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The fate of fungicides post-irrigation on putting greens

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Cameron Stephens applying post-application irrigation to field research plots to evaluate the in

Cameron Stephens applying post-application irrigation to field research plots to evaluate the influence of its timing on fungicide movement on a golf course putting green. Photo by Daniel Freund.

Soilborne diseases in turfgrass are difficult to manage, so turfgrass managers routinely apply fungicide to golf course putting greens throughout the growing season. Carefully timed irrigation practices may enhance fungicide movement to soilborne targets, improve efficacy, and limit potential off-target effects.

Researchers conducted two field studies on a creeping bentgrass putting green, evaluating the influence of post-application irrigation timing and mowing timing on fungicide movement into the soil profile and removal in turfgrass clippings.

Results, published in the *Journal of Environmental Quality*, showed that timing of post-application irrigation, and to a lesser extent mowing, influenced the amount of fungicide movement into the soil profile. Irrigating immediately after application facilitated the greatest fungicide movement compared with waiting six hours or not irrigating at all. Regardless of post-application irrigation treatment, more than 50% of the fungicide remained in the thatch through the first three days after treatment. Less than 4% of fungicide was removed in turfgrass clippings regardless of mowing timing.

While immediate post-application irrigation is ideal for fungicide movement, irrigating six hours after application facilitated moderate fungicide movement and was much better than not irrigating at all.

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Stephens, C.M., Kerns, J.P., Ahmed, K.A., & Gannon, T.W. (2021). Influence of post-application irrigation and mowing timing on fungicide fate on a United States Golf Association golf course putting green. *Journal of Environmental Quality*, *50*, 868–876. **https://doi.org/10.1002/jeq2.20249**

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