

Efficacy of Mesotrione on Scott's Homogenous Manufactured Fertilizer vs a Larger SGN Blended Fertilizer for Control of Dandelion and other Broadleaf Weeds in Turf-2006, HMS855

Christopher J. Blume and Nick Christians

Objective:

The objectives of this study were to evaluate several mesotrione formulations to see if they provide equivalent broadleaf weed control and if there is a difference in efficacy if irrigation is delayed.

Materials and Methods:

This study was conducted at the Iowa State University Turfgrass Research Facility. The "Moonlight" Kentucky bluegrass plot area was heavily populated with both dandelion and clover. Half of the treatments, which were put on 5 May, 2006 (Table 1), were applied to turf wet with dew and the other half were applied to dry turf. The entire plot was irrigated in 48 hours following treatment. All products were loaded on a granular carrier and applied at 125 lbs product/acre. 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 was no phytotoxicity seen on any of the treated plots at any time during the study. Plots treated with mesotrione and mesotrione plus prodiamine had better broadleaf weed control than did the plots treated with 2, 4-D plus mecoprop (Table 1). The final rating was 31 July. At that time, there was no significant difference in dandelion control among treatments.

The summer of 2006 was dry and hot during the months of June and July and broadleaf weed control in this study and in other broadleaf studies at the Iowa State University turfgrass research facility were generally quite poor.

Table 1. Percentage broadleaf and crabgrass control for the 2006 Efficacy of mesotrione on Scott's homogenous manufactured fertilizer vs. a larger SGN blended fertilizer for control of dandelion and other broadleaf weeds in turf, HMS855.

Treatments					Percentage Broadleaf Control			Final Weed Percentages on 31 July, 2006		
Trt	Product	Company Code	Rate ai/acre		20 May	6 Jun	5 Jul	Crab	Clover	Dandelion
1	Control	****	****	****	0.0	0.0	0.0	12.0	30.0	7.0
2	Mesotrione + Prodiamine	EXC856	0.25 and 0.50	Dew	78.8	89.8	73.8	1.0	13.8	4.0
3	Mesotrione	EXC853	0.25	Dew	80.0	90.0	81.3	4.5	12.3	10.5
4	Mesotrione	EXC950	0.3	Dew	82.5	90.0	81.3	13.5	9.3	3.3
5	2,4-D + MECOPROP	EXC915	2.3	Dew	13.8	66.3	56.3	5.0	21.3	7.5
6	Mesotrione + Prodiamine	EXC856	0.25 and 0.5	2-DAT	87.5	95.8	80.0	1.0	5.3	7.8
7	Mesotrione	EXC853	0.25	2-DAT	80.0	93.8	81.3	2.3	13.5	7.5
8	Mesotrione	EXC950	0.3	2-DAT	73.8	83.8	71.3	18.5	17.8	2.5
9	2,4-D + MECOPROP	EXC915	2.3	2-DAT	21.3	70.0	58.8	17.0	17.8	3.5
LSD 0.05					11.4	11.6	18.5	13.5	13.0	NS