

Application Description	A	B	C
Application Date:	7/23/2010	6/19/2012	7/1/2013
Time of Day:	9	10	9
Application Method:	Spray	Spray	Spray
Application Timing:	Post	Post	Post
Application Placement:	Broad	Broad	Broad
Air Temperature, Unit:	76	86 F	65 F
% Relative Humidity:	85	65	62
Wind Velocity, Unit:	4	8 mph	4.8 mph
Soil Temperature, Unit:	83	80 F	76 F

Buffalograss can be maintained with extremely low maintenance, but weeds can become problematic depending on the season and setting. 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 buffalograss 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 plots in 2 gals water/1000 sq ft with a CO2 backpack sprayer using a 1 nozzle boom with 800zvs tip at 30 PSI. 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 at 1, 2, 3, 4, or 5 weeks after treatment (WAT).

**Results:** Throughout the 3 years of applications with various herbicides applied at the high label rate, Revolver (labeled for spot applications only) and Katana (1.5 oz./a recommended on buffalograss) were the only 2 herbicides to result in an unacceptable rating below 7. Even though herbicides were applied at 2x the label rate, results from this study indicate that some herbicides are very safe over established buffalograss. When herbicides were applied at the 2x rate, Katana, Revolver, Dismiss, Solitaire, Plateau, Q4 Plus, amicarbazone, Trimec Classic, Speedzone Southern, and 2-4D amine were the only herbicides to result in an unacceptable rating below 7 and generally 2-3 weeks after application ratings were back up above the acceptable rating of 7. This study will continue on different

**Table 1. Phytotoxicity of various herbicides applied in the summer at the high label or 2x the high label rate to an established Bowie buffalograss stand**

Crop Variety	Bowie	Bowie	Bowie	Bowie	Bowie	Bowie	Bowie	Bowie	Bowie	Bowie	Bowie	Bowie	Bowie	Bowie	Bowie	Bowie	Bowie	Bowie
Rating Date	7/29/2010	8/6/2010	8/13/2010	8/25/2010	9/5/2010	6/25/2012	7/2/2012	7/9/2012	7/16/2012	7/30/2012	7/30/2012	7/8/2013	7/12/2013	7/21/2013	7/30/2013	8/6/2013	8/6/2013	
Rating Unit	Phyto	Phyto	Phyto	Phyto	ground	Phyto	Phyto	Phyto	Phyto	Phyto	Cover	Phyto	Phyto	Phyto	Phyto	Cover	Cover	
Trt Treatment	1-9	1-9	1-9	1-9	%	1-9	1-9	1-9	1-9	1-9	%	1-9	1-9	1-9	1-9	%	%	
No Name	Rate	1 WAT	2 WAT	3 WAT	4 WAT	5 WAT	1 WAT	2 WAT	3 WAT	4 WAT	5 WAT	1 WAT	2 WAT	3 WAT	4 WAT	5 WAT	5 WAT	
	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 Untreated Check		9 a	9 a	9 a	9 a	90 ab	8.7 ab	9 a	9 a	9 a	9 a	83.3 a	9 a	9 a	9 a	9 a	9 a	91.7 a
2 Tenacity 45C	8 fl oz/a	8.3 abc	8 abc	8.7 ab	9 a	87 abc	9 a	9 a	9 a	9 a	9 a	85 a	8.7 ab	9 a	8.7 ab	8.7 a	9 a	95 a
3 Tenacity 45C	16 fl oz/a	8.3 abc	7.3 bcd	8 bc	9 a	85 bc	8.7 ab	9 a	9 a	9 a	9 a	83.3 a	7.7 b-e	7.3 c-f	8 a-d	8.7 a	9 a	95 a
4 Quiksilver T&O 1.95C	2.1 fl oz/a	9 a	8.7 a	9 a	9 a	90 ab	8.7 ab	8.7 ab	8.7 ab	9 a	9 a	83.3 a	8 a-d	8 a-d	8 a-d	8.7 a	9 a	95 a
5 Quiksilver T&O 1.95C	4.2 fl oz/a	8.7 ab	8.7 a	9 a	9 a	88 ab	9 a	8.3 abc	8.7 ab	9 a	9 a	85 a	7.7 b-e	7.3 c-f	8 a-d	8.7 a	9 a	95 a
6 Sedgehammer 75WG	1.33 oz/a	9 a	9 a	9 a	9 a	88 ab	9 a	9 a	9 a	9 a	9 a	83.3 a	8.3 abc	8.3 abc	8.3 abc	9 a	9 a	93.3 a
7 Sedgehammer 75WG	2.66 oz/a	9 a	9 a	9 a	9 a	87 abc	9 a	9 a	8.7 ab	9 a	9 a	85 a	8.7 ab	8.7 ab	9 a	9 a	9 a	93.3 a
8 Princep Caliber 90WG	1 lb/a	9 a	9 a	9 a	9 a	92 a	9 a	9 a	9 a	9 a	9 a	83.3 a	9 a	9 a	9 a	9 a	9 a	95 a
9 Princep Caliber 90WG	2 lb/a	9 a	9 a	9 a	9 a	87 abc	9 a	9 a	9 a	9 a	9 a	85 a	8.3 abc	8.7 ab	9 a	9 a	9 a	95 a
10 Certainty 75WG	1.25 oz/a	9 a	8.7 a	9 a	9 a	88 ab	9 a	8.7 ab	8.7 ab	9 a	9 a	85 a	9 a	9 a	9 a	9 a	9 a	93.3 a
11 Certainty 75WG	2.5 oz/a	9 a	8.3 ab	8.7 ab	9 a	85 bc	8.7 ab	8.7 ab	8.7 ab	9 a	9 a	85 a	8.7 ab	8.7 ab	8.7 ab	8.7 a	9 a	91.7 a
12 Dismiss 45C	12 fl oz/a	8.7 ab	8.7 a	9 a	9 a	85 bc	8.3 abc	8.3 abc	8.7 ab	9 a	9 a	85 a	8.3 abc	8.7 ab	9 a	9 a	9 a	95 a
13 Dismiss 45C	24 fl oz/a	8 bcd	8.7 a	8.7 ab	9 a	88 ab	6.7 e	7.7 b-e	8.3 abc	9 a	9 a	85 a	8 a-d	8.3 abc	9 a	9 a	9 a	95 a
14 Katana 25WG	3 oz/a	7.7 cde	7.3 bcd	8.3 ab	9 a	82 cd	7.3 cde	5.3 g	7 d	8.3 b	9 a	81.7 a	8.7 ab	8.3 abc	8.3 abc	8.7 a	8.7 a	95 a
15 Katana 25WG	6 oz/a	8 bcd	6.7 d	7.3 cd	8.7 b	7.7 b-e	6 fg	5 f	7.3 c	9 a	9 a	78.3 a	7.7 b-e	7.7 b-e	8 a-d	8.7 a	8.7 a	95 a
16 Solitaire 75WG	32 oz/a	8.7 ab	8.3 abc	8.7 ab	9 a	87 abc	8.3 abc	9 a	9 a	9 a	9 a	83.3 a	7.7 b-e	8 a-d	8.7 ab	8.7 a	9 a	95 a
17 Solitaire 75WG	64 oz/a	7.7 cde	8 abc	8.3 ab	9 a	85 bc	6.7 e	8.3 abc	9 a	9 a	9 a	83.3 a	8 a-d	8.7 ab	9 a	8.3 ab	9 a	95 a
18 Echelon 45C	24 fl oz/a	8.3 abc	8.7 a	9 a	9 a	85 bc	9 a	9 a	9 a	9 a	9 a	85 a	7.3 c-f	8 a-d	8.3 abc	8.3 ab	9 a	91.7 a
19 Echelon 45C	48 fl oz/a	8 bcd	8.3 ab	9 a	9 a	87 abc	7 de	7.3 cde	7.7 cd	8.3 b	9 a	83.3 a	8 a-d	8.7 ab	9 a	9 a	9 a	93.3 a
20 Q4 Plus 1.79SL	7 pt/a	7.7 cde	8 abc	9 a	9 a	85 bc	8.7 ab	8.7 ab	8.7 ab	9 a	9 a	85 a	7.3 c-f	7.3 c-f	9 a	9 a	9 a	95 a
21 Q4 Plus 1.79SL	14 pt/a	7 e	7.3 bcd	8 bc	9 a	82 cd	7.7 b-e	7.7 b-e	8 bc	8.7 ab	9 a	85 a	6.3 f	6.7 efg	7 d-g	7.3 cd	8 a	90 a
22 Monument 75WG	0.53 oz/a	8.3 abc	8 abc	8.7 ab	9 a	82 cd	9 a	8.7 ab	8.7 ab	9 a	9 a	83.3 a	8.7 ab	8.7 ab	9 a	9 a	9 a	91.7 a
23 Monument 75WG	1.06 oz/a	8 bcd	7 cd	8.3 ab	8.7 b	85 bc	8.3 abc	8 a-d	7.7 cd	8.7 ab	9 a	83.3 a	9 a	9 a	9 a	9 a	9 a	93.3 a
24 Revolver 2.34%SC	0.8 fl oz/1000 ft	7.7 cde	6.3 d	6.7 d	8.7 b	78 d	7.7 b-e	7.3 cde	7 d	8.3 b	9 a	80 a	8.3 abc	8.7 ab	8.7 ab	8.7 a	9 a	95 a
25 Revolver 2.34%SC	1.6 fl oz/1000 ft	7.3 de	5 e	5.7 e	8 c	72 e	8 a-d	6.7 efg	5.7 ef	7.7 c	9 a	78.3 a	8.3 abc	7.3 c-f	6.3 fgh	6.7 de	9 a	91.7 a
26 Drive XLR8 1.5SL	64 fl oz/a						9 a	9 a	9 a	9 a	9 a	85 a	8.3 abc	8.7 ab	9 a	9 a	9 a	93.3 a
27 Drive XLR8 1.5SL	128 fl oz/a						8 a-d	8.7 ab	9 a	9 a	9 a	83.3 a	8.7 ab	8.7 ab	8.7 ab	9 a	9 a	93.3 a
28 Amicarbazone 70WG	5 oz/a						8.3 abc	8.3 abc	8.7 ab	9 a	9 a	85 a	8 a-d	8.3 abc	9 a	9 a	9 a	95 a
29 Amicarbazone 70WG	10 oz/a						7.3 cde	7 def	8 bc	9 a	9 a	83.3 a	6.7 ef	7 d-g	8.3 abc	9 a	9 a	91.7 a
30 Trimec Classic	4 pt/a												8.7 ab	8.3 abc	8.3 abc	8.7 a	9 a	95 a
31 Trimec Classic	8 pt/a												6.7 efg	6.7 efg	7 d-g	8.3 ab	9 a	91.7 a
32 Octane 2%SC	2 fl oz/a						8.7 ab	8.3 abc	9 a	9 a	9 a	85 a	8 a-d	8.3 abc	9 a	9 a	9 a	95 a
33 Octane 2%SC	4 fl oz/a						8.7 ab	8.7 ab	8.3 abc	8.7 ab	9 a	83.3 a	8 a-d	8.3 abc	8.3 abc	8.7 a	8.7 a	91.7 a
34 SquareOne 70WG	18 oz/a						9 a	8.7 ab	9 a	9 a	9 a	85 a	8.3 abc	8.3 abc	8.7 ab	9 a	9 a	95 a
35 SquareOne 70WG	36 oz/a						8.7 ab	9 a	9 a	9 a	9 a	83.3 a	8.3 abc	8.7 ab	8.7 ab	9 a	9 a	91.7 a
36 Blindside 75WG	10 oz/a						8.7 ab	9 a	9 a	9 a	9 a	85 a	9 a	9 a	9 a	9 a	9 a	95 a
37 Blindside 75WG	20 oz/a						7.7 b-e	8 a-d	8 bc	9 a	9 a	85 a	8.7 ab	8.7 ab	7.7 b-e	8.7 a	9 a	91.7 a
38 Plateau 2AS(SL)	8 fl oz/a						8.7 ab	7.7 b-e	8 bc	9 a	9 a	83.3 a	8.7 ab	8.3 abc	8.7 ab	9 a	9 a	93.3 a
39 Plateau 2AS(SL)	16 fl oz/a						7 de	5 g	6 e	7.7 c	9 a	80 a	6.3 f	6.3 fg	5.7 h	6.3 e	8.7 a	91.7 a
40 Specticle	5 oz/a												8.3 abc	8.3 abc	9 a	9 a	9 a	95 a
41 Specticle	10 oz/a												8.7 ab	8.7 ab	9 a	9 a	9 a	91.7 a
42 Celsius	4.9 oz/a												8.7 ab	9 a	8.7 ab	9 a	9 a	95 a
43 Celsius	9.8 oz/a												8.7 ab	9 a	9 a	9 a	9 a	95 a
44 Speedzone	4 pt/a												9 a	9 a	9 a	9 a	9 a	95 a
45 Speedzone	8 pt/a												7.7 b-e	7.7 b-e	7.3 c-f	8.3 ab	8.7 a	91.7 a
46 Speedzone Southern	4 pt/a												8 a-d	8 a-d	9 a	9 a	9 a	91.7 a
47 Speedzone Southern	8 pt/a												7 def	6 g	6 gh	7.7 bc	8 a	88.3 a
48 Onetime	64 fl oz/a												8.3 abc	8.3 abc	9 a	9 a	9 a	93.3 a
49 Onetime	128 fl oz/a												8.3 abc	8.7 ab	8.7 ab	8.7 a	9 a	91.7 a
50 2-4D Amine	1.5 qt/a												8.7 ab	8 a-d	9 a	9 a	9 a	93.3 a
51 2-4D Amine	3 qt/a												6.7 ef	6.3 fg	6.7 e-h	7.3 cd	8.7 a	86.7 a
LSD (P= .05)		0.98	1.01	0.71	0.33	5.17	1.16	1.02	0.92	0.45	0	4.15	1.23	1.04	1.18	0.87	0.64	4.68
Standard Deviation		0.6	0.61	0.43	0.2	3.14	0.71	0.63	0.56	0.28	0	2.54	0.76	0.64	0.73	0.54	0.39	2.89
Treatment Prob(F)		0.0004	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	1	0.0664	0.0001	0.0001	0.0001	0.0001	0.6361	0.1119

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.