



EFFICACY AGAINST SPECIFIC CITRUS PESTS

(+++ = excellent control; ++ = good control; + = some help; Blank = not determined)

IMPORTANT: READ ALL PESTICIDE LABELS CAREFULLY

TAMUK-CC-ENTO-1



PESTICIDE BRAND NAME	ACTIVE INGREDIENT (IRAC-MOA)	RATE/ ACRE	REI (hr)	PHI (d)	MAXIMUM AMOUNT/YR (Application)	RUST & BUD MITES	SPIDER MITES Red & TX	ARMORED SCALES	SOFT SCALES	CITRUS LEAF-MINER	CITRUS PSYLLID	BLACK/ WHITE FLIES	THRIPS	ROOT WEEVILS	APHIDS	MEALY-BUG	LEAF-HOPPERS/ SHARP-	NEMA-TODE	Effects on	
																			Natural Enemies	
ADMIRE PRO	Imidacloprid (4A)	Soil	7 -14 oz	12	0	14 oz			++	+++	+++	+++	+++	++	++	+++	+++	++	++	Low
		Foliar	3.5-7 oz	12	0	14 oz														
ACTARA	Thiamethoxam (4A)		3 – 5.5 oz	12	0	11 oz		++	+++	+++	+++	+++	++	++	+++	+++	++			Moderate
AGRI-FLEX	Abamectin (6)/Thiamethoxam (4A)		5.5 – 8.5 oz	12	7	17 oz (3)	+++	+++	+++	+++	+++	+++	+++	++	+++	+++	+++	+++		Moderate
AGRIMEK SC	Abamectin (6)		1 – 4.25 oz	12	7	8.5 oz (3)	+++	+++		+++	++		+++							Moderate
APTA	Tolfenpyrad (21A)		14 - 27 oz	12	3	27 oz (1)	+++	++			+++		+++	++	++	++				Moderate
ASSAIL 30SG	Acetamiprid (4A)		2.5 – 10.3 oz	12	7	29.3 oz (5)		+++	+++	+++	++		+++		+++	+++	+++			Moderate
BAYTHROID XL	Beta-Cyfluthrin (3)		1.6 – 6.4 oz	12	0	6.4 oz					+++		+++	+++			+++			High
BELEAF 50 SG	Flonicamid (29)		2.8 – 5.7 oz	12	0	8.4 oz (3)					+++	+++	+++		+++					Low
CENTAUR WDG	Buprofezin (16)		34.5 - 46 oz	12	3	92 oz (2)		+++	+++		+++	+++				+++	+++			Moderate
CLOSER SC	Sulfoxaflor (4C)		1.5 – 5.75 oz	12	1	17 oz (4)		++	+++		+++	+++	+++		+++	+++				Low
DANITOL 2.4 EC	Fenpropathrin (3)		16 –21-1/3 oz	24	1	42-2/3 oz	++	++			+++	++	+++	++				++		High
DELEGATE WG	Spinetoram (5)		3 - 6 oz	4	1	12 oz (3)				+++	+++		+++							Low
DIMETHOATE 4EC	Dimethoate (1B)		0.5 - 2 pt	240	15	2 pts			+++	++		+++	+++		+++	+	+++			High
ENVIDOR 2 SC	Spirodiclofen (23)		12 - 20 oz	12	7	20 oz (1)	+++	+++												Low
ESTEEM 0.86EC/KNACK	Pyriproxyfen (7C)		10 - 16 oz	12	1	26 oz		+++	+++	++		+++								Moderate
EXIREL	Cyantranilprole (28)		13.5-20.5 oz	12	1	61.4 Oz				+++	+++		+++	++	++					Moderate
LEVERAGE 360	Imidacloprid (4A)/β-cyfluthrin (3)		2.4 – 6.4 oz	12	0	6.4 oz		++	+++	+++	+++	+++	++	+++	+++	+++	+++	+++		High
MAGISTER SC	Fenazaquin (21A & 39)		32 – 36 oz	12	7	36 oz (1)	+++	+++			+++	+++						++		Moderate
MICROMITE 80 WGS	Diflubenzuron (15)		6.25 oz	12	7	18.75 oz (3)	+++			+++	+++			+++			++			Low
MINECTO PRO	Abamectin(6) / Cyantranilprole(28)		8–12 oz	12	7	24 oz	+++	+++		+++	+++		+++		+++	+++				Moderate
MOVENTO MPC	Spirotetramat (23)		16 oz	24	1	32 oz (2)	+++	+++	+++	+++	++	++	+++	+	+++	+++	+++			Low
MUSTANG	Zeta-cypermethrin (3)		4.3 oz	12	1	17.2 oz					+	+++	++	+	+++			+		High
NEALTA	Cyflumetofen (25)		13.7 oz	12	7	27.4 oz (2)	++	+++												Low
NEXTER 75 W	Pyridaben (21)		4.3-10.67 oz	12	7	21.34 oz (2)	+++	++				+	+	+	++			+		High
ONAGER	Hexythiazox (10A)		12 – 24 oz	12	7	24 oz (1)	++	+++												Moderate
PILOT 4E	Chlorpyrifos		2 – 12 pt	120	21	15 pt	++		+++	+++	+	+++	+	++	++	+++	+++			High
PLATINUM 75 SG*	Thiametoxam (4) (SOIL)		1.83 - 3.67 oz	12	0	3.67 oz		++	++	+++	+++	++	+	+	++	++	++	++		Low
PORTAL XLO	Fenpyroximate (21A)		2-4 pt	12	3	4 pt (2)	+++	+++		++		+++	++	++		++	++			Moderate
			2.4 – 6.4 oz	12	1	12.8 oz (2)								+++		+++				
REQUIEM PRIME	Extract of <i>Chenopodium ambrosioides</i>		2 – 4 qts	4	0	10 appl.	++	++		++	++		++							Moderate
SEFINA Inscalis	Afidopyropen (9D)		3 – 14 oz	12	0	28 oz		++	++		+++	+++			+++					Low
SENSTAR	Spirotetramat(23)/Pyriproxyfen(7C)		16 – 20 oz	24	1	40 oz (2)	++	+++	+++	+++	+++	+++	+++		+++	+++				Moderate
SEVIN SL	Carbaryl (1A)		2 – 5 qts	12	5	20 qts	++	+++	+++	+	++		+	++	+	++				High
SIVANTO PRIME	Flupyradifurone (4D)	Foliar	7 - 14 oz (F)	4	1	28 oz			+	++	++	+++	+++	+++	+++	+++	+++			Low
		Soil	21 - 28 oz (S)	4	30	28 oz						+++	+++		+++					
SPINTOR 2 SC	Spinosad (5)		4 - 10 oz	4	1	29 oz (2)				++	+		++							Low
VENDEX 50 WP	Fenbutatin-oxide (12B)		2 - 3 lb	48	7	6 lbs (2)	+++	+++												Low
VOLIAM Flexi	Thiamethoxam(4A)/Chlorantranilprole (28)		4 – 7 oz	12	1	14 Oz		+++	+++	+++	+++	+++	+++	++	+++	+++	+++	++		Moderate
VERIMARK	Cyantranilprole (28) (SOIL)		15-30 oz	4	1	30 oz (2)				+++	+++		+++		++					Moderate
VYDATE L	Oxamyl (1A)		0.25 - 4 pt	48	7	24 pts (6)	+++	++		++	+++		+++		++		++	++		High

IRAC-MOA = Insecticide Resistance Action Committee - Mode Of Action. For resistance management and good pesticide stewardship, growers should not only rely on a *single pesticide class* for pest control. Please read label and make sure pesticide is legally registered before using it.

FORMULATION OF ORGANIC PESTICIDE	Mite Pests		Greasy spots	Melanose	POST-BLOOM	Phytophthora	SCAB	CANKER	ALTER-NARIA	NEMATODE
	Citrus rust mite	Spider mites								
Sulfur Products: Kumulus DF, Microthiol 80 DF, Sulfur DF, Sulfur 6F, Sulfur 6L, Sulfur 90 W, Micronized sulfur, 80% Thiospere, Wettable sulfur, etc.	+++	+								
Copper: Cu hydroxide, Cu oxychloride, Cu sulfate, cuprous oxide			+++	+++	+++	+	+++	+++	++	
Oils Petroleum-based*: Suffoil-X, Superior spray oil, Organic JMS Stylet oil, TriTek, TresOil, PureSpray, Saf-T-Side, Plant-based: Azatrol, Aza-Direct, AzaGuard, Ecotrol, Oil Pharm, Neemix, Oroboost, Prevam, Trilogy, Soybean oil, Cottonseed oil, Limonene, Garlic, Ecotrol, Sesame oil	++	++	+++	++	+		+		+	
Pyrethrins and pyrethrin-based: Evergreen EC 60-6, Pyganic 1.4 & Pyganic 5.0	++	++								
Insecticidal soaps: Potassium salt of fatty acids: Des-X, M-Pede	+	+								
Biological Antagonists: <i>Bacillus</i> spp., <i>Trichoderma</i> spp. <i>Pasteruria</i> spp.						++				++
Other products: Entrust (Spinosad), Sil-Matrix, Entrust, Agree, Garlic extract, Hot pepper wax, Sucroicide, SucraShield, PFR-97, <i>Diatomaceous Earth</i> , Veteran D (Sabadilla alkaloids), organic amendments, sticky traps and barriers	See label	See label	See label	See label	See label	See label	See label	See label	See label	See label

PESTICIDE DISTRIBUTORS IN SOUTH TEXAS	LABEL RECOMMENDATIONS FOR FUNGICIDES							CITRUS DISEASE							NEMA TODE
	FUNGICIDE	ACTIVE INGREDIENT	GROUP	RATE/Ac	REI (hr)	PHI (d)	Maximum Rate/Yr (# APPL.)	GREASY SPOT	MELANOSE	PHYTOPH-THORAX	SCAB	PFD/COLLE-TOTRICHUM	ALTER-NARIA	CANKER**	
<p>TAMUK Citrus Center is an authorized institution to provide research, educational information and other services. Mention of pesticides and distributors are for guidance only.</p> <p>Nutrien 10601 TX-107, Santa Rosa TX 78541, Tel 956-636-1934 <i>Ag Solutions</i></p> <p>WILBUR-ELLIS 3809 W Monte Cristo Rd, Edinburg, TX 78539, Tel 956-383-8433 <i>Ideas to Grow With</i></p> <p>HELENA Border Rd, Alamo, TX 78516, Tel 956-464-4411</p> <p>Spilot 24203 E. Port Rd, Harlingen, TX 78550, Tel 956-428-0575 <i>GROWER SOLUTIONS</i></p> <p>For questions, please call Dr. Mamoudou Sétamou at 956-447-3370 or email at mamoudou.setamou@tamuk.edu</p>	ABOUND 2.08 F	Azoxystrobin	11	12 - 15 oz	4	0	92.3 fl oz	+++	+++		+++	+++	+++		
	ALIETTE WDG	Aluminum tris	33	2 ½ - 5 lb	12	30	20 lbs (4)			+++		++	++		
	BADGE SC	Cu Oxychloride Cu Hydroxide	M1	0.75 – 11pt	48	0	44.4 pts	+++	+++	++	+++	++	+++	+++	
	COPPER FUNGICIDE	Cu hydroxide, Cu oxychloride, Cu sulfate, cuprous oxide	M1	See label	24	See label	None	+++	+++	++	+++	++	++	+++	
	ENABLE 2F	Fenbuconazole	3	8 oz	12	0	24 fl oz (3)	+++	+++		++				
	FLINT EXTRA	Trifloxystrobin	11	2 – 3.8 oz	12	7	15.2 fl oz (4)	+++	+++		+++	+++	+++		
	HEADLINE	Pyraclostrobin	11	9 -15 oz	12	0	54 fl oz	+++	+++		+++	+++	+++		
	LUNA SENSATION	Fluopyram, Trifloxystrobin	7, 11	7.6 oz	12	7	27.2 fl oz	+++	+++		+++	+++	+++		
	MIRAVIS TOP	Difenoconazole Pydiflumetofen	3, 7	13.7-15.2oz	12	0	60.9 fl oz (4)	+++	+++		+++	+++	+++		
	PRESIDIO	Fluopicolide	43	4 oz	12	30	4 fl oz (1)			+++					
	PRISTINE	Pyraclostrobin, Boscalid	11, 7	16 -18.5oz	12	0	74 fl oz	+++	+++		+++	+++	+++		
	QUADRI TOP & AMISTAR TOP	Azoxystrobin Difenoconazole	11,3	10-15.4oz	12	0	61.5 oz (3)	+++	+++		+++	+++	+++		
	RIDOMIL GOLD SL	Mefenoxam	4	1 - 3 qts	48	21	6 qts			+++					
	SPRAY OILS (Narrow Range)	Oil Midpoint boiling range of 412°F - 455°F	NR	2 -10gal	12	0	None	+++	++			++			
	VELUM PRIME	Fluopyram	7	6.5-6.84oz	12	7	13.7 oz							+++	+++

Most pesticides required the use of a spray adjuvant (surfactant, oils) for enhanced performance. Narrow range oils, Non-ionic surfactants, Wetcit, and Vintre are recommended for citrus pest control. Make sure to read the label and ensure compatibility before tank mixing pesticides. For instance, do not tank mix sulfur and oil; M-Pede or Des-X and sulfur, or any penetrator, spreader sticker, activator, calcium nitrate, diatomaceous earth, Aliette fungicide or metallic ions (Mn, Mg, Fe or Zn). ** Citrus Canker suppression is also provided by pesticides such as Imidacloprid and Flupyradifurone. For more information on pesticide current registration status in Texas, visit <https://www.npirs.org/state/>. Other effective preplant nematicides include Metam Sodium (e.g. Vapam HL, Sectagon 42), 1,3-Dichloropropene/Chloropicrin (Telone C35) and 1,3-Dichloropropene (Telone II). Please read appropriate labels.