

Fairy Ring

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Figure 1- Fairy ring in Kentucky bluegrass turf (source: www.colostate.edu/Depts/CoopExt/4DMG/images/fairy2.jpg.)

Problem Description:

Figure 1 is of a dead necrotic ring about 2 feet in diameter was found in a lawn of Kentucky bluegrass.

The turf in the center and the and around the ring was healthy and growing dormant for the winter.

Other small areas of dead necrotic turf were seen in a few areas away from the ring. The plants in the necrotic region appeared like they have been stressed and just were

not able to maintain with a weak root system and thus died.

Causal Organism:

The necrotic ring was an excellent sign of fairy ring. Fairy ring is a very common turf disease caused by many different fungal pathogens the most common of which is *Marasmius oreades*. Fairy ring got its name from medieval times when the rings were said to be caused by fairies or leprechauns who would dance in circle leaving a green ring or mushrooms behind. The pathogen *Marasmius oreades*, survives in the soils organic or thatch layer, which consumes organic matter to stay alive thus competing for nutrients with the turf. Turf in the early stages appears dark green due to lack of nitrogen, then during the hot summer or unfavorable conditions necrosis sets in, thus causing the dead ring. Fairy ring survives year after year, and usually grows anywhere between a few inches to 2 feet in diameter per year.

Disease Control:

The easiest way to control fairy ring is to prevent it by using sound turfgrass management practices, such as a good fertility and irrigation management programs (Johnston). Aerifying and vertical mowing (thatching)

are excellent ways to reduce the amount of thatch in the turf thus limiting the food source for the pathogen. However, if fairy rings are present in turf they are very hard to get rid of. Chemical control is very limited, but there are some fungicides that can treat fairy ring, however, they must penetrate the soil deep enough to kill all of the fungal mycelium, which can be difficult (Carlos). Also, fumigation can work but is not feasible in a residential setting. According to the University of Nevada Reno, the best way to eliminate the pathogen is to either drill holes in and around the ring and fill with water, soak the area in and around the ring with 18 to 24 inches of water and keep moist, or core aerating and then adding large amounts of water. What this does is keeps the area moist and favorable to microorganisms that are parasitic to the fairy ring pathogen, and also promote a healthy lawn (Carlos).

Reference:

Carlos, W.J. et al. 2003. Fairy rings in lawns.

<http://www.unce.unr.edu/publications/FS03/FS0320.pdf>. Info obtained. 11/18/03.

Johnston, W.J. 2003. Lecture Notes.