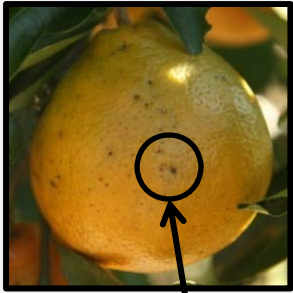


Citrus Foliar Fungal Diseases

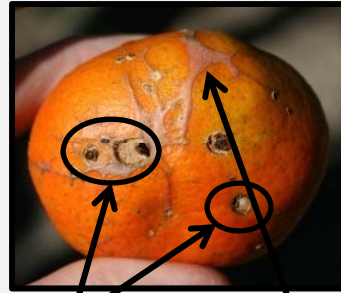
Alternaria Brown Spot



Alternaria lesions on mature fruit



Alternaria lesions on immature fruit



Alternaria lesions and wind scar on mature fruit. Note corky eruptions and craters



Young Alternaria lesion on leaf



Young Alternaria lesions on leaf; Note necrosis following the vein



Late season Alternaria lesion on leaf

Scientific Name: *Alternaria alternata*

Leaf Symptoms: Initial small brown spots that develop yellow halos. Lesions expand into circular or irregular shapes that can cover a large portion of the leaves. Badly affected leaves fall off.

Fruit Symptoms: Start as small dark specks and develop into either large black lesions or corky eruptions. The eruptions can fall off leaving craters on the fruit surface. Badly affected fruit will drop.

Varieties Affected: Minneola tangelos, Dancy tangerines, Murcotts, Orlando tangelos, Novas, Lees, Sunburst.

Residential Management: Clean nursery trees; good air drainage; prune in March; moderately vigorous rootstock; do not over-fertilize or water; no over-head watering; copper fungicides.

Citrus Scab



Corky or warty scab lesions on mature fruit



Scab lesions on mature fruit



Scab lesions on immature fruit



Late season scab lesions on leaves



Late season scab lesion



Young scab lesions forming finger-like structures on leaf

Scientific Name: *Elsinoe fawcettii*

Leaf Symptoms: Finger-like lesions on leaves, especially Temple with a tan-to-gray pustule at the tip.

Fruit Symptoms: Start with slightly raised pink-brown lesions which develop into warty or corky protuberances that can crack. The color changes to yellowish brown to dark gray.

Varieties Affected: Grapefruit, Temples, Murcotts, Tangelos and some other Tangerine hybrids.

Residential Management: Clean nursery trees; prune out heavily infected sections of tree; moderately vigorous rootstock; no over-head watering; copper fungicides.

Citrus Foliar Fungal Diseases

Megan M. Dewdney and Jamie D. Yates²

Photo Credit: M.M. Dewdney, L.W. Timmer, J.D. Yates

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Greasy Spot



Early greasy spot rind blotch on grapefruit

Greasy spot rind blotch on mature grapefruit

Greasy spot rind blotch on mature grapefruit



Young greasy spot lesions



Older greasy spot lesions

Scientific Name: *Mycosphaerella citri*

Leaf Symptoms: Initial yellow mottle pattern with reddish-brown blisters on the underside of the leaf. As the leaf ages, the lesions become darker brown with a greasy look. The yellow disappears and badly affected leaves will drop.

Fruit Symptoms: Symptoms appear as specks on rind between oil glands. Especially noticeable on grapefruit. Lesions start pink but become brown or black 3-6 months after infection.

Varieties Affected: All citrus but especially grapefruit, Pineapples, Hamlins and tangelos.

Residential Management: Remove dead leaves from around tree; copper fungicide or horticultural oil.

Melanose



Tear stain Melanose

Mudcake Melanose

Melanose lesions



Late season Melanose



Early season Melanose



Late season Melanose

Scientific Name: *Diaporthe citri*

Leaf Symptoms: Early symptoms are small reddish-brown discrete spots that are surrounded by yellow halos. Later the halos disappear but the raised pustules remain. The leaf surface feels like sandpaper.

Fruit Symptoms: If infected when fruit small, lesions can cover most of the fruit. The lesions are reddish-brown and rough. If infected later in the season, the lesions are small and discrete.

Varieties Affected: All citrus but grapefruit and lemons are most susceptible.

Residential Management: Prune out as much dead wood as possible; Copper fungicides.