Anthracnose

Colletotrichum cereale

DAMAGE CAUSED

Foliage: older leaves attacked first. Leaves may appear water-soaked and/or display small, reddish-tan leaf spots or elongate yellow leaf spots. As the disease advances, foliage will turn brown and black, hair-like fungal structures known as acervuli (photo to right) may develop.

Crown or basal rot: lower leaf sheaths and crowns become dark-colored, leaves turn yellow-orange, and acervuli (photo to right) are common.

Overall appearance: small, irregular patches of yellowing, thinning or brown turf eventually grow larger if the infestation is not controlled.

PLANTS ATTACKED

Poa annua is the most common target.

Other hosts include (in order of frequency observed) bentgrass, Kentucky bluegrass, bermudagrass.

PESTS/CONDITIONS THAT CAUSE SIMILAR DAMAGE

- rapid blight
- black turfgrass ataenius
- high soil salts (salinity)
- heat or drought stress

PREDICTING DISEASE

Spring and summertime, once average air temperatures reach 65F (18C).

CONDUCIVE ENVIRONMENTAL CONDITIONS

- Average air temperatures greater than 65 F(18C)
- Anything that stresses turf, such as:
- High soil salts (salinity)
- Low nitrogen
- Low Potassium
- Compaction
- Traffic
- Heat or drought

Anthracnose

Colletotrichum cereale

Anthracnose, continued

- Excessive shade
- Poor drainage
- Low mowing heights

GEOGRAPHIC DISTRIBUTION

Worldwide

MONITORING TECHNIQUES:

Monitor air temperatures. When five-day average air temperatures reach 65F (18C), begin scouting turf for early symptoms.

Focus scouting efforts on weak or stressed areas, or areas where the disease has occurred in the past. This is where symptoms are likely to occur earliest.

THRESHOLDS:

For golf courses where anthracnose has been a problem in the past, preventive control is warranted (see Management Strategies below).

For situations where a curative approach is used, control should be implemented as soon as symptoms are seen.

Anthracnose

Colletotrichum cereale

MANAGEMENT STRATEGIES:

Strains of anthracnose resistant to QoI (strobilurin) and benzimidazole fungicides have been documented in several locations. Follow resistance management guidelines by rotating products as with different modes of action. Always consult the most recent version of all product labels before use.

<table>
<tr><th>TYPE</th><th colspan="2">PRACTICE</th></tr>
<tr><td>Cultural</td><td colspan="2">• Adequate nitrogen and potsssium (0.1 – 0.2 lb nitrogen/wk during season), but do not exceed 20 ppm total nitrogen in soil
• Maintain soil salinity below 3.0 dS/m for cool season turf
• Apply Primo Maxx at 1/8 oz/1000 sq ft every 14 days during anthracnose threat period.
• Schedule a monthly "venting" using small diameter (1/4") hollow cores or solid tines.
• Raise mowing heights as much as possible.</td></tr>
<tr><td>Biological</td><td>Preventive: apply when average air temperatures reach 65F (18C)</td><td>Polyoxin-D (Affirm, Endorse)</td></tr>
<tr><td rowspan="2">Chemical</td><td>Preventive: apply when average air temperatures reach 65F (18C)</td><td rowspan="2">Refer to Vincelli, Clarke and Munshaw, “Chemical Control of Turfgrass Diseases” for information on products and resistance management rotations</td></tr>
<tr><td>Curative : less desirable strategy, with less than optimal results in most cases</td></tr>
</table>