Diagnostic Guide to Common Home Orchard Diseases

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This bulletin is intended to be used as a pictorial diagnostic guide to identify the most common diseases seen on fruits grown in home landscapes, gardens, and/or orchards in Georgia. Refer to the Homeowner Edition of the Georgia Pest Management Handbook for chemical control recommendations: http://extension.uga.edu/publications/detail.cfm?number=SB48.

In terms of plant disease management in home orchards, an integrated pest management (IPM) approach is necessary to manage plant pathogens and ensure production of quality produce. Using clean plant stock, selecting disease-resistant varieties (when available), sanitation, proper cultural care and control, and maintaining healthy plants are all essential components in minimizing home orchard plant diseases. Most fungicides are largely protectant in nature and must be applied before symptoms are seen.

Keeping records or a journal of past plant diseases will be useful in managing future problems in the home orchard. Remember, when applying pesticides, read the chemical label carefully and follow all instructions written on the label. More specifically, take note of the Preharvest Intervals (PHI – interval of time between when the last chemical spray is applied and when the fruit is harvested) for each individual chemical. The PHI will vary depending on the chemical used.
Apples and Pears
(see photos on page 6)

Disease: Sooty blotch and fly speck
Pathogen: Multiple organisms that usually occur together as a disease complex, referred to as SBFS (*Peltaster fructicola*, *Geastrumia polystigmatis*, and *Leptodontium elatius* – sooty blotch; *Zygophiala jamaicensis* – fly speck)
Comments: This disease complex appears late in the summer/early fall. Pruning is important to increase air circulation. Fruit thinning is also important. Diseases favor moderate temperatures and high humidity. These are superficial diseases, and they do not cause rots. Application (rubbing with a cloth) of a bleach solution (1 ounce household bleach per gallon of water) will help to remove these, but subsequent shelf life of apples is reduced.

Disease: Bitter rot
Pathogen: *Glomerella cingulata*
Comments: This is a very important summer disease, especially when conditions are warm and moist! Pustules of spores are formed in concentric rings on the fruit. A sunken, sour-smelling rot results. Good sanitation is vital to management. Remove diseased fruit, which will hang on the tree, and any cankers formed in the woody tissues.

Disease: Black rot
Pathogen: *Botryosphaeria (Physalospora) obtusa*
Comments: A major disease on both apples and pears in the Southeast. On leaves, a symptom known as “frog-eye” leaf spot occurs. Infection occurs early in the season at silver tip; rots become evident in the late season at the calyx or bottom end. Rot will be seen as concentric rings, and it will be dark (eventually turning black). Good sanitation is important, so prune out dead wood and remove fallen debris.

Disease: Apple scab
Pathogen: *Venturia inequalis*
Comments: Not a consistent problem in the Southeast. Cool, wet weather favors infection. Fruit and foliage must be protected season-long for adequate management if the disease does occur. Plant resistant varieties (ask local nurseries for availability). Sanitation is important. Rake and destroy fallen leaves to reduce the amount of disease that will carry over to the next year.

Disease: White or bot rot
Pathogen: *Botryosphaeria dothidea*
Comments: This is a serious and common late-season problem in apples and pears. This fruit rot is a rapidly developing soft rot (unlike bitter rot and black rot, which form harder rots). Sanitation is important. Remove mummified apples (dried, dead apples hanging in the tree) and prune out deadwood.

Disease: Fire blight
Pathogen: *Erwinia amylovora* — Bacterial disease
Comments: This is a bacterial disease, and it is very destructive on both apples and pears. It’s difficult and expensive to control. Avoid spraying too often, as resistance may develop. Succulent tissues are most vulnerable to infection, so avoid excessive nitrogen fertilization. Avoid pruning during and after the blossom period (corresponds to insect feeding). Promptly prune out any blighted tissue; remove infected plant parts through cutting 8 to 12 inches below diseased tissue; between cuts, disinfect pruning tools using a 10 percent bleach solution.

Disease: Cedar-Apple Rust
Pathogen: *Gymnosporangium juniperi-virginianae*
Comments: Can cause extensive defoliation of apple trees. Plant resistant varieties! If possible, remove galls from nearby cedar trees (breaks the fungal life cycle, as it needs both hosts to reproduce).

Blueberries
(see photos on page 7)

Disease: Botrytis blight
Pathogen: *Botrytis cinerea*
Comments: Disease affects green twigs, flowers, leaves and fruit. Outbreaks often occur after freeze injury to flowers in the spring, especially when followed by cool, wet weather. Fruit rot does not generally occur until after fruit is harvested. Sanitation is important. Remove infected fruit/mummies and maintain a good mulch layer.

Disease: Mummy berry
Pathogen: *Monilinia vaccinii-corymbosi*
Comments: Sanitation is important. Rake and remove mummies (dead fruit on the ground); prune annually.
Disease: Septoria leaf spot
Pathogen: Septoria albopunctata
Comments: Rake and remove infected leaf debris. Summer pruning or topping will help remove older, infected tissues. Increased spacing will improve air circulation, resulting in dryer foliage.

Disease: Twig blight and Fruit rot
Pathogen: Phomopsis vaccini
Comments: Twig blight: remove infected twigs in winter; choose resistant cultivars when available. Fruit rot: harvest fruit before it becomes overripe.

Brambles
(Raspberries and Blackberries)
(see photos on page 8)

Disease: Anthracnose
Pathogen: Elsinoe veneta
Comments: Disease affects canes, leaves, fruit and stems of berry clusters. Symptoms on canes are ash grey lesions with raised purple to brown borders. Sanitation is very important. After harvest, cut old floricanes to the ground, and remove and destroy them.

Disease: Orange rust
Pathogen: Kunkelia nitens
Comments: Attacks all brambles except red raspberries. Establishes a systemic infection and, once infected, no cure is available. Symptoms include stunting and limited fruit production. Symptoms occur shortly after leafing out. When disease is first detected, dig up and discard/destroy any infected plants to reduce spread.

Disease: Rosette or double blossom
Pathogen: Cercosporella rubi
Comments: Most damaging to blackberries. In the spring, infected buds from the previous year produce numerous leafy sprouts – “rosettes” or “witches brooms.” Berries do not develop from infected blossoms. Remove/destroy nearby wild brambles – they serve as reservoirs; remove infected rosettes and blossom clusters before they open.

Disease: Orange felt (orange cane blotch)
Pathogen: Cephaleuros virescens
Comments: Remove old floricanes after harvest; increase air circulation in canopy; avoid stressing plants; improve drainage.

Bunch Grapes
(see photos on page 9)

Disease: Black rot
Pathogen: Guignardia bidwellii
Comments: Annual pruning in February; removing infected berries both on the ground and on the plant. After pruning, only the permanent trunk, one-year-old fruiting canes and short spurs should remain. Sanitation is important. Remove mummified fruit! Disease spread is favored by moist, wet weather.

Disease: Powdery mildew
Pathogen: Uncinula necator
Comments: Annual pruning in February will help to remove inoculum; remove infected berries both on the ground and on the plant. After pruning, only the permanent trunk, one-year-old fruiting canes and short spurs should remain.

Disease: Downy mildew
Pathogen: Plasmopara viticola
Comments: Annual pruning in February; remove infected berries both on the ground and on the plant. After pruning, only the permanent trunk, one-year-old fruiting canes and short spurs should remain.
Disease: Botrytis bunch rot
Pathogen: Botrytis cinerea — see Blueberry-Botrytis blight image

Disease: Pierce’s disease
Pathogen: Xylella fastidiosa — Bacterial disease
Comments: Vectored by various sharpshooters (such as glassywinged sharpshooter). New growth is stunted, yellow, deformed (resembles zinc deficiency). Choose more resistant cultivars; native grapes are generally more resistant. Do not propagate from symptomatic vines. Do not plant vinifera wine or table grapes at elevations below 1,300 feet. Muscadines are generally resistant, and some other native grapes have limited resistance.

Disease: Phomopsis
Pathogen: Phomopsis viticola
Comments: A late dormant application of lime sulfur is very beneficial for control of this disease.

Disease: Root knot nematode
Pathogen: Meloidogyne spp.
Comments: Prune tops to balance weakened roots; attentive watering and fertilization may prolong tree life. Nematode infested plants usually die sooner or later regardless of treatment. Plant new trees away from this site!

Disease: Rust
Pathogen: Cerotelium fici
Comments: Not fatal but will reduce tree vigor and size and quality of fruit. Attacks the leaves, usually in late summer. Infected leaves turn yellow-brown and drop. Underside of leaves have reddish brown spots/pustules. Sanitation is important.

Disease: Anthracnose
Pathogen: Glomerella cingulata — see Apple-bitter rot image
Comments: Not serious; Increase air circulation and avoid excess irrigation; sanitize.

Disease: Figs
(see photos on page 8)

Disease: Black rot
Pathogen: Guignardia bidwellii

Comments: Remove fallen debris and mummified fruit; during the winter, remove all old fruit stems to eliminate overwintering sites for fungi.

Disease: Bitter rot
Pathogen: Melaconium fuligineum

Comments: Remove fallen debris and mummified fruit; during the winter, remove all old fruit stems to eliminate overwintering sites for fungi.

Disease: Ripe rot
Pathogen: Glomerella cingulata — see Apple-bitter rot image

Comments: Remove fallen debris and mummified fruit. During the winter, remove all old fruit stems to eliminate overwintering sites for fungi.

Disease: Macrophoma rot
Pathogen: Botryosphaeria dothidea

Comments: Remove fallen debris and mummified fruit. During the winter, remove all old fruit stems to eliminate overwintering sites for fungi.

Disease: Angular leaf spot
Pathogen: Mycosphaerella angulata

Comments: This pathogen can cause leaf spotting that can lead to rapid defoliation. Remove fallen debris and mummified fruit; during the winter, remove all old fruit stems to eliminate overwintering sites for fungi. Pruning is equally important.

Disease: Powdery mildew
Pathogen: Uncinula necator — see Grape-powdery mildew image

Comments: Attacks young berries – causes a russetted look. Berry drop and reduced size result from infections. Improve air circulation and use proper sanitation practices.
Disease: Brown rot  
Pathogen: *Monilinia fructicola*  
**Comments:** Major disease of these fruits in Georgia. Disease infects blooms, stems and fruit. Sanitation is the key! Remove and/or prune infected tissues and areas on trees. Remove and discard mummies. During wet summers, green fruit injured by insects and/or environment will develop brown rot. Remove any fruit that has fungal growth.

Disease: Peach scab  
Pathogen: *Cladosporium carpophilum*  
**Comments:** Disease infects both fruit and twigs of current years’ growth. Small, oval to round, gray to black spots on fruit. Fruit may crack because of coalescing of scabs. Pruning trees to promote penetration of sunlight and air circulation is necessary.

Disease: Gummosis  
Pathogen: *Botryosphaeria dothidea*  
**Comments:** Disease causes sunken lesions with oozing amber-colored resin or gum on trunks, limbs, and twigs. Small twigs may be killed as disease progresses. Prune out and remove dead wood. Irrigation during periods of dry weather helps to reduce plant stress and may minimize disease.

Disease: Peach leaf curl  
Pathogen: *Taphrina deformans*  
**Comments:** Disease occurs in cooler areas of the state – primarily the upper Piedmont and mountains. Apply this to nectarines and peaches only. Sanitize. For successful control, the fungicides must be applied before bud swell.

Disease: Leaf spots  
Pathogen: *Mycosphaerella fragariae; Xanthomonas* sp.  
**Comments:** Leaf spot – upper leaf surface first as tiny, round, purple spot 1/8” in diameter; spot becomes gray with purple border. Loss of foliage is common.

Disease: Anthracnose  
Pathogen: *Colletotrichum* sp.  
**Comments:** Anthracnose is a major disease of strawberries when conditions are wet. Anthracnose infects stolons, petioles, crowns, fruit and leaves. Small dark lesions form on stolons and petioles in summer. Crowns can be infected, resulting in plant death. Remove infected plants or fruit and destroy or bury. Always purchase disease-free plants!

Disease: Botrytis blight  
Pathogen: *Botrytis cinerea*  
**Comments:** Botrytis is often present in strawberry leaves, etc., even if symptoms are not present. These quiescent infections give rise to production of spores under wet conditions during bloom. Blossoms need to be protected season-long to reduce fruit infection and to prevent epidemic development.

Disease: Rhizoctonia root and crown rot  
Pathogen: *Rhizoctonia* spp.  
**Comments:** Root rot is favored by cool weather, but crown rot is worse in hot weather. Plants start collapsing as fruiting starts. The bottom of the leaves are purple and leaves curl up as the original crown is killed. Buy disease-free plants.

Disease: Phomopsis leaf blight  
Pathogen: *Phomopsis obscurans*  
**Comments:** Disease starts in the fall or spring after planting. It spreads rapidly and can destroy most of the foliage. Remains active as long as there is green foliage. Symptoms occur as circular red to purple spots on leaflets; the spots enlarge and develop gray centers, making large V-shaped lesions. Fruit and calyx infection also occurs. Remove infected foliage. Fruit infection is prevented by controlling foliar infection.
### Apples and Pears

<table>
<thead>
<tr>
<th>Disease: Sooty Blotch and Fly Speck</th>
<th>Disease: Bitter Rot</th>
<th>Pathogen: Glomerella cingulata</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="" /> Dull black sooty blotches and individual “fly specks”</td>
<td><img src="image2" alt="" /> Concentric rings of acervuli</td>
<td><img src="image3" alt="" /> V-shaped lesions extending to core of fruit</td>
</tr>
<tr>
<td><strong>Pathogen:</strong></td>
<td><strong>Glomerella cingulata</strong></td>
<td><strong>Conidia (J. Brock, UGA)</strong></td>
</tr>
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<tr>
<th>Disease: Black Rot</th>
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<th>Disease: Apple Scab</th>
<th>Pathogen: Venturia inequalis</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image4" alt="" /> Brown, bruised look on the calyx end of fruit</td>
<td><img src="image5" alt="" /> Conidia</td>
<td><img src="image6" alt="" /> Black, scabby lesions on leaves and fruit</td>
<td><img src="image7" alt="" /> Perithecia and spores</td>
</tr>
<tr>
<td><strong>Pathogen:</strong></td>
<td><strong>Botryosphaeria dothidea</strong></td>
<td><strong>Pathogen:</strong></td>
<td><strong>Venturia inequalis</strong></td>
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<tr>
<th>Disease: White or Bot Rot</th>
<th>Pathogen: Botryosphaeria dothidea</th>
<th>Disease: Cedar-Apple Rust</th>
<th>Pathogen: Gymnosporangium juniperi-virginianae</th>
</tr>
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<tbody>
<tr>
<td><img src="image8" alt="" /> Depressed, soft, enlarged lesion on fruit</td>
<td><img src="image9" alt="" /> Ascospores within asci</td>
<td><img src="image10" alt="" /> Lesions on apple leaves</td>
<td><img src="image11" alt="" /> Teliospores</td>
</tr>
<tr>
<td><strong>Pathogen:</strong></td>
<td><strong>Botryosphaeria dothidea</strong></td>
<td><strong>Pathogen:</strong></td>
<td><strong>Gymnosporangium juniperi-virginianae</strong></td>
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</thead>
<tbody>
<tr>
<td><img src="image12" alt="" /> Shepard’s crook symptom on foliage</td>
<td><img src="image13" alt="" /> Dieback on branch due to presence of a canker</td>
<td><img src="image14" alt="" /> Lesions on apple leaves</td>
<td><img src="image15" alt="" /> Telial gall on cedar (alternate host)</td>
</tr>
<tr>
<td><strong>Pathogen:</strong></td>
<td><strong>Gymnosporangium juniperi-virginianae</strong></td>
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### Blueberries

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<tr>
<th>Disease: Mummy Berry</th>
<th>Pathogen: <em>Monilinia vaccinii-corymbosi</em></th>
<th>Disease: Botrytis Blight</th>
<th>Disease: Septoria Leaf Spot</th>
</tr>
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<tbody>
<tr>
<td>Shoot-blight phase (Bill Cline, NCSU)</td>
<td>Conidia</td>
<td>Blighted flowers (covered in conidia)</td>
<td>Small leaf spots with tan center and purple border (black dot in center - pycnidia of pathogen) (Bill Cline, NCSU)</td>
</tr>
<tr>
<td>Mummies on the bush (Bill Cline, NCSU)</td>
<td>Mummies (H. Scherm, UGA)</td>
<td>Berries covered in conidia (Bill Cline, NCSU)</td>
<td>Mummies (H. Scherm, UGA)</td>
</tr>
<tr>
<td>Infected green berries (H. Scherm, UGA)</td>
<td>Conidiophore and conidia</td>
<td>Pathogen: <em>Botrytis cinerea</em></td>
<td>Conidiophore and conidia</td>
</tr>
</tbody>
</table>

### Disease: Mummy Berry
- Shoot-blight phase (Bill Cline, NCSU)
- Mummies on the bush (Bill Cline, NCSU)
- Infected green berries (H. Scherm, UGA)

### Pathogen: *Monilinia vaccinii-corymbosi*
- Conidiophore and conidia

### Disease: Botrytis Blight
- Blighted flowers (covered in conidia)

### Pathogen: *Botrytis cinerea*
- Narrow, filiform, several-celled conidia

### Disease: Septoria Leaf Spot
- Small leaf spots with tan center and purple border (black dot in center - pycnidia of pathogen) (Bill Cline, NCSU)
- Mummies (H. Scherm, UGA)
- Infected green berries (H. Scherm, UGA)

### Pathogen: *Septoria albopunctata*
- Narrow, filiform, several-celled conidia

### Disease: Twig Blight and Fruit Rot
- Dieback of blueberry twigs (Bill Cline, NCSU)
- Fruit rot (Bill Cline, NCSU)

### Pathogen: *Phomopsis vaccinii*
- Conidia (two types: alpha [oval or fusoid] and beta [long and curved])
### Brambles (Raspberries and Blackberries)

<table>
<thead>
<tr>
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<th>Pathogen</th>
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<tbody>
<tr>
<td>Cane Blight</td>
<td>Leptosphaeria coniothyrium</td>
</tr>
<tr>
<td>Orange Rust</td>
<td>Kunkelia nitens</td>
</tr>
<tr>
<td>Rosette or Double Blossom</td>
<td>Cercosporella rubi</td>
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<tr>
<td>Cane Blight</td>
<td>Leptosphaeria coniothyrium</td>
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### Figs

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<tr>
<th>Disease</th>
<th>Pathogen</th>
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<tbody>
<tr>
<td>Root Knot Nematode</td>
<td>D. Langston, UGA</td>
</tr>
<tr>
<td>Rust</td>
<td>Cerotelium fici</td>
</tr>
<tr>
<td>Orange Felt (Orange Cane Blotch)</td>
<td>Cephaleuros virescens</td>
</tr>
<tr>
<td>Anthracnose</td>
<td>Cerotelium fici</td>
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</tbody>
</table>

**Disease:**
- **Cane Blight**
- **Orange Rust**
- **Rosette or Double Blossom**
- **Cane Blight**

**Pathogen:**
- **Leptosphaeria coniothyrium**
- **Kunkelia nitens**
- **Cercosporella rubi**
- **Cerotelium fici**

**Description:**
- **Cane Blight:** Dieback of canes
- **Orange Rust:** Yellow-orange pustules on leaf surfaces (usually lower leaf)
- **Rosette or Double Blossom:** Bunchy growth at nodes
- **Cane Blight:** Pycnidia, Ascospores in ascus

**Disease:**
- **Orange Felt (Orange Cane Blotch)**

**Pathogen:**
- **Cephaleuros virescens**

**Description:**
- **Orange Felt (Orange Cane Blotch):** Yellow, disc-shaped spots on canes
- **Orange Felt (Orange Cane Blotch):** Algal sporangiophores

**Disease:**
- **Root Knot Nematode**

**Pathogen:**
- D. Langston, UGA

**Description:**
- **Root Knot Nematode:** Knotty, galled roots (not fig roots)

**Disease:**
- **Rust**

**Pathogen:**
- **Cerotelium fici**

**Description:**
- **Rust:** Small, reddish pustules on the underside of the leaves
- **Rust:** Pustule (uredinial stage) on underside of leaf

**Disease:**
- **Orange Felt (Orange Cane Blotch)**

**Pathogen:**
- **Cephaleuros virescens**

**Description:**
- **Orange Felt (Orange Cane Blotch):** Yellow, disc-shaped spots on canes
- **Orange Felt (Orange Cane Blotch):** Algal sporangiophores
**Bunch Grapes**

<table>
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<tr>
<th>Disease</th>
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<th>Pathogen: Uncinula necator</th>
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<tr>
<td><strong>Black Rot</strong></td>
<td></td>
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<tr>
<td>Small, yellowish spots on leaves</td>
<td>Conidia</td>
<td>Cleistothecia</td>
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<tr>
<td>Sunken oval lesion with pycnidia of the fungus (black dots)</td>
<td>Masses of gray conidia covering infected grapes</td>
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<tr>
<td>Shriveled mummies (infected berries)</td>
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<tr>
<th>Disease: Powdery Mildew</th>
<th>Pathogen: Guignardia bidwellii</th>
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<tbody>
<tr>
<td>White powdery fungal growth on berries</td>
<td></td>
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<tr>
<th>Disease: Downy Mildew</th>
<th>Pathogen: Plasmopara viticola</th>
</tr>
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<tbody>
<tr>
<td>Yellow, irregular-shaped lesions on upper surface; whitish-gray fungal growth directly under lesions on lower surface of leaves</td>
<td>Conidiophores and conidia</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Disease: Pierce’s Disease</th>
<th>Pathogen: Phomopsis viticola</th>
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</thead>
<tbody>
<tr>
<td>Scorched leaves with a defined margin and yellow / chlorotic border</td>
<td>Two spore types: alpha and beta conidia</td>
</tr>
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<tr>
<th>Disease: Bitter Rot</th>
<th>Pathogen: Phomopsis viticola</th>
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<tbody>
<tr>
<td>Black acervuli covering berries (Bill Cline, NCSU)</td>
<td>Two spore types: alpha and beta conidia</td>
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<tr>
<th>Disease: Ripe Rot</th>
<th>Pathogen: Phomopsis viticola</th>
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<tr>
<td>Dark brown rot with pink masses of spores covering part or all of fruit (Bill Cline, NCSU)</td>
<td>Small, black pycnidia of the fungus on the cane</td>
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<td>Shriveled mummies (infected berries)</td>
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<tr>
<td>Pycnidia in a mummified grapevine berry</td>
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### Muscadines

**Disease:** Powdery Mildew  
**Pathogen:** Mycosphaerella angulata  
Surface russetting on fruit (Bill Cline, NCSU)

**Disease:** Angular Leaf Spot  
**Pathogen:** Mycosphaerella angulata  
Light yellow spots; irregular brown flecks develop in the center (Bill Cline, NCSU)

**Disease:** Black Rot  
**Pathogen:** Guignardia bidwellii  
Circular brown leaf spots

**Pathogen:** Macrophoma Rot  
Pycnidia containing conidia

**Pathogen:** Botryosphaeria dothidea  
Small, sunken, black fruit spots; round, with distinct edges (Bill Cline, NCSU)

### Peaches, Nectarines and Plums

**Disease:** Brown Rot  
**Pathogen:** Monilinia fructicola  
Masses of conidia covering light brown fruit rot

**Pathogen:** Botryosphaeria dothidea  
Conidia

**Disease:** Gummosis  
**Pathogen:** Botryosphaeria dothidea  
Gum/jelly produced on trunk

**Pathogen:** Monilinia fructicola  
Apothecia (sexual fruiting structure) on a peach mummy

**Pathogen:** Botryosphaeria dothidea  
Conidia
Peaches, Nectarines and Plums (continued)

**Disease:** Peach Scab

Raised dark brown lesions on twigs

**Pathogen:** *Cladosporium carpophilum*

Disease: Peach Leaf Curl

Deformed leaves (wrinkled, puckered, and/or curled)

**Pathogen:** *Phomopsis obscurans*

**Disease:** Anthracnose

Light to dark brown sunken lesions on fruit (Courtesy of Tom Jennings)

**Pathogen:** *Colletotrichum sp.*

Conidiophores and conidia

Disease: Botrytis Blight

Botrytis blight on strawberry fruit

**Pathogen:** *Botrytis cinerea*

Conidiophores and conidia

Disease: Leaf Spots

Leaf spot (gray/white center with purple border) - *Mycosphaerella* sp.

**Pathogen:** *Xanthomonas* sp.

Angular Leaf Spot (restricted by veins) (Courtesy of Jeff Cook)

Bacterial Streaming (@ 40x)

Disease: Phomopsis Leaf Blight

V-shaped leaf lesions progressing from leaf margin to leaf interior

**Pathogen:** *Phomopsis obscurans*

Conidia (two types)

Disease: Rhizoctonia Root Rot and Crown Rot

**Pathogen:** *Rhizoctonia* spp.

Robust, separate, pigmented, branching mycelia

Strawberries (Continued)

**Disease:** Anthracnose

Light to dark brown sunken lesions on fruit (Courtesy of Tom Jennings)

**Pathogen:** *Colletotrichum sp.*

**Disease:** Botrytis Blight

Botrytis blight on strawberry fruit

**Pathogen:** *Botrytis cinerea*

Conidiophores and conidia

**Disease:** Leaf Spots

Leaf spot (gray/white center with purple border) - *Mycosphaerella* sp.

**Pathogen:** *Xanthomonas* sp.

Angular Leaf Spot (restricted by veins) (Courtesy of Jeff Cook)

Bacterial Streaming (@ 40x)

**Disease:** Phomopsis Leaf Blight

V-shaped leaf lesions progressing from leaf margin to leaf interior

**Pathogen:** *Phomopsis obscurans*

Conidia (two types)

**Disease:** Rhizoctonia Root Rot and Crown Rot

**Pathogen:** *Rhizoctonia* spp.

Robust, separate, pigmented, branching mycelia
References

Literature:
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