

Florida Cooperative Extension Service

# **Diagnosing Dooryard Citrus Problems**<sup>1</sup>

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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 prematu	rely		
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. Foll	ow recommended practices	next season.		
Symptom: Smooth brown or tar	n irregular blemishes on pe	el.		
Mechanical damage from abrasion.	Near harvest	Usually when fruit is small.	No control available.	
Comment: A cosmetic problem				
Symptom: Black, smutty covering	ng of fruit			
Sooty mold fungus	Prior to and during harvest.	Summer	Control insects which cause problem.	
Comment: The fungus grows of	n exudates from scales, whi	teflies and aphids.		
Symptom: Granulation, drying	of juice sacs.			
Physiological disorder	At harvest	Near harvest	Regular irrigation. Good cultural practices.	
Comment: Problem is worse or	young or vigorous trees.			
Symptom: Thick peel				
Physiological disorder	At harvest	Near harvest	Follow good cultural practices.	
Comment: Worse on trees which	ch are young or overfertilize	ed, recently pruned.		
Symptom: Raised scabby bump	s 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 reven	rse damage, must be preven	nted.		
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 af	fect tree vigor.			
Symptom: Premature coloring, black decay in fruit core.				
Black rot fungus	Late fall	Early fall	Remove affected fruit.	

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### Table 1. Problems of Fruit.

Usual Cause	When Usually Noticed	When Usually Occurred	Control
Comment: An infrequent proble	em		
Symptom: Premature coloring,	very small puncture wound	s, 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 prob	lem		
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 prob	lem. Spray will not reverse	existing damage.	
Symptom: Crease-like, depress	ed 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 ne	crotic sunken areas of dam	age 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 co	overing 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 scale	es, whiteflies & aphids.		
Symptom: Distortion, curling	and/or cupping of l	eaves.		
Aphids and/or citrus leafminer	Anytime	Mainly spring, summer when leaves were tender	Control insects on plant. Cannot reverse damage.	
Comment: Controlling insect	s will prevent the pr	oblem but will not repair ext	isting damage.	
Symptom: Scratched, silvery	appearance to leaves	3.		
Spider mites, usually citrus red mite	Anytime	Mainly spring, fall	Control spider mites.	
Comment: May cause leaf dr	op in fall with sever	e infestations.		
Symptom: Leaves cut, chewe	d 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 seri	ous problem.			
Symptom: Leaves distorted, of	often with bumpy, sc	abby lesions.		
Scab fungus	Anytime	During spring growth flush period.	Requires well-timed sprays or use resistant varieties.	
Comment: Must be prevented	d, spray will not corr	rect. May be on fruit, twigs	also.	
Symptom: Dark brown pinhe	ad-sized pustules wi	th 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	s on leaves usually le	ess 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 b	be more of a probler	n 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 rais	ed 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 attack	s the immature whit	tefly.		
Symptom: Leaf drop, often for	ollowed by twig dieb	ack.		
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 BurnMay 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-lik	ke 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.				