FAIRY RINGS

SYMPTOMS

Fairy rings were named long ago by people who speculated about the mysterious green rings of grass and mushrooms in lawns, fields and pastures. They believed that fairies or elves had danced there in the night. The rings are often large, usually several feet or more in diameter. The grass in the ring is darker green and more lush than the grass on either side. From time to time, mushrooms or puffballs will sprout up quite suddenly at points along the ring. Occasionally, there will be a ring of dead grass to the inside of the darker, lush ring. Rings of poor growth may also be bordered by lush rings on either side. The symptoms may come and go from year to year or even during a single growing season. Fairy rings enlarge by a foot or more each year.

SEASON

Fairy rings may appear at nearly any time when the grass is growing. The mushrooms or puffballs appear throughout the summer depending on the species of fungus that is present.

DISEASE CYCLE

The way in which fairy rings begin is still not clear, but they are caused by the outward radial growth of a fungus within the soil beneath the grass. It is often possible to see the white matted threads of the fungus in the soil beneath the fairy ring. The fungus may have a distinct musty odor. The lush, dark green color of the grass is caused by the nutrients released as the fungus breaks down dead organic matter for its own growth. The grass receives the benefit of the extra nutrients as well. Some fairy rings are believed to begin from an old tree trunk or wood scraps buried in the soil after construction projects.

If the fungus mat becomes very dense, it may prevent water from penetrating the soil. The grass above the dense mat will then begin to show symptoms of water stress, especially during hot weather. As the older part of the fungus mat breaks down in the center of the circle, more nutrients are released for the grass, and the second darker green ring may appear.

The fungus threads in the soil usually continue to grow in an expanding circle as long as organic matter in the soil is available for nutrients. The circle continues to expand unless it reaches a block such as a wall or driveway.

Periodically, mushrooms or puffballs are produced as reproductive structures of the fungus in the soil. Different types of mushrooms are found depending on the species of fungus that is causing the fairy ring. Dust-like spores from the mushrooms or puffballs travel through the air to colonize new sites.

CULTURAL CONTROLS

Fairy rings often do no damage to lawns and require no management. Careful watering and fertilizing of the lawn may help mask the dark green circles. Mushrooms or puffballs may be removed by picking or mowing. Removing them will have no effect on the fairy ring.

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Some fungi are poisonous. Do not eat any mushrooms or puffballs that have not been identified by an expert. If small children play on the lawn, mushrooms should be removed to prevent accidental poisoning.

In the less common situation where a circle of damage occurs because of a fairy ring fungus, it is sometimes helpful to penetrate the fungus mat many times and water the ring deeply and frequently. If damage is very severe, it may be necessary to remove the fungus mat, replace the soil, and reseed. This is a difficult job because all soil must be carefully removed out to one foot from the leading edge of the ring and to a depth of one foot.

In very rare circumstances, fairy rings may disfigure an entire area. Experimental methods of rototilling and mixing the soil have been successful in reducing the presence of the damaging rings. The basis of this method is a biological control in which the fungi antagonize each other and prevent new rings from establishing when the lawn has been reseeded.

CHEMICAL CONTROLS

Because the fungus mat is so dense and deep, fungicides are not effective and are not recommended. Fairy rings do not usually damage lawns significantly.

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