

Lawn And Turf

General Home Lawn Weed Control

Home lawn broadleaf weed control can often be accomplished using selective postemergence formulations that contain two or more herbicides. Formulations are available for most Southern grasses. Examples are Bayer Advanced Southern Weed Killer, Trimec Southern, Ferti-lome Weed Free Zone, Ortho Weed-B-Gon, Atrazine, MSM Turf (metsulfuron). Most labels will stress their use on younger weeds growing in the cooler mid-spring to early summer period. A temporary discoloration of the lawn usually occurs. Repeat application in three to four weeks if needed on persistent weeds. **Warning:** Some of these products contain phenoxy herbicides; avoid drift, keep away from gardens and clean sprayers thoroughly with ammonia. Atrazine-containing products enter through roots and leaves and work more slowly. **Note that MSMA is no longer labeled for home lawn use; however, existing quantities of MSMA purchased prior to 2010 may have a product label that allows for use on home lawns.**

Many manufacturers offer herbicides impregnated on fertilizer for homeowner use. However, these products have to be applied according to their intended use. Products containing a preemergence herbicide must be applied before the weed emerges. For crabgrass, application is typically early March in northern areas of Louisiana and mid- to late February in the southern portion of the state. A good rule of thumb is that *Forsythia plants begin to bloom just prior to crabgrass emergence*. If sufficient rainfall is not received, irrigation should be applied to activate the herbicide. Be sure to read and follow the manufacturer's label for maximum weed control and application instructions. Use a good quality spreader and make every effort to apply the product uniformly to the lawn. A good practice to ensure uniform application is to apply one-half of the desired amount in one direction across the lawn and the second half of the desired amount perpendicular to the first application.

Virginia buttonweed infesting St. Augustinegrass, centipedegrass, bermudagrass and zoysia lawns: A herbicide program approach is necessary for managing Virginia buttonweed. Apply "trimec" type products, such as Weed B Gon or Weed Free Zone, on newly emerged buttonweed starting in mid- to late April when temperatures are less than 85 F. Repeat application within two weeks if possible. Once temperatures exceed 85 F, apply metsulfuron or Celsius every four to six weeks in lawns with very high buttonweed populations.

The best defense against weeds in a home lawn is to have a dense, healthy turf canopy. Be certain to remove no more than one-third of the height of the turf in a single mowing. Maintain St. Augustinegrass at 3 inches. St. Augustinegrass will not tolerate short mowing. Centipedegrass, common bermudagrass and zoysiagrass should be maintained at 1.5 inches tall. Follow a recommended fertility regimen for your specific turf species and location.

Turfgrass Tolerance to Selected Preemergence and Postemergence Herbicides

Table Legend

| Rating | Abbreviation |
|---|--------------|
| Tolerant at labeled rates | T |
| Intermediate safety | I |
| Not Recommended / labeled severe injury potential | NR |
| Dormant | D |

Table 1. Preemergence herbicides.

| | bermudagrass | centipedegrass | St. Augustinegrass | zoysia |
|----------------------------|--------------|----------------|--------------------|--------|
| atrazine | D | T | T | T |
| benefin | T | T | T | T |
| benefin + oryzalin | T | T | T | T |
| bensulide | T | T | T | T |
| bensulide + oxadiazon | T | NR | NR | T |
| dithiopyr | T | T | T | T |
| indaziflam | T | T | T | T |
| isoxaben | T | T | T | T |
| metolachlor | T | T | T | T |
| oryzalin | T | T | T | T |
| oxadiazon | T | NR | T | T |
| pendimethalin | T | T | T | T |
| prodiamine | T | T | T | T |
| simazine | I | T | T | T |
| sulfentrazone + prodiamine | T | T | NR | T |

Table 2. Postemergence herbicides.

| | bermudagrass | centipedegrass | St. Augustinegrass | zoysia |
|--|--------------|----------------|--------------------|--------|
| 2,4-D | T | I | I | T |
| 2,4-D + mecoprop + dicamba | T | I | I | T |
| atrazine | D | T | T | T |
| bentazon | T | T | T | T |
| carfentrazone | T | T | T | T |
| chlorsulfuron | T | T-I | T-I | T |
| clopyralid | T | T | T | T |
| dicamba | T | I | I | T |
| diclofop | T | NR | NR | NR |
| fenoxaprop | NR | NR | NR | T |
| fluazifop | NR | NR | NR | I |
| foramsulfuron | T | NR | NR | T |
| imazaquin | T | T | T | T |
| iodosulfuron + thiencazabone + dicamba | T | T | T | T |
| metribuzin | T-I | NR | NR | NR |
| metsulfuron | T | T | T | T |
| MSMA | T | NR | NR | T-I |
| pronamide | T | NR | NR | NR |
| rimsulfuron | T | T | NR | T |
| sethoxydim | NR | T | NR | NR |
| sulfentrazone | T | T | T-I | T |
| sulfosulfuron | T | T | T | T |
| triclopyr + clopyralid | I | I | NR | I |
| trifoxylfufuron | T | NR | NR | T |
| thiencazabone + foramsulfuron + halosulfuron | T | NR | NR | T |

Table 3. Preemergence herbicides.

| Active Ingredient and Rate | Formulated Product and Rate | Weeds Controlled | Remarks and Precautions |
|---|--|--|---|
| atrazine @ 1.0 lbs/A | Aatrex and Various other formulations (See labels) @ 1.0 qt/A or 0.75 fl oz/1,000 sq ft | <i>Poa</i> , winter annuals such as henbit, chickweed and lawn burweed. | Restricted use. Use only 1 qt/A per application. Safely applied to St. Augustine, centipede, zoysia and dormant bermudagrass late fall or early winter. For improved weed control, apply another 1 qt./A at least 30 days after the previous application but not after April 15. Do not make more than two applications of this product per year. Do not use in overseed areas. Do not apply near drip line of trees and shrubs. |
| benefin @ 2.0-3.0 lbs/A | Balan 2.5 G @ 120 lbs/A or 2.75 lbs/1,000 sq ft | Crabgrass, goosegrass, <i>Poa annua</i> (annual bluegrass) and certain other annuals. | Apply in late February to early March in south Louisiana and early to mid-March in north Louisiana for many summer annual grasses and broadleaf weeds. Retreat in mid-September in north Louisiana and early to mid-October in south Louisiana for winter annuals. Do not seed treated areas within four months of last application. Use on established turf only. |
| bensulide @ 7.5-12.5 lbs/A | Bensumec 4 EC @ 1.9-3.1 gal/A or 5.6-11.2 oz/1,000 sq ft; Pre-San 7 G @ 107-180 lbs/A or 2.46-4.1 lb/1,000 sq ft | Crabgrass, goosegrass, <i>Poa annua</i> and small-seeded broadleaves. | Apply in February to early March in south La. and early March in north Louisiana. Apply in mid-September in north Louisiana and early October in south Louisiana for <i>Poa</i> . Do not seed treated areas within four months of last application. Use on established turf only. Labeled for established bermudagrass greens. |
| dimethenamid @ 1.0-1.5 lbs/A | Tower 6 EC @ 21-32 oz/A or 0.48-0.73 oz/1,000 sq ft | Preemergence on most annual grasses, certain broadleaf weeds, doveweed, yellow nutsedge. | Most established Southern grasses grown in Louisiana. Good preemergence control of yellow nutsedge. Apply in February to early March in south Louisiana and early March in north Louisiana. Apply in mid-September in north Louisiana and early October in south Louisiana for <i>Poa</i> . |
| dimethenamid + pendimethalin @ 1.75-3.5 lbs/A | FreeHand @ 100-200 lbs/A or 2.3-4.6 lbs/1,000 sq ft | Preemergence on most annual grasses, certain broadleaf weeds, doveweed, yellow nutsedge. | Most established Southern grasses grown in Louisiana. Good preemergence control of yellow nutsedge. Apply in February to early March in south Louisiana and early March in north Louisiana. Apply in mid-September in north Louisiana and early October in south Louisiana for <i>Poa</i> . |

| Active Ingredient and Rate | Formulated Product and Rate | Weeds Controlled | Remarks and Precautions |
|---------------------------------------|--|--|---|
| dithiopyr @ 0.5 lb/A | Dimension 1 EC @ 1 qt/A or 0.75 oz/1,000 sq ft; Dimension Ultra 40 WP @ 1.25 lb/A or 0.46 oz/1,000 sq ft | Crabgrass, <i>Poa</i> , foxtail, crowfoot, barnyardgrass, goosegrass, small-seeded annual broadleaves. | May tank-mix with compatibles. Delay overseeding or sprigging for three months after application. Provides PRE control of several annual grasses and limited POST control of crabgrass. Apply on established turf only. May be used on all southern turf species. |
| indaziflam 0.015-0.04 lb/A | Specticle 20 WSP @ 1.2-3.5 oz/A or 0.028-0.080 oz/1,000 sq ft; Specticle Flo @ 6-10 oz/A or 0.14-0.23/1,000 sq ft | Crabgrass, <i>Poa</i> , foxtail, crowfoot, barnyardgrass, goosegrass, several annual broadleaves. | Apply prior to weed emergence. Consider split applications approximately 60 days after the initial. Apply on established turf only. May be used on most Southern turf species. Do not use on greens. |
| isoxaben @ 0.5-1.0 lb/A | Gallery 75 DF @ 0.7-1.3 lbs/A or 0.25-0.5 oz/1,000 sq ft | Many broadleaves. No grasses are controlled. | Do not apply through irrigation. Keep in agitation. Can tank-mix with other products. All established turfgrasses are tolerant. |
| metolachlor @ 1.2-2.6 lbs/A | Pennant Magnum 7.62 EC @1.3-2.6 pt./A or 0.48-0.96 oz/1,000 sq ft | <i>Poa</i> , goosegrass, crabgrass, yellow nutsedge, some annual sedges, small-seeded broadleaves. | For warm-season turfgrasses. Not for tees or greens. Do not overseed four months prior or six months after. Also used for ornamental beds. |
| oryzalin @ 3.0 lbs/A | Surflan 4 AS @ 3 qt/A or 2.2 oz/1,000 sq ft | Crabgrass, ryegrass, goosegrass, foxtails, barnyardgrass and <i>Poa annua</i> as well as many broadleaves. | Not for greens or tees. Delay reseeding three or four months. Safe for all established warm-season grasses. |
| oxadiazon @ 2.0-4.0 lbs/A | Ronstar 2 G @ 100-200 lbs/A or 2.3-4.6 lbs/1,000 sq ft; Regal Ronstar 2 G @ 100-200 lbs/A or 2.3-4.6 lbs/1,000 sq ft; Ronstar 50 WP@ 4-6 lbs/A or 1.5-2.2 oz/1,000 sq ft | <i>Poa annua</i> , crabgrass, goosegrass, oxalis, many other annual grasses and broadleaf weeds. | For use on established St. Augustine, zoysia and bermudagrass only. Do not exceed 150 lbs/A (3 lb active) on St. Augustine turf. May cause temporary discoloration. Do not apply to centipedegrass or bermudagrass golf greens. Can split applications 30 days apart. 50WP for dormant turf. Apply 50 WP several weeks prior to greenup. Commercial turf only. Best preemergence option for goosegrass. |
| oxadiazon + bensulide @ 6 + 1.5 lbs/A | Goosegrass/Crabgrass Control @ 6.56 G @ 116 lbs/A or 2.6 lbs/1,000 sq ft | Crabgrass, goosegrass, <i>Poa annua</i> . | Apply on established zoysia, perennial ryegrass and bermudagrass. May be applied to established greens and tee boxes. |
| pendimethalin @ 1.7-3.0 lbs/A | Pendulum 3.3 EC @ 3.6-4.8 pt./A or 1.3-1.8 oz/1,000 sq ft; Pendulum AquaCap 3.8 @ 3.1-6.2 pt./A or 1.15 oz-2.3 oz/1,000 sq ft; Pendulum 2G @ 75-150 lbs/A or 1.7-3.4 lbs/1,000 sq ft | Goosegrass, crabgrass, small-seeded broadleaves. | For established warm-season grasses. Not for spring use when turf suffers from severe winter kills. Irrigate after application. All Southern grasses are tolerant. |

| Active Ingredient and Rate | Formulated Product and Rate | Weeds Controlled | Remarks and Precautions |
|---|---|---|---|
| proflaminate @ 0.75-1 lb/A | Barricade 65 WG @ 0.75-1.5 lbs/A or 0.28-0.4 oz/1,000 sq ft; Barricade 4L @ 0.625-3 pt/A or 0.23-1.1 oz/1,000 sq ft | Crabgrass, <i>Poa annua</i> , foxtail, crowfootgrass, barnyardgrass, goosegrass, small-seeded annual broadleaves. | On established turf, including ryegrass. Long residual. Use caution if winter kill of existing turf is suspected. Most grasses are tolerant. Split applications for goosegrass. |
| proflaminate + imazaquin + simazine @ 1.875-2.5 lbs/A | Coastal @ 48-64 oz/A or 1.1-1.46 oz/1,000 sq ft | Crabgrass, goosegrass, foxtail, <i>Poa</i> and several summer and winter broadleaves including burweed and clovers. | Application window is Sept. 15 to May 31. 64 oz/A is recommended for fall weed control. Provides excellent control of crabgrass, Controls <i>Poa</i> as well as many broadleaves. Labeled for bermudagrass (not for golf greens) including non-overseeded athletic fields, centipedegrass, St. Augustinegrass and zoysia. |
| proflaminate + sulfentrazone @ 0.25-1.125 lbs/A | Echelon 4 SC @ 0.5-2.25 pt./A or 0.184-0.826 oz/1,000 sq ft | Annual grasses, annual sedges, yellow nutsedge, certain broadleaf weeds. | Apply safely to bermudagrass, centipedegrass, zoysia and seashore paspalum after the second mowing. Do not apply on St. Augustinegrass. |
| pronamide @ 0.5 lb-1.5 lbs/A (total) | Kerb 3.3SC @ 1.5-2.5 pt/A (3.5 pt/A is the cumulative max amount allowed per year) or 0.55-0.92 oz/1,000 sq ft | Pre or early post in fall or winter for control of <i>Poa annua</i> . | May be applied to established greens and tee boxes. Use on dormant or active bermudagrass for <i>Poa</i> . Acts mainly through root absorption. Beware of runoff onto sensitive grasses. Do not use within 70 days prior to overseeding. Postemergence activity is slow (one to two months). For emerged <i>Poa</i> , apply 2-2.5 pt/A. Do not apply more than 2.5 pt/A per application. Do not exceed 3.5 pt/A total. Careful with spray overlaps! Ryegrass and overseed winter grasses will be injured or killed. Restricted use. |
| simazine @ 1-2 lbs/A | Simazine 4 L @ 1-2 qt/A or 0.75-1.5 oz/1,000 sq ft | Provides good control of <i>Poa annua</i> as well as many winter broadleaves. | Safely applied to St. Augustine, centipede, zoysia and bermudagrass late fall or early winter. Do not use in overseeded areas. May be applied Sept. 1 to June 1. Some triazine resistant <i>Poa</i> populations becoming more present in the state. |
| sulfentrazone + proflaminate @ 0.25-1.125 lbs/A | Echelon 4 SC @ 0.5-2.25 pt./A or 0.184-0.826 oz/1,000 sq ft | Annual grasses, annual sedges, yellow nutsedge, certain broadleaf weeds. | Apply safely to bermudagrass, centipedegrass, zoysia and seashore paspalum after the second mowing. Do not apply on St. Augustinegrass. |

Table 4. Selective postemergence herbicides.

| Active Ingredient and Rate | Formulated Product and Rate | Weeds Controlled | Remarks and Precautions |
|----------------------------|---|--|---|
| atrazine @ 1.0 lbs/A | Aatrex and Various other formulations (See labels) @ 1.0 qt/A or 0.75 fl oz/1,000 sq ft | Florida betony, <i>Poa</i> , dollarweed, lespedeza, henbit, lawn burweed. | Restricted use. Safely applied to St. Augustine, centipedegrass, zoysia and dormant bermudagrass in early winter for several winter weeds. For improved weed control, apply another 1 qt/A at least 30 days after the previous application but not after April 15. Do not make more than two applications of this product per year Do not use in overseed areas. Do not apply near drip line of trees and shrubs. |
| simazine @ 1-2 lbs/A | Simazine 4 L @ 1-2 qt/A or 0.75-1.5 oz/1,000 sq ft | Good post control of <i>Poa annua</i> and many winter broadleaves. | Safely applied to St. Augustine, centipedegrass, zoysia and bermudagrass fall or early winter. Do not use in overseeded areas. For improved weed control, apply another 1 qt/A at least 30 days after the previous application but not after June 1. Do not make more than two applications of this product per year. Apply after last home game on non-over-seeded football fields. |
| asulam @ 1.7– 2.1 lbs/A | Asulox 3.3 EC @ 4-5 pt./A; 1.5-1.8 oz/1,000 sq ft | Crabgrass, goosegrass, sandbur. | Postemergence: use in Tifway 419 bermudagrass and St. Augustinegrass sod. Do not apply to residential turf. Do not apply to freshly mowed or stressed turf. Do not use surfactant. One application per season. Some discoloration may occur, especially in hot weather. Injurious to centipedegrass. |
| bentazon @ 1.0-2.0 lbs/A | Basagran T/O or Lescogran 4 SL 1-2 qt/A or 0.75-1.5 oz/1,000 sq ft | Yellow nutsedge and annual sedges; green kyllinga with repeat applications. | Use on established warm-season grasses turf. Can repeat at 10-14 days. Do not apply more than 3 qt/A/season. Do not mow three to five days before or after application. May add crop oil concentrate. |
| clopyralid @ 0.09-0.5 lb/A | Lontrel 3 EC @ 0.25-1.33 pt./A; 0.1-0.5 oz/1,000 sq ft | Broadleaf weeds, including legumes and buttonweed. | Safely applied to all warm-season grasses. Do not use on putting greens or tees. No surfactant is needed. Can provide effective control of Virginia buttonweed but repeated applications may be necessary. Avoid drift to susceptible ornamental plants. Do not apply to residential turf. |
| dicamba @ 0.25-0.5 lb/A | Banvel 4S @ 0.5-1 pt./A or 1-2 tsp/1,000 sq ft | Annual and biennial broadleaves, woody brush and vines. Chickweed, white clover, henbit, burweed, wild strawberry, curly dock, spotted spurge. | Use on deep-rooted, stubborn broadleaves. Apply sufficient gallons to coat foliage down to base of plant. Repeat application may be needed. Do not exceed 0.5 lb per acre per year. Applications over 0.25 lb/A may temporarily stunt and discolor some grasses. Apply no more than 0.5 pt./A to St. Augustinegrass. May be tank-mixed with 2,4-D, MCPP, MCPA (consult label). |

| Active Ingredient and Rate | Formulated Product and Rate | Weeds Controlled | Remarks and Precautions |
|---|--|---|--|
| dicamba diglycolamine @ 0.09-1 lb/A | Clarity @ 3-32 oz/A or 0.07-0.74 oz/1,000 sq ft | Same weeds controlled with Banvel. | After green-up. To avoid injury to newly emerged grasses, wait until after the second mowing to apply. Applications of more than 16 oz/A may discolor susceptible grasses. Consult label. Do not exceed 32 oz/A/yr. See recommendations for sensitive grasses. |
| ethofumesate @ 1.0-2.0 lbs/A | Prograss 1.5 F @1.0-2.0 gal/A or 3-6 oz/1,000 sq ft on lt soil; 3.5-4 oz/1,000 sq ft on medium to heavy soil | Annual grasses (<i>Poa annua</i>), pigweed, chickweed, purslane, barnyardgrass, crabgrass, foxtail; suppresses nutsedge. | Apply pre or early postmerge. Hastens or extends dormancy in bermudagrass. Therefore, apply 3-4 wks after overseeding. Do not overlap. Repeat once for extended control. Overseed only with perennial ryegrass. Maximum 8 pt/A/season. Seasonal influences on bermudagrass recovery can be significant for Baton Rouge and southward. |
| fenoxaprop @ 0.57-0.174 lb/A | Acclaim 0.57 EC @ 13-39 fl oz/A or 0.75-1 fl. oz/1,000 sq ft | Early postemergence: several annual grasses and bermudagrass suppression. | Can be safely applied to zoysia. Suppresses bermudagrass infesting zoysia. |
| flazasulfuron @ 0.012-0.047 lb/A | Katana 25 DF @ 0.75-3.0 oz/A or 0.0172-0.068 oz/1000 ft2 | Effective removal of perennial ryegrass and <i>Poa trivialis</i> overseed; also controls annual bluegrass, blue-eyed grass and newly emerged crabgrass. | Bermudagrass or zoysia with some limited lower rate use in centipedegrass. Do not apply on golf greens. |
| halosulfuron @ 0.03-0.06 lb/A | Sedgehammer 75 WDG @ 0.6-1.33 oz/A or 0.138-0.03 oz/1,000 sq ft or 0.25 tsp/gal spot | Nutsedges (purple & yellow); suppression of kyllinga species. | Postemergence with repeat application necessary within six weeks with heavy infestations. Use non-ionic surfactant. Can be used on all warm-season grasses. |
| imazaquin @ 0.38-0.5 lb/A | Scepter, Image 70 DG @ 8.6-11.4 oz or 0.2-0.26 oz/1,000 sq ft | Chickweed, henbit, geranium, pigweed, onions, purple nutsedge, burweed, sandbur; suppression of kyllinga and dollarweed. | Can be used on all warm-season grasses. However, do not apply to dormant or transitional St. Augustinegrass. Not for cool-season grasses or golf greens. Some yellowing may occur especially in tire tracks or low areas. Repeat for improved control. |
| iodosulfuron + thiencazone + dicamba @ 0.10-0.21 lb/A | Celsius 68 WG @ 2.5-4.9 oz/A or 0.057-0.113 oz/1,000 sq ft | Broadleaf weeds such as white clover, chickweed, buttonweed; suppression of dallisgrass with sequential applications or applied as spot. Repeated applications will kill carpetgrass. | Do not exceed 7.4 oz/A/year. Good safety on most lawn grasses grown in Louisiana except carpetgrass. Good safety on St. Augustinegrass in hot weather. Do not apply to a turf overseeded with cool-season grasses such as perennial ryegrass. Allow a minimum of 14 days before overseeding with ryegrass. Do not apply to carpetgrass or bahiagrass. |

| Active Ingredient and Rate | Formulated Product and Rate | Weeds Controlled | Remarks and Precautions |
|--|---|--|--|
| iodosulfuron + thiencazone + halosulfuron @ 0.048-0.095 lb/A | Celsius XTRA 15.2 WDG @ 5-10 oz/A or 0.12-0.23 oz/1000 sq ft | Improved sedge control over Celsius. Broadleaf weeds such as white clover, chickweed, buttonweed. | Do not apply more than a total of 15 oz/year. Celsius XTRA provides better sedge control over Celsius. Sequential applications of 7.5 oz/A followed by 7.5 oz/A are very effective when applied six weeks apart. Do not apply to a turf overseeded with cool-season grasses such as perennial ryegrass. Allow a minimum of 14 days before overseeding with ryegrass. Do not apply to carpetgrass or bahiagrass. |
| metsulfuron @ 0.01-0.038 lb/A | MSM and various trade names. 60 WDG @ 0.33-1 oz/A or 0.007-0.023 oz/1,000 sq ft | Pensacola bahiagrass, clovers, rose (pink) woodsorrel, spurge, lawn burweed and many other winter weeds. Virginia buttonweed suppression with two applications sprayed six weeks apart. | Controls a wide range of broadleaf weeds. Labeled for St. Augustinegrass, bermudagrass, zoysia, centipedegrass. Do not exceed 0.5 oz/A on centipedegrass. Do not overseed for eight weeks after application. Be precise with applications. This is a low use rate herbicide. Improper rates can injure or kill shrubs and trees. |
| metsulfuron + dicamba @ 0.187-0.285 lbs/A | Fahrenheit 38 WSG @ 3-12 oz/A or 0.07-0.275 oz/1,000 sq ft | Pensacola bahiagrass, clovers, rose (pink) woodsorrel, stinging nettle, many winter broadleaves; Suppression of Virginia buttonweed. | Apply from 3-12 oz/A in St. Augustinegrass, bermudagrass and zoysia. Use from 3-6 oz/A in centipedegrass. Apply at least 6 oz/A for buttonweed. Do not overseed for 60 days after application. |
| metsulfuron + Sulfentrazone @ 0.269-0.413 lbs/A | Blindside 6.5-10 oz/A or 0.15-0.23 oz/1,000 sq ft | Pensacola bahiagrass, clovers, pink and yellow woodsorrel, stinging nettle, many winter broadleaves; Suppression of doveweed. Good control of annual and perennial sedges, including kyllinga species. | Two applications of Blindside 21 days apart may increase control of weeds over a single application; however, do not exceed 10 oz product per acre per year. Some suppression of doveweed, especially with a follow up application. |
| metribuzin @ 0.2-0.5 lb/A | Sencor 75 DF @ 5.3-10.5 oz/A or 0.12-0.24 oz/1,000 sq ft | Chickweed, henbit, burweed, Speedwell, suppresses goosegrass. Controls goosegrass when tank mixed with MSMA. | Postemergence on dormant bermudagrass turf (use higher rates). Actively growing turf (mid-spring) bermudagrass only. Do not apply on golf greens, tees, or aprons. Delay mowing for at least three days before spray. Do not exceed 1.5 lbs/A/season or more than one application on dormant or two applications on active turf. Mix with MSMA at 0.1-0.2 lb/A for goosegrass control. |

| Active Ingredient and Rate | Formulated Product and Rate | Weeds Controlled | Remarks and Precautions |
|--|--|---|---|
| MSMA @ 2.0-3.0 lbs/A | MSMA 6 SL @ 1.3-2 qt/A or 1.0-1.5 oz/1,000 sq ft; MSMA 6.6 SL @ 1.2-1.8 qt/A or 1.0-1.3 oz/1,000 sq ft | Bahiagrass, crabgrass, dallisgrass, nutsedges. | Bermudagrass and zoysia are tolerant. A 6 lbs/gal formulation has surfactant, but 6.6 lbs/gal formulation does not. Best performance can be expected when air temperatures are at least 80 F. Repeat applications are required seven to 10 days apart. Dallisgrass control requires multiple applications. Emerald zoysia is susceptible to MSMA. No longer labeled for lawns or sports fields. See application restrictions on product label. |
| Penoxulam + sulfentrazone + 2,4-D + dicamba @ 0.48-0.50 lb/A | Avenue South 0.80 EC @ 3.1-5.0 pt./A or 1.10-1.80 oz/1,000 ft2 | Dollarweed, clover, buttonweed, spurge. | Good safety on St. Augustinegrass and safe for all Deep South turf species. Consult label for specific turf rates. Good control of many cool season and summer broadleaf weeds. |
| 2,4-D + MCPP + dicamba @ 0.68-1.35 lbs/A | Trimec Classic 2.7 EC @ 2-4 pt./A (consult label for other turf) or 0.75-1.5 oz/1,000 sq ft for hybrid Bermuda and 1 oz/1,000 sq ft for St. Augustinegrass or centipedegrass | Virginia buttonweed, Henbit, lespedeza, clovers, dandelion, dock, burweed, bull thistle, wild strawberry and many other broadleaves. | Consult label for specific turf rates. Provides good control of many broadleaf weeds. Avoid nontarget drift. For clover, 4 pt/A is recommended. Maximum of two applications per year. Do not apply when temperatures exceed 85 F. |
| 2,4-D + MCPP + dicamba @ 0.375-0.75 lb/A | Trimec Southern 3 EC @ 1-2 pt./A or 0.37-1 oz/1,000 sq ft (consult label for specific turf) | Henbit, lespedeza, clovers, dandelion, dock, lawn burweed, bull thistle, wild strawberry and many other broadleaves. | May be applied to most Southern turf. However, use rates vary for particular grass species. Use 1.5 pt/A in St. Augustinegrass. Contains less 2,4-D than Trimec Classic. Do not apply when temperatures exceed 90 F. |
| 2,4-D + MCPP + dicamba + carfentrazone @ 0.1519-0.6075 lb/A | Speed Zone South 2.2 EC @ 1.5-6 pt./A or 0.55-2.2 oz/1,000 sq ft for hybrid Bermuda 1 oz/1,000 sq ft for St. Augustinegrass or centipedegrass | Virginia buttonweed, Henbit, lespedeza, clovers, dandelion, dock, lawn burweed, bull thistle, wild strawberry and many other broadleaves. | May be used in most warm-season turfgrass. Consult label for specific turf rates. Provides good control of many broadleaf weeds. Avoid nontarget drift. Do not apply when temperatures exceed 85 F. |
| 2,4-D amine @ 0.75-1 lb/A | 2,4-D amine 3.84 EC @ 1.5-2.0 pt./A or 1.0 oz or 2 tbsp/2 gal water/1,000 sq ft; Spot treatments @ 0.5 oz/gallon/1000 sq ft in St. Augustinegrass | Many annual, biennial and perennial broadleaf weeds. | St. Augustinegrass is the most sensitive warm-season turf. Use spot treatments instead of broadcast. Apply on sunny days when the temperature is well above 60 F and there is little wind presence. Observe regional rules concerning 2,4-D use in cotton-producing areas of the state. |
| quinclorac @ 0.75/A | Drive 75 DF 1 lb/A or 0.367 oz/1,000 sq ft; Drive XLR 8 @ 64 oz/A or 1.45 oz/1000 ft2 | Crabgrass, barnyardgrass, lespedeza, clover; suppression of torpedograss. | For bermudagrass and zoysia. Do not apply to centipedegrass, St. Augustinegrass or bahiagrass. Three applications needed for torpedograss management. |
| quinclorac, sulfentrazone, dicamba, 2,4-D @ 1.1-1.6 lbs/A | Q4 Plus @ 5-7 pt./A or 1.8-2.6 oz/1,000 ft2 | Crabgrass, barnyardgrass, broadleaf signalgrass, foxtail, lespedeza, clover, Florida betony, yellow nutsedge. | Warm-season application is limited to bermudagrass. Reduced crabgrass control at three to four tillers. Apply at least 2 days before mowing or two days after. Do not apply to centipedegrass or St. Augustinegrass. |

| Active Ingredient and Rate | Formulated Product and Rate | Weeds Controlled | Remarks and Precautions |
|--|---|---|---|
| rimsulfuron @ 0.031-0.062 lb/A | Rimsulfuron 25 DF @ 1-2 oz/A or 0.046-0.09 oz/1000 sq ft | <i>Poa annua</i> , perennial ryegrass overseed. | <i>Poa annua</i> control in non-overseeded bermudagrass. Transitional aid for the removal of ryegrass overseed. May be used on established bermudagrass golf greens and tees. |
| sethoxydim @ 0.3-0.5 lb/A | Segment II 1.5 EC @ 1.5-2.5 pt./A or 0.60-0.90 fl oz/1,000 sq ft | Crabgrass, goosegrass; other annual grasses; suppression of bermudagrass; temporary suppression of torpedograss; poor control of carpetgrass. | Postemergence on grassy weeds in centipede. May be used on seedling centipedegrass (delay application until 3 inches of new stolon growth) and established centipedegrass. Apply at 0.4 oz/1,000 sq ft or pt/A rate for seedling centipedegrass. Ensure good coverage of target foliage. Use during good growing conditions. If centipedegrass is cold-stressed, delay application until three weeks after green up. A maximum two applications/year on established centipede. Only suppresses torpedograss. For bahiagrass suppression, reapply 10-14 days after first application. Some limited torpedograss suppression with two applications spaced three weeks apart. COC or MSO improves control but may increase injury in hot and humid conditions. |
| sulfosulfuron @ 0.05-0.09 lb/A | Certainty 75 WG @ 1.25-2.0 oz/A or 0.03-0.04 oz/1,000 sq ft | Yellow and purple nutsedge, green kyllinga, johnsongrass. | Safe on all warm-season turfgrasses and very effective on most sedges including green kyllinga. Also controls johnsongrass. |
| thiencarbazone + foramsulfuron+halosulfuron @ 0.037-0.121 lb/A | Tribute Total 60.5 WDG @ 1.0-3.2 oz/A or 0.02-0.07 oz/1000 sq ft | Several grassy and broadleaf weeds including ryegrass, <i>Poa</i> , clovers, buttonweed; suppression of dallisgrass. | Bermudagrass and zoysia only. Use a non-ionic surfactant. Provides good suppression of dallisgrass when applied in two applications in late summer to early fall @ 3.2 oz/A per application. Can be helpful in the management of buttonweed. |
| triclopyr + clopyralid @ 0.09-0.19 lb/A | Confront 3 SL @ 1.5-2.0 pt/A or 0.5-0.75 oz/1,000 sq ft or pump-up sprayer @ 1 tbs/gal for spot treatments | Many annual and perennial broadleaves; black medic, white clover, chickweed, burweed, lespedeza, wild violet, Virginia buttonweed. | Postemergence on active weeds. Repeat if necessary. May be used on bermudagrass, centipedegrass and zoysia. Do not apply on St. Augustinegrass. Avoid drift and contact of shrubs. Not for golf greens or tees. A maximum 2 qt/A/yr. Do not apply to residential turf. |
| trifloxysulfuron @ 0.015-0.02 lb/A | Monument 75 WG @ 0.33-0.56 oz/A or 0.007-0.011 oz/1,000 sq ft; Spot treatment @ 0.0176 oz/gallon + 2 teaspoons of non-ionic surfactant. | Purple, yellow, annual sedges; green kyllinga, oxalis, white clover, spotted spurge, <i>Poa</i> , ryegrass overseed, Virginia buttonweed. | Bermudagrass and zoysia only. Excellent sedge and green kyllinga control. Suppresses Virginia buttonweed. Repeat applications may be needed four weeks after initial application for buttonweed. Use rates 0.1-0.3 oz/A for overseed removal. Allow six weeks between last application and overseeding with ryegrasses. Labeled for bermudagrass and zoysia. May be applied on bermudagrass golf greens. |

Table 5. Soil fumigant and nonselective herbicides.

| Active Ingredient and Rate | Formulated Product and Rate | Weeds Controlled | Remarks and Precautions |
|---|---|---|---|
| dazomet @346.5 lbs/A | Basamid 99 G @ 350 lbs/A or 8 lbs/1,000 sq ft | Soil treatment that kills most weeds prior to planting. | Soil fumigant. Follow label carefully. Apply prior to planting. Fall for early spring planting. Soil fumigant used two to four weeks ahead of planting depending on soil temperature. Toxic to fish. |
| diquat 0.25-0.5 lb/A | Reward 2 SL @ 1-2 pt/A; 0.4-4.4 fl oz/1,000 sq ft; Various other formulations | Most annual weeds. | Nonselective herbicide. Use on dormant bermudagrass and for edging. Top burn kill; same as paraquat. Presently a 24C label. Add a non-ionic surfactant, if advised. Not effective on perennial weeds. |
| glufosinate – ammonium @ 0.75-1.5 lbs/A | Finale 1 SL @ 3-6 qt/A or spot treatment 1.5-4.0 oz/gal | Most weeds, including Asian jasmine. | Nonselective herbicide. Nonselective burndown like paraquat. Locally systemic. Many tank-mix combinations. Use 20-40 g/A for sufficient coverage. |
| glyphosate @ 1.0-5.0 lb | Roundup Pro 4 SL and others @ 1-1.5 qt/A for annuals or 2.5-5 qt/A for perennials and turf renovation; 0.75-3 oz/1,000 sq ft or Spot treatments @ 1-2% solution | Most grasses and herbaceous broadleaves. | Nonselective herbicide. This herbicide is systemic. Spray foliage to wet. Use when no rain is expected for at least six hours. Plants should not be stressed. Use when target vegetation is actively growing. For turf renovation, wait seven to 10 days before cultivating. Not for use on dormant St. Augustinegrass, centipedegrass or carpetgrass. |

