

TURFGRASS SCIENCE

at the UT Institute of Agriculture

Parsley-piert (*Aphanes arvensis*)

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Introduction

Parsley-piert (*Aphanes arvensis*) is a winter annual broadleaf weed that has been increasing in turfgrass systems throughout Tennessee and the Southeast. This weed will persist in a diversity of growing conditions but favors recently disturbed soil and areas where turf is weak. As a result parsley-piert is a very common weed in landscape beds as well as turf.



Figure 1. Parsley-piert (*Aphanes arvensis*) growth habit facilitates survival at mowing heights commonly used to maintain both warm- and cool-season turfgrasses.

Parsley-piert Identification

Parsley-piert seed germinates in late fall. Seedlings will overwinter and resume growth in the spring before flowering and producing seed. Parsley-piert develops a fibrous root system and exhibits a prostrate growth habit that allows it to tolerate frequent mowing at a diversity of heights of cut (Figure 1). Often confused with lawn burweed (*Soliva sessilis*), parsley-piert plants have alternatively arranged lobed-shaped leaves that are often subdivided into three to four additional lobes. Leaves may be petiolate or sessile near the base and covered with small hairs (i.e., pubescence) (Figure 2).

The University of Tennessee Weed Diagnostics Center (WDC) can assist practitioners in identifying parsley-piert, as well as many other weed species. All diagnostic identification assays are



Figure 2. Representative size of parsley-piert (*Aphanes arvensis*).

accompanied by a recommendation for control in the field. More information on weed identification and other services offered by the WDC can be found online at weeddiagnostics.org.

Parsley-piert Control

The best defense against any weed infestation is maintaining a dense, vigorous stand of turfgrass. Growing conditions that favor turfgrass often

discourage the growth of parsley-piert and other weeds. Numerous herbicide options exist for postemergence control of parsley-piert in warm- and cool-season turfgrass; however, only dithiopyr (e.g., Dimension) is labeled for preemergence control. This application should be applied in late summer to early fall (i.e., August-September) throughout Tennessee before parsley-piert emerges from soil. A complete list of herbicide options can be found in Table 1.

Table 1. Herbicide options for parsley-piert control.

Active Ingredients	Example Trade Name	Rate ai/ac	Tolerant Turf Species
Preemergence			
Dithiopyr	Dimension 2EW	0.38-0.5 lb.	Bermudagrass, Centipedegrass, Fine Fescue, Kentucky Bluegrass, Perennial Ryegrass, Tall Fescue, Zoysiagrass
Postemergence			
2,4-D + clopyralid + dicamba	Millennium Ultra 2	0.667-1.33 lb.	Bermudagrass, Fine Fescue, Kentucky Bluegrass, Tall Fescue, Zoysiagrass
2,4-D + fluroxypyr + dicamba	Escalade 2	1-1.5 lb.	Bermudagrass, Fine Fescue, Kentucky Bluegrass, Perennial Ryegrass, Tall Fescue, Zoysiagrass
2,4-D + MCPP or MCPA + dicamba	Three-way, Trimec, 3D, Others	See Label	Bermudagrass, Centipedegrass, Fine Fescue, Kentucky Bluegrass, Perennial Ryegrass, Tall Fescue, Zoysiagrass
2,4-D + triclopyr + fluroxypyr	Momentum FX2	1-1.4 lb.	Bermudagrass, Centipedegrass, Fine Fescue, Kentucky Bluegrass, Perennial Ryegrass, Tall Fescue, Zoysiagrass
Amicarbazone	Xonerate 70WG	0.04-0.44 lb.	Bermudagrass, Centipedegrass, Fine Fescue, Kentucky Bluegrass, Perennial Ryegrass, Tall Fescue, Zoysiagrass
Carfentrazone + 2,4-D + MCPP + dicamba	Speedzone Southern, Speedzone	0.55-1.39 lb.	Bermudagrass, Centipedegrass, Fine Fescue, Kentucky Bluegrass, Perennial Ryegrass, Tall Fescue, Zoysiagrass
Carfentrazone + MCPA + MCPP + dicamba	Powerzone	0.81-2.18 lb.	Bermudagrass, Fine Fescue, Kentucky Bluegrass, Perennial Ryegrass, Tall Fescue, Zoysiagrass
Carfentrazone + quinclorac	SquareOne	0.35-0.97 lb.	Bermudagrass, Centipedegrass, Fine Fescue, Kentucky Bluegrass, Perennial Ryegrass, Tall Fescue, Zoysiagrass
Flazasulfuron	Katana 25WG	0.0078-0.047 lb.	Bermudagrass, Centipedegrass, Zoysiagrass
Imazaquin	Image 70DG	0.37-0.5 lb.	Bermudagrass, Centipedegrass, Zoysiagrass

Table 1. Herbicide options for parsley-piert control. (continued)

Active Ingredients	Example Trade Name	Rate ai/ac	Tolerant Turf Species
MCPA + fluroxypyr + dicamba	Change Up	0.75-1.8 lb.	Bermudagrass, Centipedegrass, Kentucky Bluegrass, Perennial Ryegrass, Tall Fescue, Zoysiagrass
Metribuzin	Sencor 75DF	0.25-0.5 lb.	Bermudagrass
Metsulfuron	Manor 60DF, MSM	0.08-0.6 oz.	Bermudagrass, Centipedegrass, Fine Fescue, Kentucky Bluegrass, Zoysiagrass
Penoxsulam + Sulfentrazone + 2,4-D + Dicamba	Avenue South	0.31-0.6 lb.	Bermudagrass, Centipedegrass, Fine Fescue, Kentucky Bluegrass, Perennial Ryegrass, Tall Fescue, Zoysiagrass
Sulfentrazone	Dismiss 4L	0.125-0.375 lb.	Bermudagrass, Centipedegrass, Fine Fescue, Kentucky Bluegrass, Perennial Ryegrass, Tall Fescue, Zoysiagrass
Sulfentrazone + metsulfuron	Blinside	0.134-0.413 lb.	Bermudagrass, Kentucky Bluegrass, Tall Fescue, Zoysiagrass
Thiencarbazone + iodosulfuron + dicamba	Celsius 68WG	0.11-0.21 lb.	Bermudagrass, Centipedegrass, Zoysiagrass
Thiencarbazone + foramsulfuron + halosulfuron	Tribute Total	0.04-0.12lb.	Bermudagrass, Zoysiagrass
Trifloxysulfuron	Monument 75WG	0.016-0.025 lb.	Bermudagrass, Zoysiagrass
Quinclorac + sulfentrazone	Solitare 75WG	0.75-1.5 lb.	Bermudagrass, Centipedegrass, Fine Fescue, Kentucky Bluegrass, Perennial Ryegrass, Tall Fescue, Zoysiagrass

Postemergence herbicide applications need to be applied before seed production in the spring. Winter annual weeds such as parsley-piert can be harder to control after producing seed in spring; moreover, deposition of seed onto soil will ensure that parsley-piert infestations will be problematic the following year.

Regardless of product selected, turf managers should rotate among the herbicides listed in Table 1 to prevent the onset of parsley-piert populations evolving resistance to different herbicide chemistries. There are numerous cases of annual weed species that reproduce from seed evolving resistance to a particular herbicide(s) when the same application is made over multiple years without rotation or implementation of any other weed management measure.

Final Thoughts

The use of proper maintenance practices throughout the summer will help prevent the encroachment of winter annual broadleaf weeds in the fall. Control measures should be implemented before these weeds produce seed that can be deposited into the soil seed-bank. There are multiple options for postemergence control of winter annual broadleaf weeds. Homeowners should rely on commercially available products containing multiple phenoxy herbicides. Professional applicators can select from an array of different products, depending on the species of turfgrass the weeds have infested. More information on winter annual broadleaf weed management is available in UT Extension publication [W 205 "Controlling Winter Annual Broadleaf Weeds."](#)

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, tennesseeturfgrassweeds.org.

Herbicides listed in this publication have provided good to excellent control (80 to 100 percent) in research trials conducted at the University of Tennessee; however, other herbicides may

also have activity on parsley-piert. For more information on herbicide selection, please visit the University of Tennessee Mobile Weed Manual (MWM) at mobileweedmanual.com. MWM was developed by UT Extension professionals to assist green industry professionals in selecting herbicides for use in turf and ornamentals. MWM is a web-based platform optimized for use on mobile devices such as smartphones and tablets, but it will function on desktop and laptop computers as well. The site provides users with weed control efficacy information for 90 different herbicides, tolerance information for over 2,300 turf and ornamental species, as well as direct links to label and safety data sheet information on herbicides used for turf and ornamental weed management.

Disclaimer

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication.

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