

Herbicide safety over established buffalograss-2012
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Buffalograss can be maintained with extremely low maintenance, but weeds can become problematic depending on the season and setting. New new herbicides have been labeled since the latest UNL research on this topic in 2006 (<http://turf.unl.edu/pdfcaextpub/HerbicideToleranceofBuffalograss.pdf>). Therefore, our objective was to evaluate herbicides for safety over established 'Bowie' buffalograss.

This study was initiated on 10 year old Bowie bufflaograss at the John Seaton Anderson Turf Center outside Mead, NE. The area was mowed monthly at 3.5 inches , unirrigated, and received 1.0 lb N/1000 sq ft/yr. Herbicides were applied to 3' by 3' plots in 2 gals water/1000 sq ft. Herbicides were applied at their recommended high label rate and 2X their high label rate to mimic worse case scenarios with application overlaps, etc. All herbicides also included recommended surfactants. Phytotoxicity to buffalograss was rated on a 1 to 9 scale with 1=dead, 7= acceptable, and 9=no damage. Though experiment design is a 2 X 19 factorial, preliminary data was analyzed as a randomized complete block. Data will be fully analyzed after the second year of this trial in 2013.

Results:

Dismiss or Solitare at the 2X rate caused unacceptable damage by 25 June (Table 1). Katana at both rates, and Revolver or Plateau at the high rates caused unacceptable damaged by 2 July. Revolver or Plateau at the high rates caused unacceptable damage by 9 July. No herbicides caused unacceptabel damage thereafter and all plots were fully recovered by 30 July, which was 6 weeks after application. The buffalograss on this site was low maintenance and thus likely did not result in damage to the extent that a higher maintenance buffalograss stand would. The herbicides used in this study may not currently be labelled for buffalograss, so refer to labels for specifics.

Application Description	6/19/2012
Application Method:	Spray
Application Timing:	Post
Application Placement:	Broad
Air Temperature, Unit:	86 F
% Relative Humidity:	65
Wind Velocity, Unit:	8 mph
Soil Temperature, Unit:	80 F

Table 1. Phytotoxicity on a low maintenance stand of mature 'Bowie' buffalograss after application of herbicides at 1X and 2X their high label rates.

Crop Variety	Bowie		Bowie		Bowie		Bowie		Bowie		
Rating Date	6/25/2012		7/2/2012		7/9/2012		7/16/2012		7/30/2012		
Rating Type	Phyto		Phyto		Phyto		Phyto		Phyto		
Rating Unit	1-9		1-9		1-9		1-9		1-9		
Number of Subsamples	1		1		1		1		1		
Days After First/Last Applic.	6 6		13 13		20 20		27 27		41 41		
Trt-Eval Interval	6 DA-A		13 DA-A		20 DA-A		27 DA-A		41 DA-A		
Trt Treatment	Rate		Rate		Rate		Rate		Rate		
No. Name	Rate	Unit	1		2		3		4		5
1 Untreated Check			8.7 ab		9 a		9 a		9 a		9 a
2 Tenacity	8 fl oz/a		9 a		9 a		9 a		9 a		9 a
3 Tenacity	16 fl oz/a		8.7 ab		9 a		9 a		9 a		9 a
4 Quicksilver	2.1 fl oz/a		8.7 ab		8.7 ab		8.7 ab		9 a		9 a
5 Quicksilver	4.2 fl oz/a		9 a		8.3 abc		8.7 ab		9 a		9 a
6 Sedgehammer	1.33 oz/a		9 a		9 a		9 a		9 a		9 a
7 Sedgehammer	2.66 oz/a		9 a		9 a		8.7 ab		9 a		9 a
8 Princep Caliber 90	1 lb/a		9 a		9 a		9 a		9 a		9 a
9 Princep Caliber 90	2 lb/a		9 a		9 a		9 a		9 a		9 a
10 Certainty	1.25 oz/a		9 a		8.7 ab		8.7 ab		9 a		9 a
11 Certainty	2.5 oz/a		8.7 ab		8.7 ab		8.7 ab		9 a		9 a
12 Dismiss	12 fl oz/a		8.3 abc		8.3 abc		8.7 ab		9 a		9 a
13 Dismiss	24 fl oz/a		6.7 e		7.7 b-e		8.3 abc		9 a		9 a
14 Katana	3 oz/a		7.3 cde		5.3 g		7 d		8.3 b		9 a
15 Katana	6 oz/a		7.7 b-e		6 fg		5 f		7.3 c		9 a
16 Solitaire	32 oz/a		8.3 abc		9 a		9 a		9 a		9 a
17 Solitaire	64 oz/a		6.7 e		8.3 abc		9 a		9 a		9 a
18 Echelon	24 fl oz/a		9 a		9 a		9 a		9 a		9 a
19 Echelon	48 fl oz/a		7 de		7.3 cde		7.7 cd		8.3 b		9 a
20 Q4 Plus	7 pt/a		8.7 ab		8.7 ab		8.7 ab		9 a		9 a
21 Q4 Plus	14 pt/a		7.7 b-e		7.7 b-e		8 bc		8.7 ab		9 a
22 Monument	0.53 oz/a		9 a		8.7 ab		8.7 ab		9 a		9 a
23 Monument	1.06 oz/a		8.3 abc		8 a-d		7.7 cd		8.7 ab		9 a
24 Revolver	0.8 fl oz/1000 ft2		7.7 b-e		7.3 cde		7 d		8.3 b		9 a
25 Revolver	1.6 fl oz/1000 ft2		8 a-d		6.7 ef		5.7 ef		7.7 c		9 a
26 Drive	64 fl oz/a		9 a		9 a		9 a		9 a		9 a
27 Drive	128 fl oz/a		8 a-d		8.7 ab		9 a		9 a		9 a
28 Amicarbazone	5 oz/a		8.3 abc		8.3 abc		8.7 ab		9 a		9 a
29 Amicarbazone	10 oz/a		7.3 cde		7 def		8 bc		9 a		9 a
30 Flucarbazone	0.3 oz/a		8.7 ab		8.3 abc		8.7 ab		9 a		9 a
31 Flucarbazone	0.6 oz/a		8.7 ab		8.3 abc		8.7 ab		9 a		9 a
32 Octane	2 fl oz/a		8.7 ab		8.3 abc		9 a		9 a		9 a
33 Octane	4 fl oz/a		8.7 ab		8.7 ab		8.3 abc		8.7 ab		9 a
34 SquareOne	18 oz/a		9 a		8.7 ab		9 a		9 a		9 a
35 SquareOne	36 oz/a		8.7 ab		9 a		9 a		9 a		9 a
36 Blindside	10 oz/a		8.7 ab		9 a		9 a		9 a		9 a
37 Blindside	20 oz/a		7.7 b-e		8 a-d		8 bc		9 a		9 a
38 Plateau	8 fl oz/a		8.7 ab		7.7 b-e		8 bc		9 a		9 a
39 Plateau	16 fl oz/a		7 de		5 g		6 e		7.7 c		9 a
LSD (P=.05)			1.16		1.02		0.92		0.45		0
Standard Deviation			0.71		0.63		0.56		0.28		0
CV			8.5		7.64		6.74		3.13		0
Replicate F			1.892		3.758		4.222		1.462		0
Replicate Prob(F)			0.1578		0.0278		0.0182		0.2383		1
Treatment F			3.044		7.885		9.111		6.876		0
Treatment Prob(F)			0.0001		0.0001		0.0001		0.0001		1

Means followed by same letter do not significantly differ (P=.05, LSD)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Rating Unit

1-9 = 1-9 index/scale