

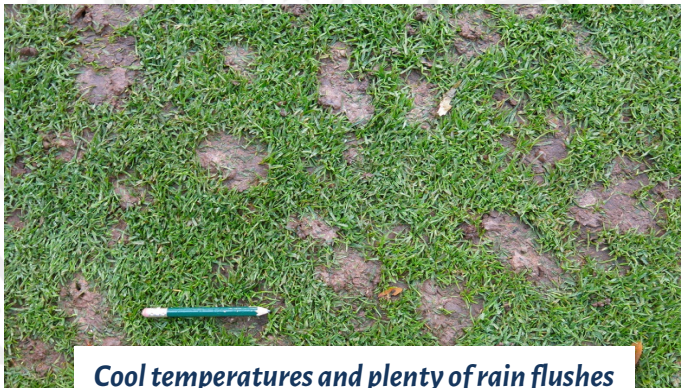


Wet And Wormy

By Bob Vavrek, regional director, Central Region

November 4, 2016

Golfers throughout the northern part of the Central Region have been grumbling about fairway playing conditions during the past several weeks of cool, wet weather. Mid- to high-handicap players generally prefer a slightly elevated lie that allows them to sweep the ball off the turf. Unfortunately, some fairways can seem like a tabletop of mud after mowers flatten the small mounds of soil produced by earthworms. The mounds of soil are called earthworm casts or castings, and when earthworms are active they can deposit a considerable amount of soil onto the playing surface.



Cool temperatures and plenty of rain flushes of earthworm activity because saturated soils leave no place for worms to go but up.

Earthworm activity typically peaks during the cool weather of spring and fall. Furthermore, the recent stretch of frequent, heavy rainfall prevents worms from moving deep into the soil.

The result is a lot of surface earthworm activity during a time

when turf is slowly growing due to cool nights and short days, further compounding the problems caused by earthworm casts. With so many casts at the surface, it is only a matter of time before mowers flatten them, smothering fairway turf.

Heavily shaded fairways are most affected by worm activity because turf density is already suffering from lack of sunlight. Consider this one more reason to remove trees that adversely affect turf quality, unless you are misguidedly hoping that a thick blanket of falling leaves will help hide the worm problem each fall.

Unfortunately, not very much can be done to discourage earthworms. Over time, a fairway topdressing program can accumulate enough sand in the soil profile to encourage worms to seek higher soil moisture and less abrasive conditions in the adjacent roughs. However, initiating a fairway topdressing program for the sole purpose of mitigating earthworm activity is not a cost-effective option for most golf facilities.

Another option to consider is using an organic fertilizer made from a byproduct of tea tree seed oil production. USGA-funded research at the University of Kentucky demonstrated a decrease in earthworm activity following use of this material, most likely due to the saponin content of the tree seed meal. Saponins are natural soap-like compounds that irritate earthworms. The research article "[Controlling Earthworm Casts on Golf Courses](#)" discusses playing surface disruption due to earthworm activity and control options in more detail.

Although not likely to be a silver bullet for earthworm control, byproducts of tea tree seed oil production may be well worth trying it on a worm-infested approach or fairway landing area. Vary product rates and irrigation amounts to fully understand its potential for providing golfers with temporary relief from playing on muddy fairways.

Central Region Agronomists:

Bob Vavrek, regional director – bvavrek@usga.org

John Daniels, agronomist – jdaniels@usga.org

Zach Nicoludis, agronomist – znicoludis@usga.org

[Information on the USGA's Course Consulting Service](#)

[Contact the Green Section Staff](#)