

## Tenacity combined with other herbicides for control of ground ivy

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**Background/Objective:** Do combinations of herbicides provide improved control? Was acceptable weed control observed with any of these rate combinations? Phytotoxicity was secondary objective – are these combinations safe to turfgrass?

### Site Information

<b>Location:</b>	William H. Daniel Research and Diagnostic Center
<b>Soil Type:</b>	Starks-Fincastle silt loam
<b>Soil pH:</b>	7.2
<b>Turfgrass Species:</b>	Kentucky bluegrass blend
<b>Turf Condition:</b>	good
<b>Turf Management:</b>	
<b>Mowing Height cm (in):</b>	6.3 (2.5)
<b>Fertilization:</b>	none
<b>Irrigation:</b>	To prevent moisture stress
<b>Testing on Site Previous Year:</b>	none
<b>Target Pest:</b>	Ground ivy ( <i>Glechoma hederacea</i> )
<b>Growth Stage:</b>	mature

### Application Information

<b>Application Date:</b>	19 Sep
<b>Application Time:</b>	9:00 am
<b>Air Temperature C<sup>o</sup>(F<sup>o</sup>):</b>	20.5 (69)
<b>Relative Humidity(%):</b>	73
<b>Wind Speed m s<sup>-1</sup> (mph):</b>	calm
<b>Soil Temperature(7.6 cm depth) C<sup>o</sup>(F<sup>o</sup>):</b>	19.4 (67)
<b>Soil Moisture:</b>	moist
<b>Spray Volume L ha<sup>-1</sup> (gal 1000 ft<sup>-2</sup>):</b>	814 (2)
<b>Spray Pressure:</b>	30psi
<b>Spray Nozzle:</b>	8001.5
<b>Spray Equipment:</b>	CO <sub>2</sub> backpack
<b>Irrigation After Application:</b>	None
<b>Experimental Design:</b>	Randomized complete block
<b>Replications:</b>	3
<b>Plot Size m (ft):</b>	1.5 X 1.5 (5 X 5)

### Results:

- Both rates of Tenacity when applied alone reduced cover of ground ivy throughout the study compared to the untreated check, but not to industry standards of acceptability (Table 1).
- Adding Tenacity to Vanquish improved control of ground ivy compared to Vanquish alone on every rating date, but this control was similar to when Tenacity was applied alone.
- Tenacity did not improve control of ground ivy from Turflon or Spotlight throughout the study, but a slight improvement was seen by adding Tenacity to Drive when rated on 11 Oct.
- Tenacity did not reduce efficacy of any of the broadleaf herbicides on ground ivy.
- No phytotoxicity was observed during this study.

**Table 1.** Percent ground ivy cover<sup>a</sup> after applications of Tenacity with and without broadleaf herbicides.

Treatment <sup>b</sup>	Rate of application	4 Oct	11 Oct	18 Oct	2 Nov
	g ai/ha				
Tenacity 480 gai/L	112	55	37	33	37
Tenacity 480 gai/L	280	40	32	20	20
Turflon ester 480 g ae/L	560 <sup>c</sup>	18	4	3	2
Tenacity 480 gai/L	112	12	3	2	1
Turflon ester 480 g ae/L	560 <sup>c</sup>				
Vanquish 480 g ai/L	280	73	57	58	57
Tenacity 480 gai/L	112	58	35	22	20
Vanquish 480 g ai/L	280				
Spotlight 180 g ae/L	105 <sup>c</sup>	32	13	6	4
Tenacity 480 gai/L	112	23	4	2	1
Spotlight 180 g ae/L	105 <sup>c</sup>				
Drive 75DF	420	68	38	22	13
Tenacity 480 gai/L	112	55	22	10	7
Drive 75DF	420				
Check		80	80	78	75
LSD (0.05)		25	15	13	18

<sup>a</sup> Percent of the plot area covered by ground ivy.

<sup>b</sup> Tenacity applications included NIS at 0.25% v/v.

<sup>c</sup> Rate of application was g ae/ha.