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Raspberry Anthracnose

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Anthracnose is the most common and widespread disease of raspberries, especially black raspberries. It attacks canes, leaves and the stems of berry clusters, stunting or destroying the planting and reducing both fruit yield and quality. Anthracnose also attacks blackberry, western dewberry, cloudberry, European bramble and loganberry.

Symptoms

Anthracnose first appears in the spring when the young raspberry canes are about 6 inches high. Small, purple, slightly-raised spots are found scattered over the length of the canes. These lesions soon enlarge, become sunken in the center and turn gray with purple borders. They eventually grow to about 1/8 inch in diameter and run together to form extensively diseased areas on mature canes.

Then around mid July, the leaves, leaf veins, leaf stems and berry cluster stems also become infected with small, yellowish-white spots. Lesions on the stems of fruit clusters will cause the clusters to break off while the fruit is still hard and green. Anthracnose sometimes causes the brown, dried-up areas on ripe berries.
A severe outbreak of anthracnose will stunt or destroy new canes. Infected canes tend to crack during winter, causing them to dry out and break in the fruiting season. These canes are also more susceptible to winter injury.

**Cause**

Anthracnose is caused by the fungus *Elsinoe veneta*, which overwinters in lesions on old fruiting canes. Just as the raspberry buds start to open in the spring, the fungus produces spores that are carried by wind and splashing rain to healthy, young canes. The lesions that develop on these "spring" canes then produce summer spores that, in turn, spread the disease to leaves, fruit, fruit stems and fruiting canes.

Young, tender canes are highly susceptible to anthracnose infection during wet, rainy periods. During dry weather, these canes harden-off and resist the disease.

**Control**

1. Raspberries should be planted in sunny, open areas that have good air drainage. Moist conditions favor anthracnose infections.
2. Plant only disease-free canes when establishing a new patch; prune off old cane stubs before planting.
3. Plant resistant cultivars: Black Hawk is more resistant than other black raspberry varieties; Sodus and Marian are more resistant than other purple raspberry varieties.
4. Keep weeds cultivated from between the rows; they prevent good air circulation and thus hamper rapid drying of foliage.
5. After harvest, remove and destroy badly-infected canes.
6. Use fungicides to prevent anthracnose -- before symptoms become evident. When using fungicides follow ALL label instructions.

**Table 1. Spray schedule for anthracnose**

<table>
<thead>
<tr>
<th>When to spray</th>
<th>Material and amount to use in 1 gallon of water</th>
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</thead>
<tbody>
<tr>
<td>A. Delayed dormant, when leaf buds are showing 1/4 -1/2 inch green tips</td>
<td>1 1/3 - 2 cups of liquid lime sulfur*</td>
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<tr>
<td>B. Just before blossoms open</td>
<td>2 TBSP captan 50% WP</td>
</tr>
<tr>
<td>C. After plants have blossomed</td>
<td>2 TBSP captan 50% WP</td>
</tr>
<tr>
<td>D. After harvest is completed and old canes removed</td>
<td>2 TBSP captan 50% WP</td>
</tr>
</tbody>
</table>

* Liquid lime sulfur (sold as Orthorix, etc.) sprays likely are the most important sprays for control of anthracnose. The spring application is referred to as a "delayed dormant" spray, to be applied just as the buds begin to open.