

North Carolina State University

Roundup Ready Creeping Bentgrass Field Evaluation Genotype Screening

Trial ID: 03-D02
Location: NCSU Turf Field Lab

Study Dir.: Travis Gannon
Investigator: Fred Yelverton

Crop Code				AGSST	AGSST	AGSST	AGSST	AGSST	AGSST	AGSST							
Rating Data Type				COVER	COVER	COVER	COVER	COVER	COVER	COVER							
Rating Unit				%	%	%	%	%	%	%							
Rating Date				5-1-03	5-15-03	6-3-03	7-1-03	7-29-03	8-27-03	9-23-03							
Trt-Eval Interval				30 DA-A	44 DA-A	63 DA-A	91 DA-A	119 DA-A	148 DA-A	175 DA-A							
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Product Rate	Product Rate	Grow Unit	Stg	Appl Code								
1	L 93						APRIL 1	A		31.7 a	58.3 a	76.7 a	81.7 a	80.0 a	93.3 bc	99.3 a	
2	Penncross						APRIL 1	A		25.0 a	51.7 a	73.3 a	78.3 a	76.7 a	90.0 c	99.3 a	
3	Penneagle						APRIL 1	A		33.3 a	60.0 a	76.7 a	75.0 a	78.3 a	93.3 bc	99.3 a	
4	Providence						APRIL 1	A		31.7 a	53.3 a	73.3 a	78.3 a	73.3 a	90.0 c	98.7 a	
5	Penn A-4						APRIL 1	A		30.0 a	60.0 a	76.7 a	85.0 a	90.0 a	95.0 ab	99.3 a	
6	Crenshaw						APRIL 1	A		21.7 a	51.7 a	76.7 a	85.0 a	88.3 a	96.7 ab	99.3 a	
7	ASR 368 Gen L Roundup Pro	L		48 fl oz/a			APRIL 1 MAY 5	A B		26.7 a	50.0 a	76.7 a	81.7 a	85.0 a	95.0 ab	99.3 a	
8	ASR 368 Gen L Roundup Pro Roundup Pro Roundup Pro	L L L		48 fl oz/a 48 fl oz/a 48 fl oz/a			APRIL 1 MAY 5 NOV 15 JUNE 1	A B C D		26.7 a	45.0 a	73.3 a	80.0 a	78.3 a	93.3 bc	99.3 a	
9	ASR 368 Gen E Roundup Pro Roundup Pro Roundup Pro	L L L		48 fl oz/a 48 fl oz/a 48 fl oz/a			APRIL 1 MAY 5 NOV 15 JUNE 1	A B C D		26.7 a	38.3 a	70.0 a	78.3 a	76.7 a	93.3 bc	99.3 a	
10	ASR 368 Gen R Roundup Pro Roundup Pro Roundup Pro	L L L		48 fl oz/a 48 fl oz/a 48 fl oz/a			APRIL 1 MAY 5 NOV 15 JUNE 1	A B C D		30.0 a	46.7 a	73.3 a	81.7 a	86.7 a	98.3 a	100.0 a	
LSD (P=.05)				7.62	16.74	8.47	8.29			13.86	4.58	1.29					
Standard Deviation				4.44	9.76	4.93	4.83			8.08	2.67	0.75					
CV				15.67	18.95	6.61	6.0			9.93	2.85	0.76					
Grand Mean				28.33	51.5	74.67	80.5			81.33	93.83	99.33					
Bartlett's X2				3.175	4.875	8.82	4.995			6.807	2.527	0.0					
P(Bartlett's X2)				0.923	0.845	0.454	0.835			0.657	0.772	1.00					
Friedman's X2				11.582	12.091	5.836	10.273			11.345	12.873	1.818					
P(Friedman's X2)				0.238	0.208	0.756	0.329			0.253	0.168	0.994					
Replicate F				9.169	19.076	8.452	8.143			2.234	5.026	12.316					
Replicate Prob(F)				0.0018	0.0001	0.0026	0.0030			0.1359	0.0184	0.0004					
Treatment F				1.972	1.525	0.669	1.274			1.498	2.870	0.526					
Treatment Prob(F)				0.1053	0.2130	0.7260	0.3152			0.2223	0.0272	0.8368					

Means followed by same letter do not significantly differ (P=.05, LSD)
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Crop Code				AGSST	AGSST	TURF	TURF	TURF	TURF	TURF						
Rating Data Type				PHYTO	PHYTO	QUALITY	QUALITY	QUALITY	QUALITY	QUALITY						
Rating Unit				%	%	1-9	1-9	1-9	1-9	1-9						
Rating Date				10-23-03	11-18-03	6-3-03	7-1-03	7-29-03	8-27-03	9-23-03						
Trt-Eval Interval				205 DA-A	231 DA-A	63 DA-A	91 DA-A	119 DA-A	148 DA-A	175 DA-A						
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Product Rate	Product Rate	Grow Unit	Stg	Appl Code							
1	L 93						APRIL 1 A			0.0 a	0.0 a	5.6 a	6.3 a	5.5 a	6.8 bcd	7.1 a
2	Penncross						APRIL 1 A			0.0 a	0.0 a	5.4 a	6.3 a	5.5 a	6.5 d	7.0 a
3	Penneagle						APRIL 1 A			0.0 a	0.0 a	5.6 a	6.2 a	5.7 a	6.8 bcd	7.0 a
4	Providence						APRIL 1 A			0.0 a	0.0 a	5.7 a	6.2 a	5.0 a	6.6 cd	7.0 a
5	Penn A-4						APRIL 1 A			0.0 a	0.0 a	5.8 a	6.8 a	6.3 a	7.0 abc	7.3 a
6	Crenshaw						APRIL 1 A			0.0 a	0.0 a	5.8 a	6.8 a	6.3 a	7.2 ab	7.1 a
7	ASR 368 Gen L Roundup Pro	L		48 fl oz/a			APRIL 1 A MAY 5 B			0.0 a	0.0 a	5.8 a	6.4 a	6.0 a	6.9 a-d	7.0 a
8	ASR 368 Gen L Roundup Pro	L		48 fl oz/a			APRIL 1 A MAY 5 B			0.0 a	0.0 a	5.7 a	6.3 a	5.5 a	6.9 a-d	7.2 a
	Roundup Pro	L		48 fl oz/a			NOV 15 C									
	Roundup Pro	L		48 fl oz/a			JUNE 1 D									
9	ASR 368 Gen E Roundup Pro	L		48 fl oz/a			APRIL 1 A MAY 5 B			0.0 a	0.0 a	5.3 a	6.2 a	5.4 a	6.8 bcd	7.1 a
	Roundup Pro	L		48 fl oz/a			NOV 15 C									
	Roundup Pro	L		48 fl oz/a			JUNE 1 D									
10	ASR 368 Gen R Roundup Pro	L		48 fl oz/a			APRIL 1 A MAY 5 B			0.0 a	0.0 a	5.8 a	6.5 a	6.3 a	7.3 a	7.3 a
	Roundup Pro	L		48 fl oz/a			NOV 15 C									
	Roundup Pro	L		48 fl oz/a			JUNE 1 D									
LSD (P=.05)										0.00	0.00	0.65	0.48	1.31	0.42	0.27
Standard Deviation										0.00	0.00	0.38	0.28	0.77	0.24	0.16
CV										0.0	0.0	6.69	4.41	13.32	3.55	2.19
Grand Mean										0.0	0.0	5.64	6.38	5.75	6.89	7.1
Bartlett's X2										0.0	0.0	9.085	7.265	11.402	4.259	2.21
P(Bartlett's X2)										.	.	0.429	0.508	0.249	0.749	0.819
Friedman's X2										0.0	0.0	6.145	13.0	11.236	14.255	5.891
P(Friedman's X2)										1.00	1.00	0.725	0.163	0.26	0.114	0.751
Replicate F										0.000	0.000	18.468	8.155	2.974	4.205	3.115
Replicate Prob(F)										1.0000	1.0000	0.0001	0.0030	0.0766	0.0317	0.0689
Treatment F										0.000	0.000	0.586	1.950	1.058	3.015	1.692
Treatment Prob(F)										1.0000	1.0000	0.7918	0.1089	0.4361	0.0221	0.1635

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Crop Code							TURF	TURF
Rating Data Type							QUALITY	QUALITY
Rating Unit							1-9	1-9
Rating Date							10-23-03	11-18-03
Trt-Eval Interval							205 DA-A	231 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Product Rate	Product Rate	Grow Unit Stg	Appl Code
1	L 93						APRIL 1 A	
							7.2 bc	6.8 a
2	Penncross						APRIL 1 A	
							7.0 c	6.9 a
3	Penneagle						APRIL 1 A	
							7.3 abc	7.1 a
4	Providence						APRIL 1 A	
							7.0 c	6.7 a
5	Penn A-4						APRIL 1 A	
							7.7 a	7.1 a
6	Crenshaw						APRIL 1 A	
							7.7 a	7.3 a
7	ASR 368 Gen L Roundup Pro	L		48 fl oz/a			APRIL 1 A MAY 5 B	
							7.0 c	6.7 a
8	ASR 368 Gen L Roundup Pro	L		48 fl oz/a			APRIL 1 A MAY 5 B	
	Roundup Pro	L		48 fl oz/a			NOV 15 C	
	Roundup Pro	L		48 fl oz/a			JUNE 1 D	
							7.0 c	6.9 a
9	ASR 368 Gen E Roundup Pro	L		48 fl oz/a			APRIL 1 A MAY 5 B	
	Roundup Pro	L		48 fl oz/a			NOV 15 C	
	Roundup Pro	L		48 fl oz/a			JUNE 1 D	
							7.3 abc	6.8 a
10	ASR 368 Gen R Roundup Pro	L		48 fl oz/a			APRIL 1 A MAY 5 B	
	Roundup Pro	L		48 fl oz/a			NOV 15 C	
	Roundup Pro	L		48 fl oz/a			JUNE 1 D	
							7.5 ab	7.3 a
LSD (P=.05)							0.46	0.56
Standard Deviation							0.27	0.33
CV							3.72	4.74
Grand Mean							7.27	6.93
Bartlett's X2							1.144	4.779
P(Bartlett's X2)							0.95	0.687
Friedman's X2							13.6	8.255
P(Friedman's X2)							0.137	0.509
Replicate F							0.114	2.563
Replicate Prob(F)							0.8930	0.1048
Treatment F							3.089	1.405
Treatment Prob(F)							0.0200	0.2573

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Trial Comments