

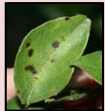





# Quick Reference Guide to Foliar Fungicides<sup>1</sup>

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

Pesticide <sup>a</sup>	Target pathogen									Maximum rate per acre per season
	Mode of action <sup>b</sup> (FRAC code)	REI <sup>c</sup>	PHI <sup>d</sup>	 Alternaria	 Black Spot	 Greasy spot	 Melanose	 Postbloom fruit drop (PFD)	 Scab	
Abound 2.08F	11	4 hours	0	+++ , R	NT, R	+++ , R	+++ , R	++ , R	+++ , R	92.3 fl oz 1.5 lb a.i.
Copper fungicide	M1	See label	See label	++ , R	NT, R	+++ , R	+++ , R	-	++ , R	None
Enable 2F	3	12 hours	0	-	NT	++ , R	-	-	++ , R	24 fl oz 0.38 lb a.i.
Ferbam Granuflo	M3	24 hours	1 day	++ , R, NR	NT	-	-	+ , NR	++ , R, NR	None
Gem 500 SC	11	12 hours	7 days	+++ , R	NT, R	+++ , R	+++ , R	++ , R	+++ , R	15.2 fl oz
Headline	11	12 hours	0	+++ , R	NT, R	+++ , R	+++ , R	++ , R	+++ , R	54 fl oz 0.88 lb a.i.
Copper fungicide + petroleum oil 97 + %	M1 & NR	See label	See label	++ , NR	NT	+++ , R , NR	+++ , NR	-	++ , NR	None
Petroleum oil 97 + %	NR	12 hours	0	-	NT	+++ , R, NR	-	-	-	None
Abound 2.08F + Ferbam	11, M3	24 hours	1 day	+++	NT	-	-	++ , R	+++	92.3 fl oz (Abound) 1.5 lb a.i. (Abound)
Gem + Ferbam	11, M3	24 hours	7 days	+++	NT	-	-	++ , R	+++	15.2 fl oz (Gem)
Headline + Ferbam	11, M3	24 hours	0	+++	NT	-	-	++ , R	+++	54 fl oz (Headline) 0.88 lb a.i. (Headline)
Pristine	7, 11	12 hours	0	+++ , R	NT	+++	+++ , R	NT	+++	74 oz (Pristine) 0.88 lb a.i. (pyraclostrobin)
Quadris Top	11, 3	12 hours	0	+++ , R	NT	+++ , R	+++ , R	NT	+++	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

(+++)= Good control of pathogen

(++)= Moderate control of pathogen

(+)= Low levels of pest suppression

(-)= No observed control of pathogen

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# 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 fungicides.

- 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 Pest Management Guide* (<http://www.crec.ifas.ufl.edu/extension/pest/index.htm>).