FAIRY RINGS

"Fairy rings" are not some supernatural phenomena or the location of a recent UFO landing. Instead, they are circular or arc-shaped formations.

The interesting term originates from folklore traditions crediting their formation to fairies or elves dancing in circles. They have also been called "elf rings" or "pixy rings."

Fairy rings are commonly found in grassy areas like yards, golf courses, or even a cemetery, particularly from late summer to early autumn. They are more common following periods of wet weather. These rings can range in size from as small as a dinner plate to larger than a football field.

Fairy rings form as fungi develops colonies underground, producing mycelium that expands outward while dying off at the center. During this process, the fungi initially do not harm the turf directly but may limit water availability to grass roots. This can potentially damage turfgrass by altering soil physical and chemical properties. These changes can cause localized dry spots and nutrient imbalances.

Fairy rings can expand at a rate of 10–14” per year and are difficult to manage due to the depth at which the causal organisms reside in the soil. New rings often arise from spores produced by mushrooms. Rather than a disease, this is an organism-induced change in the soil environment. This causes the turf to respond.

Sometimes it is compost which was applied to the soil, and sometimes it comes from wood chips left in the soil from tree removal. It is the decomposing wood material that exacerbates the issue. The primary causal agents are various basidiomycete fungi, thriving under warm, moist conditions with intermittent drought. Fungal growth is generally limited to a soil depth of six inches.

Treatment typically involves soil aeration and the application of wetting agents. Wetting agents are surfactants, a type of molecules with a water loving (hydrophilic) and a water-repelling (hydrophobic) end. The dual nature allows these agents to interact with water and soil. This helps facilitate water infiltration and distribution within the soil. The fungus depletes water and releases nitrogen, leading to dead turf spots by making the soil hydrophobic and causing grass to die off.

Fairy Rings are classified as:

- Type 1 fairy rings that develop most commonly on golf courses and occur less commonly on residential lawns. The fungi involved produce compounds that reduce the amount of water that the soil, leading to drought conditions that cause the grass in the ring to brown and die.
- Type 2 fairy ring fungi efficiently decay organic matter releasing nitrogen that promotes lush growth and leads to a dense green ring of grass.
- Type 3 fairy rings have rings of mushrooms that appear during wet periods, particularly in the fall.

Damon L. Smith, with the Department of Entomology and Plant Pathology at Oklahoma State University, did a

presentation on Dollar Spot, bipolaris diseases, and fairy rings. He concluded with these recommendations for controlling fairy rings:

- Frequent aerification (even a pitchfork will work, combined with deep watering)
- Soil removal or mixing of soil
- Applying fungicides such as: azoxystrobin (Heritage), flutolanil (Prostar), fluoxastrobin (Disarm), pyraclostrobin (Insignia), azoxystrobin + propiconazole (Headway)
- Mask symptoms with light nitrogen applications, aerification, and deep watering

Be sure to ALWAYS read and follow label directions!

Even William Shakespeare was intrigued by fairy rings and while it's not exactly Hamlet, it is amusing;

"If you see a fairy ring
In a field of grass,
Very lightly step around,
Tiptoe as you pass;
Last night fairies frolicked there,
And they're sleeping somewhere near."

Disclaimer: It's unclear if William Shakespeare was ever a master gardener……

Sources:

Damon L. Smith, Department of Entomology and Plant Pathology, OSU Stillwater.
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