

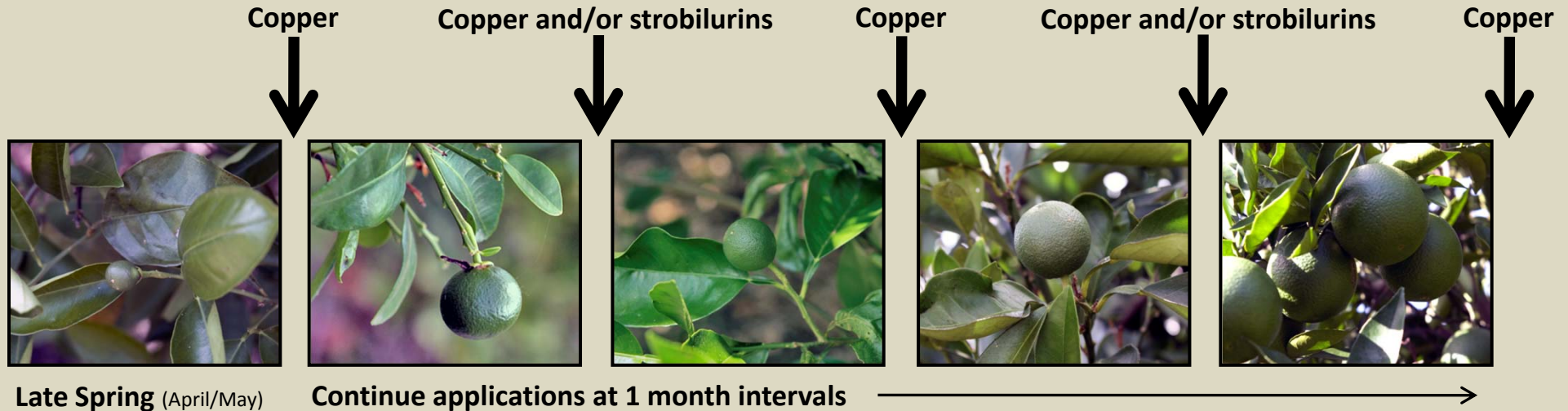
## Management Timing Schedule

### Fungicide Timing

Megan M. Dewdney and Jamie D. Yates<sup>1</sup>

Photo Credit: University of Florida

Fruit is susceptible for 5-6 months post-petal fall



•Registered fungicides with reported efficacy against black spot are copper (all formulations; use maximum label rate) and strobilurins (Abound, Gem, Headline; maximum label rate recommended). Strobilurins are recommended at temperatures greater than 94°F when phytotoxicity is a concern with copper. No more than 4 strobilurins applications can be made in a year for all diseases and consecutive applications are not recommended due to potential resistance development.

•Black spot management can be coordinated with a canker management program. Copper sprays are effective for both diseases but applications for black spot will need to be extended past the canker application season for most varieties (see back).

•Fungicide applications for greasy spot and melanose will also be effective against black spot. However, neither Enable nor petroleum spray oil have a demonstrated effect against black spot.

•The pre-bloom fungicide applications for Alternaria brown spot and citrus scab will not be effective for black spot because spores are not yet present to cause infection. Petal fall may still be too early to begin applications for black spot if the weather is dry.

•It is important to get good canopy coverage with fungicides for black spot control. To ensure complete coverage consider using a spray volume of 250 gallons per acre.

•Leaf litter management is also an important tool for black spot management since the primary spores are produced in the litter like greasy spot. The measures described below have shown to effectively reduce greasy spot inoculum, although not enough to eliminate fungicide applications.

•One urea (187 lb/treated acre) or ammonium sulfate (561 lb/acre) application will reduce the number of fungal structures and spore production.

**OR**

•Enhanced irrigation with microsprinkler five times a week starting mid-March and continuing until litter is decomposed.

•Dolomite lime (2,226 lb/acre) will also reduce the number of fungal structures and spores.

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# Foliar Fungal Management Program

Shaded areas represent suggested spray periods. Refer to the annual Florida Citrus Pest Management Guide for more details.

		<table border="1" style="width:100%; text-align:center; border-collapse: collapse;"> <tr> <td style="width:16.6%; background-color: #f4a460;">Oranges</td> <td style="width:16.6%; background-color: #ffff00;">Grapefruit</td> <td style="width:16.6%; background-color: #90ee90;">Valencias</td> <td style="width:16.6%; background-color: #dc143c;">Tangerines &amp; Hybrids</td> <td style="width:16.6%; background-color: #add8e6;">All varieties</td> <td style="width:16.6%; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);">Optional applications</td> </tr> </table>												Oranges	Grapefruit	Valencias	Tangerines & Hybrids	All varieties	Optional applications
Oranges	Grapefruit	Valencias	Tangerines & Hybrids	All varieties	Optional applications														
DISEASE	FRUIT MARKET and VARIETY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC						
<b>Black Spot<sup>a</sup></b>	Processed/Fresh All varieties																		
<b>Greasy Spot<sup>b</sup></b>	Processed/Fresh Oranges and Grapefruit																		
	Processed Valencias																		
<b>Canker<sup>c</sup></b>	Processed/Fresh Early Oranges																		
	Processed/Fresh Grapefruit																		
	Processed/Fresh Valencias, Tangerines & Hybrids																		
<b>Melanose<sup>d</sup></b>	Fresh Grapefruit																		
<b>Alternaria Brown Spot<sup>e</sup></b>	Fresh Tangerines and Hybrids																		
<b>Scab<sup>f</sup></b>	Fresh Grapefruit, Tangerines and Hybrids																		
<b>DISEASE</b>	<b>FRUIT MARKET and VARIETY</b>	<b>JAN</b>	<b>FEB</b>	<b>MAR</b>	<b>APR</b>	<b>MAY</b>	<b>JUN</b>	<b>JUL</b>	<b>AUG</b>	<b>SEPT</b>	<b>OCT</b>	<b>NOV</b>	<b>DEC</b>						

<sup>a</sup>Optional application if there are high rainfall amounts in April, otherwise begin applications in early May

<sup>b</sup>Optional application in late July - early August if infection was severe and has caused defoliation in the previous year

<sup>c</sup>Canker is a bacterial disease managed with copper; apply every three weeks

<sup>d</sup>Apply every three weeks

<sup>e</sup>Frequency of sprays depends on amount of rainfall; start applications at ¼ to ½ full expansion with the second spray at petal fall; see Florida Citrus Pest Management Guide for more details

<sup>f</sup>Apply first application at ¼" flush; second application at petal fall; third application three weeks after petal fall; application time will vary depending on year and location, but typically begins mid-February

**The label is the law!**