

2009 Florida Citrus Pest Management Guide: Pesticides Registered for Use on Florida Citrus¹

M.E. Rogers, M.M. Dewdney and S.H. Futch²

The following are lists of products which are registered for use on citrus regardless of whether or not they are recommended for use. In cases where there are many similar products such as copper fungicides, sulfurs, or petroleum oils, separate tables have been set up for each. All other products are listed in Table 4 and grouped according to use: 1) insecticides, acaricides, and nematicides, 2) fungicides, 3) herbicides, and 4) other products such as plant growth regulators and fumigants.

READ THE LABEL.

-
1. This document is ENY-601, one of a series of the Entomology and Nematology Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Date printed: December 1995. Date revised: November 2008. This publication is included in SP-43, 2009 Florida Citrus Pest Management Guide. A copy of this publication may be found at <http://edis.ifas.ufl.edu/CG017>. Please visit the EDIS Web site at <http://edis.ifas.ufl.edu>. For a copy of this handbook, request information on its purchase at your county extension office.
 2. M.E. Rogers, assistant professor, Entomology and Nematology Department; M.M. Dewdney, assistant professor, Plant Pathology Department; and S.H. Futch, extension agent IV, Citrus REC, Lake Alfred, Florida; Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, 32611.

The use of trade names in this publication is solely for the purpose of providing specific information. It is not a guarantee or warranty of the products named, and does not signify that they are approved to the exclusion of others of suitable composition.

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information and other services only to individuals and institutions that function with non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions or affiliations. U.S. Department of Agriculture, Cooperative Extension Service, University of Florida, IFAS, Florida A. & M. University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Larry Arrington, Dean

Table 1. Copper fungicides registered for citrus and the diseases for which they have been evaluated

Trade Name	Common Name	Cu (%) ¹	EPA Reg. No.	Evaluated for: ²				
				Melanose	Greasy spot	Alternaria	Scab	Canker
Agri-San	copper sulfate pentahydrate	5	66675-4	ND	ND	ND	ND	ND
Bac-Stop	copper hydroxide	50	55146-1-34704	ND	ND	ND	ND	ND
Badge SC	copper oxychloride + copper hydroxide	20	80289-3	X	X	X	ND	X
Basic Copper 53	basic copper sulfate	53	45002-8	ND	ND	ND	ND	ND
Basic Copper Sulfate	basic copper sulfate	53	46923-2	X	ND	ND	ND	ND
Basicop	basic copper sulfate	53	352-683	ND	ND	ND	ND	ND
Champ Dry Prill	copper hydroxide	37.5	55146-57	X	X	X	X	X
Champ Formula 2 Flowable	copper hydroxide	24.4	55146-64	X	X	ND	X	ND
Champion WP	copper hydroxide	50	55146-1	X	ND	ND	ND	X
COC DF	copper oxychloride	50	45002-17	ND	ND	ND	ND	ND
COC WP	copper oxychloride	50	45002-17	ND	ND	ND	ND	X
C-O-C-S WDG	copper oxychloride + basic copper sulfate	50	34704-326	ND	ND	ND	ND	ND
Copper-Count-N	copper ammonium complex	8	10465-3	X	ND	X	ND	ND
Copper Sulfate Crystals	basic copper sulfate	25	56576-1	ND	ND	ND	ND	ND
Copper Sulfate Instant Powder	copper sulfate pentahydrate	5	1278-5	ND	ND	ND	ND	ND
Cuprofix Ultra 40 Disperss	basic copper sulfate	40	4581-413-82695	X	X	ND	ND	X
Kentan DF	copper hydroxide	40	80289-2	X	ND	X	ND	X
Kocide 101	copper hydroxide	50	352-681	X	X	X	X	X
Kocide 2000	copper hydroxide	35	352-656	X	X	X	X	X
Kocide 3000	copper hydroxide	30	352-662	X	X	ND	X	X
Kocide 4.5LF	copper hydroxide	24.4	352-684	ND	ND	ND	ND	ND
Kocide DF	copper hydroxide	40	352-688	X	X	X	ND	ND

Table 1. Copper fungicides registered for citrus and the diseases for which they have been evaluated

Trade Name	Common Name	Cu (%) ¹	EPA Reg. No.	Evaluated for: ²				
				Melanose	Greasy spot	Alternaria	Scab	Canker
KOP-Hydroxide	cupric hydroxide	24.4	19713-301	ND	ND	ND	ND	ND
KOP-Hydroxide 50W	copper hydroxide	50	19713-321	X	ND	ND	ND	ND
Nordox	cuprous oxide	50.1	48142-1	ND	ND	ND	ND	ND
Nordox 75 WG	cuprous oxide	75	48142-4	ND	ND	ND	ND	ND
Nu-Cop 3L	copper hydroxide	24.4	42750-75	ND	ND	ND	ND	ND
Nu-Cop HB	copper hydroxide	50	42750-132	ND	ND	ND	ND	ND
Nu-Cop 50DF	cupric hydroxide	50	45002-4	ND	ND	X	ND	ND
Nu-Cop 50 WP	copper hydroxide	50	45002-7	ND	ND	ND	ND	ND
Quimag Copper Sulfate Crystals	basic copper sulfate	25.2	73385-1	ND	ND	ND	ND	ND
Stretch	copper hydroxide	2.16	68292-3	ND	ND	ND	ND	ND
Tenn-Cop 5E	copper salts of fatty and rosin acids	5.14	1812-381	ND	ND	ND	ND	ND

¹Percentage of metallic copper.²X - Products indicated have been evaluated and have provided adequate control of the disease in question; ND - No data. Most of the products would be expected to provide adequate disease control.

Table 2. Sulfur products registered for use on citrus and spectrum of activity against pest mites on citrus in Florida

Trade Name and Formulation	Common Name	% Sulfur	EPA Reg. No.	Registered ¹ for Use on		Efficacy ²	
				Citrus Rust Mite	Broad Mite	Citrus Rust Mite	Broad Mite
Citrusperse Sulfur	sulfur	90%	5905-350	X	-	ID	ID
Cosavet DF	sulfur	80%	70905-1	X	-	ID	ID
Dusting Sulfur	sulfur	98%	34704-735	X	-	ID	ID
Kolodust	sulfur	84%	34704-733	X	-	ID	ID
Kumulus DF	sulfur	80%	51036-352	X	X	+	+
Liquid Sulfur Six	sulfur	52%	5905-437	X	-	ID	ID
Micro Sulf	(micronized) sulfur	80%	55146-75	X	X	ID	ID
Micronized Gold	(micronized) sulfur	90%	19713-238	X	X	+	+
Microthiol Dispers	(micronized) sulfur	80%	4581-373	X	X	+	+
Microthiol 80 DF	(micronized) sulfur	80%	4581-373	X	X	+	+
Sulfur 6 F	sulfur	52%	51036-16-34704	X	X	+	ID
Sulfur 6 L	sulfur	52%	51036-16-9779	X	X	+	ID
Sulfur Flowable 6	sulfur	52%	51306-16-34704	X	X	+	ID
Sulfur 6 L	sulfur	52%	51306-16	X	X	+	ID
Sulfur 6 FL	sulfur	52%	34704-70	X	-	ID	ID
Sulfur 90 W	(micronized) sulfur	90%	19713-238	X	X	ID	ID
Super Six	sulfur	52%	65343-1	X	-	ID	ID
Thiolux	(micronized) sulfur	80%	100-835	X	-	ID	ID
Thiolux Jet	(micronized) sulfur	80%	100-1138	X	-	ID	ID
Thiosperse 80% (CSC)	(micronized) sulfur	80%	55429-4	X	-	ID	ID
Yellow Jacket Wettable Sulfur	sulfur	90%	6325-13	X	-	ID	ID

¹X indicates product registered for control of citrus rust or broad mites; - = not registered.

²+ indicates product is effective; ID indicates incomplete data available; sulfurs are generally effective for false spider mites, ineffective for spider mites, and efficacy data on pink citrus rust mites are incomplete.

Table 3. Spray oils registered for use on Florida citrus

Company	Trade Name	Mid Point Boiling Range	EPA No. ¹	Efficacy ²	
				Greasy Spot	Citrus Rust Mite
Brandt	SAF-T-SIDE	435°F	48813-1	ID	ID
BVA	Spray 10	412°F	55206-1	ID	ID
BVA	Spray 13	435°F	55206-2	+	+
BVA	Spray 15	455°F	55206-3	+	+
BVA	Spray 22	470°F ³	55206-4	ID	ID
Drexel	435 98.8	435°F	19713-394	ID	ID
Drexel	455 98.8	455°F	19713-396	ID	ID
Calumet	Orchex 692	412°F	75652-2	ID	+
Calumet	Orchex 796	435°F	75652-1	+	+
Calumet	Orchex 892	455°F	75652-3	+	+
Florida Citrus Production Inputs	455 soluble	455°F	71258-1	ID	ID
Helena Chemical	Sol-Oil 97	435°F	5905-294	ID	+
Helena Chemical	Mite-E-Oil	435°F	5905-302	+	+
Helena Chemical	Omni Oil 6-E	415°F	5905-368	ID	ID
Petro-Canada	BioCover UL	415°F	69526-5-34704	ID	+
Petro-Canada	BioCover MLT	435°F	69526-6-34704	+	+
Petro-Canada	BioCover LS	455°F	69526-8-34704	+	+
Petro-Canada	BioCover SS	470°F ³	69526-7-34704	+	+
Petro-Canada	Glacial	435°F	34704-849	ID	ID
Petro-Canada	PureSpray Green	435°F	69526-9	ID	ID
SK Corporation	En Spray 99	455°F	75395-1	+	+
SK Corporation	En Spray N	455°F	75395-2	+	+

¹Most oils are registered for use against citrus rust mite, greasy spot, spider mites, scale insects, whitefly, and other homopterans, and for removal of sooty mold.

²+ = effective; - = not effective; ID = incomplete data; Orchex 796 has been found to control pink citrus rust mite without harm to beneficial mites; others have not been tested.

³470 weight oils have not been evaluated for their effects on fruit coloring or ripening and are more likely to be phytotoxic than lighter oils.

Table 4. Pesticides Registered for Use on Florida Citrus – Insecticides, Acaricides and Nematicides

Trade Name or Generic Name	Common Name (IRAC MOA) ⁹	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³ TPQ (lb a.i.) ⁴	
							1	2
Abacus	Abamectin (6)	81578-1 83100-4-83979	0.02	7	NO	12	--	10,000
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Toxic to fish, mammals and aquatic organisms. Highly toxic to honeybees. ⁶ Limit of 3 applications of abamectin per growing season. Do not apply more than 40 fl oz/A (0.047 lb ai/A) of any abamectin product in a growing season.								
Abamectin E-AG 0.15 EC	Abamectin (6)	79676-58	0.02	7	NO	12	--	10,000
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Toxic to fish, mammals and aquatic organisms. Highly toxic to honeybees. ⁶ Limit of 3 applications of abamectin per growing season. Do not apply more than 40 fl oz/A (0.047 lb ai/A) of any abamectin product in a growing season.								
ABBA 0.15EC	Abamectin (6)	72167-43-73220 72167-43-66222 66222-139	0.02	7	NO	12	--	10,000
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Toxic to fish, mammals and aquatic organisms. Highly toxic to honeybees. ⁶ Limit of 3 applications of abamectin per growing season. Do not apply more than 40 fl oz/A (0.047 lb ai/A) of any abamectin product in a growing season.								
Acephate products								
Other Use Requirements: Do not harvest citrus for one year after treatment. Minimum 3 days spray interval for up to 0.5 lb ai/A and 7 days for rates greater than 0.5 lb ai/A.								
Acephate 75	Acephate (1B)	70506-1-55467	Nonbearing	12 months	NO	24	--	10,000
Acephate 75 WSP		70506-1						
Acephate 90 SP		51036-238						
Acephate 90 WSP		34704-862						
Acephate 97		70506-8-55467						
Acephate 97 UP		70506-8						
Other Use Requirements: Do not harvest citrus for one year after treatment. Minimum 3 days spray interval for up to 0.5 lb ai/A and 7 days for rates greater than 0.5 lb ai/A.								
Acramite-50WS	Bifenazate (25)	400-503	Nonbearing	12 months	NO	12	--	--
Other Use Requirements: One application per year.								
Admire 2 F (see also Provado)	Imidacloprid (4)	264-758	0.7	0	NO	12	--	--
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 32 oz/acre/year (0.5 lb ai/A/yr).								

Table 4. Pesticides Registered for Use on Florida Citrus – Insecticides, Acaricides and Nematicides

Trade Name or Generic Name	Common Name (IRAC MOA) ⁹	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³	
							1	2
Admire Pro	Imidacloprid (4)	00264-00827	0.7	0	NO	12	--	--
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 14 oz per acre per season (0.5 lb ai/A/yr).								
Advise 2 FL	Imidacloprid (4)	1381-205	0.7	0	NO	12	--	--
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 32 oz/acre/year (0.5 lb ai/A/yr).								
Agri-Mek 0.15 EC	Abamectin (6)	100-898	0.02	7	NO	12	--	10,000
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Toxic to fish, mammals, and aquatic organisms. Highly toxic to honeybees. ⁶ Limit of 3 applications of abamectin per growing season. Do not apply more than 40 fl oz/A (0.047 lb ai/A) of any abamectin product in a growing season.								
Alias 2F	Imidacloprid (4)	00264-00758-66222	0.7	0	NO	12	--	--
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 32 oz per acre per season (0.5 lb ai/A/yr).								
Applaud 70DF IGR	Buprofezin (16)	71711-21	2	3	NO	12	--	--
Other Use Requirements: Limit to 2 applications per year.								
Assail 30SG	Acetamiprid (4)	08033-00036-82695 8033-36-70506	0.5	7	NO	12	--	--
Other Use Requirements: Limit to 5 applications per year. Limit to 0.55 lb ai or 29.3 oz product per acre per crop.								
Assail 70WP	Acetamiprid (4)	8033-23-4581	0.5	7	NO	12	--	--
Other Use Requirements: Limit to 5 applications per year. Limit to 0.55 lb ai or 12.5 oz of product per acre per crop.								
Atrapa (see also Fyfanon and Malathion)	Malathion (1B)	(ULV) 1812-407 (5E) 1812-406 (8E) 1812-408 67760-34-1381	8.0	7	NO	12	--	10,000
Other Use Requirements: Toxic to aquatic invertebrates; highly toxic to bees. Do not apply directly to water. Undiluted droplets will damage vehicle finishes. Unless written informed consent is obtained from adjacent landowners, ground application equipment must be used.								
Award	Fenoxycarb (7B)	100-722	Nonbearing	12 months	NO	12	--	10,000
Other Use Requirements: Limit to 2 applications per year.								

Table 4. Pesticides Registered for Use on Florida Citrus – Insecticides, Acaricides and Nematicides

Trade Name or Generic Name	Common Name (IRAC MOA) ⁹	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³	
							TPQ (lb a.i.) ⁴ 1	TPQ (lb a.i.) ⁴ 2
Aza-Direct	Azadirachtin (18)	71908-1-10163	Exempt	0	NO	4	--	--
Other Use Requirements: None								
Azatin XL	Azadirachtin (18)	70051-27-59807	Exempt	0	NO	4	--	--
Other Use Requirements: None								
Azatrol EC	Azadirachtin (18)	2217-836	Exempt	0	NO	4	--	--
Other Use Requirements: None								
Azinphosmethyl (see also Guthion)	Azinphosmethyl salts (1B)	(50W) 51036-164	2	30	NO	2-30 days	10	10,000
Other Use Requirements: RESTRICTED PESTICIDE ⁷ - liquid formulation only. Limit to 2 appl/season. Highly toxic to honeybees. ⁶ See label for REI details.								
<i>Bacillus thuringiensis</i> Agree	B.t. aizawai Strain GC-91	70051-47	Exempt	0	NO	4	--	--
Biobit HP	B.t. kurstaki Strain ABTS-351	73049-54						
Condor	B.t. kurstaki Strain EG2348	70051-78						
Crymax	B.t. kurstaki Strain EG7841	70051-86						
Deliver	B.t. kurstaki	70051-69						
DiPel DF	B.t. kurstaki Strain H0-1	73049-39						
Javelin WG	B.t. kurstaki	70051-66						
Lepinox WDG	B.t. kurstaki Strain EG7826	70051-89						
XenTari DF	B.t. aizawai Strain ABTS-1857	73049-40						
Other Use Requirements: None								

Table 4. Pesticides Registered for Use on Florida Citrus – Insecticides, Acaricides and Nematicides

Trade Name or Generic Name	Common Name (IRAC MOA) ⁹	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³		
							TPQ (lb a.i.) ⁴ 1	TPQ (lb a.i.) ⁴ 2	RQ (lb a.i.) ⁵
Bifenthrin EC Bifenthrin 2 EC AG	Bifenthrin (3)	70506-57 66330-336	0.05	1	NO	12	--	10,000	--
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Use as a soil barrier application; do not allow application to contact fruit or foliage. Apply only to individual citrus resets, not solid planted rows. Do not apply more than 0.5 lb ai/A/yr.									
Bifenture EC	Bifenthrin (3)	70506-57	0.05	1	NO	12	--	--	--
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Use as a soil barrier application; do not allow application to contact fruit or foliage. Apply only to individual citrus resets, not solid planted rows. Do not apply more than 0.5 lb ai/A/yr.									
BioVector 355	<i>Steinernema riobravis</i> (NR)	NA	Exempt	--	--	--	--	--	--
Other Use Requirements: None									
Bracket 90	Acephate (1B)	51036-238-9779	Nonbearing	12 months	NO	24	--	10,000	--
Other Use Requirements: Do not harvest citrus for one year after treatment. Minimum 3 days spray interval for up to 0.5 lb ai/A and 7 days for rates greater than 0.5 lb ai/A.									
Brigade 2 EC	Bifenthrin (3)	279-3313	0.05	1	NO	12	--	10,000	--
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Use as a soil barrier application; do not allow application to contact fruit or foliage. Apply only to individual citrus resets, not solid planted rows. Do not apply more than 0.5 lb ai/A/yr.									
Brigade WSB	Bifenthrin (3)	00279-03108	0.05	1	NO	12	--	10,000	--
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Soil application only. Do not allow contact with fruit or foliage. Toxic to fish and aquatic organisms; highly toxic to honeybees.									
Capture 2EC	Bifenthrin (3)	279-3069	0.05	1	NO	12	--	--	--
Other Use Requirements: Use as a soil barrier application; do not allow application to contact fruit or foliage. Apply only to individual citrus resets, not solid planted rows. Do not apply more than 0.5 lb ai/A/yr.									
Carbaryl (see also Sevin)	Carbaryl (1A)	(4L) 19713-49, 34704-447 (80S) 19713-50	10	5	NO	12	10	10,000	1
Other Use Requirements: Highly toxic to aquatic invertebrates and honeybees. Do not apply more than 20 qts per acre per crop.									

Table 4. Pesticides Registered for Use on Florida Citrus – Insecticides, Acaricides and Nematicides

Trade Name or Generic Name	Common Name (IRAC MOA) ⁹	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³	
							1	2
Cheminova Acephate 75 SP	Acephate (1B)	59639-26-67760	Nonbearing	12 months	NO	24	--	10,000
Other Use Requirements: Do not harvest citrus for one year after treatment. Minimum 3 days spray interval for up to 0.5 lb ai/A and 7 days for rates greater than 0.5 lb ai/A.								
Chlorpyrifos (see also Lorsban)	Chlorpyrifos (1B)	(15G) 51036-300, 19713-505 (4E AG) 51036-291, 66222-19	1	Foliar - 21 Soil - 28	NO	5 days	100	10,000
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Toxic to fish, aquatic organisms, mammals and birds. Limit 2 applications per season.								
Clinch Ant Bait	Abamectin (6)	100-894	0.02	0	NO	12	--	--
Other Use Requirements: None								
Comite	Propargite (12C)	400-104	5	21	YES	7 days	--	10,000
Other Use Requirements: Do not mix with oil, products with petroleum-based solvents, lime or lime sulfur. Do not apply within 2 weeks of oil application. Avoid application to immature leaves and fruit. After 48 hours, workers may enter treated area if they wear proper personal protective equipment. Limit 2 applications per season. Toxic to fish.								
Couraze 1.6F	Imidacloprid (4)	264-763-67760	0.7	0	NO	12	--	--
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 32 oz per acre per season.								
Couraze 2F	Imidacloprid (4)	264-758-67760	0.7	0	NO	12	--	--
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 32 oz per acre per season.								
Cryolite 96, Prokil	Cryolite	10163-41	7	15	NO	12	--	--
Other Use Requirements: Do not mix with lime or compounds containing free lime, or calcium foliar nutrients. Minimum of 30 days between applications.								
Danitol 2.4 EC Spray	Fenprothrin (3)	59639-35	2	1	NO	24	--	10,000
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Toxic to fish, aquatic organisms and honeybees. Do not apply during bloom.								
Delegate WG	Spinetoram (5)	62719-541	0.3	1	NO	4	--	--
Other Use Requirements: Do not apply more than 12 oz of product (0.188 lb ai) per acre per season. Do not make more than 3 applications per calendar year.								

Table 4. Pesticides Registered for Use on Florida Citrus – Insecticides, Acaricides and Nematicides

Trade Name or Generic Name	Common Name (IRAC MOA) ⁹	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³	
							1	2
Dibrom 8 Emulsive	Naled (1B)	5481-479	3	7	NO	48	--	10,000
Other Use Requirements: Limit 1 pint per acre in Florida. Do not use with highly alkaline materials such as lime or Bordeaux.								
Dicofol 4E	Dicofol (UN)	66222-56	10	7	NO	12	--	10,000
Other Use Requirements: Limit 2 applications per year. Toxic to fish.								
Dimate 4 EC	Dimethoate (1B)	51036-110-9779 9779-273	2	15-45 depending on rate	NO	48	500	10,000
Other Use Requirements: Limit to 2 applications to mature fruit. Highly toxic to honeybees. ⁶ Toxic to aquatic organisms.								
Dimethoate 2.67	Dimethoate (1B)	19713-232	2	15 or 45 (depending on rate)	NO	48	500	10,000
2.67 EC		34704-489						
267		51036-198						
4 EC		5905-493						
4 EC		19713-231						
4		10163-160						
400		34704-207						
4 E		51036-110, 34704-207-67760,						
5 lb E 267		66330-223 5905-497 10163-56						
Other Use Requirements: Limit to 2 applications to mature fruit. Highly toxic to honeybees. ⁶ Toxic to aquatic organisms.								
Distance	Pyriproxyfen (7C)	59639-96	Nonbearing	12 months	NO	12	--	10,000
Other Use Requirements: Limit 2 applications per season.								
Distance Fire Ant Bait	Pyriproxyfen (7C)	1021-1728-59639	Nonbearing	12 months	NO	12	--	--
Other Use Requirements: None								
DiTera ES	<i>Myrothecium verrucaria</i>	73049-43	Exempt	0	NO	4	--	--
DiTera DF	(NR)	73049-67						
Other Use Requirements: None								

Table 4. Pesticides Registered for Use on Florida Citrus – Insecticides, Acaricides and Nematicides

Trade Name or Generic Name	Common Name (IRAC MOA) ⁹	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³	
							1	2
Ecotrol EC	Peppermint oil Rosemary oil	Exempt	Exempt	0	NO	0	--	--
Other Use Requirements: None								
Ecozin 3% EC	Azadirachtin (18)	5481-476	Exempt	0	NO	12	--	--
Other Use Requirements: None								
Endosulfan 3EC	Endosulfan (2)	19713-00399	Nonbearing	Nonbearing	No	24	10	1
Other Use Requirements: Toxic to fish, birds and other wildlife. Limit to 2 applications per season.								
Entrust	Spinosad (5)	62719-282	0.3	1	NO	4	--	--
Other Use Requirements: Limit to 2 applications per year. Limit to 9 oz of product (0.45 lb ai spinosad) per acre per season.								
Envidor 2SC	Spirodiclofen (23)	00264-00831	0.5	7	NO	12	--	--
Other Use Requirements: Limit to 1 application per year. Limit to 20 oz product per acre per season.								
Epi-mek 0.15EC	Abamectin (6)	00100-01154	0.02	7	NO	12	--	10,000
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Toxic to fish, mammals and aquatic organisms. Highly toxic to honeybees. ⁶ Limit of 3 applications of abamectin per growing season. Do not apply more than 40 fl oz/A (0.047 lb ai/A) of any abamectin product in a growing season.								
Esteem Ant Bait	Pyriproxyfen (7C)	59639-114	0.3	1	NO	12	--	--
Other Use Requirements: None								
Esteem 0.86 EC	Pyriproxyfen (7C)	59639-95	0.3	1	NO	12	--	10,000
Other Use Requirements: Limit to 2 applications per season. Limit to 26 fl oz per acre per season.								
Evergreen EC 60-6	Pyrethrins + piperonyl butoxide (27)	01021-01770	Pyrethrins (1) Piperonyl butoxide (8)	0	NO	12	10,000	1
Other Use Requirements: None								
Extinguish	Methoprene (7A)	2724-475	Exempt	0	NO	4	--	--
Other Use Requirements: None								
Fanfare 2EC	Bifenthrin (3)	66222-99	0.05	1	NO	12	--	10,000
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Soil application only. Do not allow contact with fruit or foliage. Toxic to fish and aquatic organisms. Highly toxic to honeybees.								

Table 4. Pesticides Registered for Use on Florida Citrus – Insecticides, Acaricides and Nematicides

Trade Name or Generic Name	Common Name (IRAC MOA) ⁹	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³	
							TPQ (lb a.i.) ⁴	RQ (lb a.i.) ⁵
Fyfanon (see also Malathion and Atrapa)	Malathion (1B)	(56.4%) 5905-196 (8 lb emulsion) 5905-250-ZA (ULV) 67760-34 SLN FL-40004	8	7	NO	12	--	10,000
Other Use Requirements: Highly toxic to honeybees. ⁶								
GF-120	Spinosad (5)	62719-359 62719-498	0.3	0	NO	4	--	--
GF-120 NF								
Other Use Requirements: Toxic to aquatic invertebrates. Do not apply directly to water.								
Govern 4 E	Chlorpyrifos (1B)	62719-220-55467	1	21	YES	5 days	100	10,000
Other Use Requirements: RESTRICTED PESTICIDE. ⁷								
Guthion (see also Azinphosmethyl)	Azinphosmethyl (1B)	(2 L) 3125-102, 264-721 (S P) 3125-301	2	30	NO	2-30 days	10	10,000
Other Use Requirements: RESTRICTED PESTICIDE ⁷ - 2 L formulation only; Limit to 2 appl/season; Highly toxic to honeybees. ⁶ See label for REI details.								
Imida E-AG 2 F	Imidacloprid (4)	81959-22	0.7	0	NO	12	--	--
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 32 oz/acre/year (0.5 lb ai/A/yr).								
Imidan 70-W	Phosmet (1B)	10163-169 SLN FL-10006	5	7	NO	24	10	10
Other Use Requirements: Limit 5 applications per year. Toxic to fish and aquatic organisms. Highly toxic to honeybees.								
Impulse 1.6 FL	Imidacloprid (4)	42750-109	0.7	0	NO	12	--	--
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 40 oz/acre/year (0.5 lb ai/A/yr).								
Justice Fire Ant Bait	Spinosad (5)	62719-00329	0.3	0	NO	4	--	--
Other Use Requirements: None								

Table 4. Pesticides Registered for Use on Florida Citrus – Insecticides, Acaricides and Nematicides

Trade Name or Generic Name	Common Name (IRAC MOA) ⁹	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³		
							TPQ (lb a.i.) ⁴	RQ (lb a.i.) ⁵	
Kanemite 15SC	Acequinocyl (20B)	66330-00038	0.2	7	NO	12	--	--	
Other Use Requirements: None									
Kelthane	Dicofol (UN)	707-202 62719-405	10	7	NO	12	--	10,000	
Other Use Requirements: Applicators must be in an approved enclosed cab or cockpit. Toxic to fish. Limit to 2 applications per season.									
Knack IGR	Pyriproxyfen (7C)	59639-95	0.3	1	NO	12	--	10,000	
Other Use Requirements: Limit to 2 applications per season. Limit to 26 fl oz product per acre per season.									
Kryocide	Cryolite (9)	4581-116	7	15	NO	12	--	--	
Other Use Requirements: Limit to 90 lbs per acre per season.									
Lorsban (see also Chlorpyrifos)	Chlorpyrifos (1B)	(4E) 62719-220 (50-W) 62719-221, 62719-221-10163 (15G) 62719-34 (75WG) 62719-301, 62719-301-10163	1	Foliar - 21 Soil - 28	NO (YES)	5 days	100	10,000	
Other Use Requirements: Foliar - Highly toxic to honeybees. ⁶ Limit to 2 appl/season with 30 day interval; Soil - Limit to 3 appl/season with maximum of 10 qts/acre/season. 4E Formulation is RESTRICTED PESTICIDE. ⁷									
Macho 2.0 FL	Imidacloprid (4)	42750-110	0.7	0	NO	12	--	--	
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 32 oz/acre/year (0.5 AI/acre/year).									

Table 4. Pesticides Registered for Use on Florida Citrus – Insecticides, Acaricides and Nematicides

Trade Name or Generic Name	Common Name (IRAC MOA) ⁹	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³	
							1	2
Malathion (see also Fyfanon and Atrapa)	Malathion (1B)		8	7	NO	12	--	10,000
57 EC		34704-108						
5 EC		51036-104						
8 Aquamul		34704-474						
8 E		9779-5						
8 EC		1386-124						
		34704-452						
8 Flowable		34704-119,						
8 Spray		51036-214						
		10163-21						
		2935-83						
Other Use Requirements: Highly toxic to honeybees. ⁶								
Micromite 25WS	Diflubenzuron (15)	400-471	0.5	21	NO	12	--	10,000
Micromite 4L		400-476						
		(SLN-FL-960014)						
Micromite 80WGS		400-487						
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Toxic to aquatic invertebrates.								
Mocap EC	Ethoprop (1B)	264-458	Nonbearing	12 months	YES	48	1,000	10,000
		SLN-FL-870001						
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Acute dermal toxicity.								
Montana 2F	Imidacloprid (4)	83100-7-83979	0.7	0	NO	12	--	--
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 32 oz/acre/year (0.5 lb ai/A/yr).								
Movento	Spirotetramat (23)	264-1050	0.6	1	NO	24	--	--
Other Use Requirements: Do not apply more than 20 fl oz/A (0.32 lb ai/A) per crop season. Do not apply within 10 days prior to bloom, during bloom, or until petal fall is complete.								
M-Pede	Potassium salts of fatty acids	53219-6 15G62119-34 62719-515	Exempt	0	NO	12	--	--
Other Use Requirements: Do not mix with chlorothalonil, Formetanate hydrochloride, Fosetyl-Al, gibberellic acid, Mancozeb, or sulfur.								

Table 4. Pesticides Registered for Use on Florida Citrus – Insecticides, Acaricides and Nematicides

Trade Name or Generic Name	Common Name (IRAC MOA) ⁹	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³		
							TPQ (lb a.i.) ⁴ 1	TPQ (lb a.i.) ⁴ 2	RQ (lb a.i.) ⁵
Mustang Insecticide	Zeta-cypermethrin (3)	279-3126	0.35	1	NO	12	--	10,000	--
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Do not make more than 4 applications (0.20 lb ai) per crop season. Do not make applications less than 14 days apart. Highly toxic to bees, do not apply during bloom.									
Mustang Max EW	Zeta-cypermethrin (3)	279-3328	0.35	1	NO	12	--	10,000	--
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Do not make more than 4 applications (0.10 lb ai) per crop season. Do not make applications less than 14 days apart. Highly toxic to bees, do not apply during bloom.									
Neemix 4.5	Azadirachtin (18)	70051-9	Exempt	0	NO	12	--	--	--
Other Use Requirements: None									
Nemacur 3	Fenamiphos (1B)	264-731	0.6	30	YES	48	10	10,000	10
Other Use Requirements: RESTRICTED PESTICIDE ⁷ - liquid formulation only. Limited to 2 appl/season with 14-day interval. Do not apply during the period 5/01-10/14. See label for geographic restrictions in Florida. Important Note: Due to groundwater advisories, Nematicur use will not be permitted in sandy, well-drained soils in any county in Florida after 31 May 2005.									
Nexter Miticide/Insecticide	Pyridaben (21)	81880-4-10163	0.5	7	NO	12	--	--	--
Other Use Requirements: Highly toxic to honeybees ⁶ and fish. Do not exceed 2 appl/season. Do not apply by air or handgun.									
Nufos 15G	Chlorpyrifos (1B)	67760-14	1	28	YES	24	--	--	1
Other Use Requirements: Limit 3 applications per year.									
Nufos 4E	Chlorpyrifos (1B)	67760-28	1	21	YES	5 days	1,000	10,000	1
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Limit 2 applications per season.									
Nuprid 1.6F	Imidacloprid (4)	228-488	0.7	0	NO	12	--	--	--
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 32 oz per acre per season (0.5 lb ai/A/yr).									
Nuprid 2F	Imidacloprid (4)	228-484	0.7	0	NO	12	--	--	--
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 32 oz per acre per season (0.5 lb ai/A/yr).									

Table 4. Pesticides Registered for Use on Florida Citrus – Insecticides, Acaricides and Nematicides

Trade Name or Generic Name	Common Name (IRAC MOA) ⁹	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³		
							1	2	
Nuprid 4.6F Pro	Imidacloprid (4)	228-527	0.7	0	NO	12	--	--	
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 14 fl oz per acre per season (0.5 lb ai/A/yr).									
Omite-30WS Omite-CR	Propargite (12C)	400-427 400-426	Nonbearing	12 months	YES	28 days	--	10,000	
Other Use Requirements: After 48 hours, workers may enter treated area if they wear proper personal protective equipment. Limit 2 applications per season.									
OR-Cal Slug & Snail Bait	Metalddehyde	71096-7	--	0	NO	12	--	--	
Other Use Requirements: None									
Orthene	Acephate (1B)	(75 S) 59639-26 (97) 59639-91	Nonbearing	12 months	NO	24	10	10,000	
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to fish and birds. Do not harvest citrus for one year after treatment. Minimum 3 days spray interval for up to 0.5 lb ai/A and 7 days for rates greater than 0.5 lb ai/A.									
Pasada 1.6F	Imidacloprid (4)	00264-00763-66222	0.7	0	NO	12	--	--	
Other Use Requirements: Highly toxic to honeybees. ⁶ Highly toxic to aquatic invertebrates. Limit to 32 oz per acre per season (0.5 lb ai/A/yr).									
Phaser 3EC	Endosulfan (2)	264-638	Nonbearing	12 months	NO	24	10	10,000	
Other Use Requirements: Toxic to fish, birds and other wildlife.									
Portal	Fenpyroximate (21)	71711-19	--	14	NO	12	--	--	
Other Use Requirements: Do not apply more than 4 pts per season.									
Prey 1.6	Imidacloprid (4)	34704-894	0.7	0	NO	12	--	--	
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 40 oz/acre/year (0.5 lb ai/A/yr).									
Prokil Cryolite 96	Sodium aluminoflouride (9)	10163-41	7	15	NO	12	--	--	
Other Use Requirements: Do not apply more than 90 lbs per acre per year.									
Prokoz Sevin SL	Carbaryl (1A)	432-1227-72112	10	5	NO	12	10,000	100	
Other Use Requirements: None									

Table 4. Pesticides Registered for Use on Florida Citrus – Insecticides, Acaricides and Nematicides

Trade Name or Generic Name	Common Name (IRAC MOA) ⁹	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³		
							1	2	
Provado 1.6 F	Imidacloprid (4)	264-763	0.7	0	NO	12	--	--	
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 40 oz/acre/season (0.5 lb ai/A/yr).									
Pyganic EC 1.4 II	Pyrethrins (3)	1021-1771	1	0	NO	12	--	--	
Pyganic EC 5.0 II		1021-1772						1	
Other Use Requirements: None									
Pyrellin E.C.	Pyrethrins (3) Rotenone (21)	30573-2	1	5	NO	12	--	--	
Other Use Requirements: None									
Reaper 0.15EC	Abamectin (6)	34704-923	0.02	7	NO	12	--	10,000	
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Toxic to fish, mammals and aquatic organisms. Highly toxic to honeybees. ⁶ Limit of 3 applications of abamectin per growing season. Do not apply more than 40 fl oz/A (0.047 lb ai/A) of any abamectin product in a growing season.									
Savey 50 DF	Hexythiazox (10)	10163-250	Nonbearing	12 months	NO	12	--	--	
Other Use Requirements: Limit 1 application per year. Toxic to fish and aquatic invertebrates.									
Sevin (see also Carbaryl)	Carbaryl (1A)	(80 S) 264-316 (4 F) 264-349 (XLR) 264-333 (SL) 432-1227 (80WSP) 264-526 (80 WSP) 432-1226	10	5	NO	12	--	10,000	
Other Use Requirements: Do not apply more than 20 lb a.i./acre/year for all uses. Highly toxic to honeybees. Toxic to aquatic invertebrates.									
Shiper	Bifenthrin (3)	34704-858	0.05	1	NO	12	--	10,000	
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Use as a soil barrier application; do not allow application to contact fruit or foliage. Apply only to individual citrus resets, not solid planted rows. Do not apply more than 0.5 lb ai/A/yr.									
Spintor 2 SC	Spinosad (5)	62719-294	0.3	1	NO	4	--	--	
Other Use Requirements: Do not apply more than 29 ounces (0.45 lb) per acre per crop year. Limit 2 applications per season.									

Table 4. Pesticides Registered for Use on Florida Citrus – Insecticides, Acaricides and Nematicides

Trade Name or Generic Name	Common Name (IRAC MOA) ⁹	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³	
							1	2
Sulfur	Sulfur (NR)	See Table 2	Exempt	0	NO	24	--	--
Other Use Requirements: Do not apply within 21 days of an oil spray.								
Supracide	Methidathion (1B)	10163-236 (2E) 10163-244 (25-W)	Mandarin - 6 Others - 2	14 or 60 See label	NO	48	500	10,000
Other Use Requirements: RESTRICTED PESTICIDE ⁷ ; Highly toxic to honeybees ⁶ ; Only 2 appl/season at least 45 days apart; One appl/season to lemons if mixed with oil.								
Surround WP	Kaolin (NR)	70060-00014	Exempt	0	NO	4	--	--
Other Use Requirements: None								
Temik Brand 15G	Aldicarb (1A)	(15G) 264-330	0.3	Lemon - 30 Others - 0	YES	48	100	10,000
Other Use Requirements: RESTRICTED PESTICIDE ⁷ ; Notification of intent to apply is required. Apply between Nov. 15 and April 30. SL ⁸ for BMP based on soil type.								
Temprano	Abamectin (6)	67760-71-400	0.02	7	NO	12	--	10,000
Other Use Requirements: RESTRICTED PESTICIDE ⁷ . Toxic to fish, mammals and aquatic organisms. Highly toxic to honeybees. ⁶ Limit of 3 applications of abamectin per growing season. Do not apply more than 40 fl oz/A (0.047 lb ai/A) of any abamectin product in a growing season.								
Thionex 3EC	Endosulfan (2)	66222-63	Nonbearing	12 months	NO	24	10	10,000
Thionex 50W		66222-62					10	10,000
Thionex 50 WSB		66222-61					--	10
Other Use Requirements: Limit to 2 applications per season. Limit to 3 lbs ai per acre per season.								
Torrent 1.6F	Imidacloprid (4)	60063-32	0.7	0	NO	12	--	--
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 40 fl oz/acre/season (0.5 lb ai/A/yr).								
Torrent 2 F	Imidacloprid (4)	60063-31	0.7	0	NO	12	--	--
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 32 oz/acre/year (0.5 lb ai/A/yr).								
Vendex 50WP	Fenbutatin oxide (12B)	352-658	20	7	NO	48	--	10,000
Other Use Requirements: RESTRICTED PESTICIDE ⁷ ; Toxic to fish; Limited to 2 appl/12-month period with at least a 60-day interval.								

Table 4. Pesticides Registered for Use on Florida Citrus – Insecticides, Acaricides and Nematicides

Trade Name or Generic Name	Common Name (IRAC MOA) ⁹	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³	
							1	2
Vydate L	Oxamyl (1A)	352-372	3	7	NO	48	100	10,000
Other Use Requirements: SL ⁸ ; RESTRICTED PESTICIDE. ⁷ Toxic to birds and mammals. Limit to 6 applications per year.								
Warhawk	Chlorpyrifos (1B)	62719-220-34704	1	21	YES	5 days	--	10,000
Other Use Requirements: RESTRICTED PESTICIDE. ⁷								
Whirlwind	Chlorpyrifos (1B)	62719-220-5905	1	21	YES	5 days	--	10,000
Other Use Requirements: RESTRICTED PESTICIDE. ⁷								
Widow	Imidacloprid (4)	34704-893	0.7	0	NO	12	--	--
Other Use Requirements: Highly toxic to honeybees. ⁶ Toxic to aquatic invertebrates. Limit to 32 fl oz/acre/season (0.5 lb ai/A/yr).								
Zoro Miticide/Insecticide	Abamectin (6)	67760-71	0.02	7	NO	12	--	10,000
Other Use Requirements: RESTRICTED PESTICIDE. ⁷ Toxic to fish, mammals and aquatic organisms. Highly toxic to honeybees. ⁶ Limit of 3 applications of abamectin per growing season. Do not apply more than 40 fl oz/A (0.047 lb ai/A) of any abamectin product in a growing season.								
¹ Extracted from product labels, Code of Federal Regulations and other federal and state regulations.								
² Read product label for specific use precautions, especially Worker Protection Standards and environmental concerns.								
³ Emergency Planning and Community Right-To-Know Act. Information presented here is not intended to take the place of the actual regulation. Call the State Emergency Response Commission 1-800-635-7179 for additional details.								
⁴ Threshold Planning Quantity. If the grower meets or exceeds this amount, notification must be made. Placard vehicle not a facility. (1 = active ingredient is a gas, is molten, in solution or is a fine powder; 2 = is a granular or other larger particle form)								
⁵ The amount of active ingredient that when spilled or released requires reporting to authorities within 15 minutes. Should be reported by telephone to 850-413-9919 or 800-320-0519.								
⁶ Will kill bees for 24 hours following application.								
⁷ A certification license is required to purchase and apply or must be under the supervision of a licensee and only for those uses covered by the certified applicator's certification.								
⁸ SL = See Label for use restrictions.								
⁹ Mode of action class for citrus pesticides from the Insecticide, Fungicide, and Herbicide Resistance Action Committees. Refer to ENY624, <i>Pesticide Resistance and Resistance Management</i> , in the 2009 Florida Citrus Pest Management Guide for more details.								

Table 5. Pesticides Registered for Use on Florida Citrus – Fungicides

Trade Name or Generic Name	Common Name (FRAC MOA) ¹⁰	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³		
							TPQ (lb a.i.) ⁴ 1	TPQ (lb a.i.) ⁴ 2	RQ (lb a.i.) ⁵
Abound	Azoxystrobin (11)	100-1098	20 (dried pulp) 40 (oil)	0	NO	4	--	--	--
Other Use Requirements: Do not apply more than 92.3 fl oz/acre/season for all uses.									
Agri-Fos	Mono- and di-potassium salts of phosphorous acid (33)	71962-1	Exempt	0	NO	4	--	--	--
Other Use Requirements: None									
Alliette WDG	Fosetyl AL (33)	264-516	5	0.5	NO	12	--	--	--
Other Use Requirements: Do not exceed 4 appl/season or 20 lb/acre/year.									
Armcarb 100	Potassium bicarbonate (NC)	5905-541	Exempt	0	NO	4	--	--	--
Other Use Requirements: None									
Banner MAXX	Propiconazole (3)	100-741	Nonbearing	NA	NO	24	--	--	--
Other Use Requirements: Nonbearing only.									
Bumper 41.8EC	Propiconazole (3)	66222-42	Nonbearing	NA	NO	24	--	--	--
Other Use Requirements: Nonbearing only.									
Copper fungicides	Various (M1)	See Table 1	Exempt	0	NO	SL ⁶	--	--	--
Other Use Requirements: None									
Enable 2 F	Fenbuconazole (3)	62719-416	5.0 (dried pulp) 40 (oil)	1	NO	12	--	--	--
Other Use Requirements: No more than 3 applications/year; no more than 0.375 lb a.i./acre/year; Minimum retreatment interval is 21 days.									
Ferbam Granuflor	Ferbam (M3)	45728-7	4.0	1	NO	24	--	--	--
Other Use Requirements: None									

Table 5. Pesticides Registered for Use on Florida Citrus – Fungicides

Trade Name or Generic Name	Common Name (FRAC MOA) ¹⁰	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³	
							1	2
Fosphite Fungicide	Phosphorous acid, mono- and dipotassium salts (33)	68573-2	Exempt	0	NO	4	--	--
Other Use Requirements: Minimum retreatment interval is 3 days.								
Fresh Mark	Sodium o-phenylphenate	64884-45	10	PH ⁸	NA	NA	--	--
Other Use Requirements: None								
Freshgard 700	Imazalil (3)	43813-6-8764	25.0 (dried pulp) 200.0 (oil)	PH ⁸	NA	NA	--	--
Other Use Requirements: None								
Fungi-Phite	Potassium phosphite (33)	83472-1	Exempt	0	NO	4	--	--
Other Use Requirements: None								
Gem 500 SC	Trifloxystrobin (11)	264-826	1.0 (dried pulp) 38 (oil)	7	NO	12	--	--
Other Use Requirements: Do not apply more than 15.2 fl oz/acre/season for all uses. No more than 4 applications of Gem 500 SC or other Group II fungicides/season.								
Gem Fungicide	Trifloxystrobin (11)	264-781	1.0 (dried pulp) 38 (oil)	7	NO	12	--	--
Other Use Requirements: Do not apply more than 32 oz/acre/season of Gem. No more than 4 applications of Gem or other Group II fungicides/season.								
Graduate	Fludioxonil (12)	100-969	500 (oil)	PH	NA	NA	--	--
Other Use Requirements: None								
Headline	Pyraclostrobin (11)	7969-186	12.5 (dried pulp) 9.0 (oil)	0	NA	12	--	100 gal
Other Use Requirements: Do not apply more than 54 fl oz/acre/season. No more than 4 applications of Headline or other Group II fungicides/season.								
Helena ProPhyt	Potassium phosphite (33)	42519-22-5905	Exempt	0	NO	4	--	--
Other Use Requirements: None								

Table 5. Pesticides Registered for Use on Florida Citrus – Fungicides

Trade Name or Generic Name	Common Name (FRAC MOA) ¹⁰	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³		
							TPQ (lb a.i.) ⁴		
							1	2	RQ (lb a.i.) ⁵
KeyPlex 350	Yeast extract hydrolysate from <i>Saccharomyces cerevisiae</i>	73512-1	Exempt	NA	NO	4	--	--	--
Other Use Requirements: None									
Legion 80 WDG	Fosetyl-AI (33)	66222-161	5.0	30	NO	12	--	--	--
Other Use Requirements: For all application methods, do not exceed 4 applications or 20 lb/acre/year.									
Linebacker WDG	Fosetyl AL (33)	61892-9	5.0	30	NO	12	--	--	--
Other Use Requirements: Do not exceed 4 applications or 20 lb/acre/year; Do not exceed 500 GPA for foliar applications.									
ManKocide	Mancozeb (M3) + copper hydroxide (M1)	352-690	Nonbearing	12 months	NA ⁷	24	--	--	--
Other Use Requirements: Nonbearing only.									
Mertect 340-F	Thiabendazole (1)	100-889	15 (oil)	PH ⁸	NA	NA	--	--	--
Other Use Requirements: None									
Messenger	Harpin protein	69834-2	Exempt	0	NO	4	5,000	--	--
Other Use Requirements: None									
MilStop	Potassium bicarbonate (NC)	70870-1-68539	Exempt	0	NO	1	--	--	--
Other Use Requirements: None									
Orbit	Propiconazole (3)	100-702	Nonbearing	12 months	NO	24	--	--	>1,000 gal
Other Use Requirements: Nonbearing only. Do not apply more than 24 fl oz (0.67 lb a.i.) Orbit/acre/season.									
Oxidate	Hydrogen dioxide	70299-2	Exempt	0	NO	1	--	--	100
Other Use Requirements: None									

Table 5. Pesticides Registered for Use on Florida Citrus – Fungicides

Trade Name or Generic Name	Common Name (FRAC MOA) ¹⁰	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³		
							TPQ (lb a.i.) ⁴	1 2 RQ (lb a.i.) ⁵	
Phostrol	Phosphites sodium, potassium and ammonium salts (33)	55146-83	Exempt	0	NO	4	--	--	
Other Use Requirements: None									
Plant Shield HC	Strain KRL-AG2 of <i>Trichoderma harzianum</i>	68539-4	Exempt	12 months	NO	0	--	--	
Other Use Requirements: None									
Procon-Z	Propiconazole (3)	34704-879	Nonbearing	12 months	NO	24	--	10,000	
Other Use Requirements: Do not apply more than 0.67 lb propiconazole/acre/season.									
Prokoz Fathom 14.3 MEC	Propiconazole (3)	72112-3	Nonbearing	12 months	NO	24	--	10,000	
Other Use Requirements: Do not apply more than 0.67 lb propiconazole/acre/season.									
Propensity 1.3 ME	Propiconazole (3)	60063-27	Nonbearing	12 months	NO	24	--	10,000	
Other Use Requirements: Do not apply more than 0.67 lb propiconazole/acre/season.									
PropiMax EC	Propiconazole (3)	62719-346	Nonbearing	12 months	NO	24	--	10,000	
Other Use Requirements: Do not apply more than 24 fl oz (0.67 lb a.i.) PropiMax EC/acre/season.									
Quilt Fungicide	Azoxystrobin (11) Propiconazole (3)	100-1178	Nonbearing	12 months	NO	12	--	--	
Other Use Requirements: Do not apply more than 0.67 lb a.i. propiconazole/acre/year; Do not apply more than 1.5 lb a.i. azoxystrobin/acre/season.									
Ridomil Gold GR	Mefenoxam (4)	100-798	0	0	NO	48	--	>14,000	
Other Use Requirements: Do not exceed the equivalent 6 lb a.i./acre of mefenoxam-containing products.									
Ridomil Gold SL	Mefenoxam (4)	100-1202	0	0	NO	48	--	>3,500 gal	
Other Use Requirements: Do not exceed the equivalent 6 lb a.i./acre of mefenoxam-containing products.									

Table 5. Pesticides Registered for Use on Florida Citrus – Fungicides

Trade Name or Generic Name	Common Name (FRAC MOA) ¹⁰	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³		
							TPQ (lb a.i.) ⁴		
							1	2	RQ (lb a.i.) ⁵
Root Shield Granules	Strain KRL-AG2 of <i>Trichoderma harzianum</i>	68539-4	Exempt	12 months	NO	0	--	--	--
Other Use Requirements: Nonbearing.									
Serenade ASO	QST 713 strain of <i>Bacillus subtilis</i>	69592-12	Exempt	0	NO	4	--	--	--
Other Use Requirements: None									
Serenade MAX	QST 713 strain of <i>Bacillus subtilis</i>	69592-11	Exempt	0	NO	4	--	--	--
Other Use Requirements: None									
Soilgard 12 G	Strain GI-21 of <i>Gliocladium virens</i>	70051-3	Exempt	12 months	NO	0	--	--	--
Other Use Requirements: Nonbearing.									
Sporan EC	Clove Oil; Rosemary Oil; Thyme Oil	Exempt	Exempt	0	NO	0	--	--	--
Other Use Requirements: None									
Subdue GR	Mefenoxam (4)	100-794	Nonbearing	0	NO	48	--	--	--
Other Use Requirements: Do not exceed the equivalent 6 lb a.i./acre of mefenoxam-containing products.									
Subdue Maxx	Mefenoxam (4)	100-796	Nonbearing	0	NO	48	--	--	--
Other Use Requirements: Do not exceed the equivalent 6 lb a.i./acre of mefenoxam-containing products.									
Tilt	Propiconazole (3)	100-617	Nonbearing	12 months	NO	12	--	--	>1,000 gal
Other Use Requirements: Do not apply more than 0.67 lb a.i. (24 fl oz/acre/season) of Tilt.									
Topaz	Potassium phosphite (33)	68573-2-1381	Exempt	0	NO	4	--	--	--
Other Use Requirements: None									

Table 5. Pesticides Registered for Use on Florida Citrus – Fungicides

Trade Name or Generic Name	Common Name (FRAC MOA) ¹⁰	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³	
							1	2
Topsin M WSB ⁹	Thiophanate methyl (1)	73545-16, 73545-16-70506 or 73545-16-82695	0.5	2	--	48	--	--
Other Use Requirements: Section 18 Emergency Registration for postbloom fruit drop effective until March 19, 2009. Do not apply more than 4 lb per acre per season.								
Trilogy	Neem oil extract (IRAC 18)	70051-2	Exempt	0	NO	4	--	--
Other Use Requirements: Do not apply while bees are actively foraging. Do not apply within 5 days of a sulfur application.								
UltraFlourish	Mefenoxam (4)	55146-73	0	0	NO	48	--	100 lbs
Other Use Requirements: Do not exceed the equivalent 6 lb a.i./acre of mefenoxam-containing products.								
¹ Extracted from product labels, Code of Federal Regulations and other federal and state regulations.								
² Read product label for specific use precautions, especially Worker Protection Standards and environmental concerns.								
³ Emergency Planning and Community Right-To-Know Act. Information presented here is not intended to take the place of the actual regulation. Call the State Emergency Response Commission 1-800-635-7179 for additional details.								
⁴ Threshold Planning Quantity. If the grower meets or exceeds this amount, notification must be made. Placard vehicle not a facility. (1 = active ingredient is a gas, is molten, in solution or is a fine powder; 2 = is a granular or other larger particle form)								
⁵ The amount of active ingredient that when spilled or released requires reporting to authorities with a 15 minute time frame. Should be reported by telephone to 850-413-9919 or 800-320-0519.								
⁶ SL = See Label for use restrictions.								
⁷ NA = not available.								
⁸ Post Harvest use only.								
⁹ Sec. 18 emergency registration only effective until March 19, 2009.								
¹⁰ Mode of action class for citrus pesticides from the Insecticide, Fungicide, and Herbicide Resistance Action Committees. Refer to ENY624, Pesticide Resistance and Resistance Management, in the 2009 Florida Citrus Pest Management Guide for more details.								

Table 6. Pesticides Registered for Use on Florida Citrus – Herbicides

Trade Name or Generic Name	Common Name (HRAC MOA) ⁸	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³	
							1	2
Aim	Carfentrazone-ethyl (E)	279-3241	0.1	3	NO	12	--	--
Other Use Requirements: None								
Bromacil	Bromacil	70506-83	0.1	0	NO	12	--	--
Bromo	Bromacil (C1)	352-287						
Hyvar X								
Other Use Requirements: See Best Management Practice guidelines.								
Bromacil + Diuron	Bromacil + Diuron		0.1, 1	0	NO	12	--	--
Bromo-D	(C1, C2)	70506-84						
Krovar I DF		352-505						
Other Use Requirements: See Best Management Practice guidelines.								
Devrinol 50 DF	Napropamide (K3)	10182-258-70506	0.1	0	NO	12	--	--
Other Use Requirements: None								
Diuron	Diuron (C2)		NA ⁷	0	NO	12	100	--
Direx 4L		1812-257						
Direx 80DF		1812-362						
Diuron 4L		19713-36						
Diuron 80		19713-274						
Karmex DF		1812-362						
Other Use Requirements: None								
Fusilade	Fluazifop-P-butyl (A)	100-1070	Nonbearing	12 months	NO	12	--	--
Other Use Requirements: None								

Table 6. Pesticides Registered for Use on Florida Citrus – Herbicides

Trade Name or Generic Name	Common Name (HRAC MOA) ⁸	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³		
							TPQ (lb a.i.) ⁴	RQ (lb a.i.) ⁵	
Glyphosate	Glyphosate (G)		0.5	1	NO	4 to 12*	--	--	
Credit Extra		71368-20							
Durango		62719-517							
Glyfos		4787-31							
Glyfos X-TRA		4787-23							
Glyphomax		62719-323							
Glyphomax Plus		62719-322							
Glyphosate Original		352-607-1812							
Glyphosate 41%		74530-4							
Helosate Plus		74530-4							
Mirage		524-445-34704							
Roundup Original		524-445							
Roundup Original MAX		524-539							
Roundup Ultra MAX		524-512							
Roundup Weather MAX		524-537							
Touchdown HiTech		100-1182							
Other Use Requirements: None *See labels for REI details.									
Goal	Oxyfluorfen (E)	(2.0 E) 62719-424	Nonbearing	12 months	NO	24	--	--	
Other Use Requirements: None									
Landmaster	Glyphosate + 2,4-D (G, O)	SLN FL 200004 524-351	5	7	NO	48	--	--	
Other Use Requirements: See Florida State Statute SE-2.033 and supplemental labeling.									
Mandate 2E	Thiazopyr (K1)	62719-431	Grapefruit - 0.05 Oranges - 0.05	0	NO	12	--	--	
Other Use Requirements: None									

Table 6. Pesticides Registered for Use on Florida Citrus – Herbicides

Trade Name or Generic Name	Common Name (HRAC MOA) ⁸	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³	
							TPQ (lb a.i.) ⁴	RQ (lb a.i.) ⁵
Paraquat dichloride Boa	Paraquat dichloride (D)	1812-420	0.05N	0	NO	24	10	10,000
Gramoxone Gramoxone Inteon		10182-372 100-1217						
Other Use Requirements: RESTRICTED PESTICIDE.⁶								
Pendimethalin Pendimax 3.3 Prowl 3.3 EC Prowl H2O	Pendimethalin (K1)	68156-6-62719 241-337 241-418	Nonbearing	1 day 12 months 1 day	NO	24	--	--
Other Use Requirements: None								
Poast Plus	Sethoxydim (A)	7969-88-51036 7969-88	0.5	15	NO	12	--	--
Other Use Requirements: None								
Prism	Clethodim (A)	59639-78	Nonbearing	12 months	NA ⁷	24	--	--
Other Use Requirements: None								
Remedy Ultra	Triclopyr (O)	62719-552	NA	NA	NO	Until dry	--	--
Other Use Requirements: None								
Simazine Princep Caliber 90 Princep 4L Simazine 4L Simazine 90DF Sim-Trol 4L Sim-Trol 90DF	Simazine (C1)	100-603 100-526 19713-60 19713-252 35915-11-60063 35915-12-60063	Grapefruit - 0.25 Oranges - 0.25	NA ⁷	NO	12	--	--
Other Use Requirements: None								
Sollicam	Norflurazon (F1)	100-849	0.2	30	NO	12	--	--
Other Use Requirements: None								

Table 6. Pesticides Registered for Use on Florida Citrus – Herbicides

Trade Name or Generic Name	Common Name (HRAC MOA) ⁸	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	EPCRA ³		
							1	2	
Surflan	Oryzalin (K1)	(AS) 62719-112 72167-17-73220	0.05	--	NO	24	--	--	
Other Use Requirements: None									
Treflan HFP	Trifluralin (K1)	62719-250 62719-131	0.05	--	NO	12	10	10,000	
Treflan TR-10		51036-106-37686							
Trifluralin		1812-355							
Trilin									
Other Use Requirements: None									

¹Extracted from product labels, Code of Federal Regulations and other federal and state regulations.

²Read product label for specific use precautions, especially Worker Protection Standards and environmental concerns.

³Emergency Planning and Community Right-To-Know Act. Information presented here is not intended to take the place of the actual regulation. Call the State Emergency Response Commission 1-800-635-7179 for additional details.

⁴Threshold Planning Quantity. If the grower meets or exceeds this amount, notification must be made. Placard vehicle not a facility. (1 = active ingredient is a gas, is molten, in solution or is a fine powder; 2 = is a granular or other larger particle form)

⁵The amount of active ingredient that when spilled or released requires reporting to authorities with a 15 minute time frame. Should be reported by telephone to 850-413-9919 or 800-320-0519.

⁶A certification license is required to purchase and apply or must be under the supervision of a licensee and only for those uses covered by the certified applicator's certification.

⁷NA = not available.

⁸Mode of action class for citrus pesticides from the Insecticide, Fungicide, and Herbicide Resistance Action Committees. Refer to ENY624, Pesticide Resistance and Resistance Management, in the 2006 Florida Citrus Pest Management Guide for more details.

Table 7. Pesticides Registered for Use on Florida Citrus – Other Products

Trade Name or Generic Name	Common Name	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	TPQ (lb a.i.) ⁴		EPCRA ³
							1	2	
Citrus Fix	2,4-Dichloro- phenoxyacetic acid	5481-145	5	7	NO	48	--	--	--
Other Use Requirements: RESTRICTED PESTICIDE. ⁶									
Ethylene	Ethylene		Exempt	PH ⁹	NA	NA	--	--	--
Other Use Requirements: None									
Fruit Fix	Naphthalene-acetic acid	5481-130	0.1	150	NO	24	--	--	--
Other Use Requirements: None									
Gib Gro	Gibberellic acid	(2 LS) 55146-47 (20WP) 55146-53 (5WP) 55146-56	Exempt	--	NO	4	--	--	--
Other Use Requirements: None									
Hivol™-44 Hivol®-44	2,4-Dichloro- phenoxyacetic acid	5481-509 64864-31	5	7	NO	48	--	--	--
Other Use Requirements: RESTRICTED PESTICIDE. ⁶									
InLine Soil Fumigant	Trans 1,3-dichloropropene + chloropicrin	62719-348	Replant	NA ⁸	YES	5 days	0	10,000	0
Other Use Requirements: SL. ⁷ See label for geographic restrictions in Florida.									
Methyl bromide	Methyl bromide	SL ⁷ Numerous products	Replant	--	YES	48	2,500	--	1,000
Other Use Requirements: SL. ⁷ Use of methyl bromide for agricultural soil fumigation is scheduled for complete phase-out January 1, 2005. Continued use on a limited basis in citrus may occur after January 1, 2005 via an annual approval of specific Florida requests for Critical Use Exemptions (CUE).									
Petroleum Oil	FC-412-66 FC-435-66 FC-455-88 470 oil	See Table 3	Exempt	0	NO	4	--	--	--
Other Use Requirements: See Sulfur.									

Table 7. Pesticides Registered for Use on Florida Citrus – Other Products

Trade Name or Generic Name	Common Name	EPA Registration Number ¹	Tolerance Fruit (ppm)	Days to Harvest	Field Posting Required ²	REI Hr	TPQ (lb a.i.) ⁴		EPCRA ³
							1	2	
ProGibb	Gibberellic acid	(4%) 73049-15 (2X) 73049-16	0.15	NS ³	NO	4	--	--	--
Other Use Requirements: None									
Telone	Trans 1,3-dichloropropene (II, EC) or plus chloropicrin (C17, C35)	(II) 62719-32 (EC) 62719-32 (C17) 62719-12 (C35) 62719-302	Replant	NA ⁸	YES	5 days	0	10,000	100
Other Use Requirements: SL ⁷ See label for geographic restrictions in Florida.									
Tre-Hold	Ethyl 1-naphthalene acetate	5481-434	Nonbearing	12 months	NO	SL ⁷	--	--	--
Other Use Requirements: None									
Vapam HL	Metam-sodium (SMCD)	5481-468	Replant	NA ⁸	YES	48	0	10,000	0
Other Use Requirements: SL ⁷									

¹Extracted from product labels, Code of Federal Regulations and other federal and state regulations.

²Read product label for specific use precautions, especially Worker Protection Standards and environmental concerns.

³Emergency Planning and Community Right-To-Know Act. Information presented here is not intended to take the place of the actual regulation. Call the State Emergency Response Commission 1-800-635-7179 for additional details.

⁴Threshold Planning Quantity. If the grower meets or exceeds this amount, notification must be made. Placard vehicle not a facility. (1 = active ingredient is a gas, is molten, in solution of or is a fine powder; 2 = is a granular or other larger particle form)

⁵The amount of active ingredient that when spilled or released requires reporting to authorities with a 15 minute time frame. Should be reported by telephone to 850-413-9919 or 800-320-0519.

⁶A certification license is required to purchase and apply or must be under the supervision of a licensee and only for those uses covered by the certified applicator's certification.

⁷SL = See Label for use restrictions.

⁸NA = Not available.

⁹Post Harvest use only.