Evaluation of Glyphosate Formulations for Control of White Clover

Zac Reicher and Dan Weisenberger

Background/Objective: To evaluate new glyphosate formulations in the T&O market.

Site Information

Location:		William H. Daniel Research and Diagnostic Center
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
Target Pest:		*Trifolium repens* (White clover)
Growth Stage:		mature

Application Information

Application Date: in 2005	2 July
Spray Volume gal 1000 ft^{-2}:	2
Spray Equipment:	CO_2 backpack
Experimental Design:	Randomized complete block
Replications:	3
Plot Size ft:	5 X 5

Results:

- The high rate of each formulation was more effective than the low rate in controlling clover measured 8, 14, and 28 July (Table 1).
- MON 79670 and 77360 provided the highest clover control.
- The August and September percent cover ratings of clover are not indicative of clover control because the treatments effectively controlled Kentucky bluegrass, allowing surviving clover both in and around the plots to spread unabated.

Table 1. Effect of glyphosate formulations applied in early July on white clover.

		Control[a]			Cover[b]	
Treatment	Rate of application	8 July	14 July	28 July	26 Aug	20 Sep
	lb ae/A				-------%-------	
MON 79670 4.5# ae SL	0.75	18.3	10.0	23.3	75.0	50.0
MON 79670 4.5# ae SL	1.5	68.3	66.7	86.7	60.0	75.0
MON 79786 4.5# ae SL	0.75	21.7	23.3	21.7	83.3	75.0
MON 79786 4.5# ae SL	1.5	53.3	28.3	58.3	83.3	89.3
MON 79688 4.5# ae SL	0.75	11.7	1.7	13.3	76.7	71.7
MON 79688 4.5# ae SL	1.5	60.0	36.7	66.7	76.7	83.3
MON 77360 3# ae SL	0.75	15.0	13.3	16.7	83.3	70.0
MON 77360 3# ae SL	1.5	73.3	76.7	91.7	48.3	76.7
Check		0.0	0.0	0.0	16.7	18.3
LSD (0.05)		15.3	30.2	30.2	30.2	29.8

[a] Control was rated on a scale of 0 to 100 with 0 = no control and 100 = total control.
[b] Percent of the plot area covered by white clover.