

# Trees (Forest, Shade, and Christmas)

## ASH

Pest	Pesticide	Rate	Remarks
Aphids	Arena 0.25G		Treat foliage when aphids appear; repeat at 7-to 10-day intervals, if needed.
	Ultra-Pure Oil	2.0-4.0 gallons/100 gallons	
	Distance IGR	6.0-8.0 ounces/100 gallons	
	Flagship	2.0-4.0 ounces or 4.0-8.0 ounces/100 gallons	
	Orthene TTO/75S	4.0 ounces/100 gallons	
	Orthene 97S	5.3 ounces/100 gallons	
	Meridian 25WG	2.0-8.5 ounces/100 gallons	
	Talstar 10WP	1.0 tablespoons/gallon or 3.0-8.0 tablespoons/10 gallons	
	Malathion 57% EC	1.5 pints/100 gallons or 1.5 teaspoons/gallon	
	Merit 75WP	1.0 teaspoon/10.0 gallons or 3.5 tablespoons/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Zenith 75	1.6 ounces/300 gallons	
		Insecticidal soap	
Borers	Acelepryn	4.0-32.0 ounces/100 gallons	Selected borers.
	Permethrin SFR	2.0-5.0 quarts/100 gallons	
	Phaser 50WP	1.0-2.0 pounds/100 gallons	Apply in spring when buds begin to break; repeat in 10-14 days; materials may be injected into tunnels and sealed in with mud or clay.
	Astro	2.0-5.0 quarts/100 gallons	
Emerald ash borer	Tree-Age	Follow Label	Trunk injection, mid- to late spring after trees have leafed out; follow directions for tree size.
	Imicide	Follow Label	Trunk injection, mid- to late spring after trees have leafed out; follow directions for tree size.
	Merit 2F	Follow Label	Soil injection or drench, early to mid-spring or mid-fall.
	Merit 75WP	Follow Label	Soil injection or drench, early to mid-spring or mid-fall.
	Xytect 2F	Follow Label	Soil injection or drench, early to mid-spring or mid-fall.
	Xytect 75WSP	Follow Label	Soil injection or drench, early to mid-spring or mid-fall.
	Astro	Follow Label	Trunk, branch and foliage spray; two applications at 4 week intervals; first spray at 45-55 F degree-days.
	Onyx	Follow Label	Trunk, branch and foliage spray; two applications at 4 week intervals; first spray at 45-55 F degree-days.
	Tempo SC Ultra	Follow Label	Trunk, branch and foliage spray; two applications at 4 week intervals; first spray at 45-55 F degree-days.
	Bayer Advanced Tree and Shrub Insect Control	Follow Label	Soil drench, early to mid-spring; available to homeowners.
	Optrol	Follow Label	Soil drench, early to mid-spring; available to homeowners.
Caterpillars	Acelepryn	1.0-2.0 ounces/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	

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	°Confirm	2.0-8.0 ounces/acre		
	°Conserve SC (Spinosad)	0.06 ounce/gallon 6.0 ounces/100 gallons		
	°Condor XL	0.75-1.75 pints/acre	Caterpillars only.	
	Dylox 80%SP	20.0-30.0 ounces/100 gallons		
	Ultra-Pure Oil	2.0-4.0 gallons/100 gallons		
	°Crymax	0.5-1.5 pounds/acre	Caterpillars only.	
	Orthene Orthene 97S/TTO	8.0 ounces/100 gallons		
	75S/TTO	10.5 ounces/100 gallons		
	° <i>Bacillus thuringiensis</i> (B.t.)		Javelin, Biobit, Thuricide, Foray 48B, Condor, Xentari, and Dipel; follow label.	
	°Spintor 2	3.0-8.0 ounces/acre		
	Malathion 57% EC	2.0 pints/100 gallons or 2.0 teaspoons/gal		
	°Dipel	1.0 teaspoon/gal	Use or repeat as needed.	
	Imidan 70%	0.75-1.0 pound/100 gallons	Adjust pH to 5.5.	
	<b>Scales</b>	Arena 0.25G	3.0-3.6 pounds/1,000 square feet	
Ultra-Pure Oil		2.0-4.0 gallons/100 gallons		
Flagship		4.0-8.0 ounces/100 gallons		
Superior oil (60%-70%)		2.0 gallons/100 gallons or 5.0 tablespoons/gal		
Zenith 75		1.6 ounces/300 gallons		
Malathion 57% EC		1.0-1.5 pints/100 gallons or 1.0 teaspoon/gal	Apply when crawlers appear; repeat in 10 days.	
Ultra-Fine Oil		2.0-5.0 gallons/100 gallons	Dormant in summer.	
Distance IGR		8.0-12.0 ounces/100 gallons		
Carbaryl		2.0 pounds/100 gallons		
Carbaryl 50WP		2.0 tablespoons/gal		
Carbaryl 4F		1.0 quart/100 gallons or 1.0 tablespoons/gal		
Orthene TTO/75S		10.5 ounces/100 gallons		
Orthene 97S		8.0 ounces/100 gallons		
*Supracide 2E		2.0 pints/100 gallons		
Insecticidal soap				Entire foliage or affected portion of tree must be soaked to ensure adequate coverage of insects.

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## BEECH

Pest	Pesticide	Rate	Remarks
<b>Aphids</b>	Arena 0.25G	3.0-3.6 pounds/1,000 square feet	Follow label.
	Ultra-Pure Oil	0.7-1.0 gallon/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Distance IGR	6.0-8.0 ounces/100 gallons	
	Flagship	2.0-4.0 ounces/100 gallons	
	Orthene TTO/75S	5.3 ounces/100 gallons	
	Orthene 97S	4.0 ounces/100 gallons	
	Talstar 10 WP	1.0 tablespoon/gallon or 3.0-8.0 tablespoons/10 gallons	
	Malathion 57% EC	1.5 pints/100 gallons or 1.5 teaspoons/gal	
	Meridian 25WG	2.0-8.5 ounces/100 gallons	
	Merit 75WP	1.0 teaspoon/10.0 gallons or 3.5 tablespoons/100 gallons	
	Insecticidal soap		
<b>Lace bugs</b>	Acelepryn	Variable with plant size	Follow label.
	Arena 0.25G	3.0-3.6 pounds/1,000 square feet	
	Ultra-Pure Oil	2.0-4.0 gallons/100 gallons	
	Ultra-Fine Oil	2.0-5.0 gallons/100 gallons	
	Orthene TTO/75S	5.3 ounces/100 gallons	
	Orthene 97S	4.0 ounces/100 gallons	
	Carbaryl	2.0 pounds/100 gallons	
	Carbaryl 50WP	2.0 tablespoons/gal	
	Carbaryl 4F	1.0 quart/100 gallons or 1.0 tablespoons/gal	
	Malathion 57% EC	1.0 pint/100 gallons or 1.0 tablespoons/gal	
	Merit 75WP	1.0 teaspoon/10.0 gallons or 3.5 tablespoons/100 gallons	
	*Disyston 15G	25.0-27.0 ounces/tree or 2.5 ounces/ inch of trunk diameter	
	<b>Caterpillars</b>	Acelepryn	
Ultra-Pure Oil		2.0-4.0 gallons/100 gallons	
Ultra-Fine Oil		2.0-5.0 gallons/100 gallons	
Confirm 2F		2.0-8.0 ounces/acre	
°Conserve (Spinosad)		0.06 ounce/gal 6.0 ounces/100 gallons	
Orthene TTO/75S		5.3 ounces/100 gallons	
Orthene 97S		8.0 ounces/100 gallons	
°Spintor 2		3.0-8.0 ounces/acre	
Carbaryl		2.0 pounds/100 gallons	
Carbaryl 50WP		2.0 tablespoons/gal	
Malathion 57% EC		2.0 pints/100 gallons or 2.0 teaspoons/gal	

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	Imidan 70WP	0.75-1 pound/100 gallons	
	°Crymax	0.5-1.5 pounds/acre	
	°Condor XL	0.75-1.75 pounds/acre	
Scales	Ultra-Pure Oil	2.0-4.0 gallons/100 gallons	Follow label.
	Ultra-Fine Oil	2.0-5.0 gallons/100 gallons	
	Distance IGR	8.0-12.0 ounces/100 gallons	
	Flagship	4.0-8.0 ounces/100 gallons	
	Superior oil	2.0 gallons/100 gallons or	
	60%-70%	5.0 tablespoons/gal	
	Malathion 57% EC	1.0-1.5 pints/100 gallons	Apply when crawlers appear and repeat in 10 days.
	Carbaryl	2.0 pounds/100 gallons	Follow label.
	Carbaryl 50WP	2.0 tablespoons/gal	
	Carbaryl 4F	1.0 quart/100 gallons or 1.0 tablespoons/gal	
	Orthene TTO/75S	10.5 ounces/100 gallons	
	Orthene 97S	8.0 ounces/100 gallons	
	Insecticidal soap		Entire foliage or affected portion of tree must be soaked to ensure adequate coverage of insects.

### RIVER BIRCH

Pest	Pesticide	Rate	Remarks
Aphids	Arena 0.25G	3.0-3.6 pounds/1,000 square feet	Treat foliage when aphids appear.
	Ultra-Fine Oil	0.7-1.0/gal	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Distance IGR	6.0-8.0 ounces/100 gallons	
	Flagship	2.0-4.0 ounces/100 gallons	
	Orthene TTO/75S	5.3 ounces/100 gallons	
	Orthene 97S	4.0 ounces/100 gallons	
	Talstar 10WP	1.0 teaspoon/gallon or 3.0-8.0 tablespoons/10 gallons	
	Malathion 57% EC	1.5 pints/100 gallons or 1.5 teaspoons/gal	
	Meridian 25WG	2.0-8.5 ounces/100 gallons	
	*Merit 75WP	1.0 teaspoon/10 gallons or 3.5 tablespoons/100 gallons	
Insecticidal soap		Entire foliage or affected portion of tree must be soaked to ensure adequate coverage of insects.	
Scales			Same as ash.
Bronze birch borers			Same as ash.
Sawflies	Orthene	5.3 ounces/100 gallons	Follow label.
	Ultra-Pure Oil	0.75-1 gallon/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Merit 74WP	1.0 teaspoon/10 gallons or 3.5 tablespoons/100 gallons	
	°Spinosad	2.0 ounces/gallon or 22.0 ounces/100 gallons	

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Pest	Pesticide	Rate	Remarks
Leafminers	Acelepryn	Variable	Follow label.
	°Conserve SC	0.2 ounce/gallon or 22.0 ounces/ 100 gallons	
	Malathion 57% EC	1.0 quart/100 gallons or 2.0 tablespoons/gal	
	Orthene TTO/75S	5.3 ounces/100 gallons	
	Orthene 97S	4.0 ounces/100 gallons	
	°Spintor 2	3.0-8.0 ounces/acre	
Eastern tent caterpillars	Acelepryn	1.0-2.0 ounces/100 gallons	
Yellowneck caterpillars	Ultra-Pure Oil	0.75-1.0 gallons/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Tempo 2	1.0-2.0 ounces/100 gallons	
	Carbaryl	2.0 pounds/100 gallons	Spray foliage and tent as needed in the spring.
	50WP	2.0 tablespoons/gal	
	Confirm 2F	2.0-8.0 ounces/acre	
	°Conserve (Spinosad)	0.06 ounce/gallon 6.0 ounces/100 gallons	
	Malathion	2.0 pints/100 gallons or 2.0 teaspoons gallons	
	°Spintor 2	3.0-8.0 ounces/acre	
	Imidan 70WP	0.75-1.0 pound/100 gallons	Adjust pH to 5.5.
	°B.t.		Javelin, Foray, Biobit, Thuricide, Dipel, Crymax, Condor XL; follow label.
	Orthene TTO/75S	5.3 ounces/100 gallons	Spray as needed.
	Orthene 97S	4.0 ounces/100 gallons	

### BOXELDER

Pest	Pesticide	Rate	Remarks
Boxelder aphids	Malathion 57% EC	1.5 pints/1,000 gallons or 1.5 teaspoons/gallon	Treat when insects are present.
Boxelder bugs	Carbaryl	2.0 pounds/100 gallons	Primarily a house pest during warm days in fall, winter and spring; spraying tree trunks and young insects when they appear before home invasion reduces the nuisance.
	Carbaryl 50WP	2.0 tablespoons/gallon	
	Carbaryl 4F	1.0 quart/100 gallons or 1.0 tablespoons/gallon	

### CEDAR

Pest	Pesticide	Rate	Remarks
Bagworms	Acelepryn	1.0-2.0 ounces/100 gallons	Spray foliage in early June when bags are small; repeat in 10 days; handpick older larvae; spray in late afternoon.
	Orthene TTO/75S	1/3 pound/100 gallons	
	Orthene 97S	4.0 ounces/100 gallons	
	Scimitar GS, CS	1.5-5.0 ounces/100 gallons	
	°Spintor 2	3.0-8.0 ounces/acre	
	Battle WP	1.2-4.8 ounces/100 gallons	
	°B.t.		
	Malathion 57% EC	2.0 pints/100 gallons or 2.0 teaspoons/gallon	

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Pest	Pesticide	Rate	Remarks
	Carbaryl	2.0 pounds/100 gallons	
	Carbaryl 50WP	2.0 tablespoons/gallon	
	Dylox 80% SP	20.0-30.0 ounces/100 gallons	
<b>Mites</b>	Forbid 4F	1.4-4.0 ounces/100 gallons	Follow label.
	Ultra-Pure Oil	0.75-1.0 gallons/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	°Conserve SC(Spinosad)	0.2 fluid ounce/gallon	
		22.0 ounces/100 gallons	
	*Judo	2.0-4.0 ounces/100 gallons	
	Mesurool 75WP	0.5-1.0 pound/acre	
	*Dicofol 35% WP (Kelthane)	1.0-1 1/3 pounds/100 gallons	
		1.5 tablespoons/gallon	
	Talstar 10WP	1.0-2.0 tablespoons/gallon or 3.0-8.0 tablespoons/10 gallons	

### CHERRY

Pest	Pesticide	Rate	Remarks
<b>Eastern tent caterpillars</b>	Acelepryn	1.0-2.0 ounces/100 gallons	Spray when webs first appear; cut webs out, if practical.
	Carbaryl	2.0 pounds/100 gallons	
	Carbaryl 50WP	2.0 tablespoons/gallon	
	Carbaryl 4F	1.0 quart/100 gallons or 1.0 tablespoons/gallon	
	Confirm 2F	2.0-8.0 ounces/acre	
	°Conserve (Spinosad)	0.06 ounce/gal	
		6.0 ounces/100 gallons	
	Orthene TTO/75S	1/3 pound/100 gallons	
	Orthene 97S	4.0 ounces/100 gallons	
	°Spintor 2	3.0-8.0 ounces/acre	
<b>Fall webworms</b>	Confirm 2F	2.0-8.0 ounces/acre	Follow label.
	Dylox 80% SP	20.0-30.0 ounces/100 gallons	
	°Spintor 2 (Spinosad)	3.0-8.0 ounces/acre	
	Malathion 57% EC	2.0 pints/100 gallons or 2.0 teaspoons/gallon	
	°B.t.		Same as ash.

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## CHINABERRY

Pest	Pesticide	Rate	Remarks
<b>Scales</b>			Same as ash.
<b>Whiteflies</b>	Forbid 4F	2.0-4.0 ounces/100 gallons	Follow label.
	Ultra-Pure Oil	0.75-1.0 gallon/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Safari	4.0-8.0 ounces/100 gallons 12-24 ounces/100 gallons water drench	
	Flagship	4.0-8.0 ounces/100 gallons	
	Distance 0.86 EC	6.0-8.0 ounces/100 gallons	
	Meridian 25WG	2.0-8.5 ounces/100 gallons	
	Orthene TTO/75S	10.5 ounces/100 gallons	
	Orthene 97S	8.0 ounces/100 gallons	
	Talstar 10WP	1.0-2.0 tablespoons/gallon or 3.0-8.0 tablespoons/10 gallons	
*Merit 75 WP	1.0 teaspoon/10 gallons or 3.5 tablespoons/100 gallons		

## CYPRESS

Pest	Pesticide	Rate	Remarks
<b>Scales</b>			Same as ash.
<b>Mites</b>	Forbid 4F	1.4-4.0 ounces/100 gallons	Follow label.
	Ultra-Pure Oil	0.75-1.0 gallons/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Judo	2.0-4.0 ounces/100 gallons	
	(Dicofol)	1.5 tablespoons/gallon	
	Talstar 10WP	1.0-2.0 tablespoons/gallon or 3.0-8.0 tablespoons/10 gallons	
	*Mesuroil 75WVP	0.5-1.5 pounds/acre	

## DOGWOOD

Pest	Pesticide	Rate	Remarks
<b>Webworms</b>	Acelepryn	1.0-2.0 ounces/100 gallons	Follow label.
	Carbaryl	2.0 pounds/100 gallons	
	Carbaryl 50WP	2.0 tablespoons/gal	
	Sevin 4F	1.0 quart/100 gallons	
	Orthene TTO/75S	10.5 ounces/100 gallons	
	Orthene 97S	4.0 ounces/100 gallons	
	*Imidan 70WP	0.75-1.0 pound/100 gallons	
<b>Dogwood borers, dogwood twig borers</b>			Same as ash.

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## ELM

Pest	Pesticide	Rate	Remarks
<b>Aphids</b>	Arena 0.25G	3.0-3.6 pounds/1,000 square feet	Follow label.
	Ultra-Pure Oil	0.75-1.0 gallon/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Distance IGR	6.0-8.0 ounces/100 gallons	
	Flagship	2.0-4.0 ounces/100 gallons	
	Talstar 10WP	1.0-2.0 tablespoons/gallon or 3.0-8.0 tablespoons/10 gallons	
	Orthene TTO/75S	5.3 ounces/100 gallons	
	Orthene 97S	4.0 ounces/100 gallons	
	*Merit 75WP	1.0 teaspoon/10 gallons or 3.5 tablespoons/100 gallons	
	Malathion 57% EC	1.5 pints/100 gallons or 1.5 teaspoons/gal	
	Meridian 25WG	2.0-8.5 ounces/100 gallons	
	Zenith 75	1.6 ounces/300 gallons water	
	Insecticidal soap		Entire foliage or affected portion of tree must be soaked to ensure adequate coverage of insects.
<b>Elm bark beetles</b>	Ultra-Pure Oil	0.75-1.0 gallon/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	°Conserve SC	0.06 ounce/gallon or 6.0 ounces/ 100 gallons	
<b>Elm leaf beetles</b>	Ultra-Pure Oil	0.75-1.0 gallon/100 gallons	Spray foliage when larvae first appear about the time leaves are fully expanded; repeat in 2 weeks.
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Carbaryl	2.0 pounds/100 gallons	
	Carbaryl 50WP	2.0 tablespoons/gal	
	Carbaryl 4F	1.0 quart/100 gallons	
	Scimitar GS, CS	1.5-5.0 ounces/100 gallons	
	Battle WP	1.2-4.8 ounces/100 gallons	
	*Merit 75WP	1.0 teaspoon/gallon or 3.5 tablespoons/100 gallons	
	Zenith 75	1.6 ounces/300 gallons	
	Orthene TTO/75S	10.5 ounces/100 gallons	
	Orthene 97S	8.0 ounces/100 gallons	
	<b>Caterpillars</b>	Acelepryn	1.0-2.0 ounces/100 gallons
Carbaryl		2.0 pounds/100 gallons	
Carbaryl 50WP		2.0 tablespoons/gallon	
Carbaryl 4F		1.0 quart/100 gallons or 1.0 tablespoons/gallon	
Confirm 2F		2-8 ounces/acre	
°Conserve (Spinosad)		0.06 ounce/gallon or 6 ounces/ 100 gallons	
Orthene TTO/75S		10.5 ounces/100 gallons	
Orthene 97S		8.0 ounces/100 gallons	
Dylox 80% SP		20.0-30.0 ounces/100 gallons	



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	°B.t.		
	*Ficam W	11.0 ounces/100 gallons	
	Tempo 2	1.0-2.0 ounces/100 gallons	
	*Imidan 70WP	0.75-1.0 pound/100 gallons	
	Scimitar GS, CS	1.5-5.0 ounces/100 gallons	
	°Spintor 2 (Spinosaad)	3.0-8.0 ounces/acre	
	Battle WP	1.2-4.8 ounces/100 gallons	
<b>Scales</b>			Same as ash.

### GUM

Pest	Pesticide	Rate	Remarks
<b>Scales</b>			Same as ash.
<b>Caterpillars</b>			Same as elm.

### HAWTHORN

Pest	Pesticide	Rate	Remarks
<b>Aphids</b>	Arena 0.25G	3.0-3.6 pounds/1,000 square feet	Follow label.
	Ultra-Pure Oil	0.75-1.0 gallon/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Safari	4.0-8.0 ounces/100 gallons	
	Distance IGR	6.0-8.0 ounces/100 gallons	
	Flagship	2.0-4.0 ounces/gal	
	Malathion 57% EC	1.5 pints/100 gallons or 1.5 teaspoons/gal	
	Meridian 25WG	2.0-8.5 ounces/100 gallons	Do not use near home or treat birch.
	Thiodan 2EC	1.0 quart/100 gallons or 2.0 tablespoons/3 gallons	
	Orthene TTO/75S	5.3 ounces/gallon or 4.0 ounces/100 gallons	Follow label.
	Meridian 25 WG	2.0-8.5 ounces/100 gallons	
	*Merit 75WP	1.0 teaspoon/10 gallons or 3.5 tablespoons/100 gallons	
	Acelepryn	1.0-2.0 ounces/100 gallons	
	Arena 0.25G	3.0-3.6 pounds/1,000 square feet	
	Ultra-Pure Oil	0.75-1.0 gallon/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Carbaryl	2.0 pounds/100 gallons	Treat when small nymphs appear (May through September); repeat at 7- to 10-day intervals, if needed.
	Carbaryl 50WP	2.0 tablespoons/gallon	Follow label.
	Carbaryl 4F	1.0 quart/100 gallons or 1.0 tablespoons/gallon	
	Malathion 57% EC	1.0 pint/100 gallons or 1.0 teaspoon/gal	
*Merit 75WP	1.0 teaspoon/10 gallons or		

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		3.5 tablespoons/100 gallons	
	*Disyston 15G	25.0-27.0 ounces/tree or 2.5 ounces/inch of trunk diameter	
	Orthene TTO/75S	5.3 ounces/100 gallons	
	Orthene 97S	4.0 ounces/100 gallons	
	Zenith 75	1.6 ounces/300 gallons	
	Insecticidal soap		Entire foliage or affected portion of tree must be soaked to ensure adequate coverage of insects.
Spider mites	Forbid 4F	1.4-4.0 ounces/100 gallons	Follow label.
	Ultra-Pure Oil	0.75-1.0 gallon/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Judo	2.0-4.0 ounces/100 gallons	
	Conserve SC	0.2 ounce/gallon or 22.0 ounces/ 100 gallons	
	*Dicofol 35% WP	1.0-1 1/3 pounds/100 gallons	Treat when mites are present; repeat at 7- to 10-day intervals, if needed.
	Floramite	2.0-4.0 ounces/100 gallons	Follow label.
	*Mesurol 75WP	0.5-1.5 pounds/acre	
	Avid 0.15EC	8.0 ounces/100 gallons	
	Tetram 5WDG	16.0-32.0 ounces/acre or 8.0-16.0 ounces	Does not affect adults but will cause sterilization; effective against young mites; can only be used two times a year; to control adults use adulticide; for use in greenhouse, lath and shade house only.

### HICKORY

Pest	Pesticide	Rate	Remarks
Twig girdler	Sanitation		Gather and destroy all severed branches in fall or winter.
Caterpillars	Acelepryn	1.0-2.0 ounces/100 gallons	
	Carbaryl	2.0 pounds/100 gallons	Treat when larvae are present.
	Carbaryl 50WP	2.0 tablespoons/gallon	Follow label.
	Carbaryl 4F	1.0 quart/100 gallons or 1.0 tablespoons/gal	
	°Conserve SC	0.06 ounce/gallon or 6.0 ounces/ 100 gallons	
	Malathion 57% EC	2.0 pints/100 gallons or 2.0 teaspoons/gallon	
	Tempo 2	1.0-2.0 ounces/100 gallons	
	*Imidan 70WP	0.75-1.0 pound/100 gallons	Adjust water pH to 5.5.
	°B.t.		Same as ash.
	Scimitar GS, CS	1.5-5.0 ounces/100 gallons	Follow label.
	°Spintor 2	3.0-8.0 ounces/acre	
	Orthene TTO/75S	5.3 ounces/100 gallons	
Orthene 97S	4.0 ounces/100 gallons		
Eriophyid mites	Forbid 4F	1.4-4.0 ounces/100 gallons	Follow label.
	Ultra-Pure Oil	0.75-1.0 gallon/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	

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	*Judo	2.0-4.0 ounces/100 gallons	
	Carbaryl	2.0 pounds/100 gallons	
	Carbaryl 50WP	2.0 tablespoons/gallon	
	Carbaryl 4F	1.0 quart/100 gallons or 1.0 tablespoon/gallon	
	Talstar	0.25-0.5 ounce/1,000 square feet or 10.0-20.0 ounces/acre	

### HOLLY

Pest	Pesticide	Rate	Remarks
<b>Southern red spider mites</b>	Forbid 4F	1.4-4.0 ounces/100 gallons	Follow label.
	Ultra-Pure Oil	0.75-1.0 gallon/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Judo	2.0-4.0 ounces/100 gallons	
	Avid 0.15EC	8.0 ounces/100 gallons	
	Conserve SC	0.2 ounce/gallon or 22.0 ounces/ 100 gallons	
	Floramite	1/3-2/3 teaspoon/gallon or 2.0- 4.0 ounces/100 gallons	
	*Mesurool 75WP	0.5-1.5 pounds/acre	
	Citation	2.66 ounces/100 gallons	
<b>Leafminers</b>	Permethrin SFR	4.0-8.0 ounces/100 gallons	Apply to leaves when new growth begins; a common pest of American holly sometimes occurring on English holly.
	Avid 0.15EC	0.5 teaspoon/gallon or 8.0 ounces/100 gallons	
	*Merit 75WP	1.0 teaspoon/10 gallons water or 3.5 tablespoons/100 gallons	
	°Conserve (Spinosad)	0.2/gallon	
		22.0 ounces/100 gallons	
		Zenith 75	

### JUNIPER

Pest	Pesticide	Rate	Remarks
<b>Bagworms</b>	Acelepryn	1.0-2.0 ounces/100 gallons	Follow label.
	Permethrin SFR	4.0-8.0 ounces/100 gallons	
	Confirm	2.0-8.0 ounces/acre	
	°Condor XL	0.75-1.75 pints/acre	
	°Dipel	2.0-4.0 tablespoons/gallon	
	Orthene TTO/75SP	1/3 pound/100 gallons	
	Orthene 97SP	4.0 ounces/100 gallons	
	Dylox 80% SP	20.0-30.0 ounces/100 gallons	
	°Spintor 2	3.0-8.0 ounces/acre	
	Scimitar GS, CS	1.5-5.0 ounces/100 gallons	
	Battle WP	1.2-4.8 ounces/100 gallons	
	°Crymax	0.5-1.5 pounds/acre	
	Malathion 57% EC	2.0 pints/100 gallons or	

## Trees (Forest, Shade, and Christmas)

Pest	Pesticide	Rate	Remarks
		2.0 teaspoons/gallon	
Spider mites	Forbid 4F	1.4-4.0 ounces/100 gallons	Follow label.
	Ultra-Pure Oil	0.75-1.0 gallons/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	°Conserve SC	0.2 ounce/gallon or 22.0 ounces/ 100 gallons	
	Malathion 57%EC	1.5 pints/100 gallons or 1.5 teaspoons/gallon	
	°MesuroI 75WP	0.5-1.5 pounds/acre or 0.5-1.0 teaspoon/gallon	
	Tetram 5WDG	16.0-32.0 ounces/acre or 8.0-16.0 ounces	Does not affect adults but will cause sterilization; effective against young mites; can be used only two times a year; to control adults use adulticide; for use in greenhouse, lath and shade house only.
	Judo	2-4 ounces/100 gallons	
Vendex 50WP	1.0 quart/100 gallons or 0.5-1.0 teaspoon/gallon		
Leafminers	°Spintor (Conserve)	0.2 ounce or 6.0 milliliters/gallon	
	°Citation-IGR	2.66 ounces/100 gallons/acre	Dipterous (fly) leafminers.
	Merit 75WP	1.0 teaspoon/10 gallons water or 3.5 tablespoons/100 gallons	
	°Precision-IGR	6.0-8.0 ounces/100 gallons water	Lepidopterous leafminers (azalea-citrus).
Locust Borers			Same as ash.
Locust leafminers	°Conserve SC	0.2 ounce or 6 milliliters/gallon	
	Malathion 57%EC	1.5 pints/100 gallons or 1.5 teaspoons/gallon	
	Merit 75WP	1.0 teaspoon/10 gallons water or 3.5 tablespoons/100 gallons	

## LOCUST (HONEY)

Pest	Pesticide	Rate	Remarks
Caterpillars	Acelepryn	1.0-2.0 ounces/100 gallons	
	*Imidan 70WP	0.75-1.0 ounces/100 gallons	Apply as a foliar spray when adults first appear (early summer); repeat twice at 4- to 5-week intervals; adjust water pH to 5.5.
	Orthene TTO/75S	10.5 ounces/100 gallons	
	Orthene 97S	8.0 ounces/100 gallons	
	°Spintor 2	3.0-8.0 ounces/acre	
	Carbaryl 50WP	2.0 tablespoons/gal	
	Carbaryl 4F	1.0 quart/100 gallons or 1.0 tablespoons/gallon	
	°B.t.		Same as ash. Follow label.
	Dylox 80% SP	20.0-30.0 ounces/100 gallons	
	Scimitar	1.5-5.0 ounces/100 gallons water	

# Trees (Forest, Shade, and Christmas)

## MAGNOLIA

Pest	Pesticide	Rate	Remarks
Scales			Same as ash.
Leafminer weevils	Imidan 70WP	2.0 pounds/100 gallons water	Water pH 5.5*

## MAPLE

Pest	Pesticide	Rate	Remarks
Aphids	Ultra-Pure Oil	0.75-1.0 gallons/100 gallons	Follow label.
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Zenith 75	1.6 ounces/300 gallons	
	Safari	4.0-8.0 ounces/100 gallons	
	Flagship	2.0-4.0 ounces/100 gallons	
	Talstar 10WP	1.0 tablespoons/gallon or 3.0-8.0 tablespoons/10 gallons	
	Orthene TTO/75S	5.3 ounces/100 gallons	
	Orthene 97S	4.0 ounces/100 gallons	
	Malathion 57% EC	1.5 pints/100 gallons or 1.5 teaspoons/gallon	Malathion may injure sugar maple. Treat when aphids appear. Repeat at 7- to 10-day intervals if needed. Do not use near home or treat birch.
	Meridian 25WG	2.0-8.5 ounces/100 gallons	
	*Merit 75WP	1.0 teaspoon/10 gallons or 3.5 tablespoons/100 gallons	
		Insecticidal soap	
Bladder gall mites or eriophid mites	Forbid 4F	1.4-4.0 ounces/100 gallons	
	Ultra-Pure Oil	0.75-1.0 gallons/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Carbaryl	2.0 pounds/100 gallons	Spray trees at bud break and repeat at 10- to 14-days for three sprays.
	Carbaryl 50WP	2.0 tablespoons/gal	
Borers			Same as ash.
Caterpillars	Acelepryn	1.0-2.0 ounces/100 gallons	Spray when caterpillars are small.
	Malathion 57% EC	2.0 pints/100 gallons or 2.0 teaspoons/gallon	
	Confirm	2.0-8.0 ounces/100 gallons	
	Carbaryl	2.0 pounds/100 gallons	
	Carbaryl 50WP	2.0 tablespoons/gallon	
	°B.t.		Same as ash.
	°Spintor 2	3.0-8.0 ounces/acre	
	Tempo 2	1.0-2.0 ounces/100 gallons	
	*Imidan 70WP	0.75-1.0 pound/100 gallons	Adjust water pH to 5.5.
	Orthene TTO/75S	5.3 ounces/100 gallons	
Orthene 97S	4.0 ounces/100 gallons		

# Trees (Forest, Shade, and Christmas)

## MIMOSA

Pest	Pesticide	Rate	Remarks
Mimosa webworms	°Conserve SC	2.0 milliliters/gallon water or 6.0 ounces/100 gallons	Follow label.
	°Crymax	0.5-1.5 pounds/acre	
	°Condor XL	0.75-1.75 pints/acre	
	Orthene TTO/75S	10.5 ounces/100 gallons	
	Orthene 97S	8.0 ounces/100 gallons	
	Carbaryl	2.0 pounds/100 gallons	
	Carbaryl 50WP	2.0 tablespoons/gallon	
	Carbaryl 4F	1.0 quart/100 gallons or 1.0 tablespoons/gallon	
	Dylox 80% SP	20.0-30.0 ounces/100 gallons	
	Tempo 2	1.0-2.0 ounces/100 gallons	
Scales			Same as ash.

## MULBERRY

Pest	Pesticide	Rate	Remarks
Lace bugs	Acelepryn	2.0-4.0 ounces/100 gallons	Follow label.
	Arena 0.25G	3.0-3.6 pounds/1,000 square feet	
	Malathion 57% EC	1.0 pint/100 gallons or 1.0 tablespoons/gallon	
	*Merit 75WP	1.0 teaspoon/10 gallons or 3.5 tablespoons/100 gallons	
Mites	Forbid 4F	1.4-4.0 ounces/100 gallons	Follow label.
	Ultra-Pure Oil	0.75-1.0 gallon/100 gallons	
	Ultra-Fine Oil	2.5-5.0 ounces/gallon, 1.0-2.0 gallons/100 gallons	
Stinkbugs	Carbaryl	2.0 pounds/100 gallons	Follow label.
	Carbaryl 50WP	2.0 tablespoons/gallon	

## OAK

Pest	Pesticide	Rate	Remarks
Aphids	Arena 0.25G	3.0-3.6 pounds/1,000 square feet	Follow label.
	Ultra-Pure Oil	0.75-1.0 gallon/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Zenith 75	1.6 ounces/300 gallons	
	Safari	4.0-8.0 ounces/100 gallons	
	Flagship	2.0-4.0 ounces/100 gallons	
	Talstar 10WP	1.0 tablespoons/gallon or 3.0-8.0 tablespoons/10 gallons	
	*Thiodan 2EC	1.0 quart/100 gallons or 2.0 tablespoons/3 gallons	
	Malathion 57% EC	1.5 pints/100 gallons or 1.5 teaspoons/gallon	Follow label.
	Meridian 25WG	2.0-8.5 ounces/100 gallons	
	*Merit 75WP	1.0 teaspoon/10 gallons or	

## Trees (Forest, Shade, and Christmas)

Pest	Pesticide	Rate	Remarks
		3.5 tablespoons/100 gallons	
	Orthene TTO/75S	5.3 ounces/100 gallons	
	Orthene 97S	4.0 ounces/100 gallons	
	Insecticidal soap		Entire foliage or affected portion of tree must be soaked to ensure adequate coverage of insects.
<b>Caterpillars (including buckmoth caterpillars)</b>	Acelepryn	1.0-2.0 ounces/100 gallons	Follow label
	Battle	5.0-10.0 ounces/acre	
	Carbaryl	2.0 pounds/100 gallons or	Spray foliage and web when web is first noticed.
	Carbaryl 50WP	2.0 tablespoons/gallon	Follow label.
	Carbaryl 4F	1.0 quart/100 gallons or 1.0 tablespoons/gallon	
	Confirm 2F	2.0-8.0 ounces/acre	
	*Imidan 70WP	0.75-1.0 pound/100 gallons	Adjust water pH to 5.5.
	Orthene TTO/75S	10.5 ounces/100 gallons	Follow label.
	Orthene 97S	8.0 ounces/100 gallons	
	Tempo 2	1.0-2.0 ounces/100 gallons	
	Malathion 57% EC	2.0 pints/100 gallons or 2.0 teaspoons/gallon	
	°B.t.	Same as Ash.	
	Dylox 80% SP	20.0-30.0 ounces/100 gallons	
	Scimitar	1.5-5.0 ounces/100 gallons	
<b>Orange-striped oakworms</b>	Acelepryn	1.0-2.0 ounces/100 gallons	Follow label.
	Battle	5.0-10.0 ounces/acre	
	°Conserve SC	2.0 milliliters/gallon or 6.0 ounces/100 gallons	
	Carbaryl	2.0 pounds/100 gallons water	
	Carbaryl 50WP	2.0 tablespoons/gallon water	
	Carbaryl 4F	1.0 quart/100 gallons water or 1.0 tablespoons/gallon	
	°Crymax	0.5-1.5 pounds/acre	
	°Condor XL	0.75-1.75 pints/acre	
<b>Tent caterpillars</b>	Acelepryn	1.0-2.0 ounces/100 gallons	Follow label.
	Battle	5.0-10.0 ounces/acre	
	Orthene TTO/75S	10.5 ounces/100 gallons	
	Orthene 97S	8.0 ounces/100 gallons	
	Carbaryl	2.0 pounds/100 gallons water	Spray when webs are first seen. Repeat at 7- to 10-day intervals, if needed.
	Carbaryl 50WP	2.0 tablespoons/gallon water	Follow label.
	Carbaryl 4F	1.0 quart/100 gallons water or 1.0 tablespoon/gallon water	
	Confirm 2F	2.0-8.0 ounces/acre	
	°Condor XL	0.75-1.75 pints/acre	
	Malathion 57% EC	2.0 pints/100 gallons or 2.0 teaspoons/gallon	
	°Crymax	0.5-1.5 pounds/acre	
	°Dipel	0.5-1.0 teaspoon/gallon	Spray in early morning or late afternoon.
	°Spintor 2	3.0-8.0 ounces/acre	Follow label.

## Trees (Forest, Shade, and Christmas)

Pest	Pesticide	Rate	Remarks
	Tempo 2	1.0-2.0 ounces/100 gallons	
<b>Gall wasps (Several species on stems and foliage)</b>	Flagship	2.0-4.0 ounces/100 gallons	
	Orthene TTO/75S	1 1/3 pounds/100 gallons	The use of systemic and residual materials early at bud break are suggested to prevent infestations. Sprays should be repeated at monthly intervals for three to four months.
	Orthene 97S	8.0 ounces/100 gallons	
	Meridian 25WG	2.0-8.5 ounces/100 gallons	
<b>Lace bugs</b>	Acelepryn	2.0-4.0 ounces/100 gallons	Follow label
	Arena 0.25G	3.0-3.6 pounds/1,000 square feet	
	Zenith 75	1.6 ounces/300 gallons	
	Orthene TTO/75S	5.3 ounces/100 gallons	
	Orthene 97S	4.0 ounces/100 gallons	
	Carbaryl	2.0 pounds/100 gallons or	Treat when small nymphs appear (May through September); repeat at 7-to 10-day intervals if needed.
	Carbaryl 50WP	2.0 tablespoons/gal	Follow label.
	Carbaryl 4F	1.0 quart/100 gallons or 1.0 tablespoons/gallon	
	Malathion 57% EC	1.0 pint/100 gallons or 1.0 teaspoon/gallon	
	*Merit 75WP	1.0 teaspoon/10 gallons or 3.5 tablespoons/100 gallons	

### PECAN

Pest	Pesticide	Rate	Remarks
<b>Aphids</b>	*Merit (Provado)	1.0 teaspoon/10 gallons or 3.5 tablespoons/100 gallons	Follow label.
	Insecticidal soap		Entire foliage or affected portion of tree must be soaked to ensure adequate coverage of insects.
<b>Phylloxera</b>	Malathion 25WP	3.0 pounds/100 gallons	Follow label.
	*Merit (Provado)	1.0 teaspoon/10 gallons or 3.5 tablespoons/100 gallons	
	Insecticidal soap		Entire foliage or affected portion of tree must be soaked to ensure adequate coverage of insects.
<b>Twig girdler</b>	Sanitation		Gather and destroy all severed branches in fall or winter.
<b>Fall webworm</b>	*Merit (Provado)	1.0 teaspoon/10 gallons or 3.5 tablespoons/100 gallons	Caterpillars only.
<b>Eriophid mites</b>	Forbid 4F	1.4-4.0 ounces/100 gallons	Follow label.
	Ultra-Pure Oil	0.75-1.0 gallon/100 gallons	
	Ultra-Fine Oil	1.0-2.0 gallons/100 gallons	
	Carbaryl	2.0 pounds/100 gallons	
	Carbaryl 50WP	2.0 tablespoons/gallon	
	Carbaryl 4F	1.0 quart/100 gallons or 1.0 tablespoon/gallon	
<b>Yellowneck caterpillars</b>	Acelepryn	1.0-2.0 ounces/100 gallons	



## Trees (Forest, Shade, and Christmas)

Pest	Pesticide	Rate	Remarks
Walnut caterpillars	Confirm 2F	8.0-16.0 ounces/acre	
	°Spintor 2	3.0-8.0 ounces/acre	
Caterpillars	°Confirm	8.0-16.0 ounces/acre	
	Carbaryl	2.0 pints/100 gallons	
	Malathion 57% EC	2.0 teaspoons/gallon	

### SOUTHERN PINE PLANTATIONS AND CHRISTMAS TREES

Pest	Pesticide	Rate	Remarks
Nantucket pine tip moth	Orthene TTO/75S	1.0 pound/100 gallons	Chemical control is usually impractical under forest conditions due to high cost. Spray lawn and high-value trees to coincide with moth emergence.  Drench-spray the terminals with high- or low-pressure sprayer depending on size and number of trees; destroy infested tips where practical. Shear and spray Christmas trees one- to three- times at proper intervals to control the Nantucket pine tip moth.
	Orthene 97S	12.0 ounces/100 gallons	
	°Spintor 2 (Spinosad)	1.0 tablespoons/gallon or 3.0-8.0 ounces/acre	
	°Conserve SC	0.2 ounce/gallon or 22.0 ounces/100 gallons	
	Dylox 80% SP	20.0 ounces/100 gallons	
	Astro 3.2EC	4.0-8.0 ounces/100 gallons	
	Confirm 2F	8.0 ounces/acre	
	Pounce 3.2EC	4.0-8.0 ounces/acre	Use only late season to prevent scale buildup; Christmas trees only; pH 5.5.
	*Imidan 70WSB	1 1/3 pounds/acre	
	°Dimilin 25W	4.0 ounces/acre	Apply at early stages of instar development preferably at beginning of first and second tip moth generation.
°Azatin XL	10.0-20.0 ounces/acre	Apply in sufficient water or uniform full coverage of foliage, 10-20 gallons water/acre. Protection of first-year seedling is important to getting straight stem.	
Pales weevils, pitch-eating weevils	Arctic 3.2EC	8.0 ounces/100 gallons	Site preparation in the spring prior to winter planting is recommended.
	*Imidan 70WSB	1 1/3 pounds/acre	Water pH 5.5.
		4% dip for young trees	See label.
	Permethrin SFR	2.0-5.0 quarts/100 gallons	
	Duraguard ME	1.2 gallons/100 gallons	
	Orthene TTO/Orthene 97S	12.0 ounces/100 gallons	
Deodar weevils	*Imidan 70W	1 1/3-1.5 pounds/acre	
	Permethrin SFR	2.0-5.0 quarts/100 gallons	
Coneworms	Orthene TTO/75S	2/3-3/4 pound/100 gallons	-Coneworms can be a major problem in stressed or damaged Christmas trees. -They attack wounds and breaks in the trunks and stems, girdling and killing trees.
	Orthene 97S	8.0 ounces/100 gallons	
	Duraguard ME	1.2 gallons/100 gallons	
	°Conserve SC	6.0 milliliters/gallon or 22.0 ounces/100 gallons	
	Astro 3.2 EC	4.0-8.0 ounces/100 gallons	
Pine bark aphids	Arena 0.25G	3.0-3.6 pounds/1,000 square feet	Follow label.
	Safari	4.0-8.0 ounces/100 gallons	
	Flagship	2.0-4.0 ounces/100 gallons	
	Endeavor 50%	10.0 ounces/acre	
	Talstar 10WP	1.0-3.0 tablespoons/gallon or 3.0-8.0 ounces/50 gallons	

## Trees (Forest, Shade, and Christmas)

Pest	Pesticide	Rate	Remarks
	Malathion 57% EC	1.5 pints/100 gallons or 1.5 teaspoons/gallon	
	Meridian 25WG	2.0-8.5 ounces/100 gallons	
	Orthene TTO/75S	5.3 ounces/100 gallons	
	Orthene 97S	4.0 ounces/100 gallons	
	*Merit 75WP	1.0 teaspoon/10 gallons or 3.5 tablespoons/100 gallons	
	Insecticidal soap		
<b>Pine needle Scales</b>	Safari	8.0-12.0 ounces/100 gallons	Follow label.
	Flagship	4.0-8.0 ounces/100 gallons	
	Malathion 57% EC	4.0 pints/100 gallons water or 4.0 teaspoons/gallon	
	Duraguard ME	1.2 gallons/100 gallons	
	Insecticidal soap		
<b>All pine sawflies</b>	Zenith 75	1.6 ounces/300 gallons	Apply when insects or their damage appears Repeat weekly or as needed. <b>MAY BE PHYTOTOXIC ON SOME SPECIES OF PINE. READ LABEL!</b>
	Carbaryl	2.0 pounds/100 gallons	
	Carbaryl	2.0 pounds/100 gallons	
	Carbaryl 50WP	2.0 tablespoons/gallon	
	Carbaryl 4F	1.0 quart/100 gallons or 1.0 tablespoon/gallon	
	°Conserve SC	0.06 ounce/gallon or 6.0 ounces/ 100 gallons	
	°Spintor 2	3.0-8.0 ounces/acre	
	*Merit 75WP	1.0 teaspoon/10 gallons or 3.5 tablespoons/100 gallons	
	Orthene TTO/75S	10.5 ounces/100 gallons	
	Orthene 97S	8.0 ounces/100 gallons	
	Malathion 57% EC	2.0 pints/100 gallons or 2.0 teaspoons/gallon 0.25-0.5 pounds/100 gallons	
<b>Southern pine beetles</b>	Onyx	0.25-0.5 pounds/100 gallons	Keys to managing bark beetles are maintaining healthy trees and adequate spacing between trees. Trees spaced at least 20 feet apart are rarely attacked by bark beetles. Painting tree trunks white can disrupt their outline and prevent attraction of bark beetles to dark vertical silhouettes. Prompt removal or salvage harvest of infested trees reduces the number of beetles that can infest nearby trees.  Insecticides are not a viable option for large infestations in forests, given the protection of immature beetles under the bark of trees and the short time that adults are exposed during dispersal. High-value trees in urban settings or parks can be protected by applying a medium spray of listed materials to the entire trunk, exposed roots and stumps until liquid runs down the trunk. Apply in early spring or when threat of attack exists to prevent infestation. Infested trees can be treated as above when damage occurs but before adult beetles begin to emerge; this treatment will reduce beetle
	Astro	2.0-5.0 quarts/100 gallons	
	Permethrin SFR	2.0-5.0 quarts/100 gallons	

## Trees (Forest, Shade, and Christmas)

Pest	Pesticide	Rate	Remarks
			populations and protect uninfested trees but may not save infested trees. Under forest conditions or where the spray will not fall on lawns or shrubbery, insecticide can be mixed in diesel oil instead of water; respray in 30 days as necessary. Failure to soak the entire bole reduces penetration and mortality to insects within the bark.
	Tree-Age	Follow Label	Trunk injection, mid- to late spring after trees have leafed out; follow directions for tree size.
<b>Pine aphids</b>	Zenith	1.6 ounces/300 gallons	Follow label.
	Flagship	2.0-4.0 ounces/100 gallons	
	Orthene TTO/75S	5.3 ounces/100 gallons	
	Orthene 97S	4.0 ounces/100 gallons	
	Endeavor 50%	10.0 ounces/acre	
	Meridian 25WG	2.0-8.5 ounces/100 gallons	
	Insecticidal soap		Entire foliage or affected portion of tree must be soaked to ensure adequate coverage of insects.
<b>Mites</b>	Forbid 4F	1.4-4.0 ounces/100 gallons	Follow label.
	Ultra-Pure Oil	0.75-1.0 gallon/100 gallons	
	Ultra-Fine Oil	0.75-2.5 gallons/100 gallons	
	Judo	2.0-4.0 ounces/100 gallons	
	Avid 0.15EC	0.25 teaspoon/gallon 4.0 ounces/100 gallons	Repeat at 7- to 10-day intervals as needed.
<b>Pine colaspis</b>	Malathion 57% EC	2.0 pints/100 gallons or 2.0 teaspoons/gallon	Treat when beetles appear usually in May and June.
	Carbaryl 50WP	0.5-1.0 pound/100 gallons or 2 tablespoons/gallon	
	Orthene TTO/75S	5.3-10.5 ounces/100 gallons	
	Orthene 97S	4.0-8.0 ounces/100 gallons	
<b>Town ants</b>	PTM	Liquid Injection As per label directions. 1 gallon-2.6 ounces PTM/125 ounces water	Make 2% dilution in water and inject 1.5 fluid ounces 3 inches below ground in each town ant exit hole; no more than 21 fluid ounces PTM per acre.

### RED BUD

Pest	Pesticide	Rate	Remarks
<b>Scales</b>			Same as ash.
<b>Caterpillars</b>			Same as mimosa.

### SYCAMORE

Pest	Pesticide	Rate	Remarks
<b>Lace bugs</b>	Acelepryn	1.0-2.0 ounces/100 gallons	Treat when lace bugs are present. Repeat weekly as needed.
	Arena 0.25G	3.0-3.6 pounds/1,000 square feet	
	Zenith	1.6 ounces/300 gallons	
	Orthene OTTO	5.3 ounces/100 gallons	
	Carbaryl	2.0 pounds/100 gallons	
	Carbaryl 50WP	2.0 tablespoons/gallon	
	Carbaryl 4F	1.0 quart/100 gallons or	

## Trees (Forest, Shade, and Christmas)

Pest	Pesticide	Rate	Remarks
		1.0 tablespoons/gallon	
	Merit 75WP	1.0 teaspoon/10 gallons or 3.5 tablespoons/100 gallons	

### WILLOW

Pest	Pesticide	Rate	Remarks
<b>Aphids</b>			Same as oak.
<b>Fall webworms</b>			Same as oak.
<b>Tent caterpillars</b>			Same as oak.
<b>Leaf beetles</b>	Carbaryl	2.0 pounds/100 gallons	
	Carbaryl 50WP	2.0 tablespoons/gallon	
<b>Spider mites</b>	Forbid 4F	1.4-4.0 ounces/100 gallons	
	Ultra-Pure Oil	0.75-1.0 gallon/100 gallons	
	Ultra-Fine Oil	0.75-2.5 gallons/100 gallons	
	°Conserve SC	6.0 milliliters/gallon or 22.0 ounces/100 gallons	
	Tetram 5WDG	16.0-32.0 ounces/acre or 8.0-16.0 ounces	Does not affect adults but will cause sterilization; effective against young mites; can be used only two times a year; to control adults use adulticide; for use in greenhouse, lath and shade house only.
<b>Eriophid mites</b>	Forbid 4F	1.4-4.0 ounces/100 gallons	
	Judo	2.0-4.0 ounces/100 gallons	
	Carbaryl	2.0 pounds/100 gallons	
	Carbaryl 50WP	2.0 tablespoons/gallon	
<b>Scales</b>			Same as oak.

### YELLOW POPLAR

Pest	Pesticide	Rate	Remarks
<b>Tulip tree scales</b>	Ultra-Pure Oil	0.75-1.0 gallon/100 gallons	-Dormant in summer. -Spray when crawlers are present in July or August. Repeat in 10 days if necessary.
	Ultra-Fine Oil	2.0-5.0 gallons/100 gallons	
	(98%)	0.75-2.5 gallons/100 gallons	
	Carbaryl	2.0 pounds/100 gallons	
	Carbaryl 50WP	2.0 tablespoons/gallon	
	Carbaryl 4F	1.0 quart/100 gallons or 1.0 tablespoons/gallon	
	Superior oil	3.0 gallons/100 gallons	
	(60%-70%)	8.0 tablespoons/gal	
	Insecticidal soap		Entire foliage or affected portion of tree must be soaked to ensure adequate coverage of insects.
<b>Leafminers</b>	Imidan 70WP	1.5-2.0 pounds/100 gallons	Apply after initial feeding on new growth; water pH 5.5.