



Turfgrass Pest Management

The management of turfgrass insect pests and diseases is most effective when an integrative approach is taken. Oftentimes, cultural practices will help grasses to resist and recover from pest damage. Resistant turfgrass varieties may also be available.

News/What to Watch For

Diagnosed insect pests in the fall of the year have included armyworms, sod webworms, cutworms, white grubs, and billbugs. Diagnosed diseases have included necrotic ring spot, fading out (*Curvularia* blight), pink snow mold, and take-all patch.

Insect and Disease Activity and Information

Necrotic Ring Spot (*Ophiosphaerella korrae*)



Favorable Conditions: cool (40-60°F) and moist conditions, may be compounded by drought and compaction.

Necrotic ring spot (NRS) primarily infects Kentucky bluegrass, though it may also be seen in annual bluegrass and tall fescue. The disease damages the roots and crowns of the grass plants and the first symptoms are small, light green patches of turf that get larger over time. Frequently the turf will survive the infection and re-grow in the center of the

patches, giving them a ring-like (“frog eye”) appearance.

Cultural Practices

Maintain the highest mowing height possible and follow recommended irrigation practices to prevent drought stress. Core aerate once annually to reduce thatch and avoid over application of N fertilizers.

Resistant Turfgrass Varieties

Kentucky bluegrass: Adelphi, Eclipse, Midnight, Majestic, Wabash, Monte Carlo, Baron, Blue-Tastic, Unique, Voyager, Beyond, Eagleton, Cabernet, Abbey, Award, Brooklawn.

*Fungicide Options**

Azoxystrobin (Heritage), myclobutanil (Eagle), propiconazole (Banner MAXX, Propiconazole Pro, Fertilome Liquid Systemic Fungicide), and azoxystrobin + propiconazole (Headway).

Pink Snow Mold (*Microdochium nivale*)



Favorable Conditions: cool (40-60°F) and moist conditions, neutral to alkaline soils, high N applications in the fall.

Pink snow mold (PSM) can affect all cool-season turfgrasses, but damages bentgrass and annual bluegrass most severely. Snow cover is not necessary for PSM to occur, so it may be seen in the fall, but is more prevalent in the spring. Where recurrence is severe, preventative fungicide applications may be made in the fall. Symptoms include well-defined, circular patch clusters and white-pink mycelium on infected leaf blades. Patches of dead, matted leaf blades may also be visible. **PSM has been identified in Cache County this fall.**

Cultural Practices

The last mowing of the season should be short (1 ½ to 2 inches) and the clippings should be removed. If there is PSM damage in the spring, recovery will be quickened by raking and/or mowing to aerate the matted turf.

Resistant Turfgrass Varieties

Perennial ryegrass: Delray; Chewings fescue: Atlanta, Ruby; Red fescue: Dawson.

*Fungicide Options**

Tetrachloroisophthalonitrile (Daconil), azoxystrobin (Heritage), PCNB, or combination products (Instrata).

Fading Out (*Curvularia* spp.)



Favorable conditions: cool (50-75°F) and moist conditions, shade, closely mowed turf, high rates of N fertilization.

This disease primarily affects Kentucky bluegrass. Circular or elongated purplish spots with straw colored centers appear on leaf blades, sheaths and stems. Crowns and roots may also be affected with dark brown rot. Patches of dead or dying grass can coalesce and may be mistaken for drought stress.

Cultural Practices

Reduce shade where possible. Improve aeration and drainage and control thatch. Mow as high as possible and do not exceed recommended rates of N fertilization.

Resistant Turfgrass Varieties

Kentucky bluegrass: Adelphi, Bristol, Eclipse, Enmundi, Majestic, Mona, Nugget, and Somerset.

*Fungicide Options**

Fungicides are rarely needed to control melting out. However, if the disease has occurred repeatedly in the same areas over a number of years, a fungicide may be warranted. Tetrachloroisophthalonitrile (Maxide, Ferti-Lome), combination product (Triathlon).



Sod Webworm (*multiple species*)

Life Cycle: two generations per year for the most part, though one to four are possible depending on species.

Sod webworm (SW) damage is inflicted by the larvae of the moths which feed on turfgrass blades. Blades are chewed off just above the crown. General thinning may be followed by brown patches in the area. Heavy infestations can kill grass, with peak damage occurring in summer and early fall.

Cultural Practices

Properly irrigating and fertilizing turfgrass will help the grass to resist and recover from SW damage. Overly irrigating and/or fertilizing will predispose the grass to insect outbreaks.

Resistant Turfgrass Varieties

Endophyte enhanced perennial ryegrasses and fescues show some resistance to SW.

*Insecticidal Products**

Spinosad (Conserve), *Bacillus thuringiensis* (Bt, Deliver), *Steinernema carpocapsae* (Biosafe, Biovector, Exhibit), azadirachtin (Ornazin).



White Grubs (*multiple species*)

Life Cycle: Japanese beetles (Utah County) and masked chafers have one generation per year, May/June beetles have one generation every three years.

White grubs (WG) are the larvae of one of several different beetles in Utah. Damage occurs when the roots of the grass plant are chewed off just below the soil surface or thatch layer. Early damage is consistent with drought symptoms. As damage increases, the grass can feel spongy and will easily pull away from the soil surface. Secondary pests such as birds and raccoons may prey on WG in a lawn.

Cultural Practices

Properly irrigating and fertilizing turfgrass will help the grass to resist and recover from WG damage. Overly irrigating and/or fertilizing will make the lawn more attractive to white grub adults.

Resistant Turfgrass Varieties

The fine and tall fescues are less susceptible to WG damage than Kentucky bluegrass.

*Insecticidal Products**

Imidacloprid (Merit), *Bacillus thuringiensis* (Bt, Deliver), *Steinernema carpocapsae* (Biosafe, Biovector, Exhibit), azadirachtin (Ornazin).

Recommended Cultural Practices for Fall

Mowing

Regular mowing height should be 2 ½ – 3 ½ inches to promote root growth and stress tolerance and clippings should be recycled back into the lawn. These are good practices, but not for the final mowing of the season. The last mowing should be much shorter, from 1 to 1 ½ inches, and clippings should be removed. Mowing at this shorter height will not leave long grass blades standing that over the winter can increase humidity beneath snow cover. If the grass blades are very long, and there is lengthy snow cover, diseases may result.

Fertilization

After the last mowing is the best time to apply the last fertilization of the growing season. Nitrogen is of primary concern. Following this mowing, you'll want to apply 1 pound of quick-release nitrogen fertilizer per one thousand square feet of lawn area. This is the most critical fertilization of the entire growing season and should not be missed! Research has shown that this late fall fertilization provides the most benefit and drought tolerance to the lawn the following summer.

Aeration/Cultivation

Fall is also an ideal time to aerate your lawn if the soil is compacted or there is a significant layer of thatch beneath the grass. If the thatch underneath your lawn is more than ½ inch thick, consider core aeration to stimulate the natural decomposition process. Likewise, if you have a very fine-textured soil, compaction may occur, particularly in high traffic areas. Core aeration will help to alleviate this compaction.

Seeding & Overseeding

Fall is the ideal time to seed new turfgrass areas or to overseed areas that may have been damaged during the growing season by insect pests or diseases. The cooler temperatures will promote germination and growth of cool season turf species such as Kentucky bluegrass, tall and fine fescues, and perennial ryegrass. Choose pest resistant or recommended turfgrass cultivars when possible.

Relevant USU Extension Fact Sheets

Turfgrass Management

http://extension.usu.edu/files/publications/publication/HG_517.pdf

http://extension.usu.edu/files/publications/publication/HG_Grass_2004_01.pdf

Insect Pests

<http://extension.usu.edu/files/publications/factsheet/billbug07.pdf>

<http://extension.usu.edu/files/publications/factsheet/white-grub07.pdf>

<http://extension.usu.edu/files/publications/factsheet/sod-webworm07.pdf>

Diseases

<http://extension.usu.edu/files/publications/factsheet/snowmold-turf08.pdf>

<http://utahpests.usu.edu/plantdiseases/files/uploads/PDFs/necrotic-ring-spot08.pdf>

***Precautionary Statement:** All pesticides have benefits and risks, however, following the label instructions will minimize the risk and maximize the benefit. Pay attention to the directions for use and follow precautionary statements. Pesticide labels are considered legal documents containing instructions and limitations. Inconsistent use of the product or disregarding the label is a violation of both federal and state laws. The pesticide applicator is legally responsible for proper use.

Turfgrass IPM Advisory
is published seasonally by Utah State University Extension

Editor: Kelly Kopp, kelly.kopp@usu.edu
click here [<http://www.utahpests.usu.edu/ipm/>] for archived advisories.

Utah State University is an affirmative action/equal opportunity institution.