

# Quicksilver Herbicide for the Control of Pearlwort

Jeff Gregos<sup>1</sup> and John Ferruchie<sup>2</sup>

\*<sup>1</sup> Owner, GEC (jeff@gecturf.com); <sup>2</sup> Superintendent, Highland Country Club

## PURPOSE

To evaluate Quicksilver herbicide and combinations with Rubigan for the control of Pearlwort on mixed stand bentgrass/annual bluegrass putting green.

## MATERIALS AND METHODS

This evaluation was conducted at Highland Country Club, Pittsburgh, PA on a mixed stand of annual bluegrass and creeping bentgrass maintained under golf course green management conditions, below 0.125-inch cutting height. Individual patches of pearlwort were selected in a randomized complete block design with three replications. Treatments were applied with a CO<sub>2</sub>-powered boom sprayer, using XR TeeJet 8005 VS nozzles, at 30 psi, in water equivalent to 2 gal per 1000 sq ft. Applications were initiated on May 12, 2005 at which time initial diameter ratings were taken. Treatments were continued on a 14-day schedule with applications on May 26, June 7, and 22, 2005 for a total of 4 applicaitons. Diameter of the patches were measured 8 time throughout the summer from May 26 to August 10, 2005. Percent control was calculated using the following formula:  $[(initial\ rating - weekly\ rating)/initial\ rating] \times 100$ . Data obtained was subjected to analysis of variance and LSD was used to determine significant differences between treatment means (see Table 1).

## DISCUSSION AND CONCLUSION

Two treatments achieved 100% control during the length of the study. These included Quicksilver (8.0 fl oz/acre) and Rubigan (4.0 fl oz/1000 ft<sup>2</sup>). For the Quicksilver treatment this was achieved with 3 applications and 4 applications for the Rubigan treatment. By the end of the study only the Rubigan treatment was still free of pearlwort. All other treatments provided significant amount of control ranging from 43 to 79 percent.

The Quicksilver proved to be an effective treatment for control. However, the decrease in control noted during the August 10 rating was probably the result germinating plants. Many of the plants in the Quicksilver patches were only one or two whorls, which would indicate young plants. While the Rubigan treatment was effective at the high rate, 16 fl oz of Rubigan on a mixed stand (bentgrass/annual bluegrass) could suffer from the growth regulating properties.

Future research should look at the possibility of incorporating a pre-emergent herbicide to help control any plants coming from seed. This may also be achieved using Rubigan in a fungicide program as it appears to have some efficacy on the germination of seed in the soil.

Table 1. Average percent change of pearlwort patch diameter ratings taken from May to August, 2005.

Trt No.	Treatment	Rate	Average Percent Change of Patch Diameter				
			May-26-05	Jun-01-05	Jun-07-05	Jun-15-05	Jun-22-05
1	Quicksilver	1.9 F 2 OZ/A	0 a	11.7 a	27.3 ab	44.917 bc	29.3 b
2	Quicksilver	1.9 F 4 OZ/A	0 a	10.3 a	49.3 a	80 ab	76 ab
3	Quicksilver	1.9 F 8 OZ/A	0 a	38.7 a	51.7 a	93.333 a	100 a
4	Rubigan	1 AS 2 OZ/1000 FT2	0 a	-6.3 ab	10.7 ab	33.667 bc	59.7 ab
5	Rubigan	1 AS 4 OZ/1000 FT2	0 a	-8.3 ab	31 a	27.667 c	64 ab
6	Quicksilver	1.9 F 2 OZ/A	0 a	35 a	45.7 a	63.667 abc	63.7 ab
	Rubigan	1 AS 2 OZ/1000 FT2					
7	Untreated Control		-4.7 a	-47 b	-46.7 b	-75 d	-76.7 c
LSD (P=.05)			5.44	52.81	74.35	48.0391	46.98
Standard Deviation			3.06	29.68	41.79	27.0012	26.41
CV			0	611.1	173.09	70.46	58.49

Trt No.	Treatment	Rate	Average Percent Change of Patch Diameter		
			Jun-28-05	Jul-14-05	Aug-10-05
1	Quicksilver	1.9 F 2 OZ/A	61.47 b	62.73 a	43.2 b
2	Quicksilver	1.9 F 4 OZ/A	95.6 ab	65.67 a	65.67 ab
3	Quicksilver	1.9 F 8 OZ/A	100 a	100 a	76.8 ab
4	Rubigan	1 AS 2 OZ/1000 FT2	75.7 ab	63.93 a	52.9 ab
5	Rubigan	1 AS 4 OZ/1000 FT2	100 a	94.33 a	100 a
6	Quicksilver	1.9 F 2 OZ/A	88.6 ab	82.6 a	79.13 ab
	Rubigan	1 AS 2 OZ/1000 FT2			
7	Untreated Control		-96.9 c	-84.4 b	-100.7 c
LSD (P=.05)			35.617	60.587	52.155
Standard Deviation			20.019	34.054	29.315
CV			33.01	61.94	64.73