

Winter Weed Control with Roundup ProMax in Dormant Bermudagrass

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Introduction

This study was conducted on a mature stand of common bermudagrass (*Cynodon dactylon*) at the East Tennessee Research and Education Center (Knoxville, TN). The objective of the study was to evaluate the efficacy of Roundup ProMax for control of various winter annual and perennial weeds in dormant bermudagrass turf.

Methods and Materials

The test site was maintained similar to that of a golf course fairway with respect to irrigation, fertilization and mowing.

Treatments were arranged in a randomized complete block design with four replications. Herbicide treatments were applied on 19 February 2009 to plots (5' x 5') using a CO₂ powered boom sprayer calibrated to deliver 30 gpa using four, flat-fan, 8002 nozzles at 18 psi, configured to provide a 5-ft spray swath.

Henbit (*Lamium amplexicaule*), purple deadnettle (*Lamium purpureum*), white clover (*Trifolium repens*), and common chickweed (*Stellaria media*) control were rated visually utilizing a 0 (no turf injury or weed control) to 100 % (complete control of all weeds or turf) scale at 7, 14, 27, 42 days after initial treatment (DAIT). White clover control ratings were also taken at 60 and 74 DAIT.

Results and Discussion

Applications of MON 76207 at 0.387 and 0.770 lb a.e./A provided greater henbit and purple deadnettle control than applications of MON 76207 at 0.176 lb a.e./A or Speedzone at 4 pt/A at 42 DAIT (Table 1). All treatments provided 100% control of common chickweed at 42 DAIT as well.

No rate of MON 76207 provided greater than 22.5% control of white clover at 74 DAIT; white clover control with Speedzone at 4 pt/A was greater than 90% on the same rating date (Table 2)

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Table 1. Henbit, purple deadnettle, and common chickweed control following applications of Roundup ProMax in 2009.

Treatment	Rate -per A-	Henbit Control				Purple Deadnettle Control				Common Chickweed Control		
		7 DAIT	14 DAIT	27 DAIT	42 DAIT	7 DAIT	14 DAIT	27 DAIT	42 DAIT	14 DAIT	27 DAIT	42DAIT
1. UNTREATEDCHECK		0.0 b [†]	0.0 c	0.0 c	0.0 c	0.0 b	0.0 c	0.0 c	0.0 d	0.0 d	0.0 b	0.0 b
2. MON 76207	0.176 lb a.e.	0.0 b	10.0 b	53.8 a	52.5 b	0.0 b	10.0 b	66.3 b	55.0 c	17.5 c	67.5 a	100.0 a
3. MON 76207	0.387 lb a.e.	0.0 b	15.0 b	76.3 ab	87.5 a	0.0 b	15.0 b	81.3 ab	82.5 a	27.5 bc	91.3 a	100.0 a
4. MON 76207	0.770 lb a.e.	0.0 b	15.5 b	87.5 a	96.3 a	0.0 b	15.5 b	87.5 a	91.8 a	33.8 b	92.5 a	100.0 a
5. SPEEDZONE	4 pt.	11.3a	57.5 a	68.8 ab	66.3 b	11.3 a	57.5 a	91.3 a	70.0 b	55.0 a	71.0 a	100.0 a

[†]Means followed by the same letter do not significantly differ (P = 0.05; Duncan's new MRT)

Table 2. White clover control following applications of Roundup ProMax in 2009.

Treatment	Rate -per A-	White Clover Control					
		7 DAIT	14 DAIT	27 DAIT	42 DAIT	60DAIT	74 DAIT
1. UNTREATEDCHECK		0.0 b [†]	0.0 c	0.0 c	0.0 c	0.0 d	0.0 c
2. MON 76207	0.176 lb a.e.	0.0 b	0.0 c	5.0 a	25.0 b	0.0 d	0.0 c
3. MON 76207	0.387 lb a.e.	0.0 b	15.0 b	15.0 b	30.0 b	8.8 c	0.0 c
4. MON 76207	0.770 lb a.e.	0.0 b	12.5 bc	20.0 b	30.0 b	36.3 b	22.5 b
5. SPEEDZONE	4 pt.	8.8a	50.0 a	78.8 a	91.3 a	98.8 a	90.0 a

[†]Means followed by the same letter do not significantly differ (P = 0.05; Duncan's new MRT)