Clemson Cooperative Extension
Home & Garden Information Center

Chamberbitter

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Chamberbitter (*Phyllanthus urinaria*) is also known as gripeweed, leafflower, or little mimosa. It is a warm-season, annual, broadleaf weed that emerges from warm soils beginning in early summer. It reproduces by seeds, which are found in the green, warty-like fruit attached to the underside of each branchlet.

Chamberbitter grows upright and has a well-developed taproot. The leaves are arranged in two rows on the branchlets and are thin and oblong, with smooth margins, resembling a mimosa seedling.

Chamberbitter (*Phyllanthus urinaria*) resembles a mimosa seedling.
Nancy Loewenstein, Auburn University, Bugwood.org

Management of chamberbitter is best achieved through the integrated use of mechanical, cultural, and chemical methods.

Mechanical Control

Mechanical weed control involves the physical removal of the weed from the soil. This is best accomplished by hand when weeds are young and small or in the seedling stage and easier if the soil is moist. Preventing the weed from reaching maturity and setting seeds also reduces future weed populations.

Cultural Control

Cultural weed control is the prevention of weeds through proper lawn management practices. A properly mowed turf that is not stressed by insects, diseases, drought, or nutrient imbalance is the best defense against weeds. For more information on watering, fertilizing, and mowing, see the following fact sheets: HGIC 1201, *Fertilizing Lawns*, HGIC 1205, *Mowing Lawns,* and HGIC 1207, *Watering Lawns*.

Within landscape beds, apply two to three inches of mulch in the spring to cover seeds from the previous season. Because chamberbitter seeds require light to germinate, this is especially effective.

Chemical Control in Lawns

Preemergence Herbicides: Because preemergence herbicides prevent seedlings from developing, they are an effective tool against annual weeds. However, they will not affect established weeds. Timing is critical. They must be applied prior to seed germination.

Atrazine is effective for preemergence control of chamberbitter in centipedegrass and in St. Augustinegrass lawns. Be careful not to apply on turf during the transition period from dormancy to active growth (spring green-up). Because chamberbitter tends to germinate in late spring and early summer (once the soil temperature reaches 70 °F), applications after grasses fully green up are effective. Target areas where chamberbitter was observed the previous season and be careful to not apply near the roots of desirable landscape plants. See Table 1 for examples of products.

Isoxaben is a preemergence herbicide that is effective for chamberbitter control in tall fescue, centipedegrass, St. Augustinegrass, bermudagrass, and zoysiagrass lawns. For home lawn use, it is purchased in a granular form, and the granules must be watered-in to allow the isoxaben to coat the soil surface for weed prevention. Make the first application in late spring and the second about 8 weeks later. See Table 1 for examples of products.

Isoxaben is also available as an additional active ingredient in one Bayer Advanced brand three-way herbicide. With this product, the postemergence, three-way, broadleaf weed control portion controls existing chamberbitter plants. The isoxaben portion will aid in preventing reinfestation of the area from seeds that may be present. To prevent new seeds from growing, the entire area to be protected must be sprayed. Wait 2 days after spray application and activate the isoxaben residual barrier by watering the lawn with ¼ to ½ inch of irrigation. Do not seed or overseed within 60 days after application. Do not apply isoxaben to a newly seeded lawn until it has been mowed 3 times. See Table 1 for an example of product.

Postemergence Herbicides: Postemergence herbicides are most effective when applied to young weeds. For postemergence control of chamberbitter in St. Augustinegrass and centipedegrass lawns, atrazine is recommended. It has both preemergence and postemergence properties. Make two applications spaced 30 days apart. Do not begin treatment with atrazine on these two turfgrasses until they are fully greened up in the spring.

On tall fescue, bermudagrass, and zoysiagrass lawns, repeat applications of three-way herbicides that contain 2,4-D, mecoprop (MCPP), and dicamba can be used to control chamberbitter. Apply these herbicides in late spring or early summer when the weeds are still young and space second application at 30 days later. These three-way herbicides may also be used on centipedegrass and St. Augustinegrass lawns at reduced rates and after the grasses have completely greened-up in the spring. Read the product labels for rates to mix and apply. See Table 1 for examples of products. For more information refer to HGIC 2310, *Managing Weeds in Warm-Season Lawns*.

Celsius WG Herbicide, which contains thiencarbazone, iodosulfuron, and dicamba, will control chamberbitter, especially if applied when the average daily temperatures are over 60° F. Apply when chamberbitter is actively growing

and again 2 to 4 weeks later, if needed. The addition of a non-ionic surfactant, such as Southern Ag Surfactant for Herbicides, will increase control.

Control in Landscape Beds

Postemergence Herbicides: The best choice for controlling existing chamberbitter in landscape beds is one of the many products containing glyphosate. Glyphosate will move through the plant and into the roots to kill the entire plant. Buy a 41% glyphosate concentrate and follow label directions for mixing a 2% solution to spray in a pump-up sprayer. See Table 1 for examples of products.

Glyphosate is a non-selective herbicide which can potentially damage any plant through contact with foliage or bark. Protect desirable plants from drift by not spraying in windy conditions, by keeping the spray nozzle close to the ground, and by using low pressure. Further protection is provided by attaching a plastic, cone shaped shield that surrounds the spray nozzle and confines the spray to the targeted plants. Shields can be made from bottomless two- liter drink bottles. Plants can also be shielded by covering with cardboard or something similar that is disposable.

When herbicides are applied to beds intended for future planting of ornamentals, care must be taken as various herbicides may injure the plants to be installed. For planned beds, glyphosate has far less soil activity (a few days) as compared with the three-way herbicides (a few weeks). Glyphosate is the safest choice for spray application in existing flower and shrub beds, so long as care is taken to prevent drift to non-target plants. Glyphosate applications are much less apt to move through the soil, be absorbed by roots, and injure existing woody ornamental shrubs.

Preemergence Herbicides: Isoxaben can be applied as a preemergence herbicide in landscape beds around certain well-established ornamental shrubs and trees to prevent chamberbitter from growing from seed. Products are best put below the mulch layer. Do not apply preemergence herbicides in beds where new plants will be installed, as plant root development may be inhibited. See Table 1 for examples of products.

Pesticide Safety

Always read the pesticide label and follow its directions exactly. Be sure to observe all precautions listed on the label. Mix pesticides at the rate recommended and never use more than the label says. Wear protective clothing or equipment as required by the label when mixing or applying pesticides. You may use the pesticide only on sites or crops listed on the label. Follow all label directions for pesticide storage and disposal.

Always heed the six most important words on the label**: "Keep out of reach of children."**

Table 1. Examples of Herbicides for Chamberbitter Control in Turfgrass & Landscape Beds.

Brands & Specific Products	Herbicide Active Ingredient	% Active Ingredient in Product	Site Labeled for Use
Bayer BioAdvanced Southern Weed Killer for Lawns Concentrate; & RTS[1]	2,4-D	7.59	Tall Fescue Bermudagrass Zoysiagrass Use at lower label rate on: St. Augustinegrass Centipedegrass
	Mecoprop	1.83	
	Dicamba	0.84	
Bonide Weed Beater Lawn Weed Killer Concentrate	2,4-D	7.59	
	Mecoprop	1.83	
	Dicamba	0.84	
Spectracide Weed Stop for Lawn Concentrate; & RTS	2,4-D	7.59	
	Mecoprop	1.83	
	Dicamba	0.84	
Ferti-lome Weed-Out Lawn Weed Killer Concentrate	2,4-D	5.88	
	Mecoprop	5.45	
	Dicamba	1.21	
Southern Ag Lawn Weed Killer with Trimec® Concentrate	2,4-D	3.05	
	Mecoprop	5.30	
	Dicamba	1.29	
Gordon's Trimec Lawn Weed Killer Concentrate; & RTS	2,4-D	7.59	
	Mecoprop	1.83	
	Dicamba	0.84	
Spectracide Weed Stop for Lawns RTU[2]	2,4-D	0.593	
	Mecoprop	0.144	
	Dicamba	0.066	

Ortho Weed Be Gon Weed Killer for Lawns Concentrate; & RTS[1]	2,4-D	8.658	
	Mecoprop	2.127	
	Dicamba	0.371	
Spectracide Weed Stop For Lawns Concentrate 2	2,4-D	7.57	
	Mecoprop	2.73	
	Dicamba	0.71	
	Sulfentrazone	0.18	
Gordon's Trimec Speed Lawn Weed Killer Concentrate; & RTS	2,4-D	4.01	
	Mecoprop	0.49	
	Dicamba	0.27	
	Carfentrazone	0.16	
Bonide Weed Beater Ultra Concentrate	MCPA	31.55	
	Mecoprop	6.16	
	Dicamba	1.65	
	Carfentrazone	0.22	
Ortho WeedClear Lawn Weed Killer Concentrate 2; & RTS	2,4-D	4.01	
	Mecoprop	0.49	
	Dicamba	0.27	
	Carfentrazone	0.16	
Ferti-lome Weed Free Zone Concentrate; & RTS	2,4-D	10.49	
	MCPP	2.66	
	Dicamba	0.67	
	Carfentrazone	0.54	
	2,4-D	4.73	

Bayer BioAdvanced Season Long Weed Control for Lawns	Mecoprop	1.10	
	Dicamba	0.52	
	Isoxaben	2.63	
Hi-Yield Atrazine Weed Killer	Atrazine	4.00	Centipedegrass St. Augustinegrass
Southern Ag Atrazine St. Augustine Weed Killer	Atrazine	4.00	
Celsius WG Herbicide[3]	Thiencarbazone	1.9%	Bermudagrass Zoysiagrass Centipedegrass St. Augustinegrass[4]
	Iodosulfuron	57.4%	
	Dicamba	1.9%	
Ferti-lome Broadleaf Weed Control with Gallery	Isoxaben (pre-emergence)	0.38	Tall Fescue Bermudagrass Zoysiagrass St. Augustinegrass Centipedegrass Landscape beds
Snapshot 2.5TG	Isoxaben Trifluralin (pre-emergence)	2.0% 0.5%	For use in landscape beds only. Small amounts getting into the lawn adjacent to beds should not hurt the lawn.
Ace Concentrate Weed & Grass Killer Roundup Original Concentrate Roundup Pro Herbicide Martin's Eraser Systemic Weed & Grass Killer Hi-Yield Super Concentrate Killzall Weed & Grass Killer Bonide Kleenup Grass & Weed Killer Concentrate; & RTU[2] Eliminator Weed & Grass Killer Super Concentrate Gordon's Groundwork Concentrate 50% Super	Glyphosate	41% (most brands)	Not for use within the lawn, as spot spraying will kill adjacent turfgrass. Typically for use in landscape beds only.

Weed & Grass Killer Knockout Weed & Grass Killer Super Concentrate Monterey Remuda Full Strength 41% Glyphosate Quick Kill Grass & Weed Killer Southern States Grass & Weed Killer Concentrate II Tiger Brand Quick Kill Concentrate Total Kill Pro Weed & Grass Killer Herbicide Ultra Kill Weed & Grass Killer Concentrate Zep Enforcer Weed Defeat III			

[1] RTS: Ready-to-Spray (hose-end sprayer)
[2] RTU: Ready-to-Use (pre-mixed spray bottle for spot spraying)
[3] This mix of active ingredients requires the addition of 2 teaspoons of a non-ionic surfactant (that is, a wetter-sticker agent to aid in weed control at 0.25% by volume) per gallon of water, such as Hi-Yield Spreader Sticker, Southern Ag Surfactant for Herbicides, or Bonide Turbo Spreader Sticker.
[4] Spot treatments to St. Augustinegrass at temperatures above 90 degrees may cause temporary growth regulation.
Note: Do not apply postemergence herbicides, except Celsius WG Herbicide, to lawns during the spring green up of turfgrass.

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