

Herbicides for Controlling Kentucky Bluegrass with Spray-to-Wet Applications

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Background/Objective: Glyphosate Tolerant Kentucky Bluegrass (GTKBG) growth, spread, or movement into non-desired areas requires control. Herbicide applications represent one viable method, in addition to cultural methods for controlling escaped GTKBG. The objective is to identify effective herbicide for controlling GTKBG applied as spot treatments of spray-to-wet applications using %volume/volume applications.

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:	<i>Poa pratensis</i> (Kentucky bluegrass)
Growth Stage:	mature

Application Information

Application Dates: in 2005	8 July	9 Aug
Spray Volume gal 1000 ft⁻²:	2.3	
Spray Equipment:	CO ₂ backpack	
Experimental Design:	Randomized complete block	
Replications:	3	
Plot Size ft:	5 X 5	

Results:

- Arsenal2 alone gave excellent control by 25 Oct (Table 1).
- Arsenal2 in combination with Envoy, Finale, or Fusilade gave excellent control by 25 Oct (Table 1) and most of this control was due to Arsenal2.
- Both rates of Hyvar and Plateau also provided >95% control by 25 Oct.
- Arsenal2, Hyvar, and Plateau have excellent potential for remediation of escaped glyphosate resistant Kentucky bluegrass.

Table 1. Control^a of Kentucky bluegrass from spray-to-wet applications of non-selective herbicides.

Treatment	Rate of application	22 July	4 Aug	2 Sept	25 Oct
	%v/v				
Arsenal2 2SL	5	58.3	96.3	100.0	100.0
Arsenal2 2SL	2.5	40.0	95.3	100.0	100.0
Arsenal2 2SL ^b	2.5	43.3	96.0	100.0	100.0
Arsenal2 2SL	2.5				
Envoy 0.94EC	1	8.3	40.0	41.7	8.3
Envoy 0.94EC	0.5	5.0	21.7	45.0	10.0
Envoy 0.94EC ^b	0.5	4.0	20.0	100.0	100.0
Arsenal2 2SL	2.5				
Finale 1SL	3	91.7	85.0	86.7	15.0
Finale 1SL	1.5	63.3	51.7	36.7	0.0
Finale 1SL ^b	1.5	81.7	61.7	100.0	100.0
Arsenal2 2SL	2.5				
Plateau	2.5	58.3	90.0	100.0	100.0
Plateau	1.25	38.3	75.0	100.0	99.3
Fusilade 2EC	1	10.0	55.0	91.7	21.7
Fusilade 2EC	0.5	8.3	40.0	35.0	6.7
Fusilade 2EC ^b	0.5	6.7	46.7	100.0	100.0
Arsenal2 2SL	2.5				
Reward 2EC	0.5	3.3	3.3	6.7	0.0
Hyvar 2SL	5	95.0	100.0	100.0	99.0
Hyvar 2SL	3	95.0	99.0	100.0	96.0
Check		0.0	0.0	3.3	0.0
LSD (0.05)		12.3	15.1	27.4	5.9

^a Control was rated on a scale of 0 to 100 where 0 = no control and 100 = total control.

^b Treatments were applied with the four week split application made on 9 Aug.