



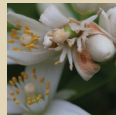



Products recommended in the *Florida Citrus Production Guide* and their effects on foliar fungal diseases.

Pesticide <sup>a</sup>	Target Disease									Maximum Rate per Acre per Season
	Mode of Action <sup>b</sup> (FRAC code)	REI <sup>c</sup> Hours	PHI <sup>d</sup> Days	 Alternaria	 Black Spot	 Greasy Spot	 Melanose	 Postbloom Fruit Drop (PFD)	 Scab	
Abound 2.08F	11	4	0	+++ , R	+++ , R,*	+++ , R,*	+++ , R	++ , R	+++ , R	92.3 fl oz 1.5 lb a.i.
Copper fungicide	M01	See label	See label	++ , R, NR	++ , R, NR	+++ , R, NR	+++ , R, NR	-	++ , R, NR	See label
Enable 2F	3	12	0	-	+++ , R	++ , R	-	-	++ , R	24 fl oz 0.38 lb a.i.
Ferbam Granuflo	M03	24	0	++ , R, NR	NT	-	-	+ , NR	++ , R, NR	18 lb
Gem 500 SC	11	12	7	+++ , R	++ , R,*	+++ , R,*	+++ , R	++ , R	+++ , R	15.2 fl oz
Headline SC	11	12	0	+++ , R	+++ , R,*	+++ , R,*	+++ , R	++ , R	+++ , R	54 fl oz 0.88 lb a.i.
Copper fungicide + petroleum oil 97+ %	M01 & NR	See label	See label	++ , NR	NT	+++ , R , NR	+++ , NR	-	-	See label
Petroleum oil 97+ %	NR	12	0	-	NT	++ , R, NR	-	-	-	None
Abound + Ferbam	11, M03	24	0	+++	NT	-	-	++ , R	+++	92.3 fl oz (Abound) 1.5 lb a.i. (Abound) 18 lb (Ferbam)
Gem + Ferbam	11, M03	24	7	+++	NT	-	-	++ , R	+++	15.2 fl oz (Gem) 18 lb (Ferbam)
Headline + Ferbam	11, M03	24	0	+++	NT	-	-	++ , R	+++	54 fl oz (Headline) 0.88 lb a.i. (Headline) 18 lb (Ferbam)
Priaxor Xemium	7, 11	12	0	NT	NT	++	++	++ , R	NT	44 fl oz (Priaxor) 0.88 lb a.i. (pyraclostrobin)
Pristine	7, 11	12	0	+++ , R	+++ , R	+++ , R	+++ , R	++ , R	+++	74 oz (Pristine) 0.88 lb a.i. (pyraclostrobin)
Amistar Top (formerly Quadris Top)	11, 3	12	0	+++ , R	+++ , R	+++ , R	+++ , R	++ , R	+++	61.5 fl oz (Quadris Top) 0.5 lb (difenoconazole) 1.5 lb (azoxystrobin)

<sup>a</sup> All listed pesticides are registered and trademarked products

<sup>b</sup> Mode of action class for citrus pesticides from the Fungicide Resistance Action Committee (FRAC)

<sup>c</sup> Restricted Entry Interval

<sup>d</sup> Preharvest Interval

(R) = Product recommended for control of pathogen in *Florida Citrus Pest Management Guide*

(NR) = Minimal resistance potential

(NT) = Not tested

(\*) = Best applied with petroleum oil

(+++ ) = good control of pathogen (++) = moderate control of pathogen (+) = low levels of pathogen suppression (-) = no observed control of pathogen

# Fungicide Resistance Management

**Fungicide resistance is now problematic in Florida citrus groves, with documented strobilurin resistance causing control failure of *Alternaria* brown spot. These guidelines apply to all fungicide applications within a season and all fungal diseases.**

- Make no more than the recommended number of sequential applications of any fungicide without alternating to another fungicide with a different mode of action (FRAC codes). To conserve fungicide efficacy, it is recommended to rotate modes of action with each application.
- Do not make more than the maximum number of applications of any fungicide class combined in a year for all diseases, and never exceed maximum label rates per acre per year.
- Control measures should begin before disease development and continue as indicated by recommended disease management practices. For guidance, consult the *Florida Citrus Production Guide* (<http://www.crec.ifas.ufl.edu/extension/pest>).

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