*Photos by M. Fidanza*

# New Insight on Fairy Ring

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## Objective

Characterize soil chemical and physical properties associated with turfgrass suffering from Type I fairy ring.

## Summary

Fairy ring has become a persistent problem and an unsightly nuisance on golf course turfgrass. Type I fairy ring symptoms include wilted, necrotic or dead turfgrass appearing in rings or arcs. Fairy ring control measures are inconsistent.

Soil cores were extracted from Type I fairy ring sites on three golf courses in Pennsylvania. Soil cores were taken from adjacent healthy turfgrass for comparison. The soil was analyzed for several chemical and physical properties.


## Results

- Where fairy ring occurred, soil pH was slightly higher; concentrations of ammonium, potassium, sulfur and soluble salts were statistically higher; volumetric water content was significantly lower in soil; and water-droplet-penetration test times were significantly longer.
- The fungi that cause fairy ring directly or indirectly contribute to the development of water-repellent soil and the depletion of soil moisture, resulting ultimately in turfgrass death.


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