2008

Yellow Woodsorrel (Oxalis stricta) Control with Certainty (Sulfosulfuron 75 WDG), 2007

Nick E. Christians
Iowa State University, nchris@iastate.edu

Yellow Woodsorrel (Oxalis stricta) Control with Certainty (Sulfosulfuron 75 WDG), 2007

Abstract
The objective of this study was to investigate the effects of Certainty (sulfosulfuron 75 WDG) on the control of yellow wood sorrel(*Oxalis sticta*) in Kentucky bluegrass turf at the Iowa State University turfgrass research area.

Disciplines
Agricultural Science | Agriculture | Horticulture

Yellow Woodsorrel *(Oxalis stricta)* Control with Certainty (Sulfosulfuron 75 WDG), 2007

Nick Christians, university professor
Department of Horticulture

Introduction

The objective of this study was to investigate the effects of Certainty (sulfosulfuron 75 WDG) on the control of yellow woodsorrel (*Oxalis sticta*) in Kentucky bluegrass turf at the Iowa State University turfgrass research area.

Materials and Methods

The first treatments were initiated on July 13, 2007. They included Certainty with a non-ionic (NI) surfactant (X-77) at 0.25% v/v applied at 0.25, 0.5, and 0.75 oz product/acre in 2-gallons of water/1,000 ft^2 (Table 1). The treatments were applied one, two, or three times at 3-week intervals as described in Table 1. Trimec Classic (2,4-D, MCPP, and Dicamba) was also applied at 0.75 lb/A (1.5 qt/A) on July 13 only.

The oxalis had begun to germinate a few weeks before applications began and continued through mid-August. Plots measured 5 × 5 ft for a total of 25 ft^2 and the study was replicated three times.

While it was apparent that treated oxalis plots were dying in the treated plots, regermination was taking place at the same time. All plots treated with Certainty showed an initial reduction of oxalis on August 3. Ratings on August 8, August 14, August 24, and August 28 showed no statistical differences, although there were numerical reductions. Again, this is likely due to germination of new plants in the plots. By the third week in August, germination had reached completion. The only treatment to show no oxalis plants on the September 7 rating was the 0.25 oz product/acre treatment applied on August 24.

The most effective treatments at the end of the study were the three applications of Certainty at 0.25 oz product/acre (#3) and the two repeated applications of Certainty at 0.75 oz product/acre (#7). The Trimec Classic did not reduce oxalis, with the exception of the August 3 rating.

Oxalis germinates from seed beginning in early July and generally completes germination by late August in Iowa. Postgermination treatments of materials with postemergence activity, but not preemergence activity are often not effective because of continued germination. These materials may have to be combined with a preemergence herbicide to be completely effective. The other solution is several applications of the postemergence material through the germination period like was done in treatment three of this study.

Table 1. Treatments applied in the 2007 Oxalis control study.

Trt	Product	Rate	Units	Date	Rate (oz product/acre)	Amount/plot
1	Certainty	0.0117	lb ai/A	July 13	0.25	0.004 g
	NI Surfactant	0.25	% v/v*	July 13	0.25	0.5 ml
2	Certainty	0.0117	lb ai/A	July 13	0.25	0.004 g
	NI Surfactant	0.25	% v/v	July 13	0.25	0.5 ml
2	Certainty	0.0117	lb ai/A	Aug. 3	0.25	0.004 g
	NI Surfactant	0.25	% v/v	Aug. 3	0.25	0.5 ml
3	Certainty	0.0117	lb ai/A	July 13	0.25	0.004 g
	NI Surfactant	0.25	% v/v	July 13	0.25	0.5 ml
3	Certainty	0.0117	lb ai/A	Aug. 3	0.25	0.004 g
	NI Surfactant	0.25	% v/v	Aug. 3	0.25	0.5 ml
3	Certainty	0.0117	lb ai/A	Aug. 24	0.25	0.004 g
	NI Surfactant	0.25	% v/v	Aug. 24	0.25	0.5 ml
4	Certainty	0.0234	lb ai/A	July 13	0.5	0.008
	NI Surfactant	0.25	% v/v	July 13	0.25	0.5 ml
5	Certainty	0.0234	lb ai/A	July 13	0.5	0.008
	NI Surfactant	0.25	% v/v	July 13	0.25	0.5 ml
5	Certainty	0.0234	lb ai/A	Aug. 3	0.5l	0.008
	NI Surfactant	0.25	% v/v	Aug. 3	0.25	0.5 ml
6	Certainty	0.035	lb ai/A	July 13	0.75	0.012
	NI Surfactant	0.25	% v/v	July 13	0.25	0.5 ml
7	Certainty	0.035	lb ai/A	July 13	0.75	0.012
	NI Surfactant	0.25	% v/v	July 13	0.25	0.5 ml
7	Certainty	0.035	lb ai/A	Aug. 3	0.75	0.012
	NI Surfactant	0.25	% v/v	Aug. 3	0.25	0.5 ml
8	Trimec Classic	1.5	qt/A	July 13		0.81 ml
9	Untreated check	0	oz wt/A	July 13	0	0

*Percent volume/volume.

Table 2. Weed counts and phytotoxicity data from the 2007 oxalis control study.

Trt[1]	Precount[2] 7/13	Weed Phyt[3] 7/27	Oxalis[4] 8/3	Grass Phyt[4] 8/8	Oxalis[4] 8/8	Oxalis[4] 8/14	Oxalis[4] 8/24	Oxalis[4] 8/28	Oxalis[4] 9/7
1	8	9	6	9	7	6	6	6	11
2	14	7	9	7	9	5	6	6	9
3	6	8	4	7	7	3	4	5	0
4	9	8	5	9	8	8	10	10	9
5	17	7	5	6	7	7	4	7	8
6	11	7	4	9	5	2	3	4	5
7	11	7	2	6	6	1	1	1	3
8	14	7	7	9	11	7	8	8	10
9	15	8	12	9	14	6	9	11	15
LSD 0.05	NS	NS	5	1	NS	NS	NS	NS	6

[1]Plots measured 5 × 5 ft; 25 ft^2. See treatment detail in Table 1.

[2]Precount on 7/13 was the number of Oxalis plants in the 25 ft^2 plots at initiation of treatments.

[3]Weed phytotoxicity and grass phytotoxicity are on a scale of 9 to 1; 9 = no damage, 1 = dead plants.

[4]Oxalis is the mean number of Oxalis plants on the 25 ft^2 plots.

NS = no significant difference.