

Postemergence Broadleaf Weed Control - 1998

Clark Throssell and Dan Weisenberger

Objective

Our objective was to determine the effectiveness of commercially available and experimental postemergence herbicides for broadleaf weed control.

Rationale

Broadleaf weeds are a problem on many turf sites. Postemergence herbicides are often applied on these sites to control broadleaf weeds. It is important to continually examine new herbicides and new ways to use existing herbicides for their ability to control broadleaf weeds.

How It Was Done

A stand of Kentucky bluegrass turf, at the Agronomy Research Center, with a substantial population of dandelion and black medic was selected as the site for this experiment. The site was mowed at 2 inches twice per week with clippings returned. No fertilizer was applied during the course of the experiment and irrigation was applied to prevent any sign of drought stress. Date of herbicide application was 21 May 1998. All herbicide treatments were applied using a three nozzle hand held boom in 2 gals. of water per 1,000 sq. ft. Data collected were phytotoxicity to the Kentucky bluegrass turf and a visual rating of percent of plot area covered with dandelion and black medic on 4, 17, 29 June, 14 July and 21 Aug 1998.

Results

- None of the treatments caused unacceptable phytotoxicity damage to the Kentucky bluegrass turf.
- Dandelion cover in the untreated check varied from 22 to 47% depending on rating date indicating this was a good site for this experiment.
- On the 4 June rating date dandelions had been negatively affected by the herbicide treatments but control had not yet been achieved (Table 1).
- On the 21 Aug rating date percent cover by dandelions had increased from previous rating dates due to recovery and/or regrowth of treated dandelions and possibly the germination and growth of new plants after herbicide application.
- Drive 75DF at 0.5 lbs ai per acre plus methylated seed oil (MSO), Drive 75DF at 0.75 lbs ai per acre plus MSO, Drive 75DF at 0.25, 0.5, and 0.75 lbs ai per acre plus 2,4-D amine at 0.75 lbs ai per acre plus MSO and Trimec Classic 3.32EC at 1.5 lbs ai per acre plus MSO provided good to excellent reduction in cover by dandelions (Table 1).
- All herbicide treatments provided excellent reduction in cover by black medic.

Table 1. Percent dandelion cover following treatment with commercially available and experimental herbicides.

Treatment	Application rate lbs ai/A	% dandelion cover ^a				
		4 June	17 June	29 June	14 July	21 Aug
Check	---	23.3	22.3	40.0	38.3	46.7
Drive 75DF	0.25	18.3	11.7	23.3	28.3	36.7
+ methylated seed oil ^b	1.0 ^c					
Drive 75DF	0.5	16.7	11.7	8.3	11.7	28.3
+ methylated seed oil ^b	1.0 ^c					
Drive 75DF	0.75	12.7	9.3	4.3	7.7	18.3
+ methylated seed oil ^b	1.0 ^c					
Drive 75DF	0.25	18.3	8.3	10.0	10.0	23.3
+ 2,4-D amine 3.8SL	0.75					
+ methylated seed oil ^b	1.0 ^c					
Drive 75DF	0.5	15.0	4.7	9.3	5.7	18.3
+ 2,4-D amine 3.8SL	0.75					
+ methylated seed oil ^b	1.0 ^c					
Drive 75DF	0.75	18.3	9.0	3.0	2.7	18.3
+ 2,4-D amine 3.8SL	0.75					
+ methylated seed oil ^b	1.0 ^c					
2,4-D amine 3.8SL	0.75	18.3	11.7	25.0	28.3	26.7
+ methylated seed oil ^b	1.0 ^c					
2,4-D amine 3.8SL	0.75	15.0	9.7	28.3	28.3	28.3
Trimec Classic 3.32EC	1.5	15.0	13.3	10.0	11.7	21.7
+ methylated seed oil ^b	1.0 ^c					
LSD (0.05)		NS	NS	11.9	16.0	NS

^a Percent of plot covered by dandelion.

^b Denotes products applied as a tank mix.

^c Rate of application was percent volume per volume.