Dandelion, Clover, and Ground Ivy Control with A.D.I.O.S. Herbicide

D. S. Gardner and E. R. Horner
Dept. of Horticulture and Crop Science, The Ohio State University

INTRODUCTION

A.D.I.O.S. herbicide was tested for efficacy against dandelion, white clover, and ground ivy in turfgrass. Only one rate was tested and there were no standards for comparison.

MATERIALS AND METHODS

This study was conducted at The Ohio Turfgrass Foundation Research and Education Center at The Ohio State University in Columbus, Ohio. The site of the experiment was an area of Kentucky bluegrass/perennial ryegrass maintained at 2.5" with a light infestation of dandelion (*Taraxacum officianale*), and white clover (*Trifolium repense*). A separate area with a moderate infestation of ground ivy (*Glechoma hederacea*) was also tested. The distribution of potential weeds on the plots was uniform on day 0.

Individual treatment plots were 3 x 3 ft and there were 2 treatments including 1 herbicide and an untreated control (Table 1). The experimental design was a randomized complete block with 3 replications. Treatments were made November 26, 2012. Second round treatment (7 DAT) was applied December 3, 2012. A backpack carbon dioxide sprayer equipped with 6503 nozzles with a spray pressure of 40 psi was used to apply the liquid materials. Liquid materials were applied with the equivalent of 2 gal H_2O/1000 ft^2.

Data were collected at 0, 1, 7, 14, and 21 days after application of the initial round of treatments (DAT). Data were collected as estimates of percentage cover of dandelion, clover, and ground ivy. Turf tolerance was assessed at on all dates (1-9 scale with 1=no phytotoxicity and 9=death).

The data were analyzed using the General Linear Models procedure of SAS. Percent control was calculated as 1-(day x % cover treated/ day x % cover untreated control) based on treatment means. Fishers protected LSD was conducted on the percent control data.

RESULTS AND DISCUSSION

No phytotoxicity was observed on any date (Data not shown). No injury or reduction in weed cover was observed at 1 DAT (Data not shown). Weed control was variable at 7 DAT, with very good control in some plots and little control in others. This caused the data to be not significant at 7 DAT for dandelion and ground ivy. However, by 14 DAT control of dandelion, white clover and ground ivy was 100%. Control was 100% at 21 DAT as well. In summary the product worked very well on

all three tested weeds, in spite of the fact that we applied treatments in 45-55 degree weather, considerably below the label recommendation. It would be interesting to follow up in the spring in order to determine any regrowth potential.

Table 1. Dandelion control after application of herbicide treatments in Columbus, Ohio in 2012. Applications were made either on November 26 and December 3.

		—Days After Treatment (DAT)—		
Trt	Treatment	7	14	21
		Percent Control†		
1	A.D.I.O.S.	68	100	100
2	Untreated	20	32	38
LSD (0.05)		NS‡	33	10

† Percent control calculated as 1-(day x % cover treated/ day x % cover untreated control) based on treatment means
‡ NS Means are not significantly different (P=0.05) according to Fisher's Protected LSD Test

Table 2. White clover control after application of herbicide treatments in Columbus, Ohio in 2012. Applications were made either on November 26 and December 3.

		—Days After Treatment (DAT)—		
Trt	Treatment	7	14	21
		Percent Control†		
1	A.D.I.O.S.	70	100	100
2	Untreated	0	-33	-44
LSD (0.05)		50	49	49

† Percent control calculated as 1-(day x % cover treated/ day x % cover untreated control) based on treatment means

Table 3. Ground ivy control after application of herbicide treatments in Columbus, Ohio in 2012. Applications were made either on November 26 and December 3.

		—Days After Treatment (DAT)—		
Trt	Treatment	7	14	21
		Percent Control†		
1	A.D.I.O.S.	31	100	100
2	Untreated	0	0	0
LSD (0.05)		NS‡	--	--

† Percent control calculated as 1-(day x % cover treated/ day x % cover untreated control) based on treatment means
‡ NS Means are not significantly different (P=0.05) according to Fisher's Protected LSD Test