

## Turfgrass Weed Control for Professional Managers

Tim R. Murphy, Extension Agronomist – Weed Science

Use Stage and Herbicide	Turfgrasses	Broadcast Rate/Acre		Remarks and Precautions
		Amount of Formulation	Pounds Active Ingredient	
<b>Preemergence Herbicides</b>				
Applications must be made prior to weed emergence or poor control will result. Recommended dates of application for crabgrass and other annual grasses are February 15 - March 5 in south Georgia and March 1-20 in north Georgia. Recommended dates for annual bluegrass and selected winter annual weeds are September 1-15 in north Georgia and October 1-15 in south Georgia.				
atrazine (Aatrex) 4L (Aatrex) 90DG (Aatrex) 80W	centipede, St. Augustine, dormant bermudagrass, zoysia	1.0 - 2.0 qts. 1.1 - 2.2 lbs. 1.2 - 2.5 lbs.	1.0 - 2.0 1.0 - 2.0 1.0 - 2.0	Atrazine provides both preemergence and postemergence control of annual broadleaf weeds. Control of summer annual grasses is weak. Aatrex formulations are labeled for applications from October 1 to April 15. Avoid applications during green-up. For bermudagrass, atrazine should be applied only to dormant turf. DO NOT overseed 4 months before or 6 months after treatment. DO NOT apply within the active root zone of azaleas, camellias, boxwoods, etc. DO NOT apply more than 1.0 lb. ai/A on hybrid bermudagrasses. Atrazine is a Restricted Use Herbicide. Refer to atrazine - POSTEMERGENCE.
benefin (Balan) 2.5G (Other trade names)	Ky. bluegrass, bermudagrass, centipede, tall fescue, St. Augustine, zoysia	80.0 to 120.0 lbs.	2.0 to 3.0	Controls annual grasses and selected broadleaf weeds. An additional application may be made 8 weeks after the initial treatment for continued weed control. DO NOT apply to newly sprigged grasses until these turfs are well established. DOES NOT use on golf course greens. DO NOT apply Balan 2.5G in the spring to fall planted turfgrasses. Delay reseeding for 6 weeks after application for the low rate, and for 12 to 16 weeks at the high rate.
bensulide (Bensumec) 4LF  (Pre-San) 7G	Ky. bluegrass, bermudagrass, centipede, tall fescue, St. Augustine, zoysia	1.9 to 3.1 gals.  107.0 to 180.0 lbs.	7.5 to 12.5  7.5 to 12.5	Controls annual grasses and selected broadleaf weeds. Apply high rate in fall for annual bluegrass control. Apply a light irrigation immediately after treatment. DO NOT apply to newly sprigged grasses. Delay reseeding for 4 months after treatment. May be used on bermudagrass and bentgrass greens.
dithiopyr (Dimension 1EC)  (Dimension Ultra 40%WSP) (each 5.0 oz. water soluble bag contains 0.125 lb. of dithiopyr)	Ky. bluegrass, buffalograss, bermudagrass, centipede, tall fescue, zoysia, St. Augustine, seashore paspalum	2.0 qts.  0.95 lb.	0.5  0.38	Provides preemergence control of annual grasses and certain annual broadleaf weeds. Dimension will also provide postemergence control of crabgrass (when treated prior to the tillering stage of growth). Apply as a spring or fall application. For split applications, use Dimension EC up to 1.5 qts./acre per application, or Dimension Ultra at 0.625 lbs./acre per application. Bermudagrass can be overseeded with perennial ryegrass 6 to 8 weeks after a Dimension application. For other turfgrass areas do not reseed, overseed or sprig treated areas for 2.5 to 4 months after treatment (see label).
isoxaben (Gallery) 75DF	bermudagrass, buffalograss, centipede, tall fescue, zoysia, St. Augustine	0.66 to 1.33 lbs.	0.5 to 1.0	Controls a broad spectrum of annual broadleaf weeds. Apply in the late summer or early spring prior to annual broadleaf weed seed germination. Established turf may be overseeded 60 days following a Gallery application. DO NOT use on putting greens.

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<b>Preemergence Herbicides – continued</b>				
mesotrione (Tenacity) 4.0 lbs./gal.	Ky. Bluegrass, centipede, tall fescue, St. Augustinegrass (grown for sod)	4.0 to 8.0 fl. oz.	0.125 to 0.25	Provides preemergence control of crabgrass, yellow foxtail and certain annual broadleaf weeds such as carpetweed and chickweed sp. Tenacity may be tank-mixed with preemergence herbicides such as Barricade for extended control of crabgrass and foxtail. Tenacity may also be applied at the time of seeding Ky. Bluegrass, centipede, or tall fescue. It may also be applied after new seedlings have been mowed two times or 4 weeks after emergence (whichever is longer). Do not exceed 4.0 fl. oz./acre on St. Augustine sod. Tenacity may cause temporary whitening of turfgrass foliage (see label). If Tenacity is tank-mixed with atrazine or simazine for use on St. Augustine or centipede use only 4.0 fl. oz. of Tenacity and 0.5 lbs. ai/acre of either atrazine or simazine. Zoysia, bermudagrass and seashore paspalum are sensitive to Tenacity. Do not use on golf course putting greens and maintain a five foot buffer between treated areas and putting greens.
metolachlor (Pennant Magnum) 7.62 lbs./gal	bermudagrass, centipede, zoysia, St. Augustine	1.3 to 2.6 pts	1.25 to 2.5	Controls annual sedge, yellow nutsedge and certain annual grass weeds. Split applications at intervals of 6 to 8 weeks will extend control. In sod fields do not apply more than 4.2 pts./acre per year. For other turf sites, the maximum annual rate is 2.6 pts./acre. DO NOT use on putting greens.
oryzalin (Surflan) 4AS	bermudagrass, buffalograss, centipede, tall fescue, zoysia, St. Augustine	1.5 to 2.0 qts	1.5 to 2.0	Controls annual grasses and selected broadleaf weeds. Apply 2.0 qts./A for summer annual grass control, or apply 1.5 qts./A and apply an additional 1.5 qts./A 8 to 10 weeks after the initial application. Split applications are recommended for improved goosegrass control and for tall fescue. DO NOT apply to newly sprigged grasses until well established. DO NOT apply to golf course greens. DO NOT make a spring application to fall planted turfgrasses. Surflan is recommended for use on healthy, established turf. Delay reseeding for 3 to 4 months after application.
oxadiazon (Ronstar) 2G (Oxadiazon) 2G	Ky. bluegrass, bermudagrass, buffalograss, seashore paspalum, tall fescue, zoysia, St. Augustine	100 to 200 lbs.	2.0 to 4.0	Controls annual grasses and selected broadleaf weeds. DO NOT apply more than 3.0 lbs. ai/A on St. Augustine. May cause temporary discoloration of bermudagrass and St. Augustine which is normally outgrown in 2 to 3 weeks. DO NOT apply to wet turf. Delay reseeding for 4 months after treatment. DO NOT apply to centipede or golf course greens or tees. Ronstar 50WSP is labeled only on bermudagrass, St. Augustinegrass and zoysia. Ronstar 2G may be used immediately prior or immediately after sprigging bermudagrass or zoysiagrass at 2.0 to 3.0 lbs. ai/acre to control various annual weeds. Ronstar 2G may also be applied 10 to 14 days after sprigging seashore paspalum. Oxadiazon is not labeled for use on home lawns.
(Ronstar) 50WSP (Oxadiazon) 50WSB	bermudagrass, St. Augustine, zoysia	4.0 to 6.0 lbs.	2.0 to 3.0	

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pendimethalin (Pendulum) 2G  (Pendulum) 3.3 EC  (Pendulum AquaCap) 3.8 CS	Ky. bluegrass, bermudagrass, centipede, tall fescue, zoysia, St. Augustine	75 - 150 lbs.  3.6 to 7.2 pts.  3.1 to 6.3 pts.	1.5 to 3.0  1.5 to 3.0  1.5 to 3.0	Controls annual grasses and selected broadleaf weeds. DO NOT use on newly sprigged turfgrasses. Not recommended for turfgrass that has been severely thinned due to winter stress. DO NOT reseed within 3 months of application. Use the low rate for tall fescue and KY bluegrass. The high rate may be used on warm season grasses. On newly seeded or sodded areas, delay application until after the fourth mowing. In established turfgrasses that have been reseeded, delay application until grass seedlings have been mowed 4 times. (This may be up to 3 months from the date of seeding.) Refer to label for information on split applications.
prodiamine (Barricade) 65WDG (ProClipse) 65 WDG (Cavalcade) 65 WDG (StoneWall) 65 WDG  (Barricade) 4L  (ProClipse) 65WDG  (RegalKade) 0.5G  (RegalKade) 0.37G	Ky. bluegrass, bermudagrass, buffalograss, centipede, St. Augustine, seashore paspalum, zoysia, tall fescue	1.15 lbs.  1.5 pts.  1.15 lbs.  100 to 300 lbs.  135 to 406 lbs.	0.75  0.75  0.75  0.5 to 1.5  0.5 to 1.5	Controls annual grasses and broadleaf weeds. DO NOT apply to newly seeded, sprigged or sodded turfgrasses. On fall-seeded turfgrasses, delay the application for 60 days after seeding or until after the second mowing, whichever is longer time period. Split applications, each at one-half the maximum annual labeled rate, at a 60 day interval, may also be used. DO NOT apply to golf course putting greens or tees. RegalKade and RegalKade 37 are formulated on a 32-3-12 dry fertilizer carrier. Barricade 65WDG at 0.58 lbs. product/acre may be applied 8 to 10 weeks before overseeding perennial ryegrass into bermudagrass fairways. Reseeding restrictions can range from 4 to 12 months, depending upon the product and rate used, reseeding method and environmental conditions. Refer to the individual product label for additional information.
pronamide (Kerb T/O) 50WSP	bermudagrass, centipede, St. Augustine, zoysia	1.0 to 2.0 lbs.	0.5 to 1.0	Preemergence or postemergence applications of Kerb will control annual bluegrass. May also be used in spring to slowly remove (4 to 6 weeks) overseeded perennial ryegrass from warm-season turfgrasses. For this purpose, apply Kerb at the 50% spring green-up warm-season turfgrass growth stage. A light overhead irrigation is necessary to move Kerb into the weed root zone if no rainfall occurs within 24 to 48 hours. DO NOT apply Kerb to any cool-season turfgrass. DO NOT apply to areas that will be overseeded with cool-season turfgrasses within 90 days of treatment. Kerb is a Restricted Use Herbicide.
simazine (Princep) 90DF (Princep Liquid) 4L Wynstar 90DF	bermudagrass, centipede, St. Augustine, zoysia	1.1 to 2.2 lbs. 1.0 to 2.0 qts. 1.1 to 2.0 lbs.	1.0 to 2.0 1.0 to 2.0 1.0 to 1.8	Apply simazine in October or November for preemergence control of winter annual weeds. Apply December through February for late postemergence control of winter annuals. Apply low rate for annual bluegrass control; or high rate for winter annual broadleaf control. DO NOT overseed with desirable turfgrass within 4 months before or 6 months after treatment. DO NOT apply more than 1.0 lb. ai/A on newly sprigged turfgrass or on hybrid bermudagrass such as Tiflawn, Tifway and Ormond.

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benefin + oryzalin (XL) 2G	bermudagrass, centipede, tall fescue, zoysia, St. Augustine	100.0 to 150.0 lbs.	1.0 to 1.5 benefin + 1.0 to 1.5 oryzalin	Controls annual grasses and selected broadleaf weeds. DO NOT apply to newly sprigged grasses until well established. DO NOT apply to golf course greens. DO NOT make a spring application to fall planted turfgrasses. Delay reseeding for 6 weeks (low rate) and for 12 to 16 weeks (high rate) after application.
benefin + trifluralin (Team Pro) 0.86G  (Team) 2G	Ky. bluegrass, bermudagrass, centipede, tall fescue, zoysia, St. Augustine	174 to 349 lbs.  100 to 150 lbs.	0.75 to 1.5 benefin + 0.75 to 1.5 Trifluralin  1.3 to 2.0 benefin + 0.7 to 1.0 trifluralin	Team Pro is a dry fertilizer based product that contains 0.43% benefin and 0.43% trifluralin. The fertilizer analysis will depend upon the respective company marketing the product. Controls summer annual grasses and annual bluegrass. Split applications of 233 lbs. product/acre followed 10 weeks later by an additional 233 lbs. product/acre may also be used. DO NOT apply to newly sprigged grasses until well established. DO NOT apply to putting greens. Delay reseeding for 8 weeks (low rate) and for 12 to 16 weeks (high rate) after application.
bensulide + oxadiazon (Goosegrass/Crabgrass Control) 5.25% + 1.31% G	Ky. bluegrass, bermudagrass, tall fescue, zoysia	115.0 lbs.	6.0 bensulide + 1.5 oxadiazon	Controls summer annual grasses. Apply a light irrigation after treatment. DO NOT use on newly sprigged grasses until well established. Delay reseeding for 5 months after treatment. Recommended for professional applicator use. May be used on bermudagrass and bentgrass greens under conditions of heavy goosegrass infestations. See label for precautions concerning use on putting greens.
oxadiazon (1.0%) + prodiamine (0.2%) (Regalstar II) (Regalstar G)	Ky. Bluegrass, bermudagrass, centipede, St. Augustine, tall fescue, zoysia	200.00 lbs.	2.0 oxadiazon + 0.4 prodiamine	Controls annual grasses. Regalstar II is formulated on a 38-0-0 urea form nitrogen carrier. Regalstar G does not contain fertilizer. Apply to dry foliage. Delay applications to newly sprigged bermudagrass until after stolons have rooted and the grass has filled in. DO NOT apply to putting greens.
sulfentrazone + prodiamine (Echelon) 4SC	Ky. Bluegrass, bermudagrass, buffalograss, carpetgrass, centipede, seashore paspalum, tall fescue, zoysia	18.0 to 36.0 fl. oz.	0.56 to 1.125	Controls annual grasses, certain annual broadleaf weeds, annual sedges, kyllinga sp. and yellow nutsedge. Use in established turfgrasses. May be applied after the second mowing of seeded grasses provided the grass has developed a uniform stand and a good root system. The high rate of 36.0 fl. oz./acre is recommended only for use on bermudagrass. This product can provide postemergence control of some, small annual broadleaf weeds. Do not apply to newly installed sod until the sod has rooted and exposed edges have grown in. Do not add an adjuvant or surfactant to the spray solution. In sod fields do not apply Echelon within 3 months of harvest. Echelon is not labeled for use on golf course putting greens.