

Phytotoxicity to ornamental horticulture plants from tools to manage broadleaf weeds and sedges.

Ornamental Protocol Number: 07-011

Objective: Determine phytotoxicity of Sedgehammer (halosulfuron), Sulfentrazone 0.2G, and V-10142 to unlabelled perennial plants commonly grown in nurseries.

Experimental Design:

Plot Size: Must be adequate to reflect actual use conditions.

Replicates: Minimum of 3 replications (preferably 4) with 3 plants per replicate

Application Instructions: Apply first application over the top of plants just breaking dormancy or, under climates where plants do not go totally dormant, apply prior to active growth in the spring. For V-10142 75WG, apply directed spray instead of over the top. See table for product specific information.

Plant Materials: *Contact your Regional Coordinator for an up-to-date list.* Plants grown in field containers are preferred to in-ground.

Evaluations: Record plant height & width at initial and final evaluations. At 1, 2, and 4 weeks after each application, record phytotoxicity on a scale of 0 to 10 (0 = No phytotoxicity; 10 = Complete kill). If appropriate, also include ratings for chlorosis, defoliation, stunting or other growth effects on a scale of 0 to 10 (0 = No effect; 10 = Complete plant affected). If any phytotoxicity is observed in treated plants, take pictures comparing treated and untreated plant material.

If different application methods or evaluations are made, please clearly specify differences in final report and explain how they enhanced results.

Recordkeeping: Keep detailed records of weather conditions including temperature and precipitation, soil-type or soil-less media, application equipment, irrigation, liner size, plant height & width, and plant growth stage at application and data collection dates.

Treatments:

Product	Rate	Special Instructions	Contact Information to obtain materials and any needed adjuvants
Sedgehammer 75WG (halosulfuron)	1 oz per acre (0.047 lb ai)	Always use 0.25% v/v of a non ionic surfactant. If severe phyto symptoms do not occur and where feasible apply a second application 4-6 weeks later at identical rates.	Gowan, Julie Butcher, 928-819-1578, jbutcher@gowanco.com
	2 oz per acre (0.094 lb ai)		
	4 oz per acre (0.188 lb ai)		
Sulfentrazone 0.2G (sulfentrazone – 0.2% active)	0.125 lb ai/acre	2 applications on a 4 week interval	FMC, Bobby Walls, 919-735-3862, bobby_walls@fmc.com
	0.25 lb ai/acre		
	0.5 lb ai/acre		
Sulfentrazone 4F	4 fl oz per acre (0.125 lb ai/acre)	2 applications on a 4 week interval	FMC, Bobby Walls, 919-735-3862, bobby_walls@fmc.com
	8 fl oz per acre (0.25 lb ai/acre)		
	16 fl oz per acre (0.5 lb ai/acre)		
V-10142 0.5G	150 lb per acre (0.75 lb ai/acre)	2 over the top applications on a 4 week interval Apply 0.5" of irrigation immediately after application	Valent, Joe Chamberlin, 770-985-0303, jcham@valent.com
	300 lb per acre (1.5 lb ai/acre)		
	600 lb per acre (3.0 lb ai/acre)		
V-10142 75WG + surfactant	1 lb per acre (0.75 lb ai/acre)	Only evaluate as directed spray on large shrubs or trees. Do not contact foliage with sprays. 2 directed applications on a 4 week	Valent, Joe Chamberlin, 770-985-0303, jcham@valent.com
	2 lb per acre (1.5 lb ai/acre)		

	4 lb per acre (2.0 lb ai/acre)	interval Apply 0.5" of irrigation immediately after application	
Untreated	--	--	

Reports:

Reports submitted on the standard IR-4 Ornamental Horticulture Research Report Form are preferred.

A report submitted electronically is preferred but not required. If the report is provided electronically, the basic report can be sent in MS Word or WordPerfect, the recordkeeping information as pdf or other electronic documents, and the raw data in MS Excel or other suitable program such as ARM.

Please direct questions to: Cristi Palmer, IR-4 HQ, Rutgers University, 500 College Road East, Suite 201W, Princeton, NJ 08540, Phone 732-932-9575 x4629, palmer@aesop.rutgers.edu.

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Revised By: CLP