

2026–2029 Florida Citrus Production Guide: Greasy Spot¹

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Greasy spot is caused by the fungus *Zasmidium citri-griseum*, formerly known as *Mycosphaerella citri*. Management must be considered in groves intended for processing and fresh-market fruit. Greasy spot is usually more severe on leaves of grapefruit, pineapple oranges, Hamlins, and tangelos than on Valencias, Temples, Murcotts, or most tangerines and their hybrids. Greasy spot rind blotch (GSRB) is particularly problematic for grapefruit destined for the fresh-fruit market.

A new symptom has been described on fresh-market grapefruit. Greasy-green disorder was originally thought to be a new disease or disorder. It consists of green patches on the rind of fruit that are not removed with degreening practices (see chapter 41, "[Decay Control of Florida Fresh Citrus](#)"). There are no symptoms of greasy spot on the leaves or classic rind blotch on fruit from affected groves. *Z. citri-griseum* has been found growing on the patches with greasy-green, and the fungus was also found in the leaves despite there being no symptoms, showing that greasy-green is a new symptom of greasy spot rind blotch. Greasy-green should be managed like greasy spot.

Airborne ascospores produced in decomposing leaf litter on the grove floor are the main inoculum source for greasy spot. These spores germinate on the fruit and the underside of the leaves, where the fungus grows for a time on the leaf surface before penetrating through the stomates (natural openings on fruit and lower leaf surfaces). Internal growth is slow, and symptoms do not appear for several months. Warm, humid nights and high rainfall, typical of Florida summers, promote infection and disease development. Major ascospore releases usually occur from April to early June with favorable conditions for infection occurring from June through September. Leaves are susceptible throughout their lives.

On processing Valencias, a single spray of oil (5–10 gal/acre) or copper + oil (5 gal/acre) should provide acceptable control when applied from mid-May to June. With average-quality copper products, 2 lb of metallic copper per acre usually provides adequate control. The strobilurin-containing (FRAC MOA 11) fungicides (Amistar Top, Gem, Headline, Pristine, or Quadris) and Enable 2F are also suitable with or without petroleum oil. On early and mid-season oranges as well as processing grapefruit, two sprays may be needed, especially in the southern part

of the state, where summer flushes constitute a large portion of the foliage. Two applications also may be needed where severe defoliation from greasy spot occurred in the previous year. In those cases, the first spray should be applied from mid-May to June and the second soon after the major summer flush has expanded, often early to mid-July. Copper fungicides provide more consistent control than oil sprays. Control of greasy spot on late summer flushes is less important than on the spring and early summer flush because the disease develops slowly and defoliation will not occur until after the next year's spring flush. Thorough coverage of the underside of leaves is necessary for maximum control of greasy spot, which can be achieved with higher spray volumes; slower tractor speeds may be needed compared to control of other pests and diseases.

The treatment program is essentially the same for fresh fruit. That is, a fungicide application once anytime from May to June and a second in July should provide control of rind blotch. A third application in August may be needed if rind blotch has been severe in the grove. Petroleum oil alone is less effective than other fungicides for control of GSRB. Heavier oils (455 or 470) are more effective for GSRB control than lighter oils (435), but the former have a greater potential for phytotoxicity. Copper fungicides are effective for control of GSRB but may result in fruit spotting, especially if applied with petroleum oil or at high rates in hot, dry weather. If copper fungicides are applied in summer, they should be applied when temperatures are moderate (<94°F) at rates no more than 2 lb of metallic copper per acre, without petroleum oil or other additives, and using spray volumes of at least 125 gal/acre. Copper residue levels can be monitored with the [Citrus Copper Application Scheduler](#). More details are available in UF/IFAS publication [PP289](#), "A Web-Based Tool for Timing Copper Applications in Florida Citrus." Enable 2F can be applied for greasy spot control at any time but is especially indicated in mid-to-late summer for rind blotch control.

The strobilurin-containing fungicides (Amistar Top, Gem, Headline, Pristine, or Quadris) or Enable 2F can be applied at any time to all citrus and provide effective control of the disease on leaves or fruit. Use of a strobilurin is especially recommended in late May and early June because it controls both melanose and greasy spot and avoids potential fruit damage from the copper fungicides applied

at that time of year. A strobilurin-containing fungicide should not be applied more than once a year for greasy spot control because of the potential for the development of resistance. The addition of petroleum oil increases the efficacy of these products.

Fungicide Resistance

The fungus responsible for greasy spot has a history of developing fungicide resistance. Recently, isolates were shown to be resistant to strobilurin (FRAC MOA 11) fungicides. Whether the problem is widespread is currently unknown. It is advised not to use strobilurin

fungicides frequently. It is best to use them in a premixture with an additional mode of action. If control failure is observed after strobilurin use, discontinue use.

Web Addresses for Links

Citrus Copper Application

Scheduler: <http://agroclimate.org/tools/citrus-copper-application-scheduler/>

UF/IFAS publication PP289, "A Web-Based Tool for Timing Copper Applications in Florida

Citrus": <https://doi.org/10.32473/edis-pp289-2012>

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