

Yellow nutsedge control using sequential applications
 Zac Reicher, Matt Sousek, and Lowell Sandell
 University of Nebraska-Lincoln
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Site and Design		
Plot Width, Unit:	3	FT
Plot Length, Unit:	3	FT
Plot Area, Unit:	9	FT ²
Replications:	3	
Randomized Complete Block (RCB)		
Application Description		
	A	B
Application Date:	6/3/2013	7/12/2013
Application Method:	Spray	Spray
Application Timing:	Post	Post
Application Placement	Broad	Broad
Air Temperature, Unit:	72 F	81 F
% Relative Humidity:	64	67
Soil Temperature, Unit	66 F	82 F

This study was done at the John Seaton Anderson Research Center at Mead, NE, on a thinned stand of perennial ryegrass with high populations of yellow nutsedge (YN). The stand was mowed at 2.5 inches and irrigated to prevent drought stress. Plots were 3' x 3' and sprayed with a CO2 backpack sprayer using a single nozzle boom with 8002vs nozzle at 30 psi in 2 gal/1000ft² water. Initial treatments of Sedgehammer or Dismiss were applied on 3 June with or without sequential applications made 3 weeks after the initial application with Sedgehammer or Dismiss. Plots were rated for % YN cover on a 0-100% scale.

Results: Applications of Sedgehammer on 3 June regardless of sequential application resulted in the lowest cover of YN ranging from 1-7 % throughout this study (Table 1). Applications of Sedgehammer made on 15 July resulted decreased cover but only on the 6 August and 17 September rating dates. Dismiss applications resulted in lower YN cover (18 -21%) compared to the untreated (25-32%) when applied twice.

Sedgehammer applications made on 3 June resulted in >95 % control of YN from the 24 July rating to the end of this study (Table 2). Sedgehammer applications made on 15 July resulted in some control 7-22% throughout this study with the final rating result in in 93% control. Dismiss control ranged from 0-50% from single or sequential applications although little control was seen in the final rating date (16-33%)(Table 2).

Conclusions: Results from this study indicate that one application of Sedgehammer applied on 3 June can provide season long control of YN. In our study, Dismiss provided some control of YN but not as good as Sedgehammer. Sequential applications resulted in as good or better control of YN than single applications. Results from this study provided surprisingly good control of YN and this study will continue for many more years.

Table 1. Yellow nutsedge ground cover following various treatments of Sedgehammer and/or Dismiss

Description				Yellow Nutse	Yellow Nutse	Yellow Nutse	Yellow Nutse	Yellow Nutse					
Rating Date				6/3/2013	6/24/2013	7/24/2013	8/6/2013	9/17/2013					
Rating Type				ground	ground	ground	ground	ground					
Rating Unit				%	%	%	%	%					
Days After First/Last Applic.				0	0	21	21	51	12	64	25	106	67
Trt-Eval Interval				0 DA-A	21 DA-A	51 DA-A	64 DA-A	106 DA-A					
Trt	Treatment	Rate	Appl	Appl									
No	Name	Rate	Unit	Code	Description	1	2	3	4	5			
1	Untreated Check					27 a	30 a	25 a	28 a	32 a			
2	Sedgehammer	0.03 oz/1000 ft2	A		June 3	23 a	7 cd	1 c	1 c	3 cd			
3	Sedgehammer	0.03 oz/1000 ft2	B		July 15	25 a	27 ab	23 ab	22 ab	2 cd			
4	Sedgehammer	0.03 oz/1000 ft2	AB		June 3+July15	23 a	7 cd	1 c	1 c	1 d			
5	Dismiss	0.12 fl oz/1000 ft2	A		June 3	23 a	15 bcd	18 b	18 b	25 ab			
6	Dismiss	0.12 fl oz/1000 ft2	B		July 15	22 a	25 ab	25 a	28 a	27 ab			
7	Dismiss	0.12 fl oz/1000 ft2	AB		June 3+July15	20 a	18 a-d	18 b	20 b	21 b			
8	Sedghammer	0.03 oz/1000 ft2	A		June 3	27 a	6 d	1 c	1 c	1 d			
	Dismiss	0.12 fl oz/1000 ft2	B		July 15								
9	Dismiss	0.12 fl oz/1000 ft2	A		June 3	25 a	20 abc	20 ab	15 b	10 c			
	Sedgehammer	0.03 oz/1000 ft2	B		July 15								
LSD (P=.05)						6.12	13.65	6.14	7.06	8.7			
Standard Deviation						3.54	7.89	3.55	4.08	5.03			
Treatment Prob(F)						0.3756	0.0088	0.0001	0.0001	0.0001			

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.

Table 2. Yellow nutsedge control following various treatments of Sedgehammer and/or Dismiss

Description				Yellow Nutse	Yellow Nutse	Yellow Nutse	Yellow Nutse					
Rating Date				6/24/2013	7/24/2013	8/6/2013	9/17/2013					
Rating Type				CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit				%UNCK	%UNCK	%UNCK	%UNCK					
Days After First/Last Applic.				21	21	51	12	64	25	106	67	
Trt-Eval Interval				21 DA-A	51 DA-A	64 DA-A	106 DA-A					
Trt	Treatment	Rate	Appl	Appl								
No	Name	Rate	Unit	Code	Description	6	7	8	9			
1	Untreated Check					0 e	0 c	0 d	0 d			
2	Sedgehammer	0.03 oz/1000 ft2	A		June 3	77 abc	96 a	96 a	90 ab			
3	Sedgehammer	0.03 oz/1000 ft2	B		July 15	14 de	7 bc	22 cd	93 ab			
4	Sedgehammer	0.03 oz/1000 ft2	AB		June 3+July15	80 ab	97 a	98 a	97 a			
5	Dismiss	0.12 fl oz/1000 ft2	A		June 3	50 a-d	27 b	34 bc	21 cd			
6	Dismiss	0.12 fl oz/1000 ft2	B		July 15	21 de	0 c	0 d	16 cd			
7	Dismiss	0.12 fl oz/1000 ft2	AB		June 3+July15	37 cde	27 b	29 bc	33 c			
8	Sedghammer	0.03 oz/1000 ft2	A		June 3	82 a	97 a	98 a	97 a			
	Dismiss	0.12 fl oz/1000 ft2	B		July 15							
9	Dismiss	0.12 fl oz/1000 ft2	A		June 3	39 b-e	20 bc	47 b	67 b			
	Sedgehammer	0.03 oz/1000 ft2	B		July 15							
LSD (P=.05)						41.81	24.56	24.31	27.98			
Standard Deviation						24.15	14.19	14.05	16.16			
Treatment Prob(F)						0.0042	0.0001	0.0001	0.0001			

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 Type

ground = groundcover

CONTRO = control / burndown or knockdown

Rating Unit

% = percent

%UNCK = percent of untreated check