

# Are fungi invading your lawn?

Gary Forrester  
Environmental Horticulturalist/Master Gardener Coordinator  
Clemson University Cooperative Extension Service  
Horry County

Conway, SC —September 8, 2008 — Rainy weather often brings on various forms of toad stools, more commonly referred to as mushrooms. Because of this, Extension agents are frequently asked to identify various strange looking growths that often appear in landscapes. Many times, these unknown organisms are members of the fungi family. Mushrooms, often seen in our local landscapes, can take many forms and produce many different odors. Looks can range from the often seen toad stool to the alien looking dog vomit. Mushrooms are of the most mysterious life forms on earth and are not plants. Ancient Greeks believed that mushrooms came from Zeus's lightning since they appeared after rains, reproduced and grew inexplicably. Later, during the middle ages, the term 'fairy ring' was given to circular patterns formed by growing mushrooms. Mushrooms are mysterious, but not as mystifying as they once were thought to be. They appear suddenly, many times in areas they have never been seen before when, in fact, they had been growing under your mulched beds and out of site in your turf all along. Many are toxic, many smell rotten, but all fungi are important to the balance of nature in the ecosystem.

Fungi feed by absorbing nutrients from the organic matter in which they live. They do not have stomachs and must digest their food before being absorbed by the hyphae, or their structural parts. Fungi have evolved to use many different items for food. Some are decomposers, living on dead organic material such as leaves. Some fungi cause disease problems on plants by using living organisms for food. These fungi can infect plants, animals and other fungi. Fungi can even live as partners with other plants. Mycorrhizal fungi grow in the soil around plant roots providing mineral nutrients to the plant in exchange for food.

Two common fungi that are often seen in our landscape are the aforementioned fairy ring and the stinkhorn mushroom. One diagnosed by site the other by smell. The name fairy ring comes from an old folk tale. People once believed that mushrooms growing in a circle followed the path made by fairies dancing in a ring. Fairies rings are usually found in open, grassy places as well as forested sites. In lawns infested with the fairy ring fungi, a circular area of dead grass will be seen with the center greening back up. The body of the fungi, its mycelium, grows underground. As it moves out in a circle, this mycelium uses up nutrients in the soil, starving the turf. In some cases, umbrella-shaped mushrooms will form behind this dead ring. These are the fruiting bodies of the growing fungi, as the living edge of the fairy ring grows outward, it secretes a chemical into the soil breaking down the organic matter. This releases nutrients into the soil to be used by the approaching mycelium. For a brief period, the grass at the outer edge of the ring benefits from these nutrients and will be thicker and greener than the rest of the lawn. This dark, green ring will soon die as the mycelium grows under it. Stinkhorn mushrooms are those that you usually smell before you see. They produce a rather pungent odor that attracts insects which disperse the mushroom's spores. Stinkhorns begin as an egg-like structure in the soil with long white mycelia that resemble roots. When conditions are right, the egg opens and a colored extension emerges that forms an arc. The spore mass is embedded in a green slime that becomes foul-smelling as the mushroom matures. Stinkhorns are very common in urban areas, especially cultivated plantings that are well mulched.

Most questions we as Extension agents get on mushrooms usually end up with the landscaper or homeowner wanting to know how to get rid of the mushrooms. As we have discussed earlier, mushrooms feed on organic matter in your soil or mulch. To positively rid your landscape of mushrooms, you must get rid of the food source. Since there is organic matter scattered throughout your soil, this may be difficult to. Old stumps must be dug out and old mulch must be removed and replaced. However, mushrooms are ever present in the ecosystem and will probably return when conditions are conducive for growth. The best advice for landscape mushrooms is to respect their dangers, teach children to stay away from them and hand remove if needed.