

Mesotrione Granular Applications to Control Mature Crabgrass

Zac Reicher and Dan Weisenberger

Background/Objective: To evaluate granular and liquid applications of mesotrione formulations for control of multi-tillered crabgrass and damage to Kentucky bluegrass.

Site Information

Location:	William H. Daniel Research and Diagnostic Center
Turfgrass Species:	Kentucky bluegrass
Turf Condition:	good
Turf Management:	Mowing Height in: 2.5
	Fertilization: 1 lb N/M/YR
	Irrigation: To prevent moisture stress
Target Pest:	<i>Digitaria sp</i> (crabgrass)
Growth Stage:	2 to 5 tiller

Application Information

Application Dates: in 2005	15 July	3 Aug
Spray Volume gal 1000 ft⁻²:	2	
Spray Equipment:	CO ₂ backpack and hand shaker bottle	
Experimental Design:	Randomized complete block	
Replications:	3	
Plot Size ft:	5 X 5	

Results:

- This was a difficult test for the herbicides as crabgrass approached 100% cover in the checks plots (Table 1). Plus the crabgrass was tillered and mature before the first application.
- The SC formulations of mesotrione provided the best reduction in crabgrass with the two high rates reducing crabgrass to <20% cover by 8 Sept.
- AND5077 performed slightly better than AND5099, especially at 0.5 + 0.5 lb ai/A.

Table 1. Percent crabgrass cover^a of plots treated with formulations of mesotrione.

Treatment ^{bc}	Rate of application	4 Aug	23 Aug	8 Sept
	lb ai/A			
AND5077	0.1	91.7	94.0	94.7
AND5077	0.1			
AND5099	0.1	91.7	93.3	97.7
AND5099	0.1			
AND5077	0.2	73.3	78.3	81.7
AND5077	0.2			
AND5099	0.2	86.7	83.3	92.3
AND5099	0.2			
AND5077	0.5	56.7	16.7	35.0
AND5077	0.5			
AND5099	0.5	71.7	41.7	61.7
AND5099	0.5			
Mesotrione 4SC	0.1	81.7	68.3	70.0
Mesotrione 4SC	0.1			
Mesotrione 4SC	0.2	63.3	23.3	19.3
Mesotrione 4SC	0.2			
Mesotrione 4SC	0.5	25.0	13.3	8.7
Mesotrione 4SC	0.5			
Check		93.3	97.7	97.3
LSD (0.05)		17.5	21.3	30.3

^a Percent of the plot area covered by crabgrass.

^b Liquid applications were made with a non-ionic surfactant at 0.25% v/v.

^c Sequential applications were a three week split applied on 2 Aug.