

**LOUISIANA RECOMMENDATIONS FOR CONTROL OF
PESTS OF ORNAMENTAL AND FLOWERING PLANTS**

Plant and Pest	Insecticide	To Make		Remarks	
		1 gal	100 gals		
<u>BULBS</u>					
Leaf-feeding caterpillars	Acelepryn	-	1.0-2.0 ozs	Follow label. Treat when insect appears as small larva.	
	Arena 0.25G	-	3.0-3.6 lbs/1,000 sq ft		
	Arena 50WDG	-	Variable		
	Carbaryl (10% dust)	-	-		
	(50% WP)	2.0 TBS	2.0 lbs		
	Conserve	0.06 fl oz	6.0 fl ozs		
<u>AZALEAS</u>					
Bark scales	Ultra pure oil	2.5-4.0 ozs winter 1.0-2.5 ozs summer		Do not use during flowering; use only 4 times during growing season; do not use on stressed plants.	
	Ultra fine oil	2.5-5.0 TBS	1.0-2.0 gals		
	Talstar 10W	1.0 tsp	0.6-1.6 ozs/10.0 gals (3.0-8.0 TBS/10.0 gals)		
Crotch scales Azalea mealybugs	Summer oil emulsion plus	5.0 TBS plus	2.0 gals plus	Sprays for scale control are most effective if they are made during crawler stages. Spray April 1 to June 1 and October. <u>Time of application</u> is most important. Repeat application in 3-4 weeks. Not closer than 7-day intervals; for use in greenhouses, shade houses, and field nurseries. Drench, 6.0-17.0 ozs/acre.	
	Malathion (57% EC)	1.0 TBS	2.0 pts		
	Carbaryl 50% WP	2.0 TBS	2.0 lbs		
	*Supracide		2.0 pts		
	*Merit 75 WP	1.0 tsp/10.0 gals	3.5 TBS		
	Orthene TTO/75S		2/3 lbs (10.5 ozs)		
	97S	0.5 tsp	8.0 ozs		
	*Flagship		2.0-4.0 ozs or 4.0-8.0 ozs		
	Safari		4.0-8.0 ozs		
	Meridian 25WG	2.0-8.5 ozs/100			
Peony Scales	Same as bark scale	Same as bark scale		Spray about May 1 to June 1. Repeat application in 3-4 weeks.	
Spider Mites (all species)	Avid 0.15 EC	0.25 tsp	4.0 ozs	Follow label instructions. Make application when mites first appear and repeat in 7-10 days. Repeat treatment as necessary when populations build up again. Alternating materials will provide better control than using the same material each time mites occur. Do not use with oils or spreader stickers. Treat when symptoms first appear. Does not effect adults but will cause sterilization; effective against young mites; can be used only 2 times a year; to control adults use adulticide; for use in greenhouse, lath, and shade house only. One application per crop cycle in greenhouses, lath, shade houses, or outdoor ornamentals.	
	Kelthane 35% WP	1.5 tsps	1 1/3 lbs		
	Malathion (57% EC)	1.0 TBS	1.5 pts		
	* Mesurol 75 WP		0.5-1 lb/50 gals/acre		
	Talstar 10 WP	1.0 tsp	3.0-8.0 TBS/10.0 gals		
	Floramite 50%	1/3-2/3 tsp	2.0-4.0 ozs		
	Conserve SC	0.2 fl oz	22.0 fl ozs		
	Ornamite	1.0 oz/6.25 gals	1.0 lb		
	Ultra fine oil	2.5-5.0 TBS	1.0-2.0 gals		
	* Judo		2.0-4.0 ozs		
		Tetram 5WDG	16.0-32.0 ozs/acre		8.0-16.0 ozs
		Ultra pure oil	2.5-4.0 ozs winter 1.0-2.5 ozs summer		
		*Ovation SC			2.0 ozs
		Forbid 4F			1.4-4.0 ozs/100

*Professional use only

**LOUISIANA RECOMMENDATIONS FOR CONTROL OF
PESTS OF ORNAMENTAL AND FLOWERING PLANTS (cont'd)**

Plant and Pest	Insecticide	To Make		Remarks
		1 gal	100 gals	
<u>AZALEAS (cont'd)</u>				
Leafminers	Acelepryn	-	1.0-2.0 ozs	
Leafrollers	Arena 0.25G	-	3.0-3.6 lbs/1,000 sq ft	
Leaf tiers	Arena 50WDG	-	Variable	Follow label.
	Avid 0.15 EC	0.5 tsp	8.0 ozs	
	°Azatin XL		10.0-16.0 ozs	
	Thionex (3 EC)	1 1/3 tsps	2/3 qt	
	*Astro 3.2 EC	1.0-2.0 tsps	4.0-8.0 ozs	
	Orthene TTO/75S			
	97S	0.5 tsp	4.0 ozs	
	°Conserve SC	0.06 fl oz	6.0 fl ozs	
	Citation	-	2.66 ozs	
	Ultra pure oil	2.5-4.0 ozs winter		
	1.0-2.5 ozs summer			
Thrips	Acelepryn	-	2.0-4.0 ozs/100	
Lace bugs	Arena 0.25G	-	3.0-3.6 lbs/1,000 sq ft	
	Arena 50WDG	-	Variable	Follow label.
	Malathion (57% EC)	1.0-1.5 tsps	1.0-1.5 pts	
	Mavrik 2E	0.25-0.5 tsp	2.0-5.0 ozs	
	*Merit 75 WP	1.0 tsp/10.0 gals	3.5 TBS	
	Merit 2.5G	Rate based on plant height		
	*Astro 3.2 EC	1.0-2.0 tsps/3 gals	4.0-8.0 ozs	
	Orthene TTO/75S		2/3 lb	
	97S	0.5 tsp	8.0 ozs	
	°Conserve SC	0.06-0.1 oz	6.0-11.0 ozs	
Ultra pure oil	2.5-4.0 ozs winter			
	1.0-2.5 ozs summer			
	Zenith		1.6 ozs	
<u>CAMELLIA</u>				
Tea scales	Ultra fine oil	2.5-5.0 ozs	1.0-2.0 gals	Can be used alone or in combination with insecticides.
Camellia scales	*Dursban 50W		2.0-4.0 lbs	
	°°Distance 0.86 EC	2/3-1.5 tsps	8.0-12.0 ozs	
	Safari		8.0-12.0 ozs	
	Summer oil emulsion	5.0 TBS	2.0 gals	Sprays for scale control are most effective if applied during the crawler stages. Prune non-growing branches on inside of plants. Remove heavily infested leaves.
	Carbaryl	2.0 TBS	2.0 lbs	
	Merit 75WP	2.0 tsps/10.0 gals	3.5 TBS	
	Merit 2.5G	Rate based on plant height		
	Zenith		1.6 ozs	
	Meridian 25WP	2.0-8.5 ozs/100		Drench, 6.0-17.0 ozs/acre.
(Crawlers only)	Orthene TTO/75S		2/3 lb	
	97S	0.5 tsp	8.0 ozs	
	Supracide 2E		2.0 pts	
	°°Distance 0.86 EC	0.5-2/3 tsp	8.0-12.0 ozs	
	° Precision	1.0-4.0 packets		
	Ultra pure oil	2.5-4.0 ozs winter		
		1.0-2.5 ozs summer		
Peony scales	Same for tea scale and camellia scale.			Prune dead and non-growing branches. Spray stems thoroughly about May to June.
Spider mites	Same for spider mites on azaleas.			Same as for azaleas.

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**LOUISIANA RECOMMENDATIONS FOR CONTROL OF
PESTS OF ORNAMENTAL AND FLOWERING PLANTS (cont'd)**

Plant and Pest	Insecticide	To Make		Remarks
		1 gal	100 gals	
<u>CAMELLIA (cont'd)</u>				
Rust mites	Kelthane 35% WP Sevin 2T Morestan 4F Ultra pure oil	1.5 tsps 2.5-4.0 ozs winter 1.0-2.5 ozs summer	1 1/3 lbs 2.0 lbs 4.0-8.0 ozs	Do not use with oil.
Aphids	Arena 0.25G Malathion (57% EC) Zenith 75 * Flagship 25WG Safari Orthene (15.6% EC) Talstar 10WP Thiodan (50% WP) (2 EC) *Merit 75WP Orthene TTO/75S 97S Endeavor 50WP Tristar 70SP Ultra pure oil Meridian 25WP Distance IGR	 2.0 tsps 1.0 TBS 1.0 tsp 2.0 tsps 2.0 tsps 1.0 tsp/10.0 gals 0.25-0.5 tsp 1/3-2/3 tsp 2.0-8.5 ozs/100	3.0-3.6 lbs/1,000 sq ft 1.5 pts 1.6 ozs 2.0-4.0 ozs 4.0-8.0 ozs 3.0 pts 3.0-8.0 TBS/10.0 gals 1.0 lb 1.0 qt 3.5 TBS 2/3 lb 0.25-0.5 lb 2.5-5.0 ozs 1 pkt/100 6.0-8.0 ozs	Treat when insects appear on young spring growth. For greenhouses, shade houses, and field nurseries. Do not apply to plants planted against the house. Drench, 6.0-17.0 ozs/acre.
Cranberry root worm beetles	Carbaryl (10% Dust) Carbaryl (80% WP) Malathion (57% EC)	- 4.0 tsps 2.0 tsps	- 1.25 lbs 1.5 pts	Apply in late afternoon.
Euonymous scales	Same as T-scale			Prune out dead and dying branches then spray.
<u>ANNUAL FLOWERING PLANTS</u>				
Aphids	Arena 0.25G Arena 50WDG °Distance 0.86 EC Orthene TTO/75S 97S Thiodan (50% WP) Duraguard ME * Flagship 25 WG Safari Malathion (57% EC) Mavrik 2E *Merit 75WP Endeavor 50WP Tristar 70SW Ultra pure oil Meridian 25WG	 0.5-2/3 tsp 0.25-0.5 tsp 2.0 TBS 0.5 oz 2.0 tsps 0.25-0.5 tsp 1.0 tsp/gal 1/3-2/3 tsp 2.5-4.0 ozs winter 1.0-2.5 ozs summer 2.0-8.5 ozs/100	3.0-3.6 lbs/1,000 sq ft 6.0-12.0 ozs 2/3 lb 0.25 to 0.5 lb 1.0 lb 1.0-1.5 qts 2.0-4.0 ozs 4.0-8.0 ozs 1.5 pts 2.0-5.0 ozs 3.5 TBS 2.5-5.0 ozs 1 pkt/100 6.0-8.0 ozs	Follow label. Treat when insects appear; re-treat once dry. For greenhouses, shade houses, and field nurseries. Drench, 6.0-17.0 ozs/acre.
Mealy bugs	Same as for aphids Tristar 70SW	Same as for aphids	1 pkt/100	Treat when crawlers appear; re-treat once dry.

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**LOUISIANA RECOMMENDATIONS FOR CONTROL OF
PESTS OF ORNAMENTAL AND FLOWERING PLANTS (cont'd)**

Plant and Pest	Insecticide	To Make		Remarks
		1 gal	100 gals	
<u>ANNUAL FLOWERING PLANTS (cont'd)</u>				
Caterpillars	Acelepryn	-	1.0-2.0 ozs	Follow label.
	Arena 0.25G	-	3.0-3.6 lbs/1,000 sq ft	
	Arena 50WDG	-		
	Mavrik 2E	0.25-0.5 tsp	2.0-5.0 ozs	
	Carbaryl (50% WP)	2.0 TBS	2.0 lbs	
	Carbaryl (10% Dust)	-	-	
	(50% WP)	2.0 TBS	2.0 lbs	
	*Astro 3.2 EC	1.0-2.0 tsps/3.0 gals	4.0-8.0 ozs	
	Orthene TTO/75S		2/3 lb	
	97S	0.25-0.5 tsp	0.25-0.5 lb	
	°Condor XL		0.75-1.75 pts/acre	
°Crymax XL		0.5-1.5 lbs/acre		
<u>CANNA LILY</u>				
Leafrollers	Carbaryl (10% Dust)	-	-	Treat weekly as long as insects are present.
	°Azatin XL			
	Battle WP	1.0-2.0 gms	1.2-4.8 ozs	
	Ultra pure oil	2.5-4.0 ozs winter 1.0-2.5 ozs summer		
<u>GARDENIA</u>				
Whiteflies	Arena 0.25G	-	3.0-3.6 lbs/1,000 sq ft	Follow label. Can be used alone or in combination with insecticides. Treat when adults are emerging and laying eggs. Do not use with oils or spreader stickers. For greenhouses, shade houses, and field nurseries. Based on volume and square footage. Treat April 1, April 15, and October 1. Repeat in 14 days for best results. Drench, 6.0-17.0 ozs/acre.
	Arena 50WDG	-		
	Forbid 4F		2.0-4.0 ozs/100	
	Ultra pure oil	2.5-4.0 ozs winter 1.0-2.5 ozs summer		
	Ultra fine oil	2.5-5.0 ozs	1.0-2.0 gals	
	Zenith 75		1.6 ozs	
	Talstar	1.0 tsp	3.0-8.0 TBS/50.0 gals	
	*Judo		2.0-4.0 ozs	
	Astro 3.2 EC	1.0-2.0 tsps/3.0 gals	4.0-8.0 ozs	
	Morestan 4	-	4.0-8.0 ozs	
	* Flagship 25 WG		2.0-4.0 ozs	
	*Merit 75W	1.0 tsp/10.0 gals	3.5 TBS	
	Tristar 70SP		1 pkt/100	
	Orthene TTO/75S		2/3 lb	
	97S		8.0 ozs	
	+Tame		10 2/3	
	Endeavor 50 WP	1/3-2/3 tsp/gal	2.5-5.0 ozs	
	°Precision	1.0-4.0 packets		
	° Azatin XL		6.0-10.0 ozs	
	°Distance 0.86 EC	1/3-2/3 tsp	6.0-12.0 ozs	
	Summer oil emulsion	0.5 pt	2.0 gals	
Malathion (57% EC)	1.0 TBS	1.5 qts		
Dimethoate (2E)	1.0 TBS	1.0 qt		
Meridian 25WG	2.0-8.5 ozs/100			
<u>HOLLY</u>				
Tea scales	Arena 0.25G		3.0-3.6 lbs/1,000 sq ft	
	Ultra fine oil	2.5-5.0 ozs	1.0-2.0 gals	

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**LOUISIANA RECOMMENDATIONS FOR CONTROL OF
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Plant and Pest	Insecticide	To Make		Remarks
		1 gal	100 gals	
<u>HOLLY (cont'd)</u>				
San Jose scales	Orthene TTO/75S		2/3 lb	
Camellia scales	97S		8.0 ozs	
	*Dursban 2EC		2.0-4.0 lbs/acre	
	* Supracide 2E		2.0 pts	
	Meridian 25WG		2.0-8.5 ozs/100	
Spider mites	*Kelthane (18.5% EC)	2.0 tsps	1.0 qt	Make 2 applications 7-10 days apart. Do not use with oils or spreader stickers.
	Ultra fine oil	2.5-5.0 ozs	1.0-2.0 gals	
	*Mesuroil 75WP		0.5-1.0 lb/50 gals/acre	
	Forbid 4F		1.4-4.0 ozs/100	
	Talstar 10WP	1.0 tsp	3.0-8.0 TBS/50 gals	Follow label.
	Avid 0.15EC	0.25 tsp	4.0 ozs	
	Malathion 57% EC	2.0 tsps	1 1/3 lbs	
	Floramite	1/3-2/3 tsp	2.0-4.0 ozs	
	Tetram 5WDG	16.0-32.0 ozs/acre	8.0-16.0 ozs	Does not effect adults but will cause sterilization, effective against young mites; can be used only 2 times a year; to control adults use adulticide; for use in greenhouse, lath, and shade house only.
	*Judo		2.0-4.0 ozs	
	Ultra pure oil	2.5-4.0 ozs winter 1.0-2.5 ozs summer		
<u>CHRYSANTHEMUM</u>				
Aphids	Arena 0.25G		3.0-3.6 lbs/1,000 sq ft	
	Talstar 10WP	1.0 tsp	3.0-8.0 TBS/10 gals	Follow label.
	Malathion (57% EC)	1.0 TBS	1.0 qt	Treat when aphids first appear.
	Mavrik 2E	0.25-0.5 tsp	2.0-5.0 ozs	
	*Merit 75 WP	1 tsp/10 gals	3.5 TBS	
	Tristar 70SP		1 pkt/100	
	Endeavor 50 WP	1/3-2/3 tsp/gal	2.5-5.0 ozs	
	°Distance 0.86 EC	1/3-2/3 tsp	6.0-12.0 ozs	
	Orthene TTO/75S		2/3 lb	
	97S		4.0 ozs	
	Ultra pure oil	2.5-4.0 ozs winter 1.0-2.5 ozs summer		
	Zenith 75		1.6 ozs	
	Safari		4.0-8.0 ozs	
	Meridian 25WG		2.0-8.5 ozs/100	Drench, 6.0-17.0 ozs/acre.
Caterpillars	Acelepryn		1.0-2.0 ozs	
	Arena 0.25G		3.0-3.6 lbs/1,000 sq ft	
	Carbaryl (10% Dust)	-	-	Watch for small caterpillars feeding in terminal buds or under leaves and treat when first appearing and weekly thereafter.
	Thionex (50% WP)	1.0 TBS	1.0 lb	
	Orthene TTO/75S		2/3 lb	
	97S		4.0 ozs	
	*Astro 3.2 EC	1.0-2.0 tsps/3.0 gals	4.0-8.0 ozs	
	Conserve SC	0.06 fl oz	6.0 fl ozs	
Mealybugs	Arena 0.25G		3.0-3.6 lbs/1,000 sq ft	
	Arena 50WDG			Follow label.
	Malathion (57% EC)	1.0 TBS	3.0 pts	Treat when insects appear. Follow labels.
	Talstar 10 WP	0.6-1.6 ozs/10 gals		
	Carbaryl (50% WP)	2.0 TBS	2.0 lbs	
	*Merit 75 WP	1 tsp/10 gals	3.5 TBS	

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**LOUISIANA RECOMMENDATIONS FOR CONTROL OF
PESTS OF ORNAMENTAL AND FLOWERING PLANTS (cont'd)**

Plant and Pest	Insecticide	To Make		Remarks	
		1 gal	100 gals		
<u>CHRYSANTHEMUM (cont'd)</u>					
Mealybugs	Tristar 70SP		2 pkt/100	For greenhouses, shade houses, and field nurseries.	
	Orthene TTO/75S		2/3 lb		
	97S		8.0 ozs		
	* Flagship 25WG		2.0-4.0 ozs		
	Safari		4.0-8.0 ozs-spray 12.0-24.0 ozs-drench		
	Zenith 75		1.6 ozs		
	Ultra pure oil	2.5-4.0 ozs winter 1.0-2.5 ozs summer			
	Meridian 25WG		2.0-8.5 ozs/100	Drench, 6.0-17.0 ozs/acre.	
Termites	Dursban (4 EC)	1.0 fl oz	1.0 qt		
Thrips	Malathion (57% EC)	2 tsps	1.5 pts	Start spraying when thrips first appear.	
	Safari		4.0-8.0 ozs		
	Mavrik 2E	0.25-0.5 tsp	2.0-5.0 ozs		
	*Merit 75WP	1.0 tsp/10.0 gals	3.5 TBS		
	Orthene TTO/75S		2/3 lb		
	97S		8.0 ozs		
	°Precision	1.0-4.0 packets			Based on volume and square footage.
	*Mesurool 75WP		0.5-1.0 lb/50gals/acre		2 sprays; 5 days apart.
	Conserve SC	0.06 fl oz	6.0 fl ozs		
	Zenith 75		1.6 ozs		
	Spinosad		6.0-11.0 ozs/100		
Leafminers	Arena 0.25G		3.0-3.6 lbs/1,000 sq ft	Based on volume and square footage.	
	°Citation		2.66 ozs/acre		
	°Azatin XL				
	°Precision	1.0-4.0 packets			
	Avid 0.15 EC	0.5 tsp	8.0 ozs		
	Conserve SC	0.2 fl oz	22.0 fl ozs		
	*Astro 3.2 EC	1-2 tsps/3 gals	4.0-8.0 ozs		
	Pounce 3.2 EC	1.0 tsp	20.0 ozs		
Spider mites	Malathion (57% EC)	1.0 TBS	3.0 pts	Treat when mites first begin to appear on foliage.	
	Kelthane (35% WP)	1.5 tsps	1 1/3 lbs		
	Forbid 4F		1.4-4.0 ozs/100		
	Talstar 10 WP	1.0 tsp	3.0-8.0 TBS/10 gals		
	*Mesurool 75 WP		0.5-1 lb/50 gals/acre		
	Floramite	1/3-2/3 tsp/gal	2.0-4.0 ozs		Does not effect adults but will cause sterilization, effective against young mites; can be used only 2 times a year; to control adults use adulticide; for use in greenhouse, lath, and shade house only.
	Ultra fine oil				
	M-PEDE	3.0 TBS	0.5-2.0 gals		One application per crop cycle in greenhouse, lath, shade houses, or outdoor ornamentals.
	Tetram 5 WDG	16.0-32.0 ozs/acre	8.0-16.0 ozs		
	*Judo		2.0-4.0 ozs		
	*Ovation SC		2.0 ozs		
	Ultra pure oil	2.5-4.0 ozs winter 1.0-2.5 ozs summer			
<u>CRAPE MYRTLE</u>					
Aphids	Arena 0.25G		3.0-3.6 lbs/1,000 sq ft	Follow label.	
	Arena 50WDG				

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**LOUISIANA RECOMMENDATIONS FOR CONTROL OF
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Plant and Pest	Insecticide	To Make		Remarks
		1 gal	100 gals	
<u>CRAPE MYRTLE (cont'd)</u>				
Aphids	Ultra pure oil	2.5-4.0 ozs winter 1.0-2.5 ozs summer		
	Talstar 10 WP	1.0 tsp	3.0-8.0 TBS/10 gals	Follow label.
	Malathion (57% EC)	1.0 TBS	3.0 pts	Treat when aphids first appear to prevent sooty mold stain.
	Endeavor 50 WP	1/3-2/3 tsp/gal	2.5-5.0 ozs	Make slurry with 4.0 TBS Orthene and 1.0 TBS water. Paint band on trunks twice width of diameter in April and late May.
	Orthene TTO/75S		2/3 lb	For greenhouses, shade houses, and field nurseries.
	°Endeavor	1/3-2/3 tsp	2.5-5.0 ozs	
	Malathion	1.0 TBS	3.0 pts	
	*Merit 75 WP	1.0 tsp/10 gals	3.5 TBS	
	* Flagship 25WG		2.0-4.0 ozs	
	Zenith 75		1.6 ozs	
	Tristar 70SP		1 pkt/100	
	Safari		4.0-8.0 ozs	
	Meridian 25WG		2.0-8.5 ozs/100	Drench, 6.0-17.0 ozs/acre.
<u>DAHLIA</u>				
Spider mites	Ultra pure oil	2.5-4.0 ozs winter 1.0-2.5 ozs summer		
	Ultra fine oil			
	Avid 0.15 EC	0.25 tsp	4.0 ozs	
	Forbid 4F		1.4-4.0 ozs/100	
	*Kelthane (35% WP)	1.5 tsps	1 1/3 lbs	Treat when spider mites appear on foliage.
	Malathion (57% EC)	1.0 TBS	3.0 pts	
	Floramite	1/3-2/3 tsp/gal	2.0-4.0 ozs/100 gals	
	Tetram 5WDG	16.0-32.0 ozs/acre	8.0-16.0 ozs	Does not effect adults but will cause sterilization, effective against young mites; can be used only 2 times a year; to control adults use adulticide; for use in greenhouse, lath, and shade house only.
Termites	Same as for Chrysanthemum			
<u>FLOWERING PEACH AND QUINCE</u>				
Aphids	Arena 0.25G		3.0-3.6 lbs/1,000 sq ft	
	Arena 50WDG			Follow label.
	Talstar 10WP	1.0 tsp	3.0-8.0 TBS/10 gals	Follow label.
	Orthene TTO/75S		2/3 lb	
	97S		8.0 ozs	
	Malathion (57% EC)	1.0 TBS	3.0 pts	Treat when aphids appear.
	Thionex (50% WP)	2.0 tsps	1.0 lb	
	(3 EC)	1 1/3 tsps	2/3 qt	
	*Merit 75 WP	1.0 tsp/10 gals	3.5 TBS	
	Tristar 70SP		1 pkt/100	
	Ultra pure oil	2.5-4.0 ozs winter 1.0-2.5 ozs summer		
	Meridian 25WG		2.0-8.5 ozs/100	Drench, 6.0-17.0 ozs/acre.
Scales	Oil emulsion	0.5 pt	6.0 gals	Apply during dormant season.
<u>DAYLILIES</u>				
Aphids	Arena 0.25G		3.0-3.6 lbs/1,000 sq ft	
	Arena 50WDG			Follow label.

*Professional use only

**LOUISIANA RECOMMENDATIONS FOR CONTROL OF
PESTS OF ORNAMENTAL AND FLOWERING PLANTS (cont'd)**

Plant and Pest	Insecticide	To Make		Remarks
		1 gal	100 gals	
<u>DAYLILIES (cont'd)</u>				
Aphids	Ultra pure oil	2.5-4.0 ozs winter 1.0-2.5 ozs summer		
	Malathion (57% EC)	1.0 TBS	3.0 pts	Make 3 applications of Malathion. Spray 4 weeks apart beginning in January. Make 2 applications of Dimethoate spray or Di-Syston granules 4 weeks apart beginning in February. Apply Di-Syston granules the rate of 8 ozs/30 ft row.
	Talstar 10WP	0.6-1.6 ozs/10 gals		
	Dimethoate (2E)	4.0 tsps	2.0 qts	
	°Distance 0.86 EC	1/3-2/3 tsp	6.0-12.0 ozs	
	Orthene TTO/75S		2/3 lb	
	97S		8.0 ozs	
	Endeavor 50WP	1/3-2/3 tsp/gal	2.5-5.0 ozs	
	*Merit 75WP	1.0 tsp/10 gals	3.5 TBS	
	Tristar 70WSP		1 pkt/100	
	Di-Syston (2% granules)	--	--	
	Meridian 25WG		2.0-8.5 ozs/100	Drench, 6.0-17.0 ozs/acre.
	Spider mites	Avid 0.15 EC	0.25 tsp	4.0 ozs
Floramite		2.0-4.0 ozs/acre	1/3-2/3 tsp/gal	
*Mesuroil 75WP			0.5-1 lb/50 gals/acre	
Ultra fine oil				
Tetram 5 WDG		16.0-32.0 ozs/acre	8.0-16.0 ozs	
*Judo			2.0-4.0 ozs	
Ultra pure oil		2.5-4.0 ozs winter 1.0-2.5 ozs summer		
Forbid 4F			1.4-4.0 ozs/100	
<u>GLADIOLA</u>				
Thrips	Spinosad		6.0-11.0 ozs/100	Spray or dust growing plants at weekly intervals beginning when leaves are 6 inches high.
	Zenith 75		1.6 ozs/300	
	Orthene TTO/75S		2/3 lb	
	97S		8 ozs	
	Carbaryl (10% Dust) (50% WP)	-- 2.0 TBS	-- 2.0 lbs	
	Safari		4.0-8.0 ozs	
	*Merit 75WP	1.0 tsp/10 gals	3.5 TBS	
<u>POINSETTIA</u>				
Whiteflies	Arena 0.25G		3.0-3.6 lbs/1,000 sq ft	Follow label.
	Arena 50WDG			
	Ultra pure oil	2.5-4.0 ozs winter 1.0-2.5 ozs summer		
	Forbid 4F		2.0-4.0 ozs/100	Follow label.
	Safari		4.0-8.0 ozs	
	Plant Fume 101	Greenhouse only		
	Orthene TTO/75S	1.0 tsp	2/3-1.0 lb	
	97S	0.5 tsp	8.0-12.0 ozs	
	°Distance 0.86 EC	1/3-2/3 tsp	6.0-12.0 ozs	
	Mavrik Aquaflo	--	4.0-10.0 ozs	
	Talstar 10 WP	--	3.0-8.0 TBS/10 gals	
	Endeavor 50%	10.0 ozs/acre		
	Tame 2.4 EC + Orthene 75S		10 2/3 ozs+16.0 ozs	
	Tristar 70WSP		2.0-4.0 pkts/100	
	Meridian 25WG		2.0-8.5 ozs/100	
	Morestan 4F	1.0 tsp	4.0-8.0 ozs	
	*Merit 75 WP	1.0 tsp/10 gals	3.5 TBS	

*Professional use only, °IGR

**LOUISIANA RECOMMENDATIONS FOR CONTROL OF
PESTS OF ORNAMENTAL AND FLOWERING PLANTS (cont'd)**

Plant and Pest	Insecticide	To Make		Remarks
		1 gal	100 gals	
<u>PYRACANTHA</u>				
Aphids	Arena 0.25G		3.0-3.6 lbs/1,000 sq ft	
Lace bugs	Ultra pure oil	2.5-4.0 ozs winter 1.0-2.5 ozs summer		
	Talstar 10 WP	1.0 tsp	3.0-8.0 TBS/10 gals	Follow label.
	Malathion (57% EC)	1.0 TBS	3.0 pts	When insects appear.
	Ultra fine oil	2.5-5.0 TBS	1.0-2.0 gals	
	Orthene TTO/75S		2/3 lb	
	97S		8.0 ozs	
	Tristar 70WSP		1 pkt/100	
	Meridian 25WG		2.0-8.5 ozs/100	Drench, 6.0-17.0 ozs/acre.
	*Merit 75 WP	1.0 tsp/10 gals	3.5 TBS	
<u>ROSES</u>				
Aphids	Arena 0.25G		3.0-3.6 lbs/1,000 sq ft	
	Ultra pure oil	2.5-4.0 ozs winter 1.0-2.5 ozs summer		
	Zenith 75		1.6 ozs/300	
	Merit 75 WP	1.0 tsp/10 gals	3.5 TBS	
	Talstar 10 WP	1.0 tsp	3.0-8.0 TBS/10 gals	Follow label.
	Malathion (57% EC)	1.0 TBS	3.0 pts	When insects appear.
	Meridian 25WG		2.0-8.5 ozs/100	Drench, 6.0-17.0 ozs/acre.
	Tristar 70WSP		1 pkt/100	
	Ultra fine oil	2.5-5.0 TBS	1.0-2.0 gals	
	Safari		4.0-8.0 ozs	
	Orthene TTO/75S		2/3 lb	
	97S		8.0 ozs	
Spider mites	M-PEDE	3.0 TBS	0.5-2.0 gals	
	*Mesurool 75 WP		0.5-1.0 lb/50 gals/acre	
	Malathion (57% EC)	1.0 TBS	3.0 pts	When mites appear.
	Talstar 10 WP	1.0 tsp	3.0-8.0 TBS/10 gals	Follow label.
	Avid 0.15 EC	0.25 tsp	4.0 ozs	
	*Kelthane (35% WP)	1.5 tsps	1 1/3 lbs	
	Floramite	0.5-2/3 tsp/gal	2.0-4.0 ozs/acre	
	Ultra fine oil	2.5-5.0 TBS	1.0-2.0 gals	
	Tetram 5 WDG	16.0-32.0 ozs/acre	8.0-16.0 ozs	
	*Judo		2.0-4.0 ozs	
	Ultra pure oil	2.5-4.0 ozs winter 1.0-2.5 ozs summer		Does not effect adults but will cause sterilization, effective against young mites; can be used only 2 times a year; to control adults use adulticide; for use in greenhouse, lath, and shade houses only.
	Forbid 4F		1.4-4.0 ozs/100	
Thrips-- outside/greenhouse	Orthene TTO/75S		2/3 lb	
	97S		4.0 ozs	
	+Tame		10 2/3 ozs	
	Carbaryl (10% Dust) (50% WP)	-- 2.0 TBS	-- 2.0 lbs	Treat plants at 3-day intervals when buds begin to show.
	*Mesurool 75 WP		0.5-1.0 lb/50 gals acre	2 applications, 5 days apart; alternate with other materials.
	Mavrick 2E	0.25-0.5 tsp	2.0-5.0 ozs	
	Malathion (57% EC)	1.0 TBS	1.0 qt	
	*Merit 75 WP	1.0 tsp/10 gals	3.5 TBS	
	Spinosad		6.0-11.0 ozs/100	

*Professional use only

**LOUISIANA RECOMMENDATIONS FOR CONTROL OF
PESTS OF ORNAMENTAL AND FLOWERING PLANTS (cont'd)**

Pest	Insecticide	To Make		Remarks
		1 gal	100 gals	
Beetles	Carbaryl (10% Dust)	-		Apply when damage appears on foliage.
	(50% WP)	2.0 TBS	2.0 lbs	
	Battle		1.5-5.0 ozs	
	Thiodan (50% WP, 5%)	2.0 tsps	1.0 lb	
Stinging Caterpillars	Acelepryn		1.0-2.0 ozs	
	Arena 0.25G		3.0-3.6 lbs/1,000 sq ft	
	Carbaryl (10% Dust)	-	-	Apply when damage appears on foliage.
	(50% WP)	4.0 TBS	2.0 lbs	
	Orthene TTO/75S		2/3 lb	
	97S		8.0 ozs	
	*Astro 3.2 EC	1.0-2.0 tsps/3 gals	4.0-8.0 ozs	
	Pounce 3.2 EC	0.5 tsp	4.0-8.0 ozs	
	°Condor XL		0.75-1.75 pts/acre	Caterpillars only.
	°Crymax XL		0.5-1.5 lbs/acre	
DeltaGard GC	1.0 tsp	4.0-8.0 ozs		
Ultra pure oil	2.5-4.0 ozs winter			
		1.0-2.5 ozs summer		
<u>Greenhouse Roses</u>				
Armyworms	Tristar 70WSP		1-4 pkts/100	
Leafrollers	Pounce 3.2 EC	8.0 ozs/100 gals	(0.2 lbs/A.I.)	Follow label for varieties.
Loopers	*Astro 3.2 EC		4.0-8.0 ozs	
Spider mites	*MesuroI 75 WP		0.5-1.0 lb/50 gals /acre	
Whiteflies	Attain TR			Release based on square footage.
Fungus gnats	1300 Orthene TR		8.0 ozs	
Thrips	Preclude TR			
	Orthene TTO/75S			
	Morestan 4F	1.0 tsp	4.0-8.0 ozs	
	Tetram 5 WDG	16.0-32.0 ozs/acre	8.0-16.0 ozs	Does not effect 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.
	Ultra pure oil	2/3-2.5 ozs	0.5-2.0 gals	
	Ultra fine oil	2/3-2.5 ozs	0.5-2.0 gals	
	Spinosad		6.0-11.0 ozs/100	
	Flagship 25WG	0.9 oz/5,000	8 ozs/acre	
<u>AFRICAN VIOLETS</u>				
Cyclaman mites	Forbid 4F		1.4-4.0 ozs/100	
	Thionex (50% WP)	2.0 tsps	1.0 lb	Treat as needed. Dipping plant is better than spraying.
	*Kelthane (35% WP)	1.5 tsps	1 1/3 lbs	
	Ultra fine oil	2/3-2.5 ozs		May be used alone for thrips, whiteflies, mealybugs, mites, and aphids or in combination with the above insecticides.
	*Judo	3.0-6.0 mls/5 gals	2.0-4.0 ozs	

Ultra pure oils and Ultra fine oils can be used with insecticides to enhance pest management on most ornamentals. Rates vary with time of year. Do not spray oils during bloom.

*Professional use only, °Biological

**LOUISIANA RECOMMENDATIONS FOR CONTROL OF
PESTS OF ORNAMENTAL AND FLOWERING PLANTS (cont'd)**

Pest	Insecticide	To Make		Remarks
		1 gal	100 gals	
<u>Greenhouse/Outside</u>				
Imported fire ants	Transport	1 pkt		Perimeter treatment-1,000 sq ft; follow label.
	Over & Out	2.0 lbs/1,000 sq ft		Apply dry formulation as a dust to tops of mounds. Distribute as evenly as possible.
	Orthene TTO 75S (Address)	2.0 tsps/mound		
	Pinpoint			Apply 1 gal. of finished mixture to mound covering 3-4 sq ft area around mound. May slightly burn grass.
	Orthene TTO 75S	1.0 oz/5 gals water		
	Top Choice	87.0 lbs/acre		Follow label.
	Chipco Choice	12.5 lbs/acre	4.3 ozs/1,000 sq ft	
	Y-TEX Gardstar	5.0-10.0 mls/gal/mound		Follow label.
<u>GREENHOUSE GROWN ORNAMENTALS</u>				
Thrips	Forbid 4F		1.4-4.0 ozs/100	White flies only.
Whiteflies	Arena 0.25G		3.0-3.6 lbs/1,000 sq ft	
Mealybugs	50WDG			Follow label
Scales	Tristar 70WSP		1-4 pkts/100	
Caterpillars	°Azatin XL	10.0-16.0 ozs/100 gals		
Sawflies	*Astro 3.2EC	1.0-2.0 tsps/3 gals/4.0-8.0 ozs/100		
Fungus gnats	Pedestal		6.0-8.0 ozs	Whiteflies, thrips, caterpillars
Aphids	Marathon 1% G	3.0 lbs/cubic yard of growing media		Follow label for amounts to use in individual containers.
	Ultra fine oil	2.5-5.0 TBS/gal		Follow label.
	Marathon 60WP			Follow label.
	Marathon II			Follow label.
	°Precision		2.0-8.0 ozs/100 gals	Thrips, scales, gnats, whiteflies;
	*Flagship		2.0-4.0 ozs/100 gals	repeat at 7-day intervals as needed.
	°Conserve SC (Spintor)	0.06-0.1 oz	6.0-11.0 ozs	
	°Ornazin (IGR)	0.25 tsp-0.5 tsp	8.0-16.0 ozs	
	Endeavor 50%	1/3-2/3 tsp or	2.5-5.0 ozs or 10.0 ozs/acre	Aphids and whiteflies.
Leafminers	°Conserve SC	0.2 fl oz	22.0 fl ozs	
	Pedestal		6.0-8.0 ozs	
Mites				
Spider mites	Forbid 4F		2.0-4.0 ozs/100 gals	
Broad mites	Ultra fine oil	2.5-5.0 TBS/gal		Follow label for plants covered. Use in rotation with other miticides; no more than 2 consecutive applications; 3 total per year per crop.
	Pylon	0.25 tsp-0.5 tsp	2.6-5.2 ozs	
Cyclamen mites	Tetrasan 5WDG	8.0-16.0 ozs/100		Aphids and whiteflies.
Rust mites	Avid 0.15EC	2/3 tsp	4.0 ozs	
	Endeavor 50%	1/3-2/3 tsp or	2.5-5.0 ozs or 10.0 ozs/acre	Not for carnation, dianthus, calanchoe, poinsettia, rose, salvia, zinna; do not spray with oil, fertilizer, or surfactants.
	Endeavor	1/4-1/2 tsp or	2.5-5.0 ozs or 10.0 ozs/acre	
	Floramite SC	2/3 tsp-1.5 tsps	4.0-8.0 ozs/100 gals	
	Talstar F	0.12-0.4 ozs	12.0-40.0 ozs	

*Professional use only, °Biological, °°IGR

**LOUISIANA RECOMMENDATIONS FOR CONTROL OF
PESTS OF ORNAMENTAL AND FLOWERING PLANTS (cont'd)**

Pest	Insecticide	To Make		Remarks
		1 gal	100 gals	
Beet armyworms	Acelepryn		1.0-2.0 ozs	Caterpillars only.
Loopers, Thrips	°Condor XL	0.75-1.75 pts/acre		Caterpillars only.
Leafhoppers	°Citalon (Leafminers)		2.66 ozs/100/acre	
Leafminers	°Conserve SC (Spintor, Spinosad)	0.06-0.1 oz	6.0-11.0 ozs	Thrips-use lower rates. Caterpillars and leafminers-use higher rates.
Whiteflies	Forbid 4F		2.0-4.0 ozs/100 gals	Whiteflies only.

°Biological

LOUISIANA RECOMMENDATIONS FOR CONTROL OF TOWN ANTS

These ants are foliage feeders and do not bite. They will strip the foliage off ornamentals, vegetables, and trees. The foliage is then chewed and used to grow a fungus that is the primary food source of the ant. Colonies can cover small areas up to 5 or 6 acres.

MATERIAL	FORMULATION	TIME OF APPLICATION	REMARKS
Logic Bait	Bait	When ants are actively foraging (1.0-1.5 lbs/acre) broadcast	
Amdro Ant Block		0.75 lb/colony	

PINK HIBISCUS MEALY BUG CONTROL STRATEGIES & CURRENT CHEMICAL CONTROL RECOMMENDATIONS

The following list of recommendations by the LSU AgCenter comprises products that may be effective in treating Pink hibiscus mealybug (*Maconellicoccus hirsutus*) in nurseries or stock dealers. Additional materials will be added as available. For additional product information, labeled rates, or guidelines for application contact the local cooperative extension office.

For Quarantine Treatments:

Chemical	Application	Rate	Interval	Comments
Imidacloprid (such as Marathon) Dinotefuran (such as Safari) Thiamethoxam (such as Flagship)	Soil drench	See label rates	Initial treatment	Soil drench must be followed by a foliar application of either Bifenthrin, Chlorpyrifos, or Acephate.
Bifenthrin (such as Talstar)	Foliar application	See label rates	Following Imidacloprid treatment	Apply with Ultra fine oil or other oil; followup treatments as needed.
Chlorpyrifos (such as DuraGuard ME)	Foliar application	See label rates	Following Imidacloprid treatment	Followup treatments as needed.
Acephate (such as Acephate, Orthene)	Foliar application	See label rates	Following Imidacloprid treatment	May be applied in conjunction with Bifenthrin unless phytotoxicity prohibits.

For Preventative/Prophylactic Treatments*:

Chemical	Application	Rate	Interval	Comments
Acephate (such as Acephate, Orthene)	Foliar application	See label rates	As needed	Follow up treatments as needed.
Acetamiprid (such as Tristar) Thiamethoxam (such as Flagship)	Foliar application	See label rates	As needed	Apply with Ultra fine oil or other oil; followup treatments as needed.
Bifenthrin (such as Talstar) Imidacloprid (Marathon-Merit)	Foliar application	See label rates	As needed	Apply with Ultra fine oil or other oil. Followup treatments as needed.
Buprofezin (such as Talus) IGR	Foliar application	See label rates	As needed	Followup treatments as needed.
Chlorpyrifos (such as DuraGuard ME)	Foliar application	See label rates	As needed	Followup treatments as needed.
Imidacloprid + Cyfluthrin (such as Discus)	Foliar application	See label rates	As needed	Followup treatments as needed.
Insecticidal soaps	Foliar application	See label rates	As needed	Followup treatments as needed.
Pesticidal oils, Ultra fine oils	Foliar application	See label rates	As needed	Followup treatments as needed.
Pyrproxyfen (such as Distance) IGR Dinotefuran (such as Safari)	Foliar application	See label rates	As needed	Apply with Ultra fine oil or other oil; followup treatments as needed.

*Note: Limited information is available concerning phytotoxicity of these products. Test on a few plants before application or consult the cooperative extension agent. When using new materials, phytotoxicity trials should be conducted in your nursery under your specific conditions. The use of trade names in this publication is solely for the purpose of providing specific information. The LSU AgCenter does not guarantee or warrant the products named and references to them in this publication does not signify our approval to the exclusion of other products of suitable composition. All chemicals should be used in accordance with directions on the manufacturer's label. Use pesticides safely. Read and follow directions on the manufacturer's label.

pH adjustments should be made for each spray application. Use a digital pH pen for accurate reading. Where needed add a buffer to water mix and re-check until pH is between 5.5 and 6.5 before adding insecticide to water. The average pH for Louisiana is 8.3 with a range of 4.6-12.0.