



## MUSHROOMS, PUFFBALLS, AND FAIRY RINGS

At some time or another, most lawns are troubled with mushrooms or puffballs. They vary in shape, size and growth habits. Sometimes they become unsightly on a well-kept lawn.

### SYMPTOMS

Mushrooms may be found growing in clumps or individually in a lawn. Often times they grow from buried organic matter in the soil such as logs, roots, tree stumps, or construction lumber. A typical mushroom has an umbrella shape with the stem growing out of the soil and the cap on top of it.

Puffballs resemble balls or giant pears growing in a lawn. Most of them are white when young but later take on a dark appearance turning brown to black in color.

Fairy rings are more or less circular, narrow rings of greener grass. The rings vary in size from a few inches in diameter to many feet. Sometimes there will be many mushrooms appearing in the area of dead grass.

### CAUSAL ORGANISMS

Mushrooms, puffballs, and fairy rings are caused by fungi living on organic matter in the soil. Up to fifty different species of mushrooms are found growing in lawns. Some of these that may be from fairy rings are: *Marasmius oreades*, *Agaricus compestris*, and *Lepiota morgani*. The fungi that form puffballs are *Lycoperdon* spp., *Scleroderma* spp., *Calvatia* spp., and *Bovista* spp.

In most cases the fungus will produce a heavy, felt-like mat of dirty-white mold growth (Mycelium), which may penetrate the turf and soil to a depth of eight inches or more. In most cases, however, this growth is in the upper 3-4 inches. In the case of fairy ring, the fungus filaments become so dense that the soil cannot be wetted and the grass dies from a lack of moisture or a toxic substance is released that prevents the growth of the grass. The ring may spread at the rate of a few inches to two feet or more per year.

### CONTROL

1. Individual mushrooms or puffballs may be removed temporarily by breaking them off or mowing. They will come back until the food source that they are feeding on is consumed. In such cases, the organic food source should be removed from the soil if possible.
2. If mushrooms appear repeatedly in the same area and the grass begins to die, the symptoms are easily masked or disguised by pumping large quantities of water—12 to 24 inches—deep into the soil, at one foot intervals, just inside the ring of dead grass. Use a tree-feeding lance or root feeder attachment on your garden hose. Treat the rings or the mushroom infested area as soon as the grass wilts and repeat when the grass wilts again. This is a cheap and easy method of suppressing the symptoms.
3. The dark green areas of fairy rings are usually fewer and less conspicuous on well-watered and fertilized turf. Adequately feed your lawn several times a year with a nitrogen fertilizer but avoid excessive application. Fertilizer will mask the rings.

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4. For fairy rings follow the procedure in No. 2 on the previous page, but treat the area several inches on either side of the affected area.
5. Complete control may be obtained only by carefully
  - stripping off the sod and fumigating the soil or
  - digging out the infested soil in the ring (12 inches or more deep and 3 feet wide with at least one foot beyond the outermost evidence of the infection) and replacing it with fresh, clean soil.

Both methods are laborious and expensive because resodding and reseeding are required and may not always be successful. This work should be done by experienced lawnsmen.

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