

NOTE: THE FOLLOWING INFORMATION IS OFFERED AS A GUIDE FOR PROSPECTIVE CHALLENGES TO MANAGING SEASHORE PASPALUM. ALL TURFGRASSES ARE SUBJECTED TO INSECT, DISEASE, AND WEED PRESSURES. PROPER MANAGEMENT IS THE KEY TO SUCCESS. YOU MUST CHECK ALL LABELS OF THE PESTICIDES TO BE USED ON THIS GRASS FOR LEGAL AND PROPER USE. MENTION OF A PARTICULAR PRODUCT IS NOT AN ENDORSEMENT OF THAT PRODUCT BUT REFLECTS WHAT IS KNOWN AT THE PRESENT TIME. ENVIRONMENTAL INTERACTIONS, INCLUDING SALINITY THAT IMPACT SPECIFIC SITES, MAY GIVE VARIABLE RESULTS IN THE USE OF SOME PRODUCTS.

Phytophthora blight (name means 'plant destroyer'): crown and root rot

An oomycete protist that is only remotely related to fungi (has mycelium and hyphae that produce sporangia, which can travel via air movement; sporangia then release zoospores that travel in water onto turfgrass plants). More closely related to heterokont algae (brown algae and diatoms)--commonly referred to as water molds. Has two kinds of spores: oospores formed from sexual recombination, and chlamydospores which are asexual survival spores. Once the pathogen has entrenched in the crown or rhizomes, you must apply systemic fungicides for control.

Survival and pathogenicity are maximized in clay or loamy soils, in high moisture retention soils with elevated organic matter or moisture retention amendments (>20% moisture capacity)--soils at or above field capacity; survival decreases below pH 5.0 acidic conditions.

Pathogenicity triggering conditions:

- 1) night temperatures below the dew point for at least 4 hours,**
- 2) low night temperatures that do not drop below 15°F or 10°C,**

3) persistent cloudy conditions, and

4) rainfall or irrigation the next day. Salty conditions can predispose the plants to disease attack.

Cultural control: functional drainage, frequent aeration to maintain pore continuity in soil profiles; salt management in soil profiles; sulfur-based fertilizers; avoid high nitrogen fertilizers; remove thatch and minimize application of water retention amendments; maintain functional drainage.

Suggested Chemical Control: *without methyl bromide fumigation, you can expect this pathogen to cause more and more problems.*

Metam sodium and dazomet products that break down into isothiocyanate can be helpful as a soil fumigant. Application of systemically oriented chemicals in the groups phenylamide, phosphonate, cinnamic acid, and quinone outside inhibitor (QoI) fungicides. Copper based fungicides can also be effective (Junction--mancozeb + copper hydroxide--- and other compounds effective for algae control).

Phenylamides--xylem movement from roots to shoots: metalaxyl, mefenoxam, oxadixyl; Products: Subdue Maxx, Apron, Ridomil. Active only on oomycetes. Does not kill the organism.

Phosphonate group--both xylem and phloem movement: fosetyl-Al and phosphorous acid. Products: Forsetyl-Al---Signature, Aliete, Viceroy; Potassium phosphonates---Alude, Apear, Magellan, Phostrol, Vital. Stimulate host plant resistant and act directly on the organism. Does not kill the organism.

QoI group--translaminar movement slowly within the plant. Mainly foliar infection control. Product: Disarm (fluoxastrobin); possible products--Compass (trifloxystrobin) or Insignia (pyrachlostrobin); fenamidone, ametoctradin + dimethomorph. Mandestrobin (Pinpoint).

Other possible fungicides: Koban or Terrazole (etr Diazol); Segway (cyazofamid/cyanoimidazole); Stellar, Presidio, Adorn (fluopicolide) + Banol, Proplant,

Previcur Flex (propamocarb); Actigard (acibenzolar-S-methyl)--defense system activation; Initium (ametoctradin) + Forum (dimethomorph)=Orvego, Stature®, Zampro®; Reason, Consento®(fenamidone) or with mancozeb=Sereno®; ethaboxam, oxathiapiprolin (Zorvec, Orondis), mandipropamid (Revus).
*****Orondis Gold 200 (oxathiapiprolin)--oxysterol-binding protein inhibitor (OSBPI).--single site inhibitor (piperidinyl thiazole isoxazoline). FRAC 15/49 fungicide group.*****

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Citations:

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