

Diagnosing Dooryard Citrus Problems¹

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Citrus is grown in many areas of Florida and in most situations can be cultivated with only routine care. However, the Florida climate is conducive to many different insects, diseases and other disorders in the dooryard situation where many different types of plants are grown in close proximity may promote certain problems. Diagnosis of the many problems which can afflict citrus is often difficult, so this publication has been prepared to assist dooryard growers with this task. The various problems have been separated by where they may be located - the fruit (Table 1), the leaves (Table 2), or other portions of the tree (Table 3). Then, a general description is

given and brief suggestions for control are provided. More accurate diagnosis can be made when fresh specimens of the problem can be taken to local IFAS County Extension offices or to local garden supply centers.

Many of the problems are non-pest and spraying is not warranted. Even certain pest problems can be dealt with biologically and sprays are often unnecessary. If chemical control measures are warranted it is important to follow label instructions explicitly to prevent harm to the applicator, the tree or the environment.

Table 1. Problems of Fruit.

Usual Cause	When Usually Noticed	When Usually Occurred	Control
Symptom: Fruit drops prematurely			
Physiological disorder or disease. Various causes.	Most acute at bloom, during June, and near harvest.	Throughout season	Follow recommended cultural practices.
Comment: Some early drop is normal since trees often over-bear. Premature fruit drop (PFD) disease may sometimes affect very young fruit, resulting in drop with calyx remaining on stem.			
Symptom: Fruit is rusty or brown with smooth texture.			
Citrus rust mite	When fruit sizes and begins to mature.	Usually during fruit development.	Check for rust mites and spray if needed.
Comment: Primarily a cosmetic problem.			
Symptom: Splitting of fruit			

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Table 1. Problems of Fruit.

Usual Cause	When Usually Noticed	When Usually Occurred	Control
Physiological disorder	Prior to and during harvest season.	Just prior to fruit maturity.	Avoid water stress, follow fertilizer recommendations.
Comment: Not reversible. Follow recommended practices next season.			
Symptom: Smooth brown or tan irregular blemishes on peel.			
Mechanical damage from abrasion.	Near harvest	Usually when fruit is small.	No control available.
Comment: A cosmetic problem			
Symptom: Black, smutty covering of fruit			
Sooty mold fungus	Prior to and during harvest.	Summer	Control insects which cause problem.
Comment: The fungus grows on exudates from scales, whiteflies and aphids.			
Symptom: Granulation, drying of juice sacs.			
Physiological disorder	At harvest	Near harvest	Regular irrigation. Good cultural practices.
Comment: Problem is worse on young or vigorous trees.			
Symptom: Thick peel			
Physiological disorder	At harvest	Near harvest	Follow good cultural practices.
Comment: Worse on trees which are young or overfertilized, recently pruned.			
Symptom: Raised scabby bumps on fruit			
Citrus scab fungus	Anytime fruit is on tree	Shortly after bloom	Preventive spray program
Comment: Affects only certain varieties			
Symptom: Brown, pinhead-sized raised lesions on fruit about 1/16" diameter.			
Melanose fungus	Summer till fruit harvest.	Late spring	Preventive spray program. Remove dead wood.
Comment: Sprays will not reverse damage, must be prevented.			
Symptom: Grapefruit rind pitting			
Greasy spot fungus	At or near harvest	Summer	Preventive spray program.
Comment: A cosmetic problem			
Symptom: Raised specks or spots of various colors, usually less than 1/10", removable.			
Scale insects (there are many types).	Anytime	Summer, fall	Spray if population warrants control.
Comment: High populations affect tree vigor.			
Symptom: Premature coloring, black decay in fruit core.			
Black rot fungus	Late fall	Early fall	Remove affected fruit.

Table 1. Problems of Fruit.

Usual Cause	When Usually Noticed	When Usually Occurred	Control
Comment: An infrequent problem			
Symptom: Premature coloring, very small puncture wounds, some fruit drop.			
Plant/stink bug injury	Late summer, early fall	Late summer, early fall	Watch for insects and spray if necessary.
Comment: An infrequent problem			
Symptom: Tan, leathery decay with foul odor.			
Brown rot fungus	Near harvest and postharvest	Just prior to harvest	Preventive spray may be helpful if problem is recurrent.
Comment: An infrequent problem. Spray will not reverse existing damage.			
Symptom: Crease-like, depressed lines in fruit peel.			
Physiological disorder (creasing).	Prior to or during harvest	Summer	Follow good cultural practices.
Comment: An occasional problem of certain varieties.			
Symptom: Discolored, often necrotic sunken areas of damage to peel.			
Chemical burn	Anytime	Anytime	Usually results from improper spray rates or application.
Comment: Sprays must be applied properly observing all label instructions.			
Symptom: White, cottony masses usually located around stem.			
Mealybugs or cottony-cushion scale insects.	Anytime	Summer	Spray should be applied if population warrants.
Comment: Only an occasional problem. High population may cause fruit drop.			
Symptom: Black, raised bumps on fruit stem about 1/8" diameter.			
Black scale insects	Near harvest	Late spring	Spray should be applied if population warrants.
Comment: High populations can cause fruit drop.			
Symptom: Holes in fruit of various sizes, depths.			
Chewing insects, birds or rodents.	Near harvest	Near harvest	Observe to determine cause of problem.
Comment: Control measures will depend on nature of problem.			

Table 2. Problems of Leaves and Twigs.

Usual Cause	When Usually Noticed	When Usually Occurred	Control
Symptoms: Black, soot-like covering on leaves.			
Sooty mold fungus	Anytime	Mainly spring, summer	Need to control pests which cause problem.

Table 2. Problems of Leaves and Twigs.

Usual Cause	When Usually Noticed	When Usually Occurred	Control
Comment: The fungus grows on exudates of scales, whiteflies & aphids.			
Symptom: Distortion, curling and/or cupping of leaves.			
Aphids and/or citrus leafminer	Anytime	Mainly spring, summer when leaves were tender	Control insects on plant. Cannot reverse damage.
Comment: Controlling insects will prevent the problem but will not repair existing damage.			
Symptom: Scratched, silvery appearance to leaves.			
Spider mites, usually citrus red mite	Anytime	Mainly spring, fall	Control spider mites.
Comment: May cause leaf drop in fall with severe infestations.			
Symptom: Leaves cut, chewed or notched.			
Chewing insects such as grasshoppers, crickets, weevils.	Anytime	Anytime but usually during warmer months	Difficult- probably best removed by hand
Comment: Usually not a serious problem.			
Symptom: Leaves distorted, often with bumpy, scabby lesions.			
Scab fungus	Anytime	During spring growth flush period.	Requires well-timed sprays or use resistant varieties.
Comment: Must be prevented, spray will not correct. May be on fruit, twigs also.			
Symptom: Dark brown pinhead-sized pustules with sandpaper texture on leaf surface.			
Melanose fungus	Anytime	Late spring - early summer	Preventive spray program. Remove dead wood.
Comment: Sprays will not correct. May attack fruit & twigs also.			
Symptom: Dark tar-like spots on leaves usually less than 1/8" in diameter.			
Greasy spot fungus	Anytime	Summer	Preventive spray program. Remove fallen leaves under tree.
Comment: Sprays will prevent, not correct exiting problem. Severe cases will defoliate.			
Symptom: Raised specks or spots of various colors usually less than 1/10", removable.			
Scale insects (there are many types).	Anytime	Summer, fall	Spray when population warrants control.
Comment: High populations affect tree vigor. May also attack fruit, twigs.			
Symptom: White, cottony masses on leaves, twigs, fruit.			
Mealybugs or Cottony-cushion scale insects.	Anytime	Spring, summer	Hand removal or spray if warranted.
Comment: Usually not serious except on small plants but may cause fruit drops.			
Symptom: Small (1/16") translucent discs under leaves with white flying insects present.			
Whiteflies	Summer	Late spring, summer	Spray if population warrants control.
Comment: Sooty mold may be more of a problem than whiteflies.			

Table 2. Problems of Leaves and Twigs.

Usual Cause	When Usually Noticed	When Usually Occurred	Control
Symptom: Leaf necrosis at tip or margin. Maybe some drop, twig death.			
Salt accumulation from water or fertilizer.	Anytime	Anytime	Check water supply, reduce fertilizer.
Comment: Irrigate with fresh water to leach salts from roots.			
Symptom: Red or yellow raised spots about 1/12" on underside of leaves.			
Aschersonia friendly fungus which attacks whiteflies.	Anytime	Summer	Do not control as this is a friendly fungus.
Comment: This fungus attacks the immature whitefly.			
Symptom: Leaf drop, often followed by twig dieback.			
Root damage, most often due to flooding.	Anytime	Anytime	Avoid excess water.
Comment: If flooding has occurred, tree may need to be removed, replaced.			
Symptom: Pale green leaves, often undersized.			
Fertilizer deficiency, possible root damage.	Anytime	Anytime	Follow fertilizer recommendations. Check for root, trunk damage.
Comment: Check trunk near soil line for fungus lesions.			
Symptom: Pale green leaves with darker green veins.			
Nutrient deficiency -- usually microelements.	Anytime	Anytime	Nutritional spray needed.
Comment: Follow fertilizer and nutritional spray recommendations carefully.			
Symptom: Leaf yellowing, necrosis, some leaf drop.			
Spray Burn--May be salt or chemical	Anytime	Anytime	Wash off excessive residues. Avoid excess rates of spray.
Comment: Salt spray is often a problem near the ocean.			

Table 3. Problems of Limbs, Trunk or Entire Tree.

Usual Cause	When Usually Noticed	When Usually Occurred	Control
Symptom: White, snow-like specks on bark of limbs, trunk.			
Citrus snow scale	Anytime	Anytime	Remove mechanically or use chemical sprays.
Comment: Severe infestations may cause limb loss, fruit drop.			
Symptom: Tree declines, small yellowish leaves, bark lesions near soil often present.			
Foot rot fungus	Anytime	Anytime	Remove any organic material near trunk, disinfect area.
Comment: Cure will be difficult. May need to contact Extension office or local nursery.			

Table 3. Problems of Limbs, Trunk or Entire Tree.

Usual Cause	When Usually Noticed	When Usually Occurred	Control
Symptom: Tree declines without outward obvious symptoms.			
Blight, virus disease, nematodes, or weevils.	Anytime	Anytime	No control available for these problems.
Comment: Diagnosis of actual problem will likely be difficult. Local Extension office may be able to help.			