

Response of Seashore Paspalum to Preemergence and Postemergence Herbicides

Joseph DeFrank, Department of Horticulture

Objective

The purpose of this trial was to evaluate the effect of several preemergence and postemergence herbicides on injury to seashore paspalum stolon beds.

Seashore paspalum, *Paspalum vaginatum*, is one of the more promising new turfgrasses for high-salt areas near the beach, and very little is known about its tolerance of herbicide treatment in nursery production.

Materials and methods

The herbicides were applied to established stolon beds of seashore paspalum at a nursery in Waimanalo, Oahu, Hawaii. The beds had been harvested three weeks prior to the start of the experiment. This exposed soil and stems not normally present in a well managed landscape. The site was fertilized on August 12 and again on September 9 with sulfur-coated urea at 5.4 lb/1000 ft². Overhead irrigation supplemented natural rainfall to apply 1 inch of water per week for the duration of the experiment.

All herbicide treatments (Table 1) were applied on August 27. Liquid and wettable-powder formulations were applied with a CO₂-powered backpack sprayer. Granular materials were applied manually. Visual ratings, on a 0 to 10 scale, were made for green color (0 = bleached white, 10 = maximum green color) and turf injury (0 = no effect, > 3 = excessive for commercial use, and 10 = complete kill) on September 14 (19 days after spraying, DAS) and September 30 (34 DAS). The individual plots were 6 x 15 ft and replicated four times.

Results

Seashore paspalum showed little or no injury or reduction in green color in response to a single application of Surflan, XL, or Gallery (Table 1). Green color was not affected by application of Team, but there appeared to be a loss of vigor and leaf curling at the higher rate. Turf color was less affected than plant vigor in response to Turflon Ester and Confront. Injury from these two materials resulted in dieback of some leaves. Turf growth was clearly inhibited by both of these herbicides,

and the effect was still noticeable at the second rating (34 DAS). Trimec Classic, at both levels of application, caused noticeable yellowing at the first rating, but most of the yellowing had dissipated by the second rating.

The use of Surflan, XL, and Gallery appears safe for stolon beds of seashore paspalum under the conditions of this trial. All pesticides should be applied in a manner consistent with product labeling.

Acknowledgments

Thanks are extended to Tom Station of Quality Turfgrass for providing the experimental site and to DowElanco and Brewer Environmental Industries, Inc., for providing the herbicides.

Table 1. The effect of preemergence and postemergence herbicides on color and injury seashore paspalum stolon beds at 19 and 34 days after spraying.

Treatment	Rate (lb a.i./acre)	Green color ^x		Turf injury ^y	
		19	34	19	34
Surflan 4SC	3.0	10.0	8.3	0.0	1.0
Surflan 4SC	6.0	8.8	8.8	1.0	0.0
XL 2G	3.0	9.0	9.8	0.5	0.3
XL 2G	6.0	9.0	8.8	0.8	1.0
Team 2G	3.0	9.0	8.0	1.5	1.5
Team 2G	6.0	9.0	8.8	2.3	0.8
Turflon Ester 4EC	0.5	9.0	8.8	3.0	1.0
Turflon Ester 4EC	1.0	8.3	7.5	4.3	2.3
Confront 3SL	0.75	9.3	8.0	3.0	1.5
Confront 3SL	1.5	8.3	8.5	4.5	1.3
Gallery 75WP	1.0	9.3	9.0	0.5	0.5
Gallery 75WP	2.0	9.5	9.0	0.8	0.5
Trimec-Classic 3.32EC	1.35	8.0	9.3	2.8	0.8
Trimec-Classic 3.32EC	2.7	6.8	9.5	3.5	0.3
Untreated control	—	10.0	9.5	0.0	0.8
Level of significance (%)	1.0	NS	1.0	5.0	
LSD values:	1.7	—	1.4	1.1	

^xColor rating: 0 = bleached white, 10 = maximum green color.

^yInjury rating: 0 = no effect, > 3 = excessive for commercial use, 10 = complete kill.

Mention of a trademark, company, or proprietary name does not constitute an endorsement, guarantee, or warranty by the University of Hawaii Cooperative Extension Service or its employees and does not imply recommendation to the exclusion of other suitable products or companies.

Caution: Pesticide use is governed by state and federal regulations. Read the pesticide label to ensure that the intended use is included on it, and follow all label directions. Pesticides and pesticide uses mentioned in this publication may not be approved for Hawaii, and their mention is for information purposes only and should not be considered a recommendation.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Charles W. Laughlin, Director and Dean, Cooperative Extension Service, College of Tropical Agriculture and Human Resources, University of Hawaii at Manoa, Honolulu, Hawaii 96822. An Equal Opportunity / Affirmative Action Institution providing programs and services to the people of Hawaii without regard to race, sex, age, religion, color, national origin, ancestry, disability, marital status, arrest and court record, sexual orientation, or veteran status.