

Control of 1- to 2- Leaf Crabgrass
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Background/Objective: Evaluate herbicides alone and in combination for crabgrass control.

Site Information

Location:	William H. Daniel Research and Diagnostic Center
Soil Type:	Starks-Fincastle silt loam
Soil pH:	7.2
Turfgrass Species:	Kentucky bluegrass blend
Turf Condition:	fair
Turf Management: Mowing Height cm (in):	6.4 (2.5)
Fertilization:	1 lb N/M/YR
Irrigation:	To prevent moisture stress
Testing on Site Previous Year:	none
Target Pest:	crabgrass (<i>Digitaria sp.</i>)
Growth Stage:	1 to 2 leaf

Application Information

Application Date:	2 June	23 June
Application Time:	8:30 a.m.	1:00 p.m.
Air Temperature C⁰(F⁰):	16.8 (62)	26 (79)
Relative Humidity(%):	82	54
Wind Speed m s⁻¹ (mph):	0.6 (1.3)	1.8 (4)
Soil Temperature(7.6 cm depth) C⁰(F⁰):	18.9 (66)	28.9 (84)
Soil Moisture:	moist	moist
Spray Volume L ha⁻¹ (gal 1000 ft⁻²):	814 (2)	
Spray Pressure:	30psi	
Spray Nozzle:	8001.5	
Spray Equipment:	CO ₂ backpack and shakerbottle	
Irrigation After Application:	None	
Experimental Design:	Randomized complete block	
Replications:	3	
Plot Size m (ft):	1.5 X 1.5 (5 X 5)	

Results:

- This was a difficult test for crabgrass because the site was Kentucky bluegrass mowed at 1 inch, plus July heat and rain caused a late flush of germination and maturation of crabgrass.
- Dimension 1EC and Ultra, plus Mesotrione at 0.25+0.25 provided excellent control of crabgrass by 25 July.
- Dimension Ultra and Mesotrione at 0.25+0.25 provided acceptable control of crabgrass by 18 Aug, given the tough conditions.

Table 1. Effect of herbicides on presence and cover of crabgrass.

Treatment	Rate of application	23 June	6 July	25 July	18 Aug
	a.i./A	presence ^a	—% ^b —		
Dimension Ultra 2EW	0.5	1.7	3.7	15.3	41.7
Dimension 1EC	0.5	1.7	0.7	2.7	33.3
Dimension Ultra 40WSP	0.5	2.0	0.7	5.0	28.3
Mesotrione 4SC ^c	0.25	2.0	2.0	18.3	68.3
Mesotrione 4SC ^c	0.25	1.7	0.0	4.3	28.3
Mesotrione 4SC ^{cd}	0.25				
Check		1.0	25.0	55.0	98.3
LSD (0.05)		0.7	7.4	17.3	34.5

^a 1 = crabgrass visible on plot and 2 = no crabgrass visible.

^b Percent of the plot area covered by crabgrass.

^c Mesotrione 4SC treatments included a NIS at the rate of 0.25 percent volume per volume.

^d Indicates treatments with a three week split application with the first application 2 June and the second 23 June.