


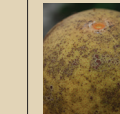

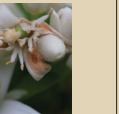


Products recommended in the *Florida Citrus Production Guide* and their effects on foliar fungal diseases.

Pesticide ^a	Target Disease									Maximum Rate per Acre per Season
	Mode of Action ^b (FRAC code)	REI ^c Hours	PHI ^d Days							
				Alternaria	Black Spot	Greasy Spot	Melanose	Postbloom Fruit Drop (PFD)	Scab	
Abound 2.08F	11	4	0	+++ , R	+++ , R,*	+++ , R,*	+++ , R	++ , R	+++ , R	90 fl oz 1.5 lb a.i.
Abound + Ferbam	11, M 03	24	0	+++	NT	-	-	++ , R	+++	92.3 fl oz (Abound) 1.5 lb a.i. (Abound) 23.7 lb (Ferbam) 6 lb a.i. (Ferbam)
Amistar Top	11 + 3	12	0	+++ , R	+++ , R	+++ , R	+++ , R	++ , R	+++	61.5 fl oz (Amistar Top) 0.5 lb (difenoconazole) 1.5 lb (azoxystrobin)
Copper fungicide	M 01	See label	See label	++ , R, NR	++ , R, NR	+++ , R, NR	+++ , R, NR	-	++ , R, NR	See label
Copper fungicide + petroleum oil 97%	M 01, NR	See label	See label	++ , NR	NT	+++ , R , NR	+++ , NR	-	-	See label
Enable 2F	3	12	0	-	+++ , R	++ , R	-	-	++ , R	24 fl oz 0.38 lb a.i.
Ferbam Granuflo	M 03	24	0	++ , R, NR	NT	-	-	+ , NR	++ , R, NR	23.7 lb 6 lb a.i.
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.
Gem + Ferbam	11, M 03	24	7	+++	NT	-	-	++ , R	+++	15.2 fl oz (Gem) 23.7 lb (Ferbam) 6 lb a.i. (Ferbam)
Headline + Ferbam	11, M 03	24	0	+++	NT	-	-	++ , R	+++	54 fl oz (Headline) 0.88 lb a.i. (Headline) 23.7 (Ferbam) 6 lb a.i. (Ferbam)
Petroleum oil 97%	NR	12	0	-	NT	++ , R, NR	-	-	-	see label
Priaxor Xemium	11 + 7	12	0	NT	NT	++	++	++ , R	NT	44 fl oz (Priaxor) 0.88 lb a.i. (pyraclostrobin)
Pristine	11 + 7	12	0	+++ , R	+++ , R	+++ , R	+++ , R	++ , R	+++	74 oz (Pristine) 0.88 lb a.i. add 1.17 lb boscalid (pyraclostrobin)

^a All listed pesticides are registered and trademarked products

^b Mode of action class for citrus pesticides from the Fungicide Resistance Action Committee (FRAC)

^c Restricted Entry Interval

^d Preharvest Interval

(R) = Product recommended for control of pathogen in *Florida Citrus Production 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* (<https://crec.ifas.ufl.edu/resources/production-guide>).

1. This document is PP275, one of a series of the Plant Pathology Department, UF/IFAS Extension. Original publication date May 2010. Revised July 2019 and August 2021. Visit the EDIS website at <https://edis.ifas.ufl.edu> for the currently supported version of this publication.

2. Megan M. Dewdney, associate professor, Plant Pathology Department; UF/IFAS Citrus Research and Education Center, Lake Alfred, FL 33850.