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TURFGRASS SCIENCE

at the University of Tennessee

Ground Ivy (*Glechoma hederacea*)

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Introduction

Ground ivy or creeping charlie (*Glechoma hederacea*) is a perennial broadleaf weed of both warm- and cool-season turfgrass. Ground ivy infestations are a common problem in both residential and commercial lawns, and to a lesser degree on golf courses and athletic fields. Ground ivy is commonly found in moist, shaded environments where turf is thin; however, it can also be found in areas of full sun. Control of ground ivy in warm- and cool-season turf can be challenging.

Ground Ivy Identification

Ground ivy, often confused with members of the geranium (Geraniaceae) family, is a prostrate growing perennial that can form dense mats that often creep out of shady moist areas into areas of full sun (Figures 1 & 2). Leaves (approximately the size of a quarter) are kidney-shaped with a scalloped margin (Figure 3). Leaves are arranged opposite one another

along stolons that root at the nodes, which can make physical removal (i.e., hand-weeding) difficult (Figure 4). Ground ivy is a member of the mint (Lamiaceae) family and has square stems. When the foliage is crushed, it emits a distinct odor. Ground ivy produces blue to purplish-colored flowers in spring that appear in clusters of three (Figure 5). Primary growth occurs during spring and fall, but ground ivy can be found throughout the growing season.

Ground Ivy Control Options

Cultural Practices

The best defense against any weed infestation is maintaining a dense, vigorous stand of turfgrass. Growing conditions that favor turf often discourage the growth of ground ivy. Decreasing shade and soil moisture will create an environment better suited for turfgrass growth and less conducive for ground ivy. Additionally, soil test regularly and apply nutrients



Figure 1. Ground ivy (*Glechoma hederacea*) in a home lawn



Figure 2. Ground ivy (*Glechoma hederacea*) mat



Figure 3. Ground ivy (*Glechoma hederacea*) leaves



Figure 4. Ground ivy (*Glechoma hederacea*) stolons

according to soil test recommendations. While cultural practices can be used to help discourage ground ivy infestations, they will not provide complete control. Herbicide applications will be required for complete eradication.

Herbicide Options

There are no preemergence herbicides for control of ground ivy; sequential applications of postemergence herbicides are required to achieve effective control. Herbicides containing three or more phenoxy (or phenoxy-type) herbicides can be used to control

Table 1. Postemergence herbicides for Ground ivy (*Glechoma hederacea*) control

Product Name	Active Ingredients	Rate/ac	Turf Species
Blindside	metsulfuron + sulfentrazone	3.25-10 oz.	Kentucky Bluegrass, Tall Fescue, Bermudagrass, Zoysiagrass, Centipedegrass
Celsius	thiencarbazone + iodosulfuron + dicamba	2.5-3.75 oz.	Bermudagrass, Zoysiagrass, Centipedegrass
Confront	triclopyr + clopyralid	1-2 pts.	Kentucky Bluegrass, Fine Fescue, Tall Fescue, Perennial Ryegrass, Bermudagrass, Zoysiagrass, Centipedegrass
Drive XLR8	quinclorac	2 qts.	Kentucky Bluegrass, Fine Fescue, Tall Fescue, Perennial Ryegrass, Bermudagrass, Zoysiagrass,
Escalade II	2,4-D + fluroxypyr + dicamba	2-3 pts.	Kentucky Bluegrass, Fine Fescue, Tall Fescue, Perennial Ryegrass, Bermudagrass, Zoysiagrass
Manor	metsulfuron	0.125-1 oz.	Kentucky Bluegrass, Fine Fescue, Bermudagrass, Zoysiagrass, Centipedegrass
Millennium Ultra 2	2,4-D + clopyralid + dicamba	2-3 pts.	Kentucky Bluegrass, Fine Fescue, Tall Fescue, Perennial Ryegrass, Bermudagrass, Zoysiagrass
Momentum fx2	2,4-D + triclopyr + fluroxypyr	3-4 pts.	Kentucky Bluegrass, Fine Fescue, Tall Fescue, Perennial Ryegrass, Bermudagrass, Zoysiagrass, Centipedegrass
Monument	trifloxysulfuron	0.53 oz.	Bermudagrass, Zoysiagrass
Onetime	quinclorac + MCPP + dicamba	64 oz.	Kentucky Bluegrass, Fine Fescue, Tall Fescue, Perennial Ryegrass, Bermudagrass, Zoysiagrass,



Figure 5. Ground ivy (*Glechoma hederacea*) flowers

ground ivy in established turf. Additionally, herbicides containing the active ingredients fluroxypyr, quinclorac or metsulfuron (alone and in mixtures) have performed well in research at the University of Tennessee. Fluroxypyr can be found in herbicides such as Spotlight® (fluroxypyr) and Escalade® (fluroxypyr, 2,4-D and MCPP), while quinclorac can be found in herbicides such as Drive XLR8® (quinclorac) and Solitare® (quinclorac and sulfentrazone). Metsulfuron

can be found in Manor® (metsulfuron) and Blindside® (metsulfuron and sulfentrazone). See Table 1 for a complete list of herbicides active against ground ivy. Again, sequential applications may be needed for complete control.

Final Thoughts

Ground ivy control in established turf can be difficult. Improving cultural practices and applying sequential applications of postemergence herbicides will often be required to provide effective control.

Always refer to the product label for specific information on proper product use, tank-mix compatibility and turfgrass tolerance. Mention of trade names or commercial products in this publication is solely for the purpose of providing specific information and does not imply recommendation or endorsement by the University of Tennessee Institute of Agriculture. For more information on turfgrass weed control, visit the University of Tennessee's turfgrass weed science website, <http://tennesseeturfgrassweeds.org>.

Table 1. Postemergence herbicides for Ground ivy (*Glechoma hederacea*) control (continued)

Product Name	Active Ingredients	Rate/ac	Turf Species
Powerzone	carfentrazone + MCPA + MCPP + dicamba	2-4 pts.	Kentucky Bluegrass, Fine Fescue, Tall Fescue, Perennial Ryegrass, Bermudagrass, Zoysiagrass
Q-4	quinclorac + sulfentrazone + 2,4-D + dicamba	7-8 pts.	Kentucky Bluegrass, Fine Fescue, Tall Fescue, Perennial Ryegrass, Bermudagrass, Zoysiagrass (Dormant)
Solitare	quinclorac + sulfentrazone	16-32 oz.	Kentucky Bluegrass, Fine Fescue, Tall Fescue, Perennial Ryegrass, Bermudagrass, Zoysiagrass, Centipedegrass
Speedzone	carfentrazone + 2,4-D + MCPP + dicamba	3-5 pts.	Kentucky Bluegrass, Fine Fescue, Tall Fescue, Perennial Ryegrass, Bermudagrass, Zoysiagrass
Spotlight	fluroxypyr	0.67-2.5 pts.	Kentucky Bluegrass, Fine Fescue, Tall Fescue, Perennial Ryegrass, Bermudagrass, Zoysiagrass, Centipedegrass
SquareOne	carfentrazone + quinclorac	8-18 oz.	Kentucky Bluegrass, Fine Fescue, Tall Fescue, Perennial Ryegrass, Bermudagrass, Zoysiagrass, Centipedegrass
Surge	sulfentrazone + 2,4-D + MCPP + dicamba	3-4 pts.	Kentucky Bluegrass, Fine Fescue, Tall Fescue, Perennial Ryegrass, Bermudagrass, Zoysiagrass
Three-way Selective, Trimec Classic, Trimec Southern, Triplet, Others	2,4-D + MCPP + dicamba	Product-Dependent	Product-Dependent