-191, "Controlling Lace Bugs on Ornamentals."</i>			
	acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	
	carbaryl EASY GARDEN LIQUID CONCENTRATE	4 t.	When insects are noticed, treat by covering foliage well with spray.
	GARDEN TECH SEVIN CONCENTRATE BUG KILLER	3 T.	
	GARDEN TECH SEVIN READY-TO-USE	---	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
SYCAMORES (cont.)			
Sycamore Lace Bugs (cont.)			
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. DO NOT 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		---	DO NOT 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.
malathion HI-YIELD 5% MALATHION DUST HI-YIELD 55% MALATHION SPRAY SPECTRACIDE MALATHION INSECT SPRAY CONCENTRATE ORTHO MALATHION PLUS INSECT SPRAY CONCENTRATE		See label.	Treat foliage thoroughly, especially the undersides of leaves, when insects are detected. Repeat if needed.
VARIOUS TREES AND SHRUBS			
Aphids			
<i>See Alabama Cooperative Extension System publication ANR-189, "Controlling Aphids on Ornamentals."</i>			
acephate BONIDE SYSTEMIC INSECT CONTROL		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, 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.

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AND SHRUBS (cont.)			
Aphids (cont.)			
	disulfoton 2-IN-1 SYSTEMIC ROSE AND FLOWER CARE READY-TO-USE GRANULES	See label for rates and directions for use.	DO NOT apply near fish pools, ponds, streams, or lakes.
	esfenvalerate ORTHO BUG-B-GON MAX GARDEN AND LANDSCAPE INSECT KILLER READY-TO- USE	2 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 plant.
	insecticidal soap SAFER® BRAND INSECT KILLING SOAP	5 T.	Examine plants after two days and spray again if needed. For other pests, spray weekly as needed up to three times. DO NOT make repeated sprays at short intervals without thoroughly rinsing foliage.
	SAFER® BRAND ROSE AND FLOWER INSECT KILLER	---	
	insecticidal soap + pyrethrins SAFER® BRAND YARD AND GARDEN INSECT KILLER	---	
	malathion HI-YIELD 5% MALATHION DUST HI-YIELD 55% MALATHION SPRAY SPECTRACIDE MALATHION INSECT SPRAY CONCENTRATE ORTHO MALATHION PLUS INSECT SPRAY CONCENTRATE	See label.	Treat foliage thoroughly, especially the undersides of leaves, when insects are detected. Repeat if needed.
	neem BIONEEM	6 T.	
	ROSE, FLOWER, AND VEGETABLE SPRAY	2 T.	
	insecticidal oil FERTILOME SCALECIDE	5-7.6 T.	Fertilome Scalecide is a dormant spray oil. Spray when the 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.
	pyrethrum GORDON GARDEN GUARD	See label.	
Asian Ambrosia Beetles			
	See Comments.		Cut and destroy infested plants. No chemical control is recommended.

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AND SHRUBS (cont.)			
Azalea Caterpillars			
<i>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 "Azalea Caterpillar."</i>			
	<i>Bacillus thuringiensis</i>		Use according to label directions.
	AMERICAN BRAND THURICIDE CONCENTRATE	4 t.	
	SAFER® BRAND CATERPILLAR KILLER	1-4 t.	
	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 CARBARYL GARDEN SPRAY	4 t.	
	GARDEN TECH SEVIN READY-TO-USE		
	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		
	BIONEEM	6 T.	
	ROSE, FLOWER, AND VEGETABLE SPRAY	2 T.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AND SHRUBS (cont.)			
Bagworms			
<i>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."</i>			
	acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	
	acephate + fenbutatin oxide ORTHO SYSTEMIC INSECT KILLER	3 T.	
	<i>Bacillus thuringiensis</i> AMERICAN BRAND THURICIDE CONCENTRATE	4 t.	Use according to label directions.
	SAFER® BRAND CATERPILLAR KILLER	1-4 t.	
	bifenthrin ORTHO BUG-B-GON MAX LAWN AND GARDEN INSECT KILLER CONCENTRATE	---	
	carbaryl FERTILOME LIQUID CARBARYL 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. DO NOT 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	See label.	Treat in spring or early summer when bagworms are small. Repeat in 10 to 14 days if necessary.
	HI-YIELD 55% MALATHION SPRAY		
	SPECTRACIDE MALATHION INSECT SPRAY CONCENTRATE		
	ORTHO MALATHION PLUS INSECT SPRAY CONCENTRATE		

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AND SHRUBS (cont.)			
Bagworms (cont.)			
	neem		
	BIONEEM	6 T.	
	ROSE, FLOWER, AND VEGETABLE SPRAY	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.	
	pyrethrins		
	CONCERN MULTI-PURPOSE INSECT KILLER	See label.	
	spinosad		
	FERTI-LOME BORER, BAG-WORM, LEAFMINER AND TENT CATERPILLAR SPRAY	4 T.	
	CONSERVE NATURALYTE INSECT CONTROL	4 T.	
Black Twig Borers			
	See Comments.		Prune and burn infested twigs. No chemical control is recommended.
Cutworms			
	<i>See Web-based information in the Alternative Control Outreach Research Network (ACORN) for pesticide alternatives for cutworm control.</i>		
	<i>Bacillus thuringiensis,</i> var. kurstaki		
	DIPEL DUST	0.5-1 oz./ 50 sq.ft.	
	carbaryl		For turf applications, use one pound per 1,000 square feet.
	CUTWORM AND CRICKET BAIT	---	
	FERTILOME LIQUID CARBARYL GARDEN SPRAY	4 t.	
	cyfluthrin		Apply in early morning or late evening when bees are not present.
	BAYER ADVANCED POWERFORCE® MULTI-INSECT KILLER	Concentrate, 1 T.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AND SHRUBS (cont.)			
Cutworms (cont.)			
	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	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.	
Eastern Tent Caterpillars			
<i>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."</i>			
	acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	
	acephate + fenbutatin oxide ORTHO SYSTEMIC INSECT KILLER	3 T.	
	<i>Bacillus thuringiensis,</i> var. kurstaki DIPEL DUST		
	SAFER® BRAND CATER- PILLAR KILLER	1-2 t.	Thoroughly dust plant surfaces.
	AMERICAN BRAND THURICIDE CONCENTRATE	4 t.	
	carbaryl CARBARYL 10% DUST		
	FERTILOME LIQUID CARBARYL GARDEN SPRAY	4 t.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AND SHRUBS (cont.)			
Eastern Tent Caterpillars (cont.)			
	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		
	gamma-cyhalothrin SPECTRACIDE TRIAZICIDE ONCE AND DONE! INSECT KILLER	See label.	
	neem BIONEEM ROSE, FLOWER, AND VEGETABLE SPRAY	6 T. 2 T.	
	permethrin HI-YIELD KILL-A-BUG II HI-YIELD KILL-A-BUG II RTU HI-YIELD PERMETHRIN CONCENTRATE LAWN, GARDEN, PET AND LIVE- STOCK INSECT SPRAY SPECTRACIDE ANT SHIELD HOME BARRIER INSECT KILLER	2 T. 1.5 t. See label.	
	spinosad FERTI-LOME BORER, BAG- WORM, LEAFMINER AND TENT CATERPILLAR SPRAY CONSERVE NATURALYTE INSECT CONTROL	4 T. 4 T.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AND SHRUBS (cont.)			
Fall Webworms			
<i>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."</i>			
	acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	
	acephate + fenbutatin oxide ORTHO SYSTEMIC INSECT KILLER	3 T.	
	<i>Bacillus thuringiensis</i> , var. kurstaki DIPEL DUST		Thoroughly dust plant surfaces.
	SAFER® BRAND CATERPILLAR KILLER	1-2 t.	
	AMERICAN BRAND THURICIDE CONCENTRATE	4 t.	
	carbaryl FERTILOME LIQUID CARBARYL 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	2 T.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AND SHRUBS (cont.)			
Fall Webworms (cont.)			
	permethrin		
	HI-YIELD KILL-A-BUG II	2 T.	
	HI-YIELD KILL-A-BUG II RTU		
	HI-YIELD PERMETHRIN	1.5 t.	
	CONCENTRATE LAWN, GARDEN, PET AND LIVE-STOCK INSECT SPRAY		
	SPECTRACIDE ANT SHIELD	See label.	
	HOME BARRIER INSECT KILLER		
	spinosad		
	FERTI-LOME BORER, BAG-WORM, LEAFMINER AND TENT CATERPILLAR SPRAY	4 T.	
	CONSERVE NATURALYTE	4 T.	
	INSECT CONTROL		
Gall Insects			
	See Comments.		Galls generally do not occur in large numbers. Pruning and removal may be helpful. No insecticide is recommended.
Holly Leafminers			
<i>For more information, see University of Tennessee Extension publication "Holly Leafminers."</i>			
	disulfoton		DO NOT apply near fish pools, ponds, streams, or lakes.
	2-IN-1 SYSTEMIC ROSE AND FLOWER CARE	---	
	READY-TO-USE GRANULES		
	FERTI-LOME SYSTEMIC INSECTICIDE GRANULES		
	imidacloprid		When applied to soil, insecticide is absorbed by plants. Once absorbed, it moves throughout the plant.
	BAYER ADVANCED GARDEN TREE AND SHRUB	See label for rates and use.	
	INSECT CONTROL		
	CONCENTRATE		
	neem		
	BIONEEM	6 T.	
	ROSE, FLOWER, AND VEGETABLE SPRAY	2 T.	
	spinosad		
	CONSERVE NATURALYTE	4 T.	
	INSECT CONTROL		
	FERTI-LOME BORER, BAG-WORM, LEAFMINER AND CATERPILLAR SPRAY	4 T.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AND SHRUBS (cont.)			
Japanese Beetles			
<i>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."</i>			
	acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	
	carbaryl FERTILOME LIQUID CARBARYL GARDEN SPRAY HI-YIELD 5% CARBARYL GARDEN AND PET DUST HI-YIELD 10% CARBARYL GARDEN AND PET DUST	4 t. See label.	
	cyfluthrin BAYER ADVANCED POWERFORCE® MULTI-INSECT KILLER	See label.	Apply in early morning or late evening when bees are not present.
	imidacloprid BAYER ADVANCED GARDEN 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.
	malathion HI-YIELD 5% MALATHION DUST HI-YIELD 55% MALATHION SPRAY SPECTRACIDE MALATHION INSECT SPRAY CONCENTRATE ORTHO MALATHION PLUS INSECT SPRAY CONCENTRATE	See label.	
	neem BIONEEM ROSE, FLOWER, AND VEGETABLE SPRAY	6 T. 2 T.	Products containing neem are repellant to Japanese beetles.
	pyrethrins JAPANESE BEETLE KILLER		

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AND SHRUBS (cont.)			
Lace Bugs			
<i>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."</i>			
	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	---	DO NOT apply near fish pools, ponds, streams, or lakes.
	imidacloprid BAYER ADVANCED GARDEN 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
VARIOUS TREES AND SHRUBS (cont.)			
Lace Bugs (cont.)			
	neem		
	BIONEEM	6 T.	
	ROSE, FLOWER, AND VEGETABLE SPRAY	2 T.	
	rotenone-pyrethrin		
	BONIDE ROTENONE-PYRETHRIN SPRAY	4 t.	
Leafhoppers			
<i>For more information on controlling leafhoppers in the garden and landscape, see Utah State University Extension publication "Leafhoppers in the Home Garden."</i>			
	acephate		
	BONIDE SYSTEMIC INSECT CONTROL	3 T.	
	capsaicin, related compounds		
	BONIDE HOT PEPPER WAX CONCENTRATE	8-16 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	---	DO NOT apply near fish pools, ponds, streams, or lakes.
	BONIDE SYSTEMIC GRANULES		
	esfenvalerate		
	ORTHO BUG-B-GON MAX GARDEN AND LANDSCAPE INSECT KILLER READY-TO-USE	4 T.	
	imidacloprid		
	BAYER ADVANCED GARDEN 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	6 T.	
	ROSE, FLOWER, AND VEGETABLE SPRAY	2 T.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AND SHRUBS (cont.)			
Leafhoppers (cont.)			
	permethrin		
	HI-YIELD KILL-A-BUG II	2 T.	
	HI-YIELD KILL-A-BUG II RTU		
	HI-YIELD PERMETHRIN	1.5 t.	
	CONCENTRATE LAWN, GARDEN, PET AND LIVE-STOCK INSECT SPRAY		
	SPECTRACIDE ANT SHIELD	See label.	
	HOME BARRIER INSECT KILLER		
	pyrethrins and soap		
	YARD AND GARDEN INSECT KILLER	10 T.	
	rotenone and pyrethrins		
	ROTENONE-PYRETHRINS SPRAY	1 t.	
Leafminers			
<i>For more information on controlling the boxwood leafminer, see North Carolina Extension Service publication "Boxwood Leafminer."</i>			
	acephate		
	BONIDE SYSTEMIC INSECT CONTROL	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 + fenbutatin oxide		
	ORTHO SYSTEMIC INSECT KILLER	3 T.	
	carbaryl		
	LIQUID CARBARYL GARDEN SPRAY	4 t.	
	imidacloprid		
	BAYER ADVANCED GARDEN 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.
	malathion		
	HI-YIELD 55% MALATHION SPRAY	2 t.	
	neem		
	BIONEEM	6 T.	
	ROSE, FLOWER, AND VEGETABLE SPRAY	2 T.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AND SHRUBS (cont.)			
Leafrollers			
<i>For more information on the biology and control of the canna leafroller, see the University of Florida Web publications "Larger Canna Leafroller" and "Lesser Canna Leafroller."</i>			
	acephate BONIDE SYSTEMIC INSECT CONTROL	3 T.	
	acephate + fenbutatin oxide ORTHO SYSTEMIC INSECT KILLER	3 T.	
	<i>Bacillus thuringiensis</i> , var. kurstaki SAFER® BRAND CATERPILLAR 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.
	nem BIONEEM	6 T.	
	ROSE, FLOWER, AND VEGETABLE SPRAY	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 LIVESTOCK INSECT SPRAY	1.5 t.	
	SPECTRACIDE ANT SHIELD HOME BARRIER INSECT KILLER	See label.	
	rotenone and pyrethrins ROTENONE-PYRETHRINS SPRAY	1 t.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AND SHRUBS (cont.)			
Leafrollers (cont.)			
	spinosad FERTI-LOME BORER, BAG-WORM, LEAFMINER AND TENT CATERPILLAR SPRAY	4 T.	
Mealybugs			
<i>For more information on the biology and control of mealybugs, see North Carolina State University Cooperative Extension's Web publication "Mealybugs."</i>			
	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.
	imidacloprid BAYER ADVANCED GARDEN 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 oil CONCERN PESTICIDAL SPRAY OIL	5 T.	
	insecticidal soap CONCERN INSECT KILLING SOAP	5 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
VARIOUS TREES AND SHRUBS (cont.)			
Mealybugs (cont.)			
	neem		
	BIONEEM	6 T.	
	ROSE, FLOWER, AND VEGETABLE SPRAY	2 T.	
	rotenone and pyrethrins		
	YARD AND GARDEN INSECT KILLER	RTU	
	permethrin		
	PERMETROL LAWN INSECTICIDE	See label.	
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.			
Sawflies			
<i>For more information on sawflies, see the University of Minnesota's Web publication "Sawflies of Trees and Shrubs."</i>			
	acephate		
	BONIDE SYSTEMIC INSECT CONTROL	3 T.	
	imidacloprid		
	BAYER ADVANCED GARDEN 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 VEGETABLE SPRAY	2 T.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AND SHRUBS (cont.)			
Scale Insects —See pesticide recommendations for scale insects in the Pines section.			
Slugs and Snails			
<i>For more information on biology and control of slugs and snails, see the University of California's Pest Management Guidelines for Slugs and Snails.</i>			
	iron phosphate SLUGGO GARDEN SAFE SLUG AND SNAIL BAIT	See label.	
	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			
<i>For more information on spidermites, see the Colorado State University Web publication "Spider Mites."</i>			
	acephate + fenbutatin oxide ORTHO SYSTEMIC INSECT KILLER	3 T.	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.	

Insect	Insecticide and Formulation	Amount per Gallon	Comments
VARIOUS TREES AND SHRUBS (cont.)			
Spidermites (cont.)			
	disulfoton		DO NOT apply near fish pools, ponds, streams, or lakes.
	2-IN-1 SYSTEMIC ROSE AND FLOWER CARE READY-TO-USE GRANULES	---	
	BONIDE SYSTEMIC GRANULES 2%	---	
	insecticidal oil		
	CONCERN PESTICIDAL SPRAY OIL	5 T.	
	insecticidal soap		
	CONCERN INSECT KILLING SOAP	5 T.	
Spittlebugs —See pesticide recommendations for Leafhoppers.			
<i>For information on the two-lined spittlebug, see North Carolina State University's Web publication "Managing the Two-Lined Spittlebug in the Home Landscape."</i>			
Thrips			
<i>For more information on controlling thrips in the landscape, see the university of Florida's Web publication "Thrips on Ornamental Plants."</i>			
	acephate		Destroy old blossoms. Treat weekly during the growing season.
	BONIDE SYSTEMIC INSECT CONTROL	3 T.	
	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		Apply in early morning or late evening when bees are not present.
	BAYER ADVANCED POWERFORCE® MULTI-INSECT KILLER	See label.	

Insect	Insecticide and 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	---	DO NOT 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	4 T.	
	CONSERVE NATURALYTE INSECT CONTROL	4 T.	
Whiteflies			
<i>For more information on whitefly biology and control, see the University of California Pest Management Guidelines for Whiteflies.</i>			
	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.	DO NOT 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 ADVANCED GARDEN 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	6 T.	
	ROSE, FLOWER AND VEGETABLE SPRAY	2 T.	
	permethrin BONIDE EIGHT INSECT CONTROL VEGETABLE, FRUIT AND FLOWER CONCENTRATE	4 T.	
	soap INSECTICIDAL 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.

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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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