

TURF

HOME TURF INSECT CONTROL

Will Hudson, Extension Entomologist

| PEST | INSECTICIDE AND FORMULATION | AMOUNT PER 1,000 SQ. FT.* | REMARKS AND PRECAUTIONS |
|---|---|------------------------------------|--|
| Ants (also see Imported fire ants) | Various pyrethroids | | See note below. |
| Armyworms, cutworms, sod webworms | trichlorfon (Bayer Advanced) carbaryl (Sevin) 50WP <i>Bacillus thuringiensis</i> (Dipel WP) Various pyrethroids | 6 1/2 ozs. 3/4-1 1/2 ozs. | Apply as a coarse spray in sufficient water for good coverage. Repeat as needed. See note below. |
| Chinch bugs | carbaryl (Sevin, etc.) bifenthrin cyfluthrin (Bayer Advanced Lawn and Garden) | See label 3 fl. ozs./gal. | Apply as a coarse spray in 4-5 gallons water per 1000 ft ² . Irrigation of lawn prior to application will give better control. |
| Digger wasps, earwigs, sowbugs | carbaryl (Sevin) 50WP Various pyrethroids | 6 1/2 ozs. | |
| Ground pearls | All suggested practices regarding fertilization, watering, mowing, etc., should be carried out to keep grass growing ahead of damage. At the present time, there is no practical, effective, pesticide treatment. | | |
| Imported fire ant | Individual Mound Treatments acephate (Orthene TTO) carbaryl (Sevin) 50WP Various pyrethroids | 1 1/2 Tbs. 4 ozs. See label | Mix with 2 gal. water. Sprinkle the entire amount on and around one mound. Do not disturb mound during treatment. |
| | acephate (Orthene TTO) | 2 tsp./mound | Dust evenly over top of mound. Do not water in. |
| | Bait Treatments Amdro B Ascend or Varsity Distance Fire Ant Bait, Spectracide, Once 'n' Done Extinguish | | Fire ant bait should be used at 1-1 1/2 lbs. per acre. Bait should be used as soon as possible after opening package. Apply baits when ants are actively foraging for food. Follow label directions. |
| | Broadcast Treatments bifenthrin (Talstar, others) Various pyrethroids | 2 lb. See label | See note below. |
| Millipedes | carbaryl (Sevin) 50WP Various pyrethroids | 6 ozs. | Apply to turf 6 to 10 feet around building to provide a barrier treatment. Water thoroughly after application of granules. See note below. |
| Mole crickets | bifenthrin carbaryl (Sevin) 20B imidacloprid (Bayer Advanced Lawn Product) | See label 2-4 ozs. 2.87 lbs. | Water lawn before applying bait if soil is dry. |
| Spittlebugs | Various pyrethroids | | Cut grass to its recommended height and remove clippings prior to application. Various pyrethroids may also provide some control. See note below. |
| White grubs (such as Japanese beetle larva, European chafer, Southern chafer, Billbugs) | trichlorfon (Bayer Advanced) imidacloprid carbaryl (Sevin SL) halofenozide (Grub-B-Gon) | 4-6 ozs. | Water lawn before application of any control material. Water thoroughly following insecticide application. For Green June beetle only. Apply as directed on label. Identification of pest grub species is important for effective control recommendations. Consult your local County Extension Agent. |

NOTE: A number of pyrethroid materials are available in a variety of homeowner formulations for use as broad-spectrum contact insecticides. Common names include bifenthrin, cyfluthrin, cypermethrin, deltamethrin, lambda-cyhalothin, permethrin and tralomethrin. Active ingredients are listed on the label.

Most of the materials listed in the Commercial Landscape Insect Control section of this handbook are not Restricted Use Pesticides, and so are available for homeowner use. They are not marketed for homeowners, in small quantities at retail garden centers, but they could provide options for some homeowners. Consult your county Cooperative Extension Agent for advice on alternatives.

* Unless otherwise specified, mix with six gallons of water/1,000 square feet.

TURFGRASS WEED CONTROL FOR HOMEOWNERS

Patrick McCullough, Extension Agronomist – Weed Science

The herbicides recommended in this section are available in small containers at most lawn and garden, hardware and discount stores. The herbicides listed in the section entitled “TURFGRASS WEED CONTROL RECOMMENDATIONS FOR PROFESSIONAL MANAGERS” are not usually available in small containers at stores that homeowners purchase lawn and garden pesticides.

| USE STAGE AND HERBICIDE | TURFGRASSES | AMOUNT OF FORMULATION PER 1,000 SQ.FT. | REMARKS AND PRECAUTIONS |
|--|--|--|---|
| PREEMERGENCE HERBICIDES: 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 GA and March 1-20 in North GA. Recommended dates for annual weeds are September 1-15 in North GA and October 1-15 in South GA. | | | |
| PREEMERGENCE (Established Grasses) | | | |
| oryzalin (Surflan) 4AS | Bermudagrass centipede, tall, fescue, zoysia, St. Augustine | 1.0 to 1.5 fl.oz. | Controls annual grasses and certain annual broadleaf weeds. Apply 1.5 oz./1,000 sq. ft. for summer annual grass control, or apply 1.0 oz./1,000 sq. ft. and apply an additional 1.0 oz./1,000 sq. ft. 8 to 10 weeks after the initial application. Split applications are recommended for improved goosegrass control and for tall fescue. Use the low rate for annual bluegrass control. DO NOT apply to newly sprigged grasses until well established. 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 applications. |
| benefin (Balan) 2.5G (Crabgrass Preventer) 2.5G (Crabgrass Preventer) 1.72G | Ky. Bluegrass, bermudagrass, centipede, tall fescue, zoysia, St. Augustine | 1.5 to 3.0 lbs. ¹ 1.8 to 2.8 lbs. ¹ 2.0 to 2.7 lbs. ¹ | Controls annual grasses and certain annual broadleaf weeds. An additional application may be made 8 weeks after the initial treatment for continued weed control. DO NOT apply to newly sprigged grass until well established. DO NOT make a spring application to fall planted turfgrass. Delay reseeding for 6 weeks after application for the low rate, and for 12 to 16 weeks at the high rate. Benefin is available on a dry fertilizer carrier under various trade names. |
| pendimethalin (Halts) 1.71G | Ky. Bluegrass, bermudagrass, centipede, tall fescue, zoysia, St. Augustine | 2.0 lbs. ¹ | Controls annual grasses and certain annual broadleaf weeds. DO NOT use on newly sprigged grasses. On newly-seeded lawns, delay the application until after the fourth mowing. An additional application may be made 8 weeks after the first application to improve control of crabgrass and goosegrass. NOT recommend for turfgrass that has been severely thinned due to winter stress. DO NOT reseed within 4 months of application. Pendimethalin is available on a dry fertilizer carrier under various trade names. |
| benefin + trifluralin (Team) 2G | Ky. Bluegrass, bermudagrass, centipede, tall fescue, St. Augustine, zoysia, | 2.5- to 3,5 lbs. ¹ | Controls annual grasses and certain annual broadleaf weeds. DO NOT make a spring application to fall planted turfgrasses. DO NOT apply to newly sprigged grasses until full soil coverage is achieved. Under conditions of heavy goosegrass or annual bluegrass infestations, a second application should be made 10 weeks after the initial application. Delay reseeding for 8 weeks (low rate) to 12 weeks (high rate) after application. |
| benefin + oryzalin (XL) 2G | Bermudagrass, centipede, tall fescue, St. Augustine, zoysia, | 2.5- to 5 lbs. ¹ | Controls annual grasses and certain annual broadleaf weeds. DO NOT apply to newly sprigged grasses until well established. DO NOT make a spring application to fall planted Augustine turfgrasses. Delay reseeding for 6 weeks (low rate) and for 12 to 16 weeks (high rate). |
| atrazine (Bonus S) Southern Lawn Fertilizer plus Weed Control | Carpetgrass, centipede, St. Augustine, zoysia | 4.3 lbs. ¹ 5.0 lbs. ^{1,1} | Atrazine controls annual bluegrass and a wide range of broadleaf weeds. These products are formulated on a dry fertilizer carrier. DO NOT apply to newly seeded carpetgrass or centipedegrass until after two mowings. DO NOT sprig for one month or seed for six months after application. Atrazine will provide preemergence and postemergence control of many annual weeds. If centipede has been fertilized with more than 1.0 lb./1,000 sq. ft. of a nitrogen containing fertilizer, the use of this product is NOT recommended. These products are not Restricted Use Herbicides. |

¹ Apply granules directly to the soil surface.

TURFGRASS WEED CONTROL FOR HOMEOWNERS (continued)

| USE STAGE AND HERBICIDE | TURFGRASSES | AMOUNT OF FORMULATION PER 1,000 SQ.FT. | REMARKS AND PRECAUTIONS |
|---|--|--|---|
| PREEMERGENCE (Established Grasses) (continued) | | | |
| (Hi-Yield Atrazine) 4.0% | Centipede, fine St. Augustine | 8.0 fl. oz. | Controls a wide range of broadleaf weeds, sandspur (sandbur) and suppresses crabgrass. May be applied in all 12 months for postemergence control of various weeds. Use in the fall or spring for the preemergence control of a wide range of annual grass and broadleaf weeds. Delay application to newly sodded or sprigged lawns until the sprigs have rooted and are actively growing. May be applied up to two times per year |
| (Image for St. Augustine & Centipede) 4.0% | | 8.0 fl. oz. | |
| dithiopyr (Turf & Ornamental Weed & Grass Stopper) 0.125GR | Ky. Bluegrass, bermudagrass, centipede, tall fescue, St. Augustine, zoysia | 4.6 to 9.2 lbs. ¹ | Controls annual grasses and certain annual broadleaf weeds. A sequential application of 4.6 lbs. followed by a second application at 4.6 lbs. may improve control of annual grasses. Apply the second treatment 8 weeks after the first application. DO NOT apply to newly sprigged grasses until full soil coverage is achieved. Delay reseeding for 10 weeks (low rate) to 16 weeks (high rate) after application. |
| POSTMERGENCE (Established Grasses) | | | |
| sethoxydim (Segment) 1.0 lb./gal | centipede, fine fescue | 0.5- to 0.75 fl. oz. | Apply only to centipede, and fine fescues (Creeping red, Chewing, Hard fescue). Other turfgrasses will be severely injured by this herbicide. Controls annual grasses and suppresses bahiagrass growth. Apply no sooner than 3 weeks after spring green-up. May be applied at the low rate to seedling centipede. DO NOT mow 7 days prior to or after application. Two applications per season may be utilized in established centipede. For bahiagrass suppression, repeat treatment 10 to 14 days after the first application. |
| fenoxaprop (Bermudagrass Control for Lawns) 0.41% fenoxaprop | Ky. Bluegrass, tall fescue, zoysia | | Controls bermudagrass, crabgrass, Japanese stiltgrass, sandbur and numerous other grass weeds. DO NOT apply to bermudagrass, centipede or St. Augustine grass lawns. Apply at monthly intervals during the summer months to suppress/control bermudagrass. Plan on doing this program annually for at least two years. Annual grass weeds are usually controlled with a single application. |
| MSMA (Crabgrass Killer) 1 lb./gal. (529 Weed Killer) 4 lb./gal. (Crabgrass & Nutgrass Killer) 1.6 lb./gal. | Ky. Bluegrass, tall fescue, zoysia, bermudagrass | 6.0 fl. oz. 2.0 fl. oz. 4.0 fl. oz. | These herbicides provide good control of emerged annual grasses, bahiagrass and dallisgrass, and fair control of nutsedge. Multiple applications spaced 7 to 10 days apart are needed for acceptable control. Temporary turf discoloration will occur. Zoysiagrass cultivars vary in their tolerance to MSMA. 'Meyer' is more tolerant to MSMA than 'Matrella' and 'Emerald'. DO NOT apply to St. Augustine, carpetgrass, or centipede. |
| (Image with MSMA) 4 lb./gal. | | 2.0 fl. oz. | |
| 2,4-D + MCPP + dicamba (33 Plus) (Ace Lawn Weed Killer) (Wipe-out), (Trimec) (Southern Weed Killer for Lawns) | Ky. Bluegrass, tall fescue, zoysia, bermudagrass | 2.67 fl. oz. 4.0 fl. oz. 5.0 fl. oz. 4.0 fl. oz. 4.0 fl. oz. | Controls a broader spectrum of weeds than 2,4-D alone. Newly-seeded lawns may be treated after a minimum of 3 mowings. Use one-half rates and spot treatments to minimize injury on centipede and St. Augustine. Applications during spring transition (green-up) should be avoided unless temporary (2 to 4 weeks) delays in green-up is acceptable. DO NOT apply at air temperatures >90°F. |
| carfentrazone + 2,4-D + MCPP + dicamba (SpeedZone Lawn Weed Killer) | Ky. Bluegrass, tall fescue, bermudagrass, zoysia-grass | 0.75 to 1.0 fl. oz. | Controls a wide range of broadleaf weeds, including spotted spurge. May be applied after the second mowing in newly-established cool-season turfgrasses, or 4 weeks after sprigging or sodding warm-season turfgrasses. DO NOT reseed until 2 weeks after application. DO NOT apply at air temperatures > 90°F. |

¹Apply granules directly to the soil surface.

TURFGRASS WEED CONTROL FOR HOMEOWNERS (continued)

| USE STAGE AND HERBICIDE | TURFGRASSES | AMOUNT OF FORMULATION PER 1,000 SQ.FT. | REMARKS AND PRECAUTIONS |
|---|--|---|---|
| POSTMERGENCE (Established Grasses) | | | |
| MCPP + 2,4-D + dicamba (Weed-B-Gon Max Ready-to-Use) (Weed-B-Gon for Southern Lawns) | Ky. Bluegrass, bermudagrass, centipedegrass, tall fescue, zoysiagrass, St. Augustine | Ready-to-Use | Controls a broader spectrum of weeds than 2,4-D alone. Use the low rate on bermudagrass. Newly-seeded lawns may be treated after a minimum of 3 mowings. DO NOT reseed within 3 weeks of application. DO NOT apply at air temperatures >90°F. Use the lowest recommended rate on centipede and St. Augustine. DO NOT use on 'Floritam' St. Augustine |
| | | 2.5 -5.0 fl. ozs. | |
| triclopyr (Weed-B-Gon Chickweed, Clover and Oxalis Killer) 8% | Ky. Bluegrass, tall fescue, zoysiagrass | 2.5 fl. oz.. | Controls numerous broadleaf weeds. Particularly effective for control of violets and ground ivy. Apply twice, at an interval of 3 to 4 weeks for improved control. NOT recommended for use on bermudagrass, centipedegrass and St. Augustinegrass. Newly-seeded lawns may be treated after a minimum of 3 mowings. DO NOT reseed for 3 weeks after application. |
| MSMA + 2,4-D + MCPP + dicamba (All-in-One Weed Killer for Lawns) (Trimec+++Plus) | Ky. Bluegrass, bermudagrass, tall fescue, zoysiagrass | 3.0 - to 7.0 fl. oz. | Controls both annual broadleaf weeds and certain annual grass weeds. Apply 1 to 3 days after mowing. DO NOT apply at air temperatures >90° F. Not recommended for use on centipedegrass, carpetgrass and St. Augustinegrass. Repeat applications 14 days apart will be necessary to control certain perennial broad leaf weeds, annual grasses and nutsedge. Newly-seeded lawns may be treated after a minimum of 4 mowings. DO NOT reseed for 3 to 4 weeks after application. |
| | | 3.0 to 4.0 fl. oz. | |
| 2,4-D + quinclorac + dicamba (All-in-One Lawn Weed and Crabgrass Killer) (Weed-B-Gon Max Plus Crabgrass Control Concentrate) | Ky. Bluegrass, bermudagrass, tall fescue, zoysiagrass | Product is designed to be applied by connecting bottle to garden hose. One quart will treat 5,000 sq. ft. | Controls both annual broadleaf weeds and crabgrass. Apply 1 to 3 days after mowing. DO NOT mow for 1 to 2 days after spraying. DO NOT apply at air temperatures >85° F. Not recommended for use on centipedegrass, carpetgrass and St. Augustinegrass. A repeat application at 14 days after the first application may be necessary to control certain perennial broadleaf weeds and annual grasses. Newly-seeded lawns may be treated after a minimum of 4 mowings. DO NOT reseed for 4 weeks after application. |
| | | 6.0 fl. ozs. | |
| atrazine (Hi-Yield Atrazine) 4.0% (Image for St. Augustine & Centipedegrass) 4.0% (Weed-B-Gon Spot Weed Killer for St. Augustine) 0.6% GR | Centipedegrass, St. Augustine | 8.0 fl. oz. | Controls a wide range of broadleaf weeds, sandspur (sandbur and suppresses crabgrass. May be applied in all 12 months for postemergence control of various weeds. Use in the fall or spring for the preemergence control of a wide range of annual grass and broadleaf weeds. Delay application to newly sodded or sprigged lawns until the sprigs have rooted and are actively growing. May be applied up to two times per year. Weed-B-Gon Spot Weed Killer for St. Augustine is a granular product used as spot treatment (1.0 tablespoon per 4.0 sq. ft.) to control broadleaf weeds in centipedegrass, carpetgrass, St. Augustinegrass and zoysia. DO NOT overseed 4 months before or 6 months after treatment. DO NOT apply within the active zone of azaleas, amellias, boxwoods, etc. DO NOT apply to any cool-season turfgrass or severe injury will occur. |
| | | 8.0 fl. oz. | |
| | | Spot treatment. | |
| imazaquin (Image Consumer Concentrate) 0.3 lbs./gal. | bermudagrass, centipedegrass, St. Augustinegrass, zoysia | 3.75 fl. oz. | Controls nutsedge(s), wild garlic and selected broadleaf weeds. DO NOT apply when turfgrass is emerging from winter dormancy. DO NOT apply to newly planted or sprigged turfgrasses. This product is not recommended for use on St. Augustinegrass during the winter months. |

¹Apply granules directly to the soil surface.

TURFGRASS WEED CONTROL FOR HOMEOWNERS (continued)

| USE STAGE AND HERBICIDE | TURFGRASSES | AMOUNT OF FORMULATION PER 1,000 SQ.FT. | REMARKS AND PRECAUTIONS |
|--|---|--|---|
| POSTMERGENCE (Established Grasses) | | | |
| bentazon (Basagran T/O) 4.0 lbs./gal. (Hi-Yield Basagran) 4.0 lbs./gal. | Ky. Bluegrass, bermudagrass, centipedegrass, tall fescue, St. Augustine, zoysia | 0.75 to 1.5 fl. oz. | Apply bentazon to emerged yellow nutsedge that is actively growing and under good soil moisture conditions. Follow 10 to 14 days later with an additional application. Crop oil concentrate at 0.75 fl. oz./1,000 sq.ft. should be added to the spray mix. DO NOT mow 3 days before of after application. DO NOT apply to newly seeded or newly sprigged turfgrass until the seedlings or sprigs are well established. |
| potassium soap of fatty acids 22.1% (Bayer 2-in-1 Moss & Algae Killer) | Ky. Bluegrass, bermudagrass, centipedegrass, tall fescue, St. Augustine, zoysiagrass, | Product is designed to be applied by connecting bottle to garden hose. | Controls moss and algae in established lawns. Rinse treated areas with water 15 to 30 minutes after treatment to lower risk of turfgrass injury. DO NOT heavily irrigate turf for 6 hours after treatment. For best results apply in spring or fall months. This product should not be applied at air temperatures > 85° F. Treated areas can be reseeded 5 days after treatment. |
| iron sulfate (Scotts Turf Builder Fertilizer with Moss Control) 17.5% | Ky. Bluegrass, bermudagrass, centipedegrass, tall fescue, St. Augustine, zoysiagrass, | . | This product contains iron sulfate formulated on a 22-2-2 fertilizer carrier. One bag will treat up 5,000 sq. ft. This application rate will supply 1/1 lbs. N per 1,000 sq. ft. Apply in winter or spring months to moist turf when moss is actively growing. This product may cause turfgrass foliage to temporarily blacken. Subsequent mowing will alleviate this condition. DO NOT apply to a newly seeded or sodded lawn until it has been mowed four times. Brush or rinse particles from cement, stone, clothing, or shoes to prevent staining. |

¹Apply granules directly to the soil surface.

TURFGRASS HERBICIDES COMMONLY FOUND IN RETAIL LAWN AND GARDEN STORES/CENTERS

Patrick E. McCullough, Extension Agronomist – Weed Science

I. Preemergence Herbicides

| Trade Name | Active Ingredient |
|---|-----------------------|
| Balan | benefin |
| Bonus S | atrazine |
| Southern Lawn Fertilizer plus Weed Control | atrazine |
| Gallery | isoxaben |
| Green Light Amaze | benefin + oryzalin |
| Green Light Betasan | bensulide |
| Halts | pendimethalin |
| Hi-Yield Crabgrass Preventer | benefin + trifluralin |
| Surflan | oryzalin |
| StaGreen CrabEx | dithiopyr |
| Hi-Yield Turf & Ornamental Weed & Grass Stopper | dithiopyr |
| StaGreen Crabgrass Preventer | prodiamine |
| Lawn Fertilizer plus Weed Control | prodiamine |
| StaGreen Crabgrass Preventer with Fertilizer | benefin + trifluralin |
| Team | benefin + trifluralin |
| XL | benefin + oryzalin |

II. Postemergence Herbicides

| Trade Name | Active Ingredient |
|--|-------------------------------|
| Ace Lawn Weed Killer | 2,4-D + MCPP + dicamba |
| Acme Super Chickweed Killer | 2,4-D + MCPP + dicamba |
| Basagran T&O | bentazon |
| Bayer Advanced All-in-One Weed Killer | MSMA + 2,4-D + MCPP + dicamba |
| Bayer Advanced Southern Lawn Weed Killer | 2,4-D + MCPP + dicamba |
| Dragon Lawn Weed Killer | 2,4-D + MCPP + dicamba |
| Drexel MSMA 6 Plus | MSMA |
| Enforcer Weed Stop | 2,4-D + MCPP + dicamba |
| Fertilome Crabgrass, Nutgrass & Dallisgrass Killer | MSMA |
| Fertilome Weed Out Lawn Weed Killer | 2,4-D + MCPP + dicamba |
| Green Light Wipe Out | 2,4-D + MCPP + dicamba |
| Green Light DSMA Crabgrass Killer | DSMA |
| Green Light MSMA Crabgrass Killer | MSMA |
| Green Light Spot Weed Killer | MCPA + MCPP + dicamba |

TURFGRASS HERBICIDES COMMONLY FOUND IN RETAIL LAWN AND GARDEN STORES/CENTERS (continued)

| Trade Name | Active Ingredient |
|--|--|
| Hi-Yield Basagran | bentazon |
| Hi-Yield 529 Crabgrass Killer | MSMA |
| Hi-Yield Atrazine | atrazine |
| Ortho Spot Weed Killer for St. Augustine Lawns | atrazine |
| Image | imazaquin |
| Image for St. Augustine and Centipede | atrazine |
| Image with MSMA | MSMA |
| Rigo's Best Crabgrass Killer | MSMA |
| Rigo Super Lawn Weed Killer | 2,4-D + MCPP + dicamba |
| Safer Weed Away | 2,4-D + MCPP + dicamba |
| Sethoxydim G-Pro | sethoxydim |
| Spectrum Lawn Weed Killer 33 Plus | 2,4-D + MCPP + dicamba |
| Speed Zone Lawn Weed Killer | 2,4-D + MCPP + dicamba + carfentrazone |
| Spectracide Weed Stop | 2,4-D + MCPP + dicamba |
| Trimec Classic | 2,4-D + MCPP + dicamba |
| Trimec Southern | MCPP + 2,4-D + dicamba |
| Weed-B-Gon Chickweed, Clover & Oxalis Killer | triclopyr |
| Weed-B-Gon Crabgrass Killer Formula II | CAMA |
| Weed-B-Gon Max | MCPA + triclopyr + dicamba |

Websites for homeowner lawn and garden herbicide labels (and other pesticides):

Bayer: <http://www.bayeradvanced.com/lawn/>

Enforcer: <http://www.enforcer.com/>

GreenLight: <http://www.greenlightco.com/>

Hi-Yield: <http://www.v-p-g.com/>

Lebanon: <http://www.lebsea.com/newlebsea/index.jsp>

Monsanto: <http://lawncare.roundup.com/index.cfm/event/Home.Normal>

Ortho: <http://www.ortho.com/>

PBI Gordon: http://www.pbigordon.com/homefarm/lawncare_weed.php

Scotts: <http://www.scotts.com/>

Southern Ag: <http://www.southernag.com/>

Spectracide: <http://www.spectracide.com/>

TURFGRASS WEED RESPONSE TO HERBICIDES – HOMEOWNER PRODUCTS

| | atrazine | benefin | dithiopyr | oryzalin | prodiamine | pendimethalin |
|------------------------|---------------------|---------|-----------|----------|------------|---------------|
| Time of application | PREEMERGENCE | | | | | |
| PERENNIAL WEEDS | | | | | | |
| bahiagrass | F | P | P | P | P | P |
| bermudagrass | P | P | P | P | P | P |
| dallisgrass | P | P | P | P | P | P |
| nutsedge, purple | P | P | P | P | P | P |
| nutsedge, yellow | P | P | P | P | P | P |
| tall fescue | F | P | P | P | P | P |
| wild garlic/onion | P | P | P | P | P | P |
| ANNUAL GRASSES | | | | | | |
| annual bluegrass | E | E | G | G | E | G |
| crabgrass | F | E | G-E | E | E | E |
| crowfootgrass | | G | | G | | G |
| goosegrass | P | F | F | F-G | G | F-G |
| sandbur | | F | | G | | G |
| BROADLEAF WEEDS | | | | | | |
| carpetweed | E | | G-E | G-E | G-E | G-E |
| chamberbitter (niruri) | G | | | | | |
| common chickweed | E | G | G | G | G | G |
| corn speedwell | E | E | G | | | E |
| cudweed | E | P | | P | | P |
| dandelion | F | P | P | P | P | P |
| dichondra | F | P | P | P | P | P |
| docks | G | P | P | P | P | P |
| doveweed | G | P | | P | | P |
| Florida betony | E | P | | P | | P |
| ground ivy | | P | P | P | P | P |
| henbit | E | G | G | G | G | G |
| hop clovers | E | P | | | | |
| knotweed | E | | | F | | |
| lespedeza | E | | | | | |
| mallow, bristly | | P | P | P | P | P |
| mock strawberry | | P | P | P | P | P |
| mouseear chickweed | | E | | P | | G |
| mugwort | | P | P | P | P | P |
| mustards | E | | | | | |
| parsley piert | E | P | | | | P |
| pennywort | F | P | | P | | P |
| plantains | G | P | P | P | P | P |
| spurges | E | P | G | | | F |
| spurweed (burweed) | E | P | P | F | P | G |
| VA buttonweed | | P | P | P | P | P |
| violets | | P | P | P | P | P |
| white clover | E | P | P | P | P | P |
| yellow woodsorrel | E | P | P | F | P | F |

Key to response symbols: E = Excellent control (90 to 100 %), G = Good control (80 to 89%), F = Fair control (70 to 79%), P = Poor control (< 70%). A blank space indicates weed response is not known.

TURFGRASS WEED RESPONSE TO HERBICIDES – HOMEOWNER PRODUCTS (continued)

| | atrazine | bentazon | 2,4-D | 2,4-D + MCPP + dicamba | imazaquin | MSMA CAMA | sethoxydim | triclopyr |
|------------------------|---------------|----------|-------|---------------------------|-----------|--------------|------------|-----------|
| Time of application | POSTEMERGENCE | | | | | | | |
| PERENNIAL WEEDS | | | | | | | | |
| bahiagrass | P-F | P | P | P | P | F | F-G | P |
| bermudagrass | P | P | P | P | P | P | F | P |
| dallisgrass | P | P | P | P | P | F-G | P | P |
| nutsedge, purple | P | P | F | P | G | F | P | P |
| nutsedge, yellow | P | G | F | P | F-G | F | P | P |
| tall fescue | F | P | P | P | P-F | P | P-F | P |
| wild garlic/onion | P | P | G | G | E | P | P | F |
| ANNUAL GRASSES | | | | | | | | |
| annual bluegrass | E | P | P | P | P-F | P | P | P |
| crabgrass | F | P | P | P | P | E | E | P |
| crowfootgrass | P | P | P | P | P | E | F-G | P |
| goosegrass | P | P | P | P | P | F | G | P |
| sandbur | F | P | P | P | F | G | G | P |
| BROADLEAF WEEDS | | | | | | | | |
| carpetweed | E | | G | G-E | | | P | G |
| chamberbitter (niruri) | G-E | P | P | | P | P-F | P | |
| common chickweed | E | G | P | G | E | P | P | E |
| corn speedwell | E | P | F | F | P | P | P | G |
| cudweed | G | | G-E | E | F | F-G | P | F |
| dandelion | F | P | E | G | | P | P | G |
| dichondra | F | P | G | G | | P | P | F-G |
| docks | G | P | F | G | | P | P | F-G |
| doveweed | G-E | P | F | F-G | | | P | F |
| Florida betony | F-G | P | F | G | | P | P | G |
| ground ivy | | P | P-F | F | | P | P | G |
| henbit | E | P | P | G | | P | P | E |
| hop clovers | E | | F | G | | P | P | E |
| knotweed | E | | P | G | | P | P | F |
| lespedeza | E | | P-F | G | | P | P | G |
| mallow, bristly | | P | F | F-G | | P | P | G |
| mock strawberry | | P | P | G | | P | P | |
| mouseear chickweed | G | P | P-F | G | G | P | P | G |
| mugwort | | P | P | P-F | | P | P | P-F |
| mustards | E | G | E | G | | P | P | G |
| parsley piert | E | G | P | F-G | G | P | P | E |
| pennywort | E | P | G | G | | P | P | F |
| plantains | F | P | E | G | | P | P | F |
| spurges | E | P | F | G | | P | P | F |
| spurweed (burweed) | E | E | G | G | E | P | P | F-G |
| star-of-Bethlehem | P | P | P | P | P | P | P | P |
| VA buttonweed | | P | P | F | | P | P | F |
| violets | | P | P | P-F | | P | P | F-G |
| white clover | E | P | F | G | G | P | P | G |
| yellow woodsorrel | G | P | P | F | | G | P | F |

Key to response symbols: E = Excellent control (90 to 100 %), G = Good control (80 to 89%), F = Fair control (70 to 79%), P = Poor control (< 70 %).
A blank space indicates weed response is not known.