

Post broadleaf weed efficacy in cool season turfgrass with combinations of quinclorac and triclopyr – USA08102

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Background/Objective: 1) To evaluate efficacy of quinclorac in combination with triclopyr when applied post-emergence to broadleaf weeds in cool-season turfgrass situations; 2) to determine if combinations at lower rates provide synergistic broadleaf weed efficacy; and 3) compare to the commercial standards.

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:	good
Turf Management:	Mowing Height in: 2.5
	Fertilization: 1 lb N/M/YR
	Irrigation: To prevent moisture stress
Testing on Site Previous Year:	none
Target Pest:	Dandelion (<i>Taraxacum officinale</i>)
Growth Stage:	Mature

Application Information

Application Date:	16 May
Application Time:	9:00am
Air Temperature F^o:	51
Relative Humidity(%):	74
Wind Speed mph:	4
Soil Temperature(3 in depth) F^o:	54
Soil Moisture:	wet
Spray Volume gal 1000 ft⁻²:	2
Spray Pressure:	30psi
Spray Nozzle:	8001.5
Spray Equipment:	CO ₂ backpack
Irrigation After Application:	None
Experimental Design:	Randomized complete block
Replications:	3
Plot Size ft:	5 X 5

Results:

All treatments decreased dandelion cover compared to the check when rated on 22 June and 18 July. There was no statistical difference in dandelion cover among the herbicide treatments on 12 June. Though triclopyr at 1 pt/A decreased dandelion cover compared to the check on 18 July, it did not perform as well as any of the quinclorac+triclopyr combinations. Our data suggest benefit of combining triclopyr with quinclorac to improve dandelion control over that expected from triclopyr alone, but more data with higher populations of dandelion would strengthen this conclusion.

Table 1. Percent cover^a of dandelion after applications of quinclorac and/or triclopyr.

Treatment	Rate of application	22 May	12 Jun	18 Jul
	pt/A			
Check		10.0	3.0	4.6
MSO	1.5			
Quali-Pro Quinclorac 75DF	0.5 ^b	5.6	0.0	1.0
MSO	1.5			
Quali-Pro Quinclorac 75DF	1.0 ^b	6.7	0.0	0.0
MSO	1.5			
Triclopyr 4EC	1	4.0	0.3	2.3
MSO	1.5			
Triclopyr 4EC	2	5.3	0.3	0.3
MSO	1.5			
Quali-Pro Quinclorac 75DF	0.5 ^b	5.0	0.3	0.0
Triclopyr 4EC	1			
MSO	1.5			
Quali-Pro Quinclorac 75DF	0.5 ^b	6.0	0.0	0.0
Triclopyr 4EC	2			
MSO	1.5			
Quali-Pro Quinclorac 75DF	1.0 ^b	5.0	0.0	0.0
Triclopyr 4EC	1			
MSO	1.5			
Quali-Pro Quinclorac 75DF	1.0 ^b	5.6	0.0	0.3
Triclopyr 4EC	2			
MSO	1.5			
Trimec Classic	4	4.0	0.3	1.0
LSD (0.05)		NS	1.2	1.5

^a Cover is the percent of the plot area covered by dandelion.

^b Rate of application was pounds per acre.