In 2013, turf researchers at Penn State University discovered activity by PCNB on Colletotrichum cereale, the fungus that causes anthracnose. This finding led to the first new use of this common turf fungicide active ingredient in more than 30 years.

Introducing AUTILUS ™ Turf Fungicide. The breakthrough fungicide for anthracnose control.

Subsequent field trials conducted by university and private researchers throughout the northeast in 2014 confirmed that AUTILUS provides excellent control of anthracnose on putting green turf consisting of annual bluegrass and/or creeping bentgrass.

Contact your AMVAC/AEP distributor today or AMVAC at 1-800-GO-AMVAC (1-888-462-6822) and visit www.amvac-chemical.com for more information on AUTILUS and the entire AMVAC line of products.
THE AUTILUS ADVANTAGE

As part of a fungicide rotation program, AUTILUS offers exceptional control of basal rot anthracnose infections.

MULTI-SITE MODE OF ACTION

Unlike any other turf fungicide on the market, AUTILUS is a Group 14 fungicide that has contact activity and provides a multi-site mode of action.

RESISTANCE MANAGEMENT

Widespread C. cereale resistance to benzimidazole and strobilurin fungicides has been documented and sensitivity shifts have been reported for several triazoles. There has never been a documented case of resistance to PCNB, making AUTILUS an important component of an anthracnose resistance management program.

SEASON-LONG CONTROL

Attack anthracnose from all angles. During the growing season, it is important to employ a program that includes a sequence of active ingredients from all fungicide classes that have proven effectiveness against this important disease.

ANTHRACNOSE

Anthracnose diseases, caused by the fungus Colletotrichum cereale, are destructive to annual bluegrass and creeping bentgrass turf. Anthracnose may develop as a foliar blight, affecting turfgrass leaves, or a basal rot, which attacks the leaf sheaths, crowns and stolons of the plant. Basal rot is the most destructive form of the disease and it is most prevalent on putting greens.

CAUSES AND SYMPTOMS

Anthracnose appears as irregular patterns of yellow to orange patches of turf, varying from small circular spots to patches up to one foot in diameter. Symptoms of anthracnose tend to be most severe in areas of high stress due to factors such as low mowing, excessive foot or equipment traffic or inadequate irrigation or fertilization.

MANAGING ANTHRACNOSE

Because both the foliar and basal rot forms of anthracnose are induced by stresses that weaken the host plant, cultural practices and turf management techniques that reduce stress on turf are the most important components of an anthracnose management program.

CULTURAL PRACTICES

Extensive research indicates various cultural practices can greatly influence anthracnose severity. Current recommendations include proper nitrogen fertilization, increased mowing height combined with green rolling to maintain ball roll distances, plant growth regulators, irrigation, topdressing and cultivation.

Researchers at Rutgers University have developed an excellent working outline of best management practices for anthracnose control, available at http://turf.rutgers.edu/research/bmpsanthracnose2014.pdf

FUNGICIDES

Fungicides will always be an important component of anthracnose management programs. However, their use is complicated by the ability of C. cereale to develop resistance after repeated exposure to individual fungicide active ingredients. This warrants judicious use of single-site mode of action fungicides, as well as a fungicide rotation that incorporates all available fungicide modes of action into a seasonal program.

AUTILUS TURF FUNGICIDE

AUTILUS treatment recommendation (per 1,000 square feet)

- AUTILUS at 6 fl.oz. + Torque™ at 0.6 fl.oz. + Par® pigment at 0.37 fl.oz.

Apply to turfgrass that is well established, actively growing and not under excessive heat or moisture stress or drought stress. Use AUTILUS as part of an anthracnose control program that consists of a sequence of fungicides that have proven activity against this disease.

AUTILUS Suggested Application Windows for Anthracnose Control

- May through early-June (1 application)
- Late-August through October (1-2 applications at least 4 weeks apart)

Potential alternate fungicides for an anthracnose management program

<table>
<thead>
<tr>
<th>Product</th>
<th>Active Ingredient</th>
<th>Chemical Class</th>
<th>FRAC Group</th>
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<td>AUTILUS</td>
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<td>Aromatic Hydrocarbon</td>
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<tr>
<td>Torque</td>
<td>tebuconazole</td>
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<td>penthiopyrad</td>
<td>Pyrazole-carboxamide</td>
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Examples of Alternate Anthracnose Fungicides