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

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The objectives of this study were to investigate the effects of Certainty (sulfosulfuron 75 WDG) on the control of Yellow Woodsorrel (*Oxalis stricta*) in Kentucky bluegrass turf at the Iowa State University turfgrass research area.

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 ml, and 0.75 oz product/acre in 2 gal water/1000 ft² (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, MCP, and Dicamba) was also applied at 0.75 lb a.i./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 x 5 ft for a total of 25 ft² and the study was replicated 3 times.

While it was apparent that treated Oxalis plants were dying in the treated plots, regrowth was taking place at the same time. All plots treated with Certainty showed an initial reduction of Oxalis on 8/3. Ratings on 8/8, 8/14, 8/24, and 8/28 showed no statistically significant differences, although there were numerical reductions. This again is likely due to germination of new plants into the plots. By the 3rd week in August, germination had reached completion. The only treatment to show no Oxalis plants on the 9/7 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 3 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 significantly reduce Oxalis, with the exception of the 8/3 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 such as done in treatment 3 of this study.

| Table 1. Treatments applied in the 2007 Oxalis control study. | | | | | | |
|---|-----------------|--------|---------|---------|-----------------------|-------------|
| Treatment | Product | Rate | Units | DATE | Rate(oz product/acre) | Amount/Plot |
| 1 | CERTAINTY | 0.0117 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | AI #/A | Aug. 3 | 0.75 | 0.012 |
| | NI SURFACTANT | 0.25 | % V/V | Aug. 3 | 0.25 | 0.5 ml |
| 8 | TRIMEC CLASS | 1.5 | QT/A | July 13 | | 0.81 ml |
| 9 | UNTREATED CHECK | 0 | OZ WT/A | July 13 | 0 | 0 |

Table 2. Data from the 2007 Oxalis control study.

| Treatment | Precount 7/13 | WeedPhyt 7/27 | Oxalis 8/3 | GrassPhyt 8/8 | Oxalis 8/8 | Oxalis 8/14 | Oxalis 8/24 | Oxalis 8/28 | Oxalis 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 |

Plots measured 5 x 5 ft; 25 ft².

Precount on 7/13 was the number of Oxalis in the 25 ft² plots at initiation of treatments.

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

Oxalis is the mean number of Oxalis plants on the 25 ft² plots.