



Read and follow the instructions on the label before using any pesticide. Some pesticides are not available in all states. Before using a pesticide on the crop for the first time or on a new cultivar, treat a few plants and check for phytotoxicity. Some pesticides listed are no longer being manufactured for use on ornamentals, but they are included as they are still available for sale and use until existing supplies are gone.

All trademarks are the property of their respective companies.

May 2000

-----Continued

AI	Active Ingredient	SC	Suspension Concentrate
E or EC	Emulsifiable Concentrate	T&O or T/O	Turf & Ornamental
ES	Emulsifiable Suspension	W or WP	Wettable Powder
F	Flowable	WDG	Water Dispersible Granules
G	Granular		
L	Liquid		
LC	Liquid Concentrate	WSB	Water Soluble Bag
ME	Micro-Encapsulated	WSP	Water Soluble Pouch
MW	Micronized Wettable	*	Do not apply through any type of irrigation system.
S or SP	Soluble Powder		

PEST	CLASS	COMMON NAME	PRODUCT NAME	FORMULA	EFFECTIVE ON	DOSE/100 GALLONS	REI HR.	COMMENTS	
Fungus Gnats	Botanical	Azadirachtin	Azatin® XL	EC	Larva & Pupa	8 fl. oz.	4	Acts as an insect growth regulator. Apply as a drench. Also labeled for shore fly control and low volume application. Do not exceed 21 fl. oz./acre.	
		Pyrethrum	PT® 1100 Pyrethrum TR	Aerosol	Adult	1lb./1,500-3,000 ft. ²	12		
	Carbamate	Fenoxycarb	Precision™	WSP	Larva & Pupa	4 oz.	12	Acts as an insect growth regulator. Apply as a soil directed spray. Also labeled for shore fly control and low volume application. Do not apply more than 30 applications/year.	
	Horticultural Oils	Horticultural Oils	Saf-T-Side™	L	Adult	1-2 gal.	4	Apply as a spray. Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*	
			Target	L	Adult	1-2 gal.	4	Apply as a spray. Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*	
			Ultra-Fine® Oil	L	Adult	1 gal.	4	Apply as a spray. Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*	
	Insect Growth Regulator	Kinoprene	Enstar® II	5 E	All Stages	5-10 fl. oz.	4	Spray to completely cover soil surface. Water in after spraying to insure contact with larvae and eggs.*	
		Pyriproxyfen	Distance®	EC	Larva & Pupa	6-8 fl. oz.	12	Apply as a spray or drench. Also labeled for shore fly control. Apply no more than 2 applications/crop or 6 months. Do not apply to bracts.*	
	Microbial	<i>Bacillus thuringiensis</i>	Gnatrol®	L	Larva	16-128 fl. oz.	4	Apply as a drench. Do not combine with fertilizers or fungicides containing copper or chlorine.	
		<i>Beauveria bassiana</i>	Naturalis®-O	L	All Stages	30-100 fl. oz.	4	At least 3-5 applications are necessary. Course spray to media and under benches. Also labeled for shore fly control. Wait 48 hours before applying fungicides.	
		<i>Steinernema feltiae</i>	NemaShield™	WDG	Larva	1 container/650-1300 ft. ²	-	Apply as a coarse spray to soil then rinse off foliage.	
			Nemasys®	WDG	Larva	1 pack/550-1,700 ft. ²	-	If applied over foliage, irrigate immediately with plain water to wash nematodes onto media surface.	
	Organophosphate	Acephate	PT® 1300 Orthene® TR	Aerosol	Adult	4 oz./1,500-3,000 ft. ²	24		
			Chlorpyrifos	DuraGuard™	ME	Larva & Adult	25-50 fl. oz.	12	Apply as a spray.
			Diazinon	Knox Out® GH	ME	Larva	48-96 fl. oz.	12	Apply as a spray to the soil surface. Also labeled for shore fly control.*
	Organophosphate plus Pyrethroid	Chlorpyrifos plus Cyfluthrin	Duraplex™ TR	Aerosol	Adult	2 oz./1,500-3,000 ft. ²	12	Also labeled for shore fly control.	
	Pyrethroid	Bifenthrin	PT® Attain® TR	Aerosol	Larva & Adult	1 lb./1,500-3,000 ft. ²	12		
			Talstar® GH	F	Adult	8-40 fl. oz.	12	Apply as a spray.*	
			Talstar® N	F	Adult	10-40 fl. oz./acre	12	Do not apply more than 0.2 lb./acre/year for outdoor application. Also labeled for low volume applications.*	
		Cyfluthrin	Decathlon™	20 WP	Adult	1.3 oz.	12	Apply as a spray. Also labeled for low volume application.*	
Deltamethrin		DeltaGard™ GC	SC	Adult	4-8 fl. oz.	12	For outdoor plants only.*		
Permethrin	Astro®	3.2 L	Adult	4-8 fl. oz.	12	Apply as a spray. Do not apply more than 2 lb./acre/year.			
Trianine	Cyromazine	Citation®	WSP	Larva & Pupa	2.66 oz.	12	Apply as a spray or drench at 7-14 day intervals. Also labeled for shore fly control and low volume applications.*		
Mealybug	Botanical	Neem Oil	Triact® 70	EC	All Stages	1-2 gal.	4	*	
		Pyrethrum	PT® 1100 Pyrethrum TR	Aerosol	Nymph & Adult	1 lb./1,500-3,000 ft. ²	12		



Poinsettia Federal Insect and Mite Control Chart – Page 2

Read and follow the instructions on the label before using any pesticide. Some pesticides are not available in all states. Before using a pesticide on the crop for the first time or on a new cultivar, treat a few plants and check for phytotoxicity. Some pesticides listed are no longer being manufactured for use on ornamentals, but they are included as they are still available for sale and use until existing supplies are gone.

All trademarks are the property of their respective companies.

May 2000

AI	Active Ingredient	SC	Suspension Concentrate
E or EC	Emulsifiable Concentrate	T&O or T/O	Turf & Ornamental
ES	Emulsifiable Suspension	W or WP	Wettable Powder
F	Flowable	WDG	Water Dispersible Granules
G	Granular		
L	Liquid	WSB	Water Soluble Bag
LC	Liquid Concentrate	WSP	Water Soluble Pouch
ME	Micro-Encapsulated	*	Do not apply through any type of irrigation system.
MW	Micronized Wettable		
S or SP	Soluble Powder		

-----Continued

PEST	CLASS	COMMON NAME	PRODUCT NAME	FORMULA	EFFECTIVE ON	DOSE/100 GALLONS	REI HR.	COMMENTS		
Mealybug (Continued)	Carbamate	Bendiocarb	Closure™	76 WP	Nymph & Adult	6-20 oz.	12			
			Dycarb®	76 WP	Nymph & Adult	12-20 oz.	12			
			Turcam®	WP	Nymph & Adult	6-11 oz.	12	Apply at 3 week intervals.*		
	Carbaryl	Sevin	80 WSP	Nymph & Adult	20 oz./acre	12	Sevin is unstable under highly alkaline conditions. Apply up to 6 times per year but not more often than every 7 days. Not labeled for greenhouse use. Do not apply to wet foliage or during periods of high humidity.			
			Chloronicotinyls	Imidacloprid	Marathon®	1% G	All Stages	See label.	12	
			60 WP		All Stages	See label.	12	Apply to soil only.		
	Horticultural Oils	Horticultural Oils	JMS Stylet Oil®	L	Egg & Nymph	100 fl. oz.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*		
			Saf-T-Side™	L	Egg & Nymph	1-2 gal.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*		
			Target	L	All Stages	1-2 gal.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*		
			Ultra-Fine® Oil	L	Adult	1 gal.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*		
	Insect Growth Regulator	Kinoprene	Enstar® II	5 E	All Stages	5-10 fl. oz.	4	Also labeled for low volume use. Do not apply to bracts.*		
	Insecticidal Soap	Insecticidal Soap	Insecticidal Soap 49.52CF	L	Nymph & Adult	2 gal.	12	Repeat weekly as needed up to 3 times. Test for phytotoxicity. Do not spray to new transplants, unrooted cuttings, or bracts.		
			M-Pede®	L	Nymph & Adult	1-2 gal.	12	Do not make more than 3 consecutive applications or repeat at less than 7 day intervals. Test for phytotoxicity. Do not add adjuvants or spray to new transplants, unrooted cuttings or bracts. Check label for tank mix restrictions.*		
	Microbial	<i>Beauveria bassiana</i>	BotaniGard™	ES	All Stages	16-96 fl. oz.	12	Do not tank mix with fungicides.*		
				22 WP	All Stages	8-48 oz.	4	Also labeled for low volume application but not with thermal foggers. Do not tank mix with some fungicides.*		
	Organophosphate	Acephate	Acephate Pro 75	Orthene® Turf, Tree & Ornamental Spray	WP	Nymph & Adult	10.5 oz.	24	Repeat application at a 2 week interval if needed. May be phytotoxic on bracts.*	
				Orthene® Turf, Tree & Ornamental Spray 97	S	Nymph & Adult	8 oz.	24	May be phytotoxic on bracts.*	
				Pinpoint®	15 G	Nymph & Adult	6.4 oz./1000 ft. ² or ½-¾ teaspoon/pot	12	Do not apply to freshly rooted cuttings.	
				PT® 1300 Orthene®	Aerosol	Nymph & Adult	4 oz./1,500-3,000 ft. ²	24		
				Chlorpyrifos	DuraGuard™	ME	Nymph & Adult	25-50 fl. oz.	12	
		Dursban™	50 W	Nymph & Adult	16 oz.	12	Not labeled for greenhouse use.*			
		Diazinon	Knox Out® GH	ME	Nymph & Adult	48-96 fl. oz.	12	Do not use with oil adjuvants.*		
		Dichlorvos	DDVP	Smoke	Nymph & Adult	10.2 oz./20,000 ft. ³	4-24	Foliage and blooms must be dry at the time of application.		
		Dimethoate	Dimethoate 4E	E	Nymph & Adult	17.5 fl. oz.	48	Not labeled for greenhouse use or application to stock plants. Do not tank mix with oils.		
Dimethoate 5 lb.			L	Nymph & Adult	10 fl. oz.	48	Not labeled for greenhouse use.*			
Dimethoate 267			L	Nymph & Adult	25 fl. oz.	48	Not labeled for greenhouse use or application to stock plants. Do not tank mix with oils.			
Malathion	Malathion 5EC	EC	Nymph & Adult	24 fl. oz.	12	Check for phytotoxicity.*				
	Malathion 8	EC & F	Nymph & Adult	16 fl. oz.	12	Not labeled for greenhouse use.				



Read and follow the instructions on the label before using any pesticide. Some pesticides are not available in all states. Before using a pesticide on the crop for the first time or on a new cultivar, treat a few plants and check for phytotoxicity. Some pesticides listed are no longer being manufactured for use on ornamentals, but they are included as they are still available for sale and use until existing supplies are gone.

All trademarks are the property of their respective companies.

May 2000

AI	Active Ingredient	SC	Suspension Concentrate
E or EC	Emulsifiable Concentrate	T&O or T/O	Turf & Ornamental
ES	Emulsifiable Suspension	W or WP	Wettable Powder
F	Flowable	WDG	Water Dispersible Granules
G	Granular		
L	Liquid		
LC	Liquid Concentrate	WSB	Water Soluble Bag
ME	Micro-Encapsulated	WSP	Water Soluble Pouch
MW	Micronized Wettable	*	Do not apply through any type of irrigation system.
S or SP	Soluble Powder		

-----Continued

PEST	CLASS	COMMON NAME	PRODUCT NAME	FORMULA	EFFECTIVE ON	DOSE/100 GALLONS	REI HR.	COMMENTS
Mealybug (Continued)	Organophosphate	Naled	Dibrom®	8 E	Nymph & Adult	1 fl. oz./10,000 ft. ³	24	May be phytotoxic.*
		Sulfotep	Dithio	Smoke	Nymph & Adult	7 oz./20,000 ft. ³	12-48	Foliage and blooms must be dry at the time of application.
			Plantfume 103™	Smoke	Nymph & Adult	7 oz./20,000 ft. ³	12-24	Foliage and blooms must be dry at the time of application.
	Organophosphate plus Pyrethroid	Chlorpyrifos plus Cyfluthrin	Duraplex™ TR	Aerosol	Nymph & Adult	2 oz./1,500-3,000 ft. ²	12	
		Pyrethroid	Bifenthrin	PT® Attain® TR	Aerosol	Nymph & Adult	1 lb./1,500-3,000 ft. ²	12
	Talstar® GH			F	Nymph & Adult	8-40 fl. oz.	12	*
	Talstar® N			F	Nymph & Adult	10-40 fl. oz./acre	12	Do not apply more than 0.2 lb.AI/acre/year for outdoor application. Also labeled for low volume use.*
	Cyfluthrin		Decathlon™	20 WP	Nymph & Adult	1.9 oz.	12	Also labeled for low volume use.*
	Deltamethrin		DeltaGard™ GC	SC	Nymph & Adult	4-8 fl. oz.	12	For outdoor plants only.*
	Fenpropathrin		Tame®	2.4 EC	Nymph & Adult	16 fl. oz.	24	May be tank mixed with Orthene Turf Tree & Ornamental Spray. Do not exceed 16 fl. oz./acre/application.*
	Pyridazinone	Pyridaben	Mavrik Aquaflow®	F	Nymph & Adult	5 fl. oz.	12	Labeled as a cutting dip.*
			Astro®	3.2 L	Nymph & Adult	4-8 fl. oz.	12	Do not apply more than 2.0 lb.AI/acre/year.
Sanmite®			75 WP	Nymph & Adult	4-6 oz.	12	Rotate with at least 2 other products before another application of Sanmite. Do not exceed 10.67 oz./acre/application.*	
Scale	Botanical	Neem Oil	Triact® 70	EC	All Stages	1-2 gal.	4	*
		Pyrethrum	PT® 1100 Pyrethrum TR	Aerosol	Nymph & Adult	1 lb./1,500-3,000 ft. ²	12	
	Carbamate	Bendiocarb	Closure™	76 WP	Nymph & Adult	3-40 oz.	12	
			Dycarb®	76 WP	Nymph & Adult	12-40 oz.	12	
			Turcam®	WP	Nymph & Adult	3-6 oz.	12	Apply at 3 week intervals.*
		Carbaryl	Sevin	80 WSP	Nymph & Adult	20 oz./acre	12	Apply up to 6 times per year but not more often than every 7 days. Sevin is unstable under highly alkaline conditions. Not labeled for greenhouse use. Do not apply to wet foliage or during periods of high humidity.
			Fenoxycarb	Precision™	WSP	Nymph	2-4 oz.	12
	Preclude® TR	Aerosol		Nymph	2 oz./1,500-3,000 ft. ²	12	Acts as an insect growth regulator.	
	Chloronicotinylns	Imidacloprid	Marathon®	1% G	All Stages	See label.	12	
				60 WP	All Stages	See label.	12	Apply to soil only.
	Horticultural Oils	Horticultural Oils	JMS Stylet Oil®	L	Nymph & Adult	100 fl. oz.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*
			Saf-T-Side™	L	Adult	1-2 gal.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*
			Target	L	All Stages	1-2 gal.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*
			Ultra-Fine® Oil	L	Adult	1 gal.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*
	Insect Growth Regulator	Kinoprene	Enstar® II	5 E	All Stages	5-10 fl. oz.	4	Also labeled for low volume use. Do not apply to bracts.*
Pyriproxyfen			Distance®	EC	Nymph	8-12 fl. oz.	12	Apply no more than 2 applications/crop or 6 months. Do not apply to bracts.*



Read and follow the instructions on the label before using any pesticide. Some pesticides are not available in all states. Before using a pesticide on the crop for the first time or on a new cultivar, treat a few plants and check for phytotoxicity. Some pesticides listed are no longer being manufactured for use on ornamentals, but they are included as they are still available for sale and use until existing supplies are gone.

All trademarks are the property of their respective companies.

May 2000

AI	Active Ingredient	SC	Suspension Concentrate
E or EC	Emulsifiable Concentrate	T&O or T/O	Turf & Ornamental
ES	Emulsifiable Suspension	W or WP	Wettable Powder
F	Flowable	WDG	Water Dispersible Granules
G	Granular	WSB	Water Soluble Bag
L	Liquid	WSP	Water Soluble Pouch
LC	Liquid Concentrate	*	Do not apply through any type of irrigation system.
ME	Micro-Encapsulated		
MW	Micronized Wettable		
S or SP	Soluble Powder		

-----Continued

PEST	CLASS	COMMON NAME	PRODUCT NAME	FORMULA	EFFECTIVE ON	DOSE/100 GALLONS	REI HR.	COMMENTS
Scale (Continued)	Insecticidal Soap	Insecticidal Soap	Insecticidal Soap 49.52CF	L	Nymph & Adult	2 gal.	12	Repeat weekly as needed up to 3 times. Do not spray to new transplants, unrooted cuttings, or bracts. Test for phytotoxicity.
			M-Pede*	L	Nymph & Adult	1-2 gal.	12	Do not make more than 3 consecutive applications or repeat at less than 7 day intervals. Test for phytotoxicity. Do not add adjuvants or spray to new transplants or unrooted cuttings. See label for tank mix restrictions.*
	Organophosphate	Acephate	Acephate Pro 75	SP	Nymph	10.5 oz.	24	Repeat applications at 2 week intervals. May be phytotoxic on bracts.*
			Orthene* Turf, Tree & Ornamental Spray	WP	Nymph	10.5 oz.	24	May be phytotoxic on bracts.*
			Orthene* Turf, Tree & Ornamental Spray 97	S	Nymph	8 oz.	24	May be phytotoxic on bracts.*
			PT* 1300 Orthene*	Aerosol	Nymph & Adult	4 oz./1,500-3,000 ft. ²	24	
		Chlorpyrifos	DuraGuard™	ME	Nymph & Adult	25-50 fl. oz.	12	
			Dursban™	50 W	Nymph & Adult	32 oz.	12	Not labeled for greenhouse use.*
		Diazinon	Knox Out® GH	ME	Nymph & Adult	48-96 fl. oz.	12	Do not use with oil adjuvants.*
		Malathion	Malathion 5EC	EC	Nymph & Adult	16-64 fl. oz.	12	Check for phytotoxicity.*
			Malathion 8	EC & F	Nymph & Adult	16 fl. oz.	12	Not labeled for greenhouse use.
		Methidathion	Supracide*	25 W	Nymph	32 oz.	48	Not labeled for greenhouse use. Make 1 application/season.*
	Sulfotep	Dithio	Smoke	Nymph & Adult	7 oz./20,000 ft. ³	12-48	Foliage and blooms must be dry at the time of application.	
		Plantfume 103™	Smoke	Nymph & Adult	7 oz./20,000 ft. ³	12-24	Foliage and blooms must be dry at the time of application.	
	Organophosphate plus Pyrethroid	Chlorpyrifos plus Cyfluthrin	Duraplex™ TR	Aerosol	Nymph & Adult	2 oz./1,500-3,000 ft. ²	12	
	Pyrethroid	Bifenthrin	PT* Attain* TR	Aerosol	Nymph & Adult	1 lb./1,500-3,000 ft. ²	12	
			Talstar® GH	F	Adult	8-40 fl. oz.	12	*
			Talstar® N	F	Nymph & Adult	10-40 fl. oz./acre	12	Do not apply more than 0.2 lb./acre/year for outdoor application. Also labeled for low volume use.*
		Cyfluthrin	Decathlon™	20 WP	Nymph & Adult	1.9 oz.	12	Also labeled for low volume use.*
		Deltamethrin	DeltaGard™ GC	SC	Nymph & Adult	4-8 fl. oz.	12	For outdoor plants only.*
Spider Mites	Botanical	Cinnamaldehyde	Cinnamite	EC	Nymph & Adult	85 fl. oz.	4	After 2 applications, rotate to alternative chemistry for at least 2 applications. Do not apply to bracts.*
		Neem Oil	Triact® 70	EC	All Stages	1-2 gal.	4	*
		Pyrethrum	PT* 1100 Pyrethrum TR	Aerosol	Nymph & Adult	1 lb./1,500-3,000 ft. ²	12	
	Carbamate	Bendiocarb	Closure™	76 WP	Nymph & Adult	20-40 oz.	12	
			Dycarb*	76 WP	Nymph & Adult	20-40 oz.	12	
		Methiocarb	MesuroI®	75 W	Nymph & Adult	8-16 oz./acre	24	Apply in 50 gallons of water. Repeat as necessary applying up to 4 applications/season. Do not apply with oil or foliar fertilizer.*
	Carbazate	Bifenazate	Floramite	WP	All Stages	2-4 oz.	12	Apply no more than 2 applications/crop/season.*
	Carboxamide	Hexythiazox	Hexygon	50 WP	Egg & Nymph	1-2 oz.	12	Make only one application/crop cycle. Not labeled for greenhouse use. Check label for tank mix restrictions.*
	Chlorinated Hydrocarbon	Dicofol	Kelthane® T/O	WSP	All Stages	8-16 oz.	48	Also labeled for low volume use.*
		Oxythioquinox	Joust™	4 L	All Stages	4-8 fl. oz.	24	For outdoor plants only. Do not add adjuvants or oils.*



Read and follow the instructions on the label before using any pesticide. Some pesticides are not available in all states. Before using a pesticide on the crop for the first time or on a new cultivar, treat a few plants and check for phytotoxicity. Some pesticides listed are no longer being manufactured for use on ornamentals, but they are included as they are still available for sale and use until existing supplies are gone.

All trademarks are the property of their respective companies.

May 2000

AI	Active Ingredient	SC	Suspension Concentrate
E or EC	Emulsifiable Concentrate	T&O or T/O	Turf & Ornamental
ES	Emulsifiable Suspension	W or WP	Wettable Powder
F	Flowable	WDG	Water Dispersible Granules
G	Granular	WSB	Water Soluble Bag
L	Liquid	WSP	Water Soluble Pouch
LC	Liquid Concentrate	*	Do not apply through any type of irrigation system.
ME	Micro-Encapsulated		
MW	Micronized Wettable		
S or SP	Soluble Powder		

-----Continued

PEST	CLASS	COMMON NAME	PRODUCT NAME	FORMULA	EFFECTIVE ON	DOSE/100 GALLONS	REI HR.	COMMENTS	
Spider Mites (Continued)	Horticultural Oils	Horticultural Oils	JMS Stylet Oil®	L	Egg & Nymph	100 fl. oz.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*	
			Saf-T-Side™	L	Egg & Nymph	1-2 gal.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*	
			Target	L	Egg & Nymph	1-2 gal.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*	
			Ultra-Fine® Oil	L	Egg & Nymph	1 gal.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*	
	Inorganic	Sulfur	Microthiol® Disperse	MW	Nymph & Adult	3-10 lb./acre	24	Injury may be enhanced under high temperatures. Do not use within 2 weeks of an oil spray.	
			Microthiol® Special	MW	Nymph & Adult	3-10 lb./acre	24	Injury may be enhanced under high temperatures. Do not use within 2 weeks of an oil spray.	
			Sulfur 6L	L	Nymph & Adult	48-128 fl. oz.	24	Foliar spray at 5-10 day intervals. Not labeled for greenhouse use. Do not use within 2 weeks of an oil spray or EC.	
	Insecticidal Soap	Insecticidal Soap	Insecticidal Soap 49.52CF	L	Nymph & Adult	2 gal.	12	Repeat weekly as needed up to 3 times. Test for phytotoxicity. Do not spray to new transplants, unrooted cuttings, or bracts.	
			M-Pede®	L	Nymph & Adult	1-2 gal.	12	Do not make more than 3 consecutive applications or repeat at less than 7 day intervals. Test for phytotoxicity. Do not add adjuvants or spray to new transplants, unrooted cuttings or bracts. Check label for tank mix restrictions.*	
	Macrocytic Lactone	Abamectin	Avid®	0.15 EC	Nymph & Adult	4 fl. oz.	12	Apply 8-16 fl. oz./acre.*	
	Microbial	<i>Beauveria bassiana</i>	Naturalis®-O	L	All Stages	30-100 fl. oz.	4	At least 3-5 applications are necessary. Wait 48 hours before applying fungicides.	
	Organophosphate	Acephate	PT® 1300 Orthene®	Aerosol	Nymph & Adult	4 oz./1,500-3,000 ft. ²	24		
			Chlorpyrifos	DuraGuard™	ME	Nymph & Adult	25-50 fl. oz.	12	
			Dursban™	50 W	Nymph & Adult	16 oz.	12	Not labeled for greenhouse use.*	
		Diazinon	Knox Out® GH	ME	Nymph & Adult	48-96 fl. oz.	12	Do not use with oil adjuvants.*	
		Dichlorvos	DDVP	Smoke	Nymph & Adult	10.2 oz./20,000 ft. ³	4-24	Foliage and blooms must be dry at the time of application.	
			Dimethoate	Dimethoate 4E	E	Nymph & Adult	17.5 fl. oz.	48	Not labeled for greenhouse use or application to stock plants. Do not tank mix with oils.
				Dimethoate 5 lb.	L	Nymph & Adult	10 fl. oz.	48	Not labeled for greenhouse use.*
			Dimethoate 267	L	Nymph & Adult	25 fl. oz.	48	Not labeled for greenhouse use or application to stock plants. Do not tank mix with oils.	
		Malathion	Malathion 5EC	EC	Nymph & Adult	24 fl. oz.	12	Check for phytotoxicity.*	
			Malathion 8	EC & F	Nymph & Adult	16 fl. oz.	12	Not labeled for greenhouse use.	
		Naled	Dibrom®	8 E	Nymph & Adult	1 fl. oz./10,000 ft. ³	24	May be phytotoxic.*	
			GH-18	Fog	Adult	1 fl. oz./3,000 ft. ³	24		
		Sulfotep	Dithio	Smoke	Nymph & Adult	7 oz./20,000 ft. ³	12-48	Foliage and blooms must be dry at the time of application.	
	Plantfume 103™		Smoke	Nymph & Adult	7 oz./20,000 ft. ³	12-24	Foliage and blooms must be dry at the time of application.		
	Organophosphate plus Pyrethroid	Chlorpyrifos plus Cyfluthrin	Duraplex™ TR	Aerosol	Nymph & Adult	2 oz./1,500-3,000 ft. ²	12		
	Pyrethroid	Bifenthrin	PT® Attain® TR	Aerosol	Nymph & Adult	1 lb./1,500-3,000 ft. ²	12		
Talstar® GH			F	Nymph & Adult	12-40 fl. oz.	12	*		
Talstar® N			F	Nymph & Adult	10-40 fl. oz./acre	12	Do not apply more than 0.2 lb./acre/year for outdoor application. Also labeled for low volume use.*		
Deltamethrin		DeltaGard™ GC	SC	Nymph & Adult	4-8 fl. oz.	12	Spider Mite suppression only. For outdoor plants only.*		
Fenpropathrin	Tame®	2.4 EC	Nymph & Adult	8-16 fl. oz.	24	May be tank mixed with Orthene Turf Tree & Ornamental Spray. Do not exceed 16 fl. oz./acre/application.*			



Poinsettia Federal Insect and Mite Control Chart – Page 6

Read and follow the instructions on the label before using any pesticide. Some pesticides are not available in all states. Before using a pesticide on the crop for the first time or on a new cultivar, treat a few plants and check for phytotoxicity. Some pesticides listed are no longer being manufactured for use on ornamentals, but they are included as they are still available for sale and use until existing supplies are gone.

All trademarks are the property of their respective companies.

May 2000

AI	Active Ingredient	SC	Suspension Concentrate
E or EC	Emulsifiable Concentrate	T&O or T/O	Turf & Ornamental
ES	Emulsifiable Suspension	W or WP	Wettable Powder
F	Flowable	WDG	Water Dispersible Granules
G	Granular	WSB	Water Soluble Bag
L	Liquid	WSP	Water Soluble Pouch
LC	Liquid Concentrate	*	Do not apply through any type of irrigation system.
ME	Micro-Encapsulated		
MW	Micronized Wettable		
S or SP	Soluble Powder		

-----Continued

PEST	CLASS	COMMON NAME	PRODUCT NAME	FORMULA	EFFECTIVE ON	DOSE/100 GALLONS	REI HR.	COMMENTS	
Spider Mites (Continued)	Pyrethroid	Fluvalinate	Mavrik Aquaflow®	F	Nymph & Adult	4-10 fl. oz.	12	Also labeled as a cutting dip at 5 fl. oz./100 gal. and for low volume use.*	
	(Continued)	Pyridazinone	Pyridaben	Sanmite®	75 WP	All Stages	2-4 oz.	12	Rotate with at least 2 other products before another application of Sanmite. Do not exceed 10.67 oz./acre/application.*
		Spinosad	Spinosyn A & D	Conserve™	SC	Nymph	22 fl. oz.	4	Do not apply more than 10 times in a 12 month period per crop or greenhouse. Do not apply more than 3 consecutive applications.*
		Sulfite Ester	Propargite	Ornamite®	WSB	Nymph & Adult	16 oz.	7 days	Labeled for outdoor use only. See label for compatibility issues.*
		Tetrazine	Clofentezine	Ovation™ SC	SC	Egg & Nymph	2 fl. oz.	12	Make only 1 application/crop. Do not exceed 8 fl. oz./acre. Also labeled for low volume use. Ovation SC is magenta in color and may leave a residue.
Thrips	Botanical	Azadirachtin	Azatin® XL	EC	Nymph	12-16 fl. oz.	4	Acts as an insect growth regulator. Apply a maximum of 21 fl. oz./acre. Also labeled for low volume use.	
		Nicotine	Nicotine	Smoke	Nymph & Adult	12 oz./20,000 ft. ³	4-24	Foliage and blooms must be dry at the time of application.	
		Pyrethrum	PT® 1100 Pyrethrum TR	Aerosol	Adult	1lb./1,500-3,000 ft. ²	12		
	Carbamate	Bendiocarb	Closure™	76 WP	Nymph, Pupa & Adult	11-20 oz.	12		
			Dycarb®	76 WP	Nymph & Adult	12-20 oz.	12		
			Turcam®	WP	Nymph & Adult	11 oz.	12	Apply at 3 week intervals.*	
		Carbaryl	Sevin	80 WSP	Nymph & Adult	20 oz./acre	12	Sevin is unstable under highly alkaline conditions. Apply up to 6 times per year but not more often than every 7 days. Not labeled for greenhouse use. Do not apply to wet foliage or during periods of high humidity.	
		Fenoxycarb	Precision™	WSP	Nymph & Pupa	2-4 oz.	12	Acts as an insect growth regulator. Also labeled for low volume application. Do not apply more than 30 applications/year.	
			Preclude® TR	Aerosol	Nymph	2 oz./1,500-3,000 ft. ²	12	Acts as an insect growth regulator.	
		Methiocarb	Mesuro®	75 W	Nymph & Adult	8-16 oz./acre	24	Apply in 50 gallons of water. Repeat as necessary applying up to 4 applications/season. Do not apply with oil or foliar fertilizer.*	
	Chloronicotinyls	Imidacloprid	Marathon®	1% G	All Stages	See label.	12	Thrips suppression.	
			60 WP	All Stages	See label.	12	Apply to soil only. Thrips suppression.		
	Horticultural Oils	Horticultural Oils	Saf-T-Side™	L	Egg & Nymph	1-2 gal.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*	
			Target	L	Egg & Nymph	1-2 gal.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*	
			Ultra-Fine® Oil	L	Egg & Nymph	1 gal.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*	
	Insecticidal Soap	Insecticidal Soap	Insecticidal Soap 49.52CF	L	Nymph, Pupa & Adult	2 gal.	12	Repeat weekly as needed up to 3 times. Test for phytotoxicity. Do not spray to new transplants, unrooted cuttings, or bracts.	
			M-Pede®	L	Nymph & Adult	1-2 gal.	12	Do not make more than 3 consecutive applications or repeat at less than 7 day intervals. Test for phytotoxicity. Do not add adjuvants or spray to new transplants, unrooted cuttings or bracts. Check label for tank mix restrictions.*	
	Macrocyclic Lactone	Abamectin	Avid®	0.15 EC	Nymph & Adult	8-16 fl. oz./acre	12	Labeled for control of spider mites and leafminers.*	
Microbial	<i>Beauveria bassiana</i>	BotaniGard™	ES	All Stages	32-96 fl. oz.	12	Do not tank mix with fungicides.*		
			22 WP	All Stages	16-48 oz.	4	Also labeled for low volume application but not with thermal foggers. Do not tank mix with some fungicides.*		
		Mycotrol	WP	All Stages	4-16 oz./acre	12	Do not tank mix with fungicides.*		
		Naturalis®-O	L	All Stages	30-100 fl. oz.	4	At least 3-5 applications are necessary. Wait 48 hours before applying fungicides.		



Read and follow the instructions on the label before using any pesticide. Some pesticides are not available in all states. Before using a pesticide on the crop for the first time or on a new cultivar, treat a few plants and check for phytotoxicity. Some pesticides listed are no longer being manufactured for use on ornamentals, but they are included as they are still available for sale and use until existing supplies are gone.

All trademarks are the property of their respective companies.

May 2000

-----Continued

AI	Active Ingredient	SC	Suspension Concentrate
E or EC	Emulsifiable Concentrate	T&O or T/O	Turf & Ornamental
ES	Emulsifiable Suspension	W or WP	Wettable Powder
F	Flowable	WDG	Water Dispersible Granules
G	Granular	WSB	Water Soluble Bag
L	Liquid	WSP	Water Soluble Pouch
LC	Liquid Concentrate	*	Do not apply through any type of irrigation system.
ME	Micro-Encapsulated		
MW	Micronized Wettable		
S or SP	Soluble Powder		

PEST	CLASS	COMMON NAME	PRODUCT NAME	FORMULA	EFFECTIVE ON	DOSE/100 GALLONS	REI HR.	COMMENTS
Thrips (Continued)	Organophosphate	Acephate	Acephate Pro 75	SP	Nymph & Adult	10.5 oz.	24	Maybe phytotoxic on bracts.*
			Orthene® Turf, Tree & Ornamental Spray	WP	Nymph & Adult	10.5 oz.	24	May be phytotoxic on bracts.*
			Orthene® Turf, Tree & Ornamental Spray 97	S	Nymph & Adult	8 oz.	24	May be phytotoxic on bracts.*
			PT®1300 Orthene® TR	Aerosol	Nymph & Adult	4 oz./1,500-3,000 ft. ²	24	
		Chlorpyrifos	DuraGuard™	ME	Nymph & Adult	25-50 fl. oz.	12	
			Dursban™	50 W	Nymph & Adult	16 oz.	12	Not labeled for greenhouse use.*
		Diazinon	Knox Out® GH	ME	Nymph & Adult	48-96 fl. oz.	12	Do not use with oil adjuvants.*
		Malathion	Malathion 5EC	EC	Nymph & Adult	24 fl. oz.	12	Check for phytotoxicity.*
			Malathion 8	EC & F	Nymph & Adult	16 fl. oz.	12	Not labeled for greenhouse use.
		Naled	GH-18	Fog	Adult	1 fl. oz./3,000 ft. ³	24	
	Sulfotep	Dithio	Smoke	Nymph & Adult	7 oz./20,000 ft. ³	12-48	Foliage and blooms must be dry at the time of application.	
		Plantfume 103™	Smoke	Nymph & Adult	7 oz./20,000 ft. ³	12-24	Foliage and blooms must be dry at the time of application.	
	Organophosphate plus Pyrethroid	Chlorpyrifos plus Cyfluthrin	Duraplex™ TR	Aerosol	Nymph & Adult	2 oz./1,500-3,000 ft. ²	12	
	Pyrethroid	Bifenthrin	PT® Attain® TR	Aerosol	Nymph & Adult	1 lb./1,500-3,000 ft. ²	12	
			Talstar® GH	F	Nymph & Adult	12-40 fl. oz.	12	*
			Talstar® N	F	Nymph & Adult	10-40 fl. oz./acre	12	Do not apply more than 0.2 lb./acre/year for outdoor application. Also labeled for low volume use.*
		Cyfluthrin	Decathlon™	20 WP	Nymph & Adult	1.9 oz.	12	Also labeled for low volume use.*
		Fluvalinate	Mavrik Aquaflow®	F	Nymph & Adult	4-10 fl. oz.	12	Also labeled for low volume use.*
Permethrin	Astro®	3.2 L	Adult	4-8 fl. oz.	12	Apply as a spray. Do not apply more than 2 lb./acre/year.		
Spinosad	Spinosyn A & D	Conserve™	SC	Nymph	6 fl. oz.	4	Do not apply more than 10 times in a 12 month period per crop or greenhouse. Do not apply more than 3 consecutive applications.*	
Whiteflies	Botanical	Azadirachtin	Azatin® XL	EC	Nymph & Pupa	10-16 fl. oz.	4	Acts as an insect growth regulator. Apply a maximum of 21 fl. oz./acre. Also labeled for low volume use.
		Neem Oil	Triact® 70	EC	All Stages	1-2 gal.	4	*
		Pyrethrum	PT®1100 Pyrethrum TR	Aerosol	Nymph & Adult	1 lb./1,500-3,000 ft. ²	12	
	Carbamate	Bendiocarb	Closure™	76 WP	Nymph & Adult	12-20 oz.	12	
			Dycarb®	76 WP	Nymph & Adult	12-20 oz.	12	
			Turcam®	WP	Nymph & Adult	21 oz.	12	Apply at 3 week intervals.*
		Fenoxycarb	Precision™	WSP	Nymph & Pupa	2-4 oz.	12	Acts as an insect growth regulator. Also labeled for low volume application. Do not apply more than 30 applications/year.
	Chlorinated Hydrocarbon	Endosulfan	Endosulfan 3EC	EC	Adult	21.3 fl. oz.	24	Do not exceed a maximum of 4 qt./acre/year.*
			Endosulfan 50WP	WP	Adult	16 oz.	24	Do not exceed a maximum of 6 lbs./acre/year.*
			Thiodan®	3 EC	Adult	21.3 fl. oz.	24	Do not exceed a maximum of 4 qt./acre/year.*
				Smoke	Adult	6 oz./10,000 ft. ³	24	Foliage and blooms must be dry at the time of application.
			50 W	Adult	16 oz.	24	Do not exceed a maximum of 6 lbs./acre/year.*	
	Oxythioquinox	Joust™	4 L	Egg	4-8 fl. oz.	24	For outdoor plants only. Do not add adjuvants or oils.*	



Read and follow the instructions on the label before using any pesticide. Some pesticides are not available in all states. Before using a pesticide on the crop for the first time or on a new cultivar, treat a few plants and check for phytotoxicity. Some pesticides listed are no longer being manufactured for use on ornamentals, but they are included as they are still available for sale and use until existing supplies are gone.

All trademarks are the property of their respective companies.

May 2000

AI	Active Ingredient	SC	Suspension Concentrate
E or EC	Emulsifiable Concentrate	T&O or T/O	Turf & Ornamental
ES	Emulsifiable Suspension	W or WP	Wettable Powder
F	Flowable	WDG	Water Dispersible Granules
G	Granular		
L	Liquid	WSB	Water Soluble Bag
LC	Liquid Concentrate	WSP	Water Soluble Pouch
ME	Micro-Encapsulated	*	Do not apply through any type of irrigation system.
MW	Micronized Wettable		
S or SP	Soluble Powder		

-----Continued

PEST	CLASS	COMMON NAME	PRODUCT NAME	FORMULA	EFFECTIVE ON	DOSE/100 GALLONS	REI HR.	COMMENTS	
Whiteflies (Continued)	Chloronicotinylns	Imidacloprid	Marathon*	1% G	All Stages	See label.	12		
				60 WP	All Stages	See label.	12	Apply to soil only.	
	Horticultural Oils	Horticultural Oils	JMS Stylet Oil*	Saf-T-Side™	L	Egg, Nymph, Pupa	100 fl. oz.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*
					L	Egg, Nymph, Pupa	1-2 gal.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*
					L	All Stages	1-2 gal.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*
					L	Egg, Nymph, Pupa	1 gal.	4	Check label for tank mix restrictions. Phytotoxicity has been reported on bracts.*
	Insect Growth Regulator	Kinoprene	Enstar® II	5 E	All Stages	5-10 fl. oz.	4	Also labeled for low volume use. Do not apply to bracts.*	
				Pyriproxyfen	Distance®	EC	Nymph & Pupa	6-8 fl. oz.	12
	Insecticidal Soap	Insecticidal Soap	Insecticidal Soap 49.52CF	L	Nymph, Pupa, Adult	2 gal.	12	Repeat weekly as needed up to 3 times. Test for phytotoxicity. Do not spray to new transplants, unrooted cuttings, or bracts.	
				M-Pede*	L	Nymph, Pupa, Adult	1-2 gal.	12	Do not make more than 3 consecutive applications or repeat at less than 7 day intervals. Test for phytotoxicity. Do not add adjuvants or spray to new transplants, unrooted cuttings or bracts. Check label for tank mix restrictions.*
	Macrocylic Lactone	Abamectin	Avid®	0.15 EC	Nymph & Adult	8-16 fl. oz./acre	12	Labeled for control of spider mites and leafminers.*	
	Microbial	Beauveria bassiana	BotaniGard™	ES	All Stages	16-96 fl. oz.	12	Do not tank mix with fungicides.*	
				22 WP	All Stages	8-48 oz.	4	Also labeled for low volume application but not with thermal foggers. Do not tank mix with some fungicides.*	
				Mycotrol	WP	All Stages	4-16 oz./acre	12	Do not tank mix with fungicides.*
				Naturalis®-O	L	All Stages	30-100 fl. oz.	4	At least 3-5 applications are necessary. Wait 48 hours before applying fungicides.
	Organophosphate	Acephate	Acephate Pro 75	SP	Nymph & Adult	10.5 oz.	24	Also labeled as a tank mix of 5.3 oz. Acephate Pro 75 plus 10 3/4 oz. Tame 2.4 EC/100 gal. May be phytotoxic on bracts.*	
				WP	Nymph & Adult	10.5 oz.	24	Also labeled as a tank mix of 5.3 oz. Orthene plus 10 3/4 oz. Tame 2.4 EC/100 gal. May be phytotoxic on bracts.*	
				S	Nymph & Adult	8 oz.	24	Also labeled as a tank mix of 4 oz. Orthene plus 10 3/4 fl. oz. Tame 2.4 EC/100 gal. May be phytotoxic on bracts.*	
				Aerosol	Nymph & Adult	4 oz./1,500-3,000 ft.²	24		
		Chlorpyrifos	Dursban™	50 W	Nymph & Adult	8-16 oz.	12	Not labeled for greenhouse use.*	
		Diazinon	Knox Out® GH	ME	Nymph & Adult	48-96 fl. oz.	12	Labeled for whitefly suppression. Do not use with oil adjuvants.*	
		Dichlorvos	DDVP	Smoke	Nymph & Adult	10.2 oz./20,000 ft.³	4-24	Foliage and blooms must be dry at the time of application.	
		Dimethoate	Dimethoate 4E	E	Nymph & Adult	17.5 fl. oz.	48	Not labeled for greenhouse use or application to stock plants. Do not tank mix with oils.	
				L	Nymph & Adult	10 fl. oz.	48	Not labeled for greenhouse use.*	
L				Nymph & Adult	25 fl. oz.	48	Not labeled for greenhouse use or application to stock plants. Do not tank mix with oils.		
Malathion	Malathion 5EC	EC	Nymph & Adult	24 fl. oz.	12	Check for phytotoxicity.*			
		EC & F	Nymph & Adult	16 fl. oz.	12	Not labeled for greenhouse use.			
Naled	Dibrom*	8 E	Nymph & Adult	1 fl. oz./10,000 ft.³	24	May be phytotoxic.*			
		Fog	Adult	1 fl. oz./3,000 ft.³	24				



Poinsettia Federal Insect and Mite Control Chart – Page 9

Read and follow the instructions on the label before using any pesticide. Some pesticides are not available in all states. Before using a pesticide on the crop for the first time or on a new cultivar, treat a few plants and check for phytotoxicity. Some pesticides listed are no longer being manufactured for use on ornamentals, but they are included as they are still available for sale and use until existing supplies are gone.

All trademarks are the property of their respective companies.

May 2000

-----Continued

AI	Active Ingredient	SC	Suspension Concentrate
E or EC	Emulsifiable Concentrate	T&O or T/O	Turf & Ornamental
ES	Emulsifiable Suspension	W or WP	Wettable Powder
F	Flowable	WDG	Water Dispersible Granules
G	Granular		
L	Liquid	WSB	Water Soluble Bag
LC	Liquid Concentrate	WSP	Water Soluble Pouch
ME	Micro-Encapsulated	*	Do not apply through any type of irrigation system.
MW	Micronized Wettable		
S or SP	Soluble Powder		

PEST	CLASS	COMMON NAME	PRODUCT NAME	FORMULA	EFFECTIVE ON	DOSE/100 GALLONS	REI HR.	COMMENTS
Whiteflies (Continued)	Organophosphate (Continued)	Sulfotep	Dithio	Smoke	Nymph & Adult	7 oz./20,000 ft. ³	12-48	Foliage and blooms must be dry at the time of application.
			Plantfume 103™	Smoke	Nymph & Adult	7 oz./20,000 ft. ³	12-24	Foliage and blooms must be dry at the time of application.
	Organophosphate plus Pyrethroid	Chlorpyrifos plus Cyfluthrin	Duraplex™ TR	Aerosol	Nymph & Adult	2 oz./1,500-3,000 ft. ²	12	
	Pyrethroid	Bifenthrin	PT® Attain® TR	Aerosol	Nymph & Adult	1 lb./1,500-3,000 ft. ²	12	
			Talstar® GH	F	Nymph & Adult	8-40 fl. oz.	12	*
			Talstar® N	F	Nymph & Adult	10-40 fl. oz./acre	12	Do not apply more than 0.2 lb.AI/acre/year for outdoor application. Also labeled for low volume use.*
		Cyfluthrin	Decathlon™	20 WP	Nymph & Adult	1.9 oz.	12	Also labeled for low volume use.*
		Fenpropathrin	Tame®	2.4 EC	Nymph & Adult	5½-16 fl. oz.	24	Rate depends on species of whitefly. Also labeled as a tank mix with Orthene. Do not exceed 16 fl. oz./acre/application.*
		Fluvalinate	Mavrik Aquaflow®	F	Nymph & Adult	4-10 fl. oz.	12	Also labeled for low volume use.*
		Permethrin	Astro®	3.2 L	Nymph & Adult	4-8 fl. oz.	12	Do not apply more than 2.0 lb.AI/acre/year.
	Resmethrin	GH 60	Fog	Adult	1 fl. oz./1,000 ft. ³	24		
	Pyridazinone	Pyridaben	Sanmite®	75 WP	Nymph & Adult	4-6 oz.	12	Rotate with at least 2 other products before another application of Sanmite. Do not exceed 10.67 oz./acre/application.*
	Pyridine Azamethine	Pymetrozine	Endeavor	WDG	Nymph & Adult	2.5-5 oz., up to 10 oz./acre	12	Foliar spray at 7-14 day intervals. For outdoor use, do not apply more than 48 oz./acre/year or 100 oz. for indoor use.*