



Pesticides Registered for Tropical Fruit Crops in Florida¹

Jonathan H. Crane and Mark A. Mossler²

Introduction

Please note, this list may not cite all chemical and common names of pesticides legally registered at the present time. This list does not constitute endorsement of any pesticide chemical named; these pesticides may be available under other names locally. Some pesticides require a license in order to buy and/or apply. Always follow the pesticide label instructions. Please note the superscript adjacent to some brand names. Some pesticides are for 1) non-bearing trees only; 2) non-bearing trees in the nursery only and; 3) for use on dormant trees only. Please contact your local Agriculture or Horticulture Extension Agent if you have any questions.

List of tables.

Table 1. Atemoya and sugar apple.

Table 2. Avocado.

Table 3. Banana and plantain.

Table 4. Barbados cherry.

Table 5. Black sapote.

Table 6. Carambola.

Table 7. Coconut.

Table 8. Guava.

Table 9. Jackfruit.

Table 10. 'Tahiti' lime, Key lime, kumquat, and pummelo.

Table 11. Lychee and longan.

Table 12. Mamey sapote.

Table 13. Mango.

Table 14. Papaya.

Table 15. Passion fruit.

Table 16. Sapodilla.

Table 17. Wax jambu.

Table 18. White sapote.

1. This document is Fact Sheet HS177, one of a series of the Horticultural Sciences Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. New publication, May 2003. Please visit the FAIRS Web site at <http://edis.ifas.ufl.edu>.

2. J.H. Crane, professor and tropical fruit crops extension specialist, Tropical Research and Education Center, Homestead, FL; M.A. Mossler, assistant in, pest management information, Food Science and Human Nutrition Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, 32611.

Pesticides Registered for Tropical Fruit Crops in Florida

2

Table 1. Pesticides registered for atemoya and sugar apple in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticide</i>	pyrethrin + rotenone	Pyrellin (atemoya only)	aphids, lepidoptera, thrips
	potassium salts of fatty acids	Safer Soap	aphids, lace bug, plant bugs, mites, thrips, scales
	various refined horticultural oils	Sunspray, citrus spray oil, crop oil, FC 435-66, FC 455-88, others	aphids, mites, scales
	azadirachtin	Align, Azatin	general insecticide
	spinosad	Spintor	lepidoptera
	methidathion	Supracide	scales
	pyrethrins	Pyronyl (atemoya only)	aphids, thrips
	<i>Beauveria bassiana</i>	Mycotrol	leaf hoppers, thrips, others
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera
	fenoxycarb	Precision ¹	ants
	pymetrozine	Endeavor ²	whiteflies, aphids,
	kaolin (clay)	Surround	barrier and irritant to various insects
	S-methoprene	Extinguish	ants
	hydramethylnon	Amdro ¹	ants
	pyriproxifen	Knack, Distance ²	scales, thrips, ants
	bifenazate	Floramite ¹	mites
	fenpropathrin	Tame ²	various insects, mites
	hexythiazox	Savey ²	various insects, mites
	bifenthrin	Talstar ¹	various insects, mites
<i>Fungicide</i>	azoxystrobin	Abound	anthracnose, rust, <i>Cercospora</i> leaf spot, powdery mildew
	copper	Kocide, others	anthracnose, various other diseases
	mefenoxam	Subdue Maxx ²	Pythium root rot
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectant
<i>Herbicide</i>	glyphosate (systemic)	Roundup, Glyphosate	numerous weeds
	oxyfluorfen	Goal (sugar apple only)	broadleaf weeds
	pelargonic acid	Scythe	broad leaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	Deer, rabbit, mouse repellent

¹ For use with non-bearing trees only.
² For nursery/nonbearing trees only.
³ For use with dormant trees only.
⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).

Pesticides Registered for Tropical Fruit Crops in Florida

3

Table 2. Pesticides registered for avocado in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticide</i>	azadirachtin	Align, Azatin	general insecticide
	spinosad	Spintor	lepidoptera
	pyrethrin + rotenone	Pyrellin	aphids, lepidoptera, thrips
	sulfur	Sulfur 6L, Sulfur Flowable, Thiolux	mites
	fenoxycarb	Logic ² , Precision ²	ants
	malathion	Malathion	thrips, scales, lepidoptera
	permethrin	Pounce, Ambush	thrips, lepidoptera, lace bug, mirids, Brown soft scale, leaf hopper
	various refined horticultural oils	Sunspray, citrus spray oil, crop oil, FC 435-66, FC 455-88, others	various aphids, mites, scales
	potassium salts of fatty acids	Safer Soap	aphids, lace bug, plant bugs, mites, thrips, scales
	methomyl	Lannate	lepidoptera
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera
	<i>Beauveria bassiana</i>	Mycotrol	lace bug
	pymetrozine	Endeavor ²	whiteflies, aphids,
	kaolin (clay)	Surround	barrier and irritant to various insects
	S-methoprene	Extinguish	ants
	hydramethylnon	Amdro ¹	ants
	pyriproxyfen	Knack, Distance ²	scales, thrips, ants
	bifenazate	Floramite ¹	mites
	fenpropathrin	Tame ²	various insects, mites
	heythiazox	Savey ²	various insects, mites
bifenthrin	Talstar ¹	various insects, mites	
<i>Molluscides</i>	metaldehyde	Slug & Snail Killer	slugs and snails
	ferric phosphate	Slug & Snail Bait	slugs and snails
<i>Fungicides</i>	copper	Kocide, others	anthracnose, Cercospora leaf spot
	sulfur	Sulfur 6L, Sulfur Flowable, Thiolux	powdery mildew
	mefenoxam	Subdue Maxx	Phytophthora root rot
	azoxystrobin	Abound	anthracnose, rust, Cercospora leaf spot, powdery mildew
	fosetyl-Al	Aliette	Phytophthora root rot
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectant
	folpet	Folpet	scab
<i>Herbicides</i>	simazine	Princep	pre-emergence, annual broadleaf and grass weeds
	fluazifop-butyl	Fusilade ¹	post-emergence, annual and perennial grass weeds
	sethoxydim	Poast ¹	post-emergence, annual and perennial grass weeds

Pesticides Registered for Tropical Fruit Crops in Florida

4

Table 2. Pesticides registered for avocado in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
	norflurazon	Solicam	pre-emergence, annual broadleaf and grass weeds
	oryzalin	Surflan	pre-emergence, annual broadleaf and grass weeds
	benefin + oryzalin	XL 2G ¹	pre-emergence, annual broadleaf and grass weeds
	isoxaben	Gallery ¹	pre-emergence broadleaf weeds
	glyphosate (systemic)	Roundup, Glyphosate	post-emergence annual and perennial weeds, woody brush, trees, grass
	sulfosate	Touchdown	post-emergence annual and perennial weeds, woody brush, trees, grass
	napropamide	Devrinol	pre-emergence, annual broadleaf and grass weeds
	oxyfluorfen	Goal ³	pre- and postemergence of certain broadleaf weeds
	paraquat	Gramoxone Extra	post-emergence annual broadleaf and grass weeds
	pelargonic acid	Scythe	broad leaf and grass weeds
	trifluralin	Treflan ¹	pre-emergence annual broadleaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	deer, rabbit, mouse repellent
¹ For use with non-bearing trees only. ² For nursery/nonbearing trees only. ³ For use with dormant trees only. ⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).			

Table 3. Pesticides registered for banana and plantain in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticides</i>	ethoprop	Mocap	nematodes,
	<i>Myrothecium verrucaria</i>	DiTera	nematodes
	buprofezin	Applaud	nymph stages of scales, mealybugs, leafhoppers
	azadirachtin	Align, Azatin	general insecticide
	oxamyl	Vydate	nematodes,
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera
	<i>Beauveria bassiana</i>	Mycotrol	aphids, mealybugs, others
	pyrethrin + rotenone	Pyrellin	aphids, lepidoptera, thrips

Table 3. Pesticides registered for banana and plantain in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
	potassium salts of fatty acids	Safer Soap	aphids, lace bugs, mealy bugs, spidermites, others
	pyrethrins	Pyrenone	aphids, lepidoptera, mites, thrips
	various refined horticultural oils	Sunspray, citrus spray oil, crop oil, FC 435-66, FC 455-88, others	various aphids, mites, scales
	pymetrozine	Endeavor ²	whiteflies, aphids,
	kaolin (clay)	Surround	barrier and irritant to various insects
	S-methoprene	Extinguish	ants
	hydramethylnon	Amdro ¹	ants
	pyriproxyfen	Knack, Distance ²	scales, thrips, ants
	bifenazate	Floramite ¹	mites
	fenpropathrin	Tame ²	various insects, mites
	heythiazox	Savey ²	various insects, mites
	bifenthrin	Talstar ¹	various insects, mites
<i>Mollicide</i>	metaldehyde	Slug & Snail Killer	slugs and snails
<i>Fungicides</i>	mancozeb	Manzate, Dithane	yellow and black Sigatoka
	copper	Kocide, others	anthracnose, Sigatoka, other various diseases
	azoxystrobin	Abound	yellow and black Sigatoka
	fenbuconazole	Enable	yellow and black Sigatoka
	fosetyl-Al	Aliette	yellow and black Sigatoka
	maneb	Manex	yellow and black Sigatoka
	tebuconazole	Elite	yellow and black Sigatoka
	thiabendazole (TBZ)	Decoo Salt No. 19 (banana only)	postharvest fungicide
	sulfur	Sulfur 6L, Sulfur Flowable, Thiolux	various diseases (some mites)
	mefenoxam	Subdue Maxx ²	root rot
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectant
	carbonic acid	Kaligreen	general fungicide
	hydrogen peroxide	Oxidate	biocide
<i>Herbicides</i>	ametryn	Evik	annual broadleaf and grass weeds
	diruon	Karmex	annual broadleaf and grass weeds
	glyphosate (systemic) (systemic)	Roundup, Glyphosate	broad leaf and grass weeds
	paraquat (contact)	Gramoxone Extra	broad leaf and grass weeds
	sulfosate (systemic)	Touchdown	broad leaf and grass weeds

Table 3. Pesticides registered for banana and plantain in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
	pelargonic acid	Scythe	broad leaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	deer, rabbit, mouse repellent
¹ For use with non-bearing trees only. ² For nursery/nonbearing trees only. ³ For use with dormant trees only. ⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).			

Table 4. Pesticides registered for Barbados cherry in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insectides</i>	pyrethrin + rotenone	Pyrellin	aphids, lepidoptera, thrips
	potassium salts of fatty acids	Safer Soap	aphids, lace bugs, mealy bugs, spidermites, others
	<i>Beauveria bassiana</i>	Mycotrol	aphids, mealybugs, others
	fenoxycarb	Precision	ants
	spinosad	Spintor	lepidoptera larvae
	azadirachtin	Align, Azatin	general insecticide
	various refined horticultural oils	Sunspray, citrus spray oil, crop oil, FC 435-66, FC 455-88, others	various aphids, mites, scales
	fluazifop-p-butyl	Fusilade	post-emergence, annual and perennial grass weeds
	pyrethrins	Pyrenone	aphids, lepidoptera, mites, thrips
	pymetrozine	Endeavor ²	whiteflies, aphids,
	kaolin (clay)	Surround	barrier and irritant to various insects
	S-methoprene	Extinguish	ants
	hydramethylnon	Amdro ¹	ants
	pyriproxyfen	Knack, Distance ²	scales, thrips, ants
	bifenazate	Floramite ¹	mites
	fenpropathrin	Tame ²	various insects, mites
	heythiazox	Savey ²	various insects, mites
	bifenthrin	Talstar ¹	various insects, mites
<i>Fungicide</i>	azoxystrobin	Abound	anthracnose
	mefenoxam	Subdue Maxx ²	root rot
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectent
<i>Herbicides</i>	paraquat	Gramoxone Extra	broad leaf and grass weeds
	glyphosate (systemic)	Roundup, Glyphosate	broad leaf and grass weeds
	fluazifop-butyl	Fusilade ¹	post-emergence, annual and perennial grass weeds
	pelargonic acid	Scythe	broad leaf and grass weeds

Pesticides Registered for Tropical Fruit Crops in Florida

7

Table 4. Pesticides registered for Barbados cherry in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
	napropamide	Devrinol	broad leaf and grass weeds
¹ For use with non-bearing trees only. ² For nursery/nonbearing trees only. ³ For use with dormant trees only. ⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).			

Table 5. Pesticides registered for black sapote in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticides</i>	pyrethrin + rotenone	Pyrellin	aphids, lepidoptera, thrips
	potassium salts of fatty acids	Safer Soap	aphids, lace bugs, mealy bugs, spidermites, others
	various refined horticultural oils	Sunspray, citrus spray oil, crop oil, FC 435-66, FC 455-88, others	various aphids, mites, scales
	spinosad	Spintor	lepidoptera larvae
	azadirachtin	Align, Azatin	general insecticide
	<i>Beauveria bassiana</i>	Mycotrol	aphids, mealybugs, others
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera larvae
	pymetrozine	Endeavor ²	whiteflies, aphids,
	pyriproxyfen	Knack, Distance ²	
	kaolin (clay)	Surround	barrier and irritant to various insects
<i>Fungicides</i>	mefenoxam	Subdue Maxx ²	root rot
	azoxystrobin	Abound	anthracnose
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectant
<i>Herbicide</i>	glyphosate (systemic)	Roundup, Glyphosate	broad leaf and grass weeds
	pelargonic acid	Scythe	broad leaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	deer, rabbit, mouse repellent
¹ For use with non-bearing trees only. ² For nursery/nonbearing trees only. ³ For use with dormant trees only. ⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).			

Table 6. Pesticides registered for carambola in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticides</i>	pyrethrin + rotenone	Pyrellin	aphids, lepidoptera, thrips
	potassium salts of fatty acids	Safer Soap	aphids, lace bugs, mealy bugs, spidermites, others
	various refined horticultural oils	Sunspray, citrus spray oil, crop oil, FC 435-66, FC 455-88, others	various aphids, mites, scales
	spinosad	Spintor	lepidoptera larvae

Table 6. Pesticides registered for carambola in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
	azadirachtin	Align, Azatin	general insecticide
	<i>Beauveria bassiana</i>	Mycotrol	aphids, mealybugs, others
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera larvae
	fenoxycarb	Logic ¹	ants
	methidathion	Supracide	scales
	pyrethrins	Pyrenone	aphids, lepidoptera, mites, thrips
	pymetrozine	Endeavor ²	whiteflies, aphids,
	kaolin (clay)	Surround	barrier and irritant to various insects
	S-methoprene	Extinguish	ants
	hydramethylnon	Amdro ¹	ants
	pyriproxyfen	Knack, Distance ²	scales, thrips, ants
	bifenazate	Floramite ¹	mites
	fenpropathrin	Tame ²	various insects, mites
	heythiazox	Savey ²	various insects, mites
	bifenthrin	Talstar ¹	various insects, mites
<i>Fungicides</i>	mefenoxam	Subdue Maxx ²	Pythium root rot
	azoxystrobin	Abound	anthracnose
	copper (Caution: may cause leaf damage and/or drop)	Kocide, others	various diseases
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectant
<i>Herbicide</i>	glyphosate (systemic)	Roundup, Glyphosate	broad leaf and grass weeds
	pelargonic acid	Scythe	broad leaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	deer, rabbit, mouse repellent
¹ For use with non-bearing trees only. ² For nursery/nonbearing trees only. ³ For use with dormant trees only. ⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).			

Table 7. Pesticides registered for coconut in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticides</i>	various refined horticultural oils	Sunspray, citrus spray oil, crop oil, FC 435-66, FC 455-88, others	various aphids, mites, scales
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera larvae
	<i>Beauveria bassiana</i>	Mycotrol	aphids, mealybugs, others
	potassium salts of fatty acids	Safer Soap	aphids, lace bugs, mealy bugs, spidermites, others
	azadirachtin	Align, Azatin	general insecticide
	pymetrozine	Endeavor ²	whiteflies, aphids,
	kaolin (clay)	Surround	barrier and irritant to various insects
	pyriproxyfen	Knack, Distance ²	
<i>Fungicide</i>	mefenoxam	Subdue Maxx ²	root rot

Pesticides Registered for Tropical Fruit Crops in Florida

9

Table 7. Pesticides registered for coconut in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectent
<i>Herbicide</i>	glyphosate (systemic)	Roundup, Glyphosate	broad leaf and grass weeds
	pelargonic acid	Scythe	broad leaf and grass weeds
	pelargonic acid	Scythe	broad leaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	deer, rabbit, mouse repellent
¹ For use with non-bearing trees only. ² For nursery/nonbearing trees only. ³ For use with dormant trees only. ⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).			

Table 8. Pesticides registered for guava in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticides</i>	pyrethrin + rotenone	Pyrellin	aphids, lepidoptera, thrips
	potassium salts of fatty acids	Safer Soap	aphids, lace bugs, mealy bugs, spidermites, others
	various refined horticultural oils	Sunspray, citrus spray oil, crop oil, FC 435-66, FC 455-88, others	various aphids, mites, scales
	spinosad	Spintor	lepidoptera larvae
	azadirachtin	Align, Azatin	general insecticide
	<i>Beauveria bassiana</i>	Mycotrol	aphids, mealybugs, others
	malathion	Malathion	thrips, scales, lepidoptera, Caribbean fruit fly
	fenoxycarb	Logic ²	ants
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera larvae
	pymetrozine	Endeavor ²	whiteflies, aphids,
	kaolin (clay)	Surround	barrier and irritant to various insects
	S-methoprene	Extinguish	ants
	hydramethylnon	Amdro ¹	ants
	pyriproxyfen	Knack, Distance ²	scales, thrips, ants
	bifenazate	Floramite ¹	mites
	fenpropathrin	Tame ²	various insects, mites
	heythiazox	Savey ²	various insects, mites
	bifenthrin	Talstar ¹	various insects, mites
<i>Fungicides</i>	azoxystrobin	Abound	anthracnose
	copper	Kocide, others	anthracnose, various other diseases
	mefenoxam	Subdue Maxx ²	root rot
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectent
<i>Herbicide</i>	glyphosate (systemic)	Roundup, Glyphosate	broad leaf and grass weeds
	pelargonic acid	Scythe	broad leaf and grass weeds
	oxyfluorfen	Goal	pre-emergence on broadleaf weeds
	paraquat	Gramoxone Extra	broad leaf and grass weeds

Table 8. Pesticides registered for guava in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
	fluazifop-butyl	Fusilade ¹	post-emergence, annual and perennial grass weeds
	oryzalin	Surflan	annual grasses and certain broadleaf weeds
	pelargonic acid	Scythe	broad leaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	deer, rabbit, mouse repellent
¹ For use with non-bearing trees only. ² For nursery/nonbearing trees only. ³ For use with dormant trees only. ⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).			

Table 9. Pesticides registered for jackfruit in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticides</i>	potassium salts of fatty acids	Safer Soap	aphids, lace bugs, mealy bugs, spidermites, others
	various refined horticultural oils	Sunspray, citrus spray oil, crop oil, FC 435-66, FC 455-88, others	various aphids, mites, scales
	spinosad	Spintor	lepidoptera larvae
	azadirachtin	Align, Azatin	general insecticide
	pyrethrins	Pyronyl	aphids, thrips
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera larvae
	<i>Beauveria bassiana</i>	Mycotrol	aphids, mealybugs, others
	pymetrozine	Endeavor ²	whiteflies, aphids,
	kaolin (clay)	Surround	barrier and irritant to various insects
	S-methoprene	Extinguish	ants
	hydramethylnon	Amdro ¹	ants
	pyriproxyfen	Knack, Distance ²	scales, thrips, ants
	bifenazate	Floramite ¹	mites
	fenpropathrin	Tame ²	various insects, mites
	heythiazox	Savey ²	various insects, mites
	bifenthrin	Talstar ¹	various insects, mites
<i>Fungicides</i>	azoxystrobin	Abound	anthracnose
	mefenoxam	Subdue Maxx ²	root rot
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectent
<i>Herbicide</i>	pelargonic acid	Scythe	broad leaf and grass weeds
	glyphosate (systemic)	Roundup, Glyphosate	broad leaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	deer, rabbit, mouse repellent
¹ For use with non-bearing trees only. ² For nursery/nonbearing trees only. ³ For use with dormant trees only. ⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).			

Table 10. Pesticides registered for 'Tahiti' lime, Key lime, kumquat, and pummelo in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticides</i>	various refined horticultural oils	Sunspray, citrus spray oil, crop oil, FC 435-66, FC 455-88, others	various aphids, mites, scales
	sulfur	Sulfur 6L, Sulfur Flowable, Thiolux	various mites
	fenoxycarb	Logic ¹	ants
	abamectin	Agri-Mek	mites
	formetanate	Carzol SP (limes only)	thrips
	buprofezin	Applaud	scales, mealybug, leafhoppers
	cryolite	Kyrocide	lepidoptera
	imidacloprid	Provado	aphids, leafminers, scales, leafhoppers, mealybugs
	oxamyl	Vydate	rust mites, thrips, nematode suppression
	oxydemeton-methyl	Metasystox ¹	mites, leafminers
	propargite	Omite ¹	mites
	fenpropathrin	Danitol	thrips, mites, sharpshooters, adult weevils
	kaolin (clay)	Surround	barrier and irritant to various insects
	dicofol	Kelthane	mites
	ethion	Ethion (limes only)	mites, scales
	diflubenzuron	Micromite	leafminers, weevil eggs/larvae, rust mite
	fenbutatin-oxide	Vendex, Hexakis	miticide
	dimethoate	Dimethoate, Cygon	miticide
	<i>Beauveria bassiana</i>	Mycotrol	aphids, mealybugs, others
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera larvae
	chlorpyrifos	Lorsban	aphids, lepidoptera, scales, thrips
	malathion	Malthion	thrips, scales, lepidoptera, Caribbean fruit fly
	pyrethrin + rotenone	Pyrellin	aphids, lepidoptera, thrips
	potassium salts of fatty acids	Safer Soap	aphids, lace bugs, mealy bugs, spidermites, others
	methidathion	Supracide	scales
	acephate	Acephate ²	aphids, plant bugs, grasshoppers, thrips, ants
	azadirachtin	Align, Azatin	general insecticide
	carbaryl	Sevin	citrus root weevil adults, mites, lepidoptera
	fenamiphos	Nemacur	nematodes
	pyridabin	Nexter	mites
	pymetrozine	Endeavor ²	whiteflies, aphids,
	S-methoprene	Extinguish	ants
	hydramethylnon	Amdro ¹	ants
	pyriproxyfen	Knack, Distance ²	scales, thrips, ants
	bifenazate	Floramite ¹	mites

Table 10. Pesticides registered for 'Tahiti' lime, Key lime, kumquat, and pummelo in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
	fenpropathrin	Tame ²	various insects, mites
	heythiazox	Savey ²	various insects, mites
	bifenthrin	Talstar ¹	various insects, mites
<i>Fungicides</i>	copper	Kocide, others	Greasy spot, melanose
	azoxystrobin	Abound	anthracnose
	fosetyl-Al	Aliette	phytophthora root rot
	mefenoxam	Subdue Maxx	phytophthora root rot
	ferbam	Ferbam Granuflo (limes only)	post bloom fruit drop, scab, anthracnose
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectent
	hydrogen peroxide		biocide
<i>Herbicides</i>	bromacil	Hyvar X ⁴	grass weeds
	diuron	Karmex	annual broadleaf and grass weeds
	bromacil + diuron	Krovar	annual broadleaf and grass weeds
	norflurazon	Solicam	grass weeds
	oryzalin	Surflan	annual grasses and certain broadleaf weeds
	glyphosate (systemic)	Roundup, Glyphosate	broad leaf and grass weeds
	paraquat	Gramoxone Extra	broad leaf and grass weeds
	fluazifop-p-butyl	Fusilade ¹	post-emergence, annual and perennial grass weeds
	sethoxydim	Poast	grass weeds
	<i>Phytophthora palmivora</i>	Devine	specific vines
	pelargonic acid	Scythe	broad leaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	deer, rabbit, mouse repellent

¹ For use with non-bearing trees only.
² For nursery/nonbearing trees only.
³ For use with dormant trees only.
⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).

Table 11. Pesticides registered for lychee and longan in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticides</i>	methidathion	Supracide (longan only)	scales
	pyrethrin + rotenone	Pyrellin	aphids, lepidoptera, thrips
	potassium salts of fatty acids	Safer Soap	aphids, lace bugs, mealy bugs, spidermites, others
	methoxyfenozide	Intrepid	lychee web worm
	spinosad	Spintor	lepidoptera larvae
	azadirachtin	Align, Azatin	general insecticide
	<i>Beauveria bassiana</i>	Mycotrol	aphids, mealybugs, others
	various refined horticultural oils	Sunspray, citrus spray oil, crop oil, FC 435-66, FC 455-88, others	various aphids, mites, scales
	fenoxycarb	Logic ¹	ants

Table 11. Pesticides registered for lychee and longan in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
	kaolin (clay)	Surround	barrier and irritant to various insects
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera larvae
	pymetrozine	Endeavor ²	whiteflies, aphids,
	S-methoprene	Extinguish	ants
	hydramethylnon	Amdro ¹	ants
	pyriproxyfen	Knack	scales, thrips, ants
	bifenazate	Floramite ¹	mites
	fenpropathrin	Tame ²	various insects, mites
	heythiazox	Savey ²	various insects, mites
	bifenthrin	Talstar ¹	various insects, mites
	pyriproxyfen	Knack, Distance ²	
<i>Fungicides</i>	copper (lychee only)	Kocide, others	anthracnose
	azoxystrobin	Abound	anthracnose
	<i>Trichoderma harzianum</i>	Rootshield	root system disease protectant
	mefenoxam	Subdue Maxx ²	root rot
<i>Herbicide</i>	glyphosate (systemic)	Roundup, Glyphosate	broad leaf and grass weeds
	pelargonic acid	Scythe	broad leaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	deer, rabbit, mouse repellent
¹ For use with non-bearing trees only. ² For nursery/nonbearing trees only. ³ For use with dormant trees only. ⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).			

Table 12. Pesticides registered for mamey sapote in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticides</i>	pyrethrin + rotenone	Pyrellin	aphids, lepidoptera, thrips
	potassium salts of fatty acids	Safer Soap	aphids, lace bugs, mealy bugs, spidermites, others
	spinosad	Spintor	lepidoptera larvae
	azadirachtin	Align, Azatin	general insecticide
	<i>Beauveria bassiana</i>	Mycotrol	aphids, mealybugs, thrips, others
	various refined horticultural oils	Sunspray, citrus spray oil, crop oil, FC 435-66, FC 455-88, others	various aphids, mites, scales
	fenoxy carb	Logic ¹	ants
	kaolin clay	Surround	barrier and irritant to various insects
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera larvae
	pymetrozine	Endeavor ²	whiteflies, aphids,
	S-methoprene	Extinguish	ants
	hydramethylnon	Amdro ¹	ants
	pyriproxyfen	Knack, Distance ²	scales, thrips, ants
	bifenazate	Floramite ¹	mites
	fenpropathrin	Tame ²	various insects, mites

Table 12. Pesticides registered for mamey sapote in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
	heythiazox	Savey ²	various insects, mites
	bifenthrin	Talstar ¹	various insects, mites
<i>Fungicides</i>	copper	Kocide, others	red alga leaf spot
	azoxystrobin	Abound	anthracnose
	mefenoxam	Subdue Maxx	Pythium root rot
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectant
<i>Herbicide</i>	glyphosate (systemic)	Roundup, Glyphosate	broad leaf and grass weeds
	pelargonic acid	Scythe	broad leaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	deer, rabbit, mouse repellent
¹ For use with non-bearing trees only. ² For nursery/nonbearing trees only. ³ For use with dormant trees only. ⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).			

Table 13. Pesticides registered for mango in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticides</i>	pyrethrin + rotenone	Pyrellin	aphids, lepidoptera, thrips
	potassium salts of fatty acids	Safer Soap	aphids, lace bugs, mealy bugs, spidermites, others
	spinosad	Spintor	lepidoptera larvae
	azadirachtin	Align, Azatin	general insecticide
	<i>Beauveria bassiana</i>	Mycotrol	aphids, mealybugs, thrips, others
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera larvae
	various refined horticultural oils	Sunspray, citrus spray oil, crop oil, FC 435-66, FC 455-88, others	various aphids, mites, scales
	fenoxycarb	Logic ¹	ants
	pyrethrins	Pyrenone	aphids, lepidoptera, mites, thrips
	malathion	Malthion	thrips, scales
	imidacloprid	Provado	thrips
	methidathion	Supracide	scales
	sulfur	Sulfur 6L, Sulfur Flowable, Thiolux	mites
	<i>Myrothecium verrucaria</i>	DiTera	nematodes
	harpin	Messenger	general plant disease and insect management
	pymetrozine	Endeavor ²	whiteflies, aphids,
	kaolin (clay)	Surround	barrier and irritant to various insects
	S-methoprene	Extinguish	ants
	hydramethylnon	Amdro ¹	ants
	pyriproxifen	Knack	scales, thrips, ants
	bifenazate	Floramite ¹	mites
	fenpropathrin	Tame ²	various insects, mites
	heythiazox	Savey ²	various insects, mites

Table 13. Pesticides registered for mango in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
	bifenthrin	Talstar ¹	various insects, mites
	pyriproxyfen	Knack, Distance ²	
<i>Fungicides</i>	sulfur	Sulfur 6L, Sulfur Flowable, Thiolux	powdery mildew
	copper	Kocide, others	anthracnose, red alga
	azoxystrobin	Abound	anthracnose
	mefenoxam	Subdue Maxx	Pythium root rot
	ferbam	Ferbam Granuflo	anthracnose
	potassium bicarbonate	Armcarb 100	powdery mildew
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectent
	thiabendazole (TBZ)	Mertect, Decoo Salt No. 19	postharvest fungicide
<i>Herbicide</i>	glyphosate (systemic)	Roundup, Glyphosate	broad leaf and grass weeds
	fluazifop-p-butyl	Fusilade ¹	post-emergence, annual and perennial grass weeds
	pelargonic acid	Scythe	broad leaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	deer, rabbit, mouse repellent
¹ For use with non-bearing trees only. ² For nursery/nonbearing trees only. ³ For use with dormant trees only. ⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).			

Table 14. Pesticides registered for papaya in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticides</i>	pyrethrin + rotenone	Pyrellin	aphids, lepidoptera, thrips
	potassium salts of fatty acids	Safer Soap	aphids, lace bugs, mealy bugs, spidermites, others
	spinosad	Spintor	lepidoptera larvae
	azadirachtin	Align, Azatin	general insecticide
	<i>Beauveria bassiana</i>	Mycotrol	aphids, mealybugs, others
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera larvae
	malathion	Malthion	thrips, scales
	pyrethrins	Pyrenone	aphids, lepidoptera, mites, thrips
	fenbutatin-oxide	Vendex	mites
	permethrin	Pounce, Ambush	mites
	pymetrozine	Endeavor ²	whiteflies, aphids,
	kaolin (clay)	Surround	barrier and irritant to various insects
	<i>Myrothecium verrucaria</i>	DiTera	nematodes
	S-methoprene	Extinguish	ants
	hydramethylnon	Amdro ¹	ants
	pyriproxyfen	Knack	scales, thrips, ants
	bifenazate	Floramite ¹	mites
	fenpropathrin	Tame ²	various insects, mites
	heythiazox	Savey ²	various insects, mites
	bifenthrin	Talstar ¹	various insects, mites

Table 14. Pesticides registered for papaya in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
	pyriproxyfen	Knack, Distance ²	
<i>Fungicides</i>	sulfur	Sulfur 6L, Sulfur Flowable, Thiolux	powdery mildew
	copper	Kocide, others	anthracnose
	azoxystrobin	Abound	anthracnose
	mefenoxam	Subdue Maxx	Pythium root rot, Phytophthora root rot
	chlorothalonil	Bravo	anthracnose
	mancozeb	Dithane, Manzate	anthracnose
	maneb	Manex	anthracnose
	thiabendazole	Decco Salt No. 19	anthracnose
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectant
<i>Herbicides</i>	glyphosate (systemic)	Roundup, Glyphosate	broad leaf and grass weeds
	oxyfluorfen	Goal	pre-emergence on broadleaf weeds
	diuron	Karmex	annual broadleaf and grass weeds
	paraquat	Gramoxone Extra	broad leaf and grass weeds
	oryzalin	Surflan	annual grasses and certain broadleaf weeds
	pelargonic acid	Scythe	broad leaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	deer, rabbit, mouse repellent
¹ For use with non-bearing trees only. ² For nursery/nonbearing trees only. ³ For use with dormant trees only. ⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).			

Table 15. Pesticides registered for passion fruit in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticides</i>	pyrethrin + rotenone	Pyrellin	aphids, lepidoptera, thrips
	potassium salts of fatty acids	Safer Soap	aphids, lace bugs, mealy bugs, spidermites, others
	spinosad	Spintor	lepidoptera larvae
	azadirachtin	Align, Azatin	general insecticide
	<i>Beauveria bassiana</i>	Mycotrol	aphids, mealybugs, others
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera larvae
	malathion	Malthion	thrips, scales
	pyrethrins	Pyrenone	aphids, lepidoptera, mites, thrips
	pymetrozine	Endeavor ²	whiteflies, aphids,
	kaolin (clay)	Surround	barrier and irritant to various insects
	S-methoprene	Extinguish	ants
	hydramethylnon	Amdro ¹	ants
	pyriproxyfen	Knack, Distance ²	scales, thrips, ants
	bifenazate	Floramite ¹	mites
	fenpropathrin	Tame ²	various insects, mites
	heythiazox	Savey ²	various insects, mites

Table 15. Pesticides registered for passion fruit in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
	bifenthrin	Talstar ¹	various insects, mites
<i>Fungicides</i>	chlorothalonil	Bravo	anthracnose
	copper	Kocide, others	anthracnose
	azoxystrobin	Abound	anthracnose
	mefenoxam	Subdue Maxx ²	root rot
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectant
<i>Herbicides</i>	glyphosate (systemic)	Roundup, Glyphosate	broad leaf and grass weeds
	paraquat	Gramoxone Extra	broad leaf and grass weeds
	pelargonic acid	Scythe	broad leaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	deer, rabbit, mouse repellent
¹ For use with non-bearing trees only. ² For nursery/nonbearing trees only. ³ For use with dormant trees only. ⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).			

Table 16. Pesticides registered for sapodilla in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticides</i>	pyrethrin + rotenone	Pyrellin	aphids, lepidoptera, thrips
	potassium salts of fatty acids	Safer Soap	aphids, lace bugs, mealy bugs, spidermites, others
	azadirachtin	Align, Azatin	general insecticide
	spinosad	Spintor	lepidoptera larvae
	<i>Beauveria bassiana</i>	Mycotrol	aphids, mealybugs, others
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera larvae
	various refined horticultural oils	Sunspray, citrus spray oil, crop oil, FC 435-66, FC 455-88, others	various aphids, mites, scales
	pymetrozine	Endeavor ²	whiteflies, aphids,
	kaolin (clay)	Surround	barrier and irritant to various insects
	S-methoprene	Extinguish	ants
	hydramethylnon	Amdro ¹	ants
	pyriproxyfen	Knack, Distance ²	scales, thrips, ants
	bifenazate	Floramite ¹	mites
	fenpropathrin	Tame ²	various insects, mites
	heythiazox	Savey ²	various insects, mites
	bifenthrin	Talstar ¹	various insects, mites
<i>Fungicides</i>	azoxystrobin	Abound	anthracnose
	mefenoxam	Subdue Maxx ²	Pythium root rot

Table 16. Pesticides registered for sapodilla in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectent
<i>Herbicides</i>	glyphosate (systemic)	Roundup, Glyphosate	broad leaf and grass weeds
	pelargonic acid	Scythe	broad leaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	deer, rabbit, mouse repellent

¹ For use with non-bearing trees only.
² For nursery/nonbearing trees only.
³ For use with dormant trees only.
⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).

Table 17. Pesticides registered for wax jambu in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticides</i>	potassium salts of fatty acids	Safer Soap	aphids, lace bugs, mealy bugs, spidermites, others
	azadirachtin	Align, Azatin	general insecticide
	spinosad	Spintor	lepidoptera larvae
	<i>Beauveria bassiana</i>	Mycotrol	aphids, mealybugs, others
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera larvae
	various refined horticultural oils	Sunspray, citrus spray oil, crop oil, FC 435-66, FC 455-88, others	various aphids, mites, scales
	pymetrozine	Endeavor ²	whiteflies, aphids,
	kaolin (clay)	Surround	barrier and irritant to various insects
	S-methoprene	Extinguish	ants
	hydramethylnon	Amdro ¹	ants
	pyriproxyfen	Knack, Distance ²	scales, thrips, ants
	bifenazate	Floramite ¹	mites
	fenpropathrin	Tame ²	various insects, mites
	heythiazox	Savey ²	various insects, mites
	bifenthrin	Talstar ¹	various insects, mites
<i>Fungicides</i>	azoxystrobin	Abound	anthracnose
	mefenoxam	Subdue Maxx ²	root rot
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectent
<i>Herbicides</i>	glyphosate (systemic)	Roundup, Glyphosate	broad leaf and grass weeds
	pelargonic acid	Scythe	broad leaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	deer, rabbit, mouse repellent

¹ For use with non-bearing trees only.
² For nursery/nonbearing trees only.
³ For use with dormant trees only.
⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).

Table 18. Pesticides registered for white sapote in Florida.

Class	Chemical name	Brand name(s)	Pest(s) controlled
<i>Insecticides</i>	potassium salts of fatty acids	Safer Soap	aphids, lace bugs, mealy bugs, spidermites, others
	azadirachtin	Align, Azatin	general insecticide
	spinosad	Spintor	lepidoptera larvae
	<i>Beauveria bassiana</i>	Mycotrol	aphids, mealybugs, others
	<i>Bacillus thuringiensis</i>	Dipel, others	lepidoptera larvae
	various refined horticultural oils	Sunspray, citrus spray oil, crop oil, FC 435-66, FC 455-88, others	various aphids, mites, scales
	pymetrozine	Endeavor ²	whiteflies, aphids,
	kaolin (clay)	Surround	barrier and irritant to various insects
	S-methoprene	Extinguish	ants
	hydramethylnon	Amdro ¹	ants
	pyriproxifen	Knack, Distance ²	scales, thrips, ants
	bifenazate	Floramite ¹	mites
	fenpropathrin	Tame ²	various insects, mites
	heythiazox	Savey ²	various insects, mites
	bifenthrin	Talstar ¹	various insects, mites
<i>Fungicides</i>	azoxystrobin	Abound	anthracnose
	mefenoxam	Subdue Maxx ²	root rot
	<i>Trichoderma harzianum</i>	Rootshield ²	root system disease protectent
<i>Herbicides</i>	glyphosate (systemic)	Roundup, Glyphosate	broad leaf and grass weeds
	pelargonic acid	Scythe	broad leaf and grass weeds
<i>Repellent</i>	capsaicin	Deer Off	deer, rabbit, mouse repellent

¹ For use with non-bearing trees only.
² For nursery/nonbearing trees only.
³ For use with dormant trees only.
⁴ Not registered for use in Miami-Dade, Palm Beach, Broward Counties (see label for others).