

Water Management



Photos by M. Carroll

Pesticide Runoff from Simulated Golf Turf

*Mark J. Carroll, Ph.D.,
University of Maryland
(mcarroll@umd.edu)*

Objective

Evaluate the effect of plot size on the runoff of pesticides from creeping bentgrass maintained as a fairway.

Summary

Pesticide runoff can be measured at small plot, field or watershed scale of measurement. Demonstrating that plot size has little effect on runoff from turfgrass would aid in alleviating concern that model calibration based on small plot data are inherently biased.

Runoff of a fungicide, herbicide and an insecticide was measured from small plots (12 x 30 feet) and large plots (40 x 120 feet). Approximately 24 hours after pesticide application, a simulated rainstorm was applied for the time needed to initiate runoff plus 90 additional minutes.



Results

- Plot size had no effect on the runoff of foliar-applied pesticides when pesticide loss was evaluated on a per-unit-area basis.
- Total runoff losses of 2, 4-D and flutolanil were similar to those reported by others.
- The relatively high pesticide runoff losses observed for these two pesticides one day after application demonstrates the importance of scheduling pesticides applications around weather conditions that favor storms that could generate runoff.
- The results of this project support the continued use of relatively small plot sizes (that is, on the order of several hundred square feet) to investigate pesticide runoff from turf.

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