

Mesotrione Plus Barricade (Proflam) Inert G for 2006 Weed Control in Lawn and Garden, HMS851A

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Objectives:

The objectives of this study were to determine which rate of granular mesotrione provides acceptable weed control, if sequential applications of mesotrione provide season-long residual control, if the combination treatments provide acceptable residual control throughout the season, and which rates, if any, of mesotrione are phytotoxic to "Nassau" Kentucky bluegrass.

Materials and Methods:

This study took place at the Iowa State University Turfgrass Research Facility. Plot areas were seeded to crabgrass 18 April, 2006. There were a total of four replications of 13 treatments (Table 1). Initial preemergence applications were applied 21 April, 2006. Repeat applications to specified plots were made six weeks later on 1 June. All applications were granular. The soil on the site is a disturbed Nicollet clay loam with a pH of 6.2, 30 ppm P, and 174 ppm K.

Results:

There were no signs of phytotoxicity on any of the treatments. First percentage crabgrass control data were not collected until June 17, when the first visible crabgrass was present in the plots. Treatments of mesotrione alone were not as effective as the treatments of mesotrione plus proflam or mesotrione plus pendimethalin (Table 1). Dithiopyr (Dimension) at 0.32 lbs ai/acre applied as a preemergence was also quite effective at controlling crabgrass throughout the study. When proflam was combined with Dicamba and Mecroprop (tmt 10), crabgrass control decreased at the 14 August rating.

Table 1. Percentage crabgrass control in the mesotrione Plus Barricade (prodiamine) inert G for 2006 weed control in lawn and garden, HMS851A.

Treatments					Percentage Crabgrass Control		
Trt	Product	Application Timing	Rate product/acre	Rate ai/acre	17-Jun	15-Jul	14-Aug
1	Control	****	****		0.0	0.0	0.0
2	Mesotrione	Preemergence	173 lb	0.25	46.3	8.8	7.5
3	Prodiamine	Preemergence	104 lb	0.5	99.3	95.0	89.3
4	Mesotrione + Prodiamine	Preemergence	173 lb	0.75	98.0	96.0	92.3
5	Pendimethalin	Preemergence	100 lb	2.0	96.3	86.8	78.8
6	Dithiopyr	Preemergence	129 lb	0.32	99.5	98.3	95.0
7	Mesotrione	Preemergence 6 WAIT	173 lb 173 lb	0.25 0.25	47.5	52.5	35.0
8	Prodiamine Mesotrione	Preemergence 6 WAIT	104 lb 173 lb	0.50 0.25	96.8	96.3	89.5
9	Mesotrione + Prodiamine Mesotrione	Preemergence 6 WAIT	173 lb 173 lb	0.75 0.25	100.0	98.0	91.0
10	Pendimethalin 2,4D, Dicamba, Mecoprop	Preemergence 6 WAIT	100 lb 150 lb	2.0 3.92	97.8	82.5	63.8
11	Dithiopyr 2,4D, Dicamba, Mecoprop	Preemergence 6 WAIT	129 lb 150 lb	0.32 28.5	98.5	89.5	84.3
12	Mesotrione	6 WAIT	173 lb	0.25	63.8	43.3	27.0
13	2,4D, Dicamba, Mecoprop	6 WAIT	150 lb	3.92	51.3	23.3	6.3
	LSD 0.05				23.5	24.1	21.7