

Herbicide Options for Oxalis Control in Bermudagrass Turf
Pamela Geisel, UC Cooperative Extension, Fresno County
Michelle Le Strange, UC Cooperative Extension, Tulare & Kings Counties

ABSTRACT

Creeping woodsorrel (*Oxalis corniculata* L.) is a common perennial broadleaf weed in California landscapes. It is a particular problem in warm season turfgrasses, especially bermudagrass, because there are limited herbicides known to control oxalis without causing some phytotoxicity to the turf. Studies were conducted in 2003 to 2005 to determine which active ingredients control oxalis without harming the turf, to compare similar products available to both professional applicators and homeowners but formulated at different concentrations, and to evaluate the impact of preemergence herbicides in conjunction with postemergence applications. Another aspect of these field experiments was a comparison of winter versus summer timing of herbicide applications.

Two field experiments were established in common bermudagrass sites in Fresno county: one was initiated in winter (November 2003) at a city park and a second one was started in summer (May 2005) at a UC research center. Three common preemergence herbicides and several postemergence broadleaf herbicides were evaluated for reducing oxalis weed populations and turf phytotoxicity. At each site label rate applications of dithiopyr, pendimethalin and proflumicafene were applied to a uniform, dense stand of oxalis. Professional and homeowner products containing the same active ingredients but differing in percentages of active ingredients were compared for their effectiveness on oxalis control. Postemergence materials included of 2,4-D, MCPP, dicamba, MSMA, carfentrazone, and fluroxypyr or combinations of these products. Each experiment received a minimum of two applications of all herbicides. Application dates and rates for the products tested are listed below.

All active ingredients (pre- and postemergence) were effective on oxalis control to varying degrees depending on application timing. In winter there were no significant differences between preemergence herbicides at any rating dates. Initially there were significant differences between postemergence treatments with Speedzone and Spotlight providing more rapid and better oxalis control. These differences waned over time and all products provided equally good control of oxalis by the end of the winter trial.

In the summer experiment significant differences between postemergence and preemergence applications became obvious. Postemergence: Spotlight and Trimec 992 (professional concentration) provided best oxalis control (rating of 9) overall. The professional "trimec" products were significantly better than the concentrations of homeowner "trimec" products. Speedzone (a professional product) was equal in oxalis control to the homeowner products. No bermudagrass phytotoxicity was observed in either experiment at any time. Preemergence: A few months after the initial application significant differences in oxalis weed control were observed. Barricade provided excellent, Dimension provided good, and Pendulum provided inadequate (though significantly better than the check) preemergence control of oxalis seedlings. Both preemergence and postemergence herbicides are needed for successful oxalis control in bermudagrass.

FALL EXPERIMENT 2003	SUMMER EXPERIMENT 2005
Pre & Postemergence applications: Nov 18, 2003 & Feb 24, 2004	Preemergence applications: May 13, Oct 17 Postemergence: May 13, Jun 23, Nov 4

Preemergence Herbicides	
Dimension	dithiopyr (12.7%)
Pendulum WDG	pendimethalin (60%)
Barricade WG	prodiamine (65%)
Untreated	
Postemergence Herbicides	
Untreated	
Trimec HOME (OSH)	2,4-D (5.67%) MCP (2.67%) dicamba (0.63%)
Trimec PRO (Gordon's)	2,4-D (30.56%) MCP (16.34%) dicamba (2.77%)
Trimec Plus HOME (Bayer)	2,4-D (3.18%) MCP (1.60%) dicamba (0.79%) MSMA (9.81)
Trimec Plus PRO (Gordon's)	2,4-D (5.83%) MCP (2.93%) dicamba (1.46%) MSMA (18.0%)
Speedzone Southern (Gordon's)	2,4-D ester (10.49%) MCP (2.66%) dicamba (0.67%) & carfentrazone (0.54%)
Spotlight (DowAgro)	fluroxypyr (26.2%)

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