

2007 Roundup PRO Formulation Comparison

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Objectives

The objective of this study was to compare the weed control of Roundup PRO and new turf and ornamental PRO formulations to ensure that the new formulations provide equal or superior efficacy.

The new formulations are potassium salts of Roundup being developed for the Industrial Turf and Ornamental product line.

Methods

The target crop/plant chosen for control in this study was 'Moonlight' Kentucky bluegrass. The study area also had a variety of grassy and broadleaf weeds present. The four treatments were arranged in a randomized complete block design, with four replications, and with individual plots measuring 5' x 10' (50ft²). Treatments were applied 10 July with the appropriate amount of product (Table 1). Products were sprayed with a CO₂ backpack sprayer at 40 psi, using Teejet 8001VS nozzles, at a spray volume rate of one gallon/1000ft².

Plots were rated on a scale of 9 to 1, with 9 showing no damage and 1 resulting in complete plant death. A rating of 6 would indicate an acceptable rating.

Results

Data were first taken 14 July. There was a statistical difference between treatments only for the 15 July data collection (Table 2). There were no statistical differences between treatments' efficacy at any other time. Data were collected on 31 July to determine final percentages of Kentucky bluegrass control. There were no differences in the control of bluegrass between any of the treatments, with control averaging 99% or greater.

Table 1. Treatment table

Trt #	Product	Formulation Amount	Formulation Unit	Rate	Rate/Unit	Alternate Rate	Alternate Rate Unit	mL/plot
1	Control	-	-	-	-	-	-	-
2	Roundup PRO	3	#/G AE	2.25	AE #/A	3	QT/A	3.3
3	MON 76207	4.5	#/G AE	2.25	AE #/A	2	QT/A	2.2
4	MON 76302	4.5	#/G AE	2.25	AE #/A	2	QT/A	2.2

Table 2. Phytotoxicity ratings (9 = no damage; 1 = dead; 6 = acceptable turf)

Trt	10-Jul	14-Jul	15-Jul	16-Jul	17-Jul	19-Jul	20-Jul	21-Jul
1	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
2	9.0	4.8	3.5	3.0	3.0	2.0	2.0	1.0
3	9.0	4.8	4.0	3.0	3.0	2.0	2.0	1.0
4	9.0	5.0	4.3	3.0	3.0	2.0	2.0	1.0
LSD	NS	0.6	0.6	0.0	0.0	0.0	0.0	0.0