

Yellow Nutsedge Control with Mesotrione in Cool-Season Turf

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Background/Objective: Manage has been the standard postemergence herbicide for yellow nutsedge control and its unavailability will create a void. This study is to determine if mesotrione is effective for yellow nutsedge control.

Site Information

Location:	William H. Daniel Research and Diagnostic Center
Turfgrass Species:	Perennial ryegrass blend
Turf Condition:	fair
Turf Management:	Mowing Height in: 2.5
	Fertilization: 3.5 lbs N/1000/yr
	Irrigation: To prevent moisture stress
Target Pest:	<i>Cyperus esculentus</i> (Yellow nutsedge)
Growth Stage:	3 to 8 leaf

Application Information

Application Dates: in 2005	2 July	11 July	28 July
Spray Volume gal 1000 ft⁻²:	2		
Spray Equipment:	CO ₂ backpack		
Experimental Design:	Randomized complete block		
Replications:	3		
Plot Size ft:	5 X 5		

Results:

- This study included 19 other confidential treatments that were included in the analysis but could not be included in this report.
- Both mesotrione treatments effectively controlled yellow nutsedge, equivalent to the control from Manage. (Table 1).
- Both mesotrione applications were safe on perennial ryegrass.

Table 1. Effect of Manage and mesotrione on yellow nutsedge control and turf safety to perennial ryegrass.

Treatment ^c	Rate of application	Spray volume	Nutsedge plants ^a			Turf injury ^b	
			12 July	28 July	30 Aug	28 July	30 Aug
	lbs ai/A	gals/M	#			%	
Manage 75WG	1.33	2	0.0	0.7	1.7	0.7	0.0
Check			13.7	51.3	74.3	0.7	0.0
Mesotrione 4L	0.167	2	6.7	8.3	8.7	1.0	0.0
Mesotrione 4L ^d	0.167						
Mesotrione 4L ^d	0.167						
Mesotrione 4L	0.25	2	5.7	3.7	16.7	0.3	0.0
Mesotrione 4L ^d	0.25						
LSD (0.05)			3.3	10.0	29.6	13.6	8.3

^a Number of yellow nutsedge plants above the turf canopy.

^b Percent of the plot area that was brown.

^c All treatments contained a non ionic surfactant at the rate of 0.25 percent volume per volume.

^d Indicates a two week split in applications with the second application being 11 July and the third application being 28 July.