

TOLERANCE OF VEGETABLE CROPS TO HALOSULFURON

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There are few options for nutsedge control in most vegetable crops. Halosulfuron is a selective herbicide that we have found to be effective in controlling yellow and purple nutsedge. Several varieties of vegetables were tested for tolerance to pre-emergent treatments of halosulfuron. Tolerant crops included carrot and the warm-season crops: melon, snap bean, pepper, cucumber, squash, and okra. Most of the cool-season vegetables were intolerant of halosulfuron. The difference in tolerance between warm-season and cool-season crops has important management implications. Summer nutsedge control is the primary application for halosulfuron. Rotations of warm-season vegetables or field crops followed by cool-season vegetables are common in many vegetable producing regions. Soil carryover of halosulfuron could lead to crop injury when fields are subsequently planted to cool-season vegetables.

However, we found the current label restrictions for plant-back to be overly cautious. Current label restrictions do not permit the planting of many vegetables for 1-2 years. Our experiments found that waiting 6-12 months after applying halosulfuron would provide more than adequate safety. We recommend a reduction in the plant-back interval for halosulfuron.

Table 1. Tolerance of vegetable crops to halosulfuron. Injury ratings are based on visual observation using a scale of 0-10, where 0 equals no injury and 10 equals complete death of the plant. Means followed by the same letter are statistically equal.

Crop Species	Variety	Crop Injury @ 4 weeks	Crop Injury @ 6 weeks	Dry weight, as percentage of untreated
Carrots	Goldmine	0 j	0 l	94.91 ab
Lettuce	Paris Island	7.75 c	7.5 c	26.36 gh
Onions	Southport White Globe	7.5 c	6 e	21.48 h
Spinach	Bassanova	6.5 d	7.75 c	27.52 g
Melon	White Crenshaw	2.75 e	3 f	77.98 dc
Cantaloupe	Topmark	2.5 e	1.25 g	79.07cd
Melon	Honeydew Green	.75 gh	1 h	83.28 cd
Green Bean	Strike	2 f	.75 I	79.42 cd
Bell Pepper	Keystone R.Giant	.25 ij	.25 k	83.56 c
Red Cabbage	Red Sun	8.75 a	8.75 a	4.44 i
Red Cabbage	Azzuro	8.25 b	8.75 a	4.42 i
Red Cabbage	Primero	8.25 b	8.25 b	5.1 i
Cucumber	Superset	1.75 f	.5 j	99.86 a
Cucumber	Celebrity	.5 hi	.25 k	48.51 f
Chinese Broccoli	N/A	8.75 a	8.75 a	3.37 i
Squash	Zuchlong	1 g	.5 j	97.61 ab
Squash	Prelude 2	.75 gh	.5 j	92.15 b
Okra	Clemson	2 f	.25 k	73.25 e
Lsd value at alpha.05	N/A	.273	.2187	5.513