

Turfgrass Weed Control for Professional Managers

Patrick E. McCullough, Extension Agronomist – Weed Science

Use Stage and Herbicide	Turfgrasses	WSSA Group	Broadcast Rate/Acre		REI	Remarks and Precautions
			Amount of Formulation	Pounds Active Ingredient		
Preemergence Herbicides - continued						
simazine (Princep) 90DF (Princep Liquid) 4L Wynstar 90DF	bermudagrass, centipede grass, St. Augustinegrass, zoysiagrass	5	1.1-2.2 lbs. 1.0-2.0 qts. 1.1-2.0 lbs.	1.0-2.0 1.0-2.0 1.0-1.8	12	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.
sulfentrazone + proflaminate (Echelon) 4SC	bermudagrass, buffalograss, carpetgrass, centipede grass, Ky. bluegrass, seashore paspalum, tall fescue, zoysiagrass	14 + 3	18.0-36.0 fl. oz.	0.56-1.125	12	Controls annual grasses, certain annual broadleaf weeds, annual sedges, <i>kyllinga sp.</i> 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.
Postemergence Herbicides						
2,4-D (Weedar 64) 3.8 lbs./gal. (Other trade names)	bermudagrass, centipede grass, Ky. bluegrass, tall fescue, zoysiagrass	4	See Label	0.5-2.0	See Label	Amine formulations of 2,4-D are non-volatile and are safer than ester formulations to use near ornamentals. Apply to small and actively growing broadleaf weeds as a summer or winter treatment. To control wild garlic/onion, use 2.0 lbs. ai/A plus surfactant. Make first application in late November or early December and follow with a second application in February or March. Repeat this schedule for 3 consecutive years to control this weed. DO NOT apply 2,4-D to St. Augustinegrass. DO NOT apply more than 0.5 lb. ai/A of 2,4-D to centipede grass. DO NOT allow spray drift to contact the foliage of ornamentals.
2,4-D + MCPP + dicamba (Three-way) (Trex-San) (Triplet) (Other trade names)	bermudagrass, Ky. bluegrass, tall fescue, zoysiagrass	4 + 4 + 4	See Label	0.75 + 0.4 + 0.08	See Label	Several commercial formulations are available. Refer to individual labels for the recommended amount of formulated product. Controls a broader spectrum of broadleaf weeds than 2,4-D alone. DO NOT spray when turfgrass is emerging from winter dormancy. Low rates of Triplet products may be used on St. Augustinegrass or centipede grass. Avoid applications if air temperatures exceed 85°F. Delay reseeding for 4 weeks after treatment.
2,4-D + MCPP + 2,4-DP (Triamine) (Dissolve)	bermudagrass, centipede grass, Ky. bluegrass, St. Augustinegrass, tall fescue, zoysiagrass	4 + 4 + 4	See Label	See Label	See Label	Refer to individual labels for recommended amount of formulated product. Controls a broader spectrum of weeds than 2,4-D alone. DO NOT spray at air temperatures greater than 85°F and when warm-season turfgrasses are growing under stress conditions. Delay reseeding for 4 weeks after treatment. Avoid applications when warm-season turfgrasses are emerging from winter dormancy.
2,4-D + clopyralid + dicamba (Millennium Ultra)	bermudagrass, Ky. bluegrass, tall fescue, zoysiagrass	4 + 4 + 4	2.0-3.0 pts.	--	48	Controls a broader spectrum of weeds than 2,4-D alone. DO NOT mow 1-2 days before or after application. Delay application to newly seeded grasses until after 3-4 mowings. Delay reseeding for 3-4 weeks after application. DO NOT spray when air temperatures are > 90°F. Not recommended for use on centipede grass and St. Augustinegrass. Avoid applications during the spring transition of warm-season turfgrasses. Not labeled for use on residential turfgrasses.

Supplemental 2(ee) label recommendations may be available for some listed pesticides. It is the end-user's responsibility to consult the manufacturer or websites like www.CDMS.net for additional recommendations.

Turfgrass Weed Control for Professional Managers

Patrick E. McCullough, Extension Agronomist – Weed Science

Use Stage and Herbicide	Turfgrasses	WSSA Group	Broadcast Rate/Acre		REI	Remarks and Precautions
			Amount of Formulation	Pounds Active Ingredient		
Postemergence Herbicides - continued						
2,4-D + fluoxyppy + dicamba (Escalade)	bermudagrass, Ky. bluegrass, tall fescue, zoysiagrass	4 + 4 + 4	2.0-3.0 pts.	--	48	Controls a broader spectrum of weeds than 2,4-D alone. DO NOT mow 1-2 days before or after application. Delay application to newly seeded grasses until after 3-4 mowings. Delay reseeding for 3-4 weeks after application. DO NOT spray when air temperatures are > 90°F. Not recommended for use on centipedegrass and St. Augustinegrass. Avoid applications during the spring transition of warm-season turfgrasses.
2,4-D + triclopyr (Turflon II Amine) 2.8 + 1.1 lbs./gal.	Ky. bluegrass, tall fescue	4 + 4 + 4	1.0-2.0 qts.	0.7+0.3 - 1.4+0.6	See Label	Controls a broader spectrum of weeds than 2,4-D alone. NOT RECOMMENDED for warm-season grasses. Apply in spring or fall months when weeds are actively growing. Newly seeded turf should be mowed 3 times before application. DO NOT reseed until 3 weeks after application. Repeat applications are recommended for corn speedwell, ground ivy, woodsorrel, parsley-piert and wild violet(s).
2,4-D + triclopyr + Sulfentrazone + dicamba (T-Zone) 1.75 + 0.5 + 0.06 + 0.2 lbs./gal.	bahiagrass (dormant), bermudagrass (dormant), Ky. bluegrass, ryegrass, tall fescue, zoysiagrass (dormant)	4 + 4 + 14 + 4	2-4 pts.	0.44+0.125+0.015+0.05-0.88+0.25+0.03+0.1	24	Apply to cool-season turfgrasses for broadleaf weed control and suppression. Apply to fully DORMANT bermudagrass, bahiagrass, or zoysiagrass only. DO NOT apply to bentgrass or greens, T-Zone is labeled for yellow nutsedge suppression. Add more sulfentrazone with this product to increase activity on sedges. DO NOT apply when temperatures exceed 85°F or if turf is under stress from drought, heat, or disease.
amicarbazone (Xonerate) 70WDG	bahiagrass, bermudagrass, buffalograss, centipedegrass, creeping bentgrass, fine fescue, kikuyugrass, Ky. bluegrass, perennial ryegrass, seashore paspalum, St. Augustinegrass, zoysiagrass	5	1-10 oz.	0.04-0.18	12	Provides postemergence control of annual bluegrass and broadleaf weeds in creeping bentgrass, tall fescue, perennial ryegrass, and warm-season turfgrasses. Make applications when air temperatures range 50-80°F and do not make applications to cool-season grasses in summer or fall due to increased injury. For annual bluegrass control in creeping bentgrass, make applications a 1 oz./acre on a seven-day interval for a maximum of four applications. In overseeded perennial ryegrass, applications from 2-4 oz./acre may control annual bluegrass and broadleaf weeds. Do not apply to desirable roughstalk bluegrass turf. In tolerant warm-season turfgrass, 3-10 oz./acre may be applied. Do not exceed 10 oz./acre per year.
atrazine (AAtrex) 4L (AAtrex) 90DG (AAtrex) 80W	bermudagrass, centipedegrass, (dormant) St. Augustinegrass, zoysiagrass	5	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	See Label	Apply to dormant bermudagrass for annual bluegrass and winter annual broadleaf weed control. DO NOT apply during bermudagrass green-up. AAtrex formulations may be applied from October 1 to April 15. DO NOT apply over the root zone of ornamental shrubs. For spurweed, apply in December or January. For Florida betony, apply in late October and follow with a second treatment in late February. DO NOT apply more than 1.0 lb. ai/A to hybrid bermudagrass. AAtrex is a Restricted Use Herbicide.

Supplemental 2(ee) label recommendations may be available for some listed pesticides. It is the end-user's responsibility to consult the manufacturer or websites like www.CDMS.net for additional recommendations.

Turfgrass Weed Control for Professional Managers

Patrick E. McCullough, Extension Agronomist – Weed Science

Use Stage and Herbicide	Turfgrasses	WSSA Group	Broadcast Rate/Acre		REI	Remarks and Precautions
			Amount of Formulation	Pounds Active Ingredient		
Postemergence Herbicides - continued						
bentazon (Basagran T/O) 4.0 lbs./gal. (Lescogran) 4.0 lbs./gal.	bermudagrass, centipede grass, Ky. bluegrass, St. Augustine grass, tall fescue, zoysiagrass,	6	1.5-2.0 pts.	0.75-1.0	48	Apply to emerged, actively-growing yellow nutsedge. Use 2.0 pts./acre and repeat the application 7-14 days later. Thorough spray coverage is essential for acceptable control. DO NOT mow 3 days before or after application. Other weeds controlled include annual sedges and dayflower. Add a crop oil concentrate at 2.0 pts./acre to the spray mix. Bentazon is not recommended for use on putting greens.
bentazon + atrazine (Prompt) 5L 2.5 + 2.5 lbs./gal.	centipede grass, St. Augustine grass, zoysiagrass	6 + 5	1.8-2.4 pts.	0.6-0.75 + 0.6-0.75	See Label	Controls several broadleaf weeds. For yellow nutsedge, initially apply Prompt at 3.5 pts./acre and follow 7-10 days later with Basagran at 2.0 pts./acre. Apply no earlier than 10 days after sprigging or plugging turfgrasses. On newly sprigged turfgrasses and hybrid bermudagrass, Prompt may cause temporary injury.
bispyribac-sodium (Velocity) 80SP (Velocity) 17.6SG	bermudagrass (overseeded with perennial ryegrass on golf course fairways)	2	2.0 oz./1.5 acres 6.0 Oz	0.06	12	Apply Velocity between February 1 and March 15 to bermudagrass overseeded the previous fall with perennial ryegrass for annual bluegrass control and seedhead suppression. Earlier or later applications may decrease efficacy or increase risk of injury to perennial ryegrass. The first application should be made just as soon as annual bluegrass seedhead begin to emerge from the leaf sheath. Apply a second application at the same rates 14-21 days after the first application. DO NOT apply if air temperatures are less than 50°F. Or if maximum temperatures are expected to be less than 50°F. For the first three days after application. Two applications as described above will be needed for control. Chlorosis (yellowing) will typically occur on perennial ryegrass between 7-21 days after application. Not recommended for use on other cool-season turfgrasses. Velocity should not be applied in late spring after bermudagrass begins active growth. DO NOT mow or irrigate for 24 hours after application.
bispyribac-sodium (Velocity) 80SP (Velocity) 17.6SG	bermudagrass (overseeded with perennial ryegrass on golf course fairways)	2	2.0 oz./1.5 acres 6.0 Oz	0.06	12	Apply Velocity between February 1 and March 15 to bermudagrass overseeded the previous fall with perennial ryegrass for annual bluegrass control and seedhead suppression. Earlier or later applications may decrease efficacy or increase risk of injury to perennial ryegrass. The first application should be made just as soon as annual bluegrass seedhead begin to emerge from the leaf sheath. Apply a second application at the same rates 14-21 days after the first application. DO NOT apply if air temperatures are less than 50°F. Or if maximum temperatures are expected to be less than 50°F. For the first three days after application. Two applications as described above will be needed for control. Chlorosis (yellowing) will typically occur on perennial ryegrass between 7-21 days after application. Not recommended for use on other cool-season turfgrasses. Velocity should not be applied in late spring after bermudagrass begins active growth. DO NOT mow or irrigate for 24 hours after application.

Supplemental 2(ee) label recommendations may be available for some listed pesticides. It is the end-user's responsibility to consult the manufacturer or websites like www.CDMS.net for additional recommendations.

Turfgrass Weed Control for Professional Managers

Patrick E. McCullough, Extension Agronomist – Weed Science

Use Stage and Herbicide	Turfgrasses	WSSA Group	Broadcast Rate/Acre		REI	Remarks and Precautions
			Amount of Formulation	Pounds Active Ingredient		
Postemergence Herbicides - continued						
carfentrazone (QuickSilver) T&O 1.9 lbs./gal. (Quicksilver) 1.03 lbs./gal/	bermudagrass, centipedegrass, Ky. bluegrass, seashore paspalum, St. Augustinegrass, tall fescue, zoysiagrass water-soluble 5 ml bag	14	0.9-2.1 fl. oz. 0.8-2.0 fl. oz. 5 ml/2,000 ft ²	0.013-0.031	Until Dry	Controls numerous broadleaf weeds including plantains, chickweed(s), dandelion, thistle(s), lawn burweed, henbit, corn speedwell, purslane(s) and spotted spurge. QuickSilver may also be applied to newly-seeded, sodded or sprigged turfgrasses. To expand the weed spectrum, QuickSilver may be tank-mixed with numerous other postemergence herbicides. Aim formulations are registered for use only on seed and sod farms. Add a nonionic surfactant at 0.125-0.25% v/v to the spray mix.
carfentrazone (0.04 lb./gal.) + 2,4-D (0.52 lb./gal.) + MCPP (0.2 lb./gal.) + dicamba (0.05 lb./gal.) (SpeedZone - Southern)	bermudagrass, centipedegrass, Ky. bluegrass, seashore paspalum, St. Augustinegrass, tall fescue, zoysiagrass	14 + 4 + 4 + 4	2.0-5.0 pts.	--	48	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 1 week after application. DO NOT apply at air temperatures > 90°F. DO NOT apply during the spring green-up of St. Augustinegrass, or to Floratam, BitterBlue and other improved varieties of St. Augustinegrass.
carfentrazone (0.04 lb./gal.) + MCPA (2.21 lbs./ gal.) + MCPP (0.44 lb./gal.) + dicamba (0.22 lbs./gal.) (PowerZone)	bermudagrass, Ky. bluegrass, tall fescue, zoysiagrass	14 + 4 + 4 + 4	2.0-6.0 pts.	--	48	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.
carfentrazone (0.05 lb./gal.) + 2,4-D (1.53 lbs. gal.) + MCPA (0.48 lb./gal.) + dicamba (0.14 lb./gal.) (SpeedZone)	bermudagrass, Ky. bluegrass, tall fescue, zoysiagrass	14 + 4 + 4 + 4	2.0-5.0 pts.	--	48	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.
chlorsulfuron (Corsair) 75DF	bermudagrass, centipedegrass, Ky. bluegrass, St. Augustinegrass, zoysiagrass	2	1.0-5.33 oz.	0.05-0.25	See Label	Particularly effective for the control of Aclump-type@ tall fescue. Labeled only as spot treatment in lawns, but may be applied as a broadcast application on golf courses. Add a nonionic surfactant at 1/4-1/3fl. oz. per gallon of spray mix. DO NOT apply to ryegrass or tall fescue being grown as a turfgrass.

Supplemental 2(ee) label recommendations may be available for some listed pesticides. It is the end-user's responsibility to consult the manufacturer or websites like www.CDMS.net for additional recommendations.

Turfgrass Weed Control for Professional Managers

Patrick E. McCullough, Extension Agronomist – Weed Science

Use Stage and Herbicide	Turfgrasses	WSSA Group	Broadcast Rate/Acre		REI	Remarks and Precautions
			Amount of Formulation	Pounds Active Ingredient		
Postemergence Herbicides - continued						
clopyralid (Lontrel) 3 lbs. /gal.	bermudagrass, buffalograss, centipedegrass, Ky. bluegrass, St. Augustinegrass, tall fescue, zoysiagrass	4	0.25-1.33 pts.	0.09-0.5	12	Effectively controls numerous broadleaf weeds that belong to the aster and legume families. Control of other broadleaf weed species is poor. Sold in combination with triclopyr as Confront. Clopyralid is not labeled for use on residential turfgrasses.
dicamba (Vanquish) 4 lbs. /gal.	bermudagrass, centipedegrass, Ky. bluegrass, tall fescue, zoysiagrass	4	0.5-1.0 pts.	0.25-0.5	24	Apply to small and actively-growing broadleaf weeds as a summer or winter treatment. Provides better control of henbit, knotweed, lespedeza, clovers, docks and woodsorrel than 2,4-D. Repeat treatment if necessary. DO NOT apply to St. Augustinegrass. DO NOT use over the root zone of ornamental trees and shrubs.
diclofop-methyl (Illoxan) 3EC	bermudagrass (golf courses only)	1	1.0-1.4 qts.	0.75-1.0	See Label	Illoxan may be used for goosegrass control on bermudagrass golf courses. Use the high rate for goosegrass with one to two tillers. Lower rates may be used on smaller goosegrass. DO NOT mow for 24-36 hours after application. Control requires 2-3 weeks. May cause temporary phytotoxicity (7-10 days.) DO NOT mix with other pesticides or fertilizers as control will be reduced. DO NOT overseed treated areas for at least 2 months after the last application. Illoxan is a Restricted Use Pesticide.
diquat (Reward) 2.0 lbs. /gal.	bermudagrass (dormant)	22	1.0-2.0 pts.	0.25-0.5	24	Controls certain winter annual broadleaf weeds, such as little barley, annual bluegrass, henbit and Carolina geranium in dormant bermudagrass in lawns, parks and golf courses. A nonionic surfactant at 0.25% v/v should be added to the spray mix. Apply only to dormant bermudagrass.
ethofumesate (Prograss) 1.5EC	bermudagrass (dormant), perennial ryegrass, Kentucky bluegrass, tall fescue	8	See Label	See Label	12	Apply Prograss in fall for pre- and postemergence control of annual bluegrass in perennial ryegrass and tall fescue. Prograss can be applied to dormant bermudagrass in the fall one to two weeks after emergence of perennial ryegrass for the control of annual bluegrass. An additional application at 1.0 lb. ai/A at 21-28 day intervals may be required to maintain control. The initial treatment may cause immediate browning of bermudagrass that is not completely dormant. DO NOT apply Prograss after Jan. 15 to overseeded bermudagrass. Applications after this date can severely delay bermudagrass growth in the spring. Prograss is not labeled for use on golf course putting greens.
ethofumesate (Prograss) 1.5EC + Atrazine (numerous formulations)	St. Augustinegrass	8 + 5	2.0 gal. + 2.0 lbs. ai/acre	3.0 + 2.0	See Label	Prograss + atrazine may be used to control bermudagrass in St. Augustinegrass. Make the first application in mid-March when bermudagrass initiates green-up. Repeat this application 30 days later. Use of this application timing is critical for control. Temporary St. Augustinegrass stunting may occur. Avoid improper overlapping of the spray pattern.
fenoxaprop (Acclaim Extra) 0.57 lb./gal.	fine fescue, Ky. bluegrass, tall fescue, zoysiagrass	1	13.0-39.0 fl. oz.	0.06-0.17	24	Controls annual grasses. Apply in late spring or early summer to weedy grasses in the 3-leaf (low rate) to 5-tiller (high rate) growth stage. Repeat application at 14 days if weed regrowth has occurred and no turfgrass injury is present. DO NOT tank mix Acclaim with phenoxy containing herbicides. Fescues and ryegrasses may be seeded immediately after application. Acclaim may be used on newly plugged zoysiagrass and seedling fescues and perennial ryegrasses that are 4 weeks old. Acclaim Extra + Turflon Ester tank-mixtures can be used to control bermudagrass in tall fescue and zoysiagrass.

Supplemental 2(ee) label recommendations may be available for some listed pesticides. It is the end-user's responsibility to consult the manufacturer or websites like www.CDMS.net for additional recommendations.

Turfgrass Weed Control for Professional Managers

Patrick E. McCullough, Extension Agronomist – Weed Science

Use Stage and Herbicide	Turfgrasses	WSSA Group	Broadcast Rate/Acre		REI	Remarks and Precautions
			Amount of Formulation	Pounds Active Ingredient		
Postemergence Herbicides - continued						
flazasulfuron (Katana) 25 WG	bermudagrass, centipede grass, zoysiagrass	2	0.25-3 oz.		12	Flazasulfuron (Katana) is a selective herbicide for removal of overseeded cool-season grasses as well as control of annual and perennial grasses, sedges, and broadleaf weeds in bermudagrass, zoysiagrass, and certain other warm-season turfgrasses. Flazasulfuron has postemergence and some preemergence activity and may be used on golf courses (fairways, roughs, and tees) and the following non-residential turf areas: industrial parks, tank farms, sod farms, seed farms, cemeteries, professionally managed college and professional sports fields, and commercial lawns for control of cool-season grasses and weeds from tolerant grasses. The maximum yearly application rate is 9.0 oz. per acre. Use only on labeled turfgrasses or severe injury may result. Do not apply to newly seeded, sodded, or sprigged Turfgrass until well established. Allow at least 2 weeks from the last application to the time of overseeding when applied at 1.5 oz. per acre. Allow 4 weeks for rates above 1.5 oz. per acre.
florasulam (Defendor) 0.42 lbs./gal.	bahiagrass, bentgrass, bermudagrass, centipede grass, Kentucky bluegrass, perennial ryegrass, seashore paspalum, St. Augustine grass, tall fescue, zoysiagrass	2	4.0 fl. oz.	0.013	4	Apply for postemergence control of annual and perennial broadleaf weeds in established turfgrass, including residential lawns, golf courses, sports fields, sod farms and commercial turfgrass areas. Apply with a nonionic surfactant when florasulam is applied alone. Make applications in a minimum of 20 gallons per acre of spray solution. Do not apply more than 12 fl. oz./acre per year. Do not make repeat treatments within four weeks of initial applications. Do not apply to golf greens.
fluzifop-butyl (Fusilade II) 2.0 lbs./gal.	tall fescue, zoysiagrass	1	3.0 -6.0 fl. oz.	0.05-0.10	12	Use to control common and hybrid bermudagrass in zoysiagrass and tall fescue. Tank mix with Turflon Ester to improve control of bermudagrass. In zoysiagrass, apply 3.0-4.0 fl. oz./A plus 0.25% v/v nonionic surfactant. Make the first application around June 1 and repeat every 20-30 days. Reduce the rate to 2.0-3.0 fl. oz./A in the late summer. In tall fescue, apply 5.0-6.0 fl. oz./A plus 0.25% v/v nonionic surfactant in the spring (April-May) as bermudagrass begins to green-up. Repeat the application in September-October. DO NOT apply to tall fescue during the hot summer months. Some injury (discoloration) will occur on tall fescue for up to 14 days after application.
flumioxazin (Sureguard) 51WDG	bermudagrass (dormant)	14	8-12 oz.	0.23-0.38	12	Provides preemergence control of annual broadleaf weeds and annual grasses including crabgrass, goosegrass, and annual bluegrass. Flumioxazin also provides postemergence control of annual bluegrass and annual broadleaf weeds. Applications should be limited to dormant bermudagrass only. Late fall applications to partially green bermudagrass can aid in transition to dormancy. Do not apply to golf greens or actively growing turfgrasses. Do not apply more than 24 oz./acre per year. The addition of a nonionic surfactant is recommended for postemergence applications.
fluroxypyr (Spotlight) 1.5 lbs./gal.	bermudagrass, centipede grass, Ky. bluegrass, St. Augustine grass, tall fescue, zoysiagrass	4	0.67-1.33 pts.	0.125-0.25	12	Controls numerous broadleaf weeds including common purslane, chickweed(s), white clover, ground ivy and woodsorrel Apply to newly seeded turf after 2-3 mowings or to established turf. To broaden weed spectrum, Spotlight can be mixed with other labeled turf herbicides. Use Spotlight on bermudagrass and St. Augustine grass only at 0.67 pt./acre and only if some injury can be tolerated. Not recommended for use on golf course putting greens

Supplemental 2(ee) label recommendations may be available for some listed pesticides. It is the end-user's responsibility to consult the manufacturer or websites like www.CDMS.net for additional recommendations.

Turfgrass Weed Control for Professional Managers

Patrick E. McCullough, Extension Agronomist – Weed Science

Use Stage and Herbicide	Turfgrasses	WSSA Group	Broadcast Rate/Acre		REI	Remarks and Precautions
			Amount of Formulation	Pounds Active Ingredient		
Postemergence Herbicides - continued						
foramsulfuron (Revolver) 0.19 lbs./gal	bermudagrass, zoysiagrass	2	8.8-26.2 fl. oz.	0.013-0.04	12	Apply Revolver for: a) control of undesirable cool-season grasses (including tall fescue), b) control of emerged annual bluegrass 1 week before overseeding bermudagrass with perennial ryegrass, c) postemergence control of goosegrass in late spring and early summer, and d) spring transition of bermudagrass overseeded the previous fall with cool-season turfgrasses. For tillered goosegrass, make 2 applications at the high rate 7-14 days apart. A tank-mix of Revolver at 26.2 fl. oz. + MSMA (normal rate) applied twice 3-4 weeks apart will control dallisgrass. Late summer and early fall applications of this tank-mix usually provide better control than earlier applications. DO NOT apply Revolver within 2 weeks of sprigging. Revolver is rainfast within 2 hours of application.
glufosinate (Finale) 1.0 lb./gal.	bermudagrass (dormant)	10	3.0-6.0 qts./acre	0.75-1.5	12	Controls numerous winter annual broadleaf weeds and annual bluegrass in completely dormant Bermudagrass. DO NOT apply during spring green-up.
glyphosate (Roundup Pro) 4 lbs./gal.	bermudagrass (dormant)	9	0.75 pt.	0.375	4	APPLY ONLY TO DORMANT BERMUDAGRASS. Controls annual bluegrass. Apply in 5-20 gals. Water/A. DO NOT apply during green-up or to actively growing bermudagrass.
halosulfuron (SedgeHammer) 75DF	bermudagrass, centipedegrass, Ky. bluegrass, seashore paspalum, St. Augustinegrass, tall fescue, zoysiagrass	2	0.67-1.33 oz.	0.031-0.062	12	Controls yellow and purple nutsedge, and suppresses green kyllinga. A second application may be needed 6 to 10 weeks after the initial application. Apply at the 3 to 8 leaf nutsedge growth stage. Add a nonionic surfactant at 0.5% v/v (2.0 qts./100 gal.) DO NOT mow 2 days before or after application. DO NOT apply to golf course putting greens.
imazaquin (Image) 70DG	bermudagrass, centipedegrass, St. Augustinegrass, zoysiagrass	2	8.6-11.4 oz.	0.37-0.5	12	Controls nutsedge(s), wild garlic, and selected broadleaf weeds. Add a nonionic surfactant (1.0 qt./100 gals.). The addition of MSMA (bermudagrass only) will aid in control of nutsedge(s) and escaped weedy grasses. Two applications per year, at an interval of 6-8 weeks, will be needed to control purple nutsedge. DO NOT apply when turfgrass is emerging from winter dormancy. Image will severely injure fescue(s) and ryegrass(s). DO NOT apply to newly planted or sprigged lawns or golf greens.
MCPA + MCPP + 2,4-DP (Triamine II) (TriEster II) (Trimec Encore)	bermudagrass, centipedegrass, Ky. bluegrass, St. Augustinegrass, tall fescue, zoysiagrass	4+4+4	See Label	See Label	48	Refer to individual labels for recommended amount of formulated product. Controls a broader spectrum of weeds than 2,4-D alone. DO NOT spray at air temperatures greater than 85°F and, when warm-season turfgrasses are growing under stress conditions. Delay reseeding for 4 weeks after treatment. Trimec Encore is not labeled on St. Augustinegrass.

Supplemental 2(ee) label recommendations may be available for some listed pesticides. It is the end-user's responsibility to consult the manufacturer or websites like www.CDMS.net for additional recommendations.

Turfgrass Weed Control for Professional Managers

Patrick E. McCullough, Extension Agronomist – Weed Science

Use Stage and Herbicide	Turfgrasses	WSSA Group	Broadcast Rate/Acre		REI	Remarks and Precautions
			Amount of Formulation	Pounds Active Ingredient		
Postemergence Herbicides - continued						
MCPA + triclopyr + dicamba (Cool Power) (HorsePower)	bermudagrass, Ky. bluegrass, tall fescue, zoysiagrass	4+4+4	See Label	See Label	See Label	Controls a broader spectrum of weeds than 2,4-D alone. Cool Power is an ester formulation of MCPA + triclopyr + dicamba primarily for use during the cool winter months. HorsePower contains amine formulations of these herbicides. DO NOT mow 1-2 days before or after application. Delay application to newly seeded grasses until after 3-4 mowings. Delay reseeding for 3-4 weeks after application. Avoid applications during the spring transition of warm-season turfgrasses.
MCPA + MCP + dicamba (Tri-Power)	bermudagrass, Ky. bluegrass, tall fescue, zoysiagrass	4+4+4	See Label	See Label	See Label	Controls a broader spectrum of weeds than 2,4-D alone. DO NOT mow 1-2 days before or after application. Delay application to newly seeded grasses until after 3-4 mowings. Delay reseeding for 3-4 weeks after application. Avoid applications during the spring transition of warm-season turfgrasses unless a slight delay in green-up can be tolerated.
MCP + 2,4-D + dicamba (Trimec Southern)	bermudagrass, centipedeagrass, Ky. bluegrass, St. Augustinegrass, tall fescue, zoysiagrass	4+4+4	See Label	0.7 + 0.4 + 0.08	48	Controls a broader spectrum of weeds than 2,4-D alone. DO NOT spray when turfgrass is emerging from winter dormancy. Avoid application if air temperatures exceed 85°F. Delay reseeding for 4 weeks after application. Refer to label for rates for St. Augustinegrass and centipedeagrass.
mesotrione (Tenacity) 4.0 lbs./gal	centipedeagrass, Ky. bluegrass, St. Augustinegrass (grown for sod), tall fescue	27	4.0-8.0 fl. oz.	0.125-0.25	12	Provides postemergence control of crabgrass (< 4 tillers), nimblewill, creeping bentgrass, white clover and numerous broadleaf weeds. Apply to small, actively growing weeds. A repeat application at two to three weeks may be required for adequate control. Add a nonionic surfactant at 0.25% v/v to the spray mix. Tenacity may also be applied at the time of seeding Ky. bluegrass, centipedeagrass 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. Augustinegrass sod. Tenacity may cause temporary whitening of turfgrass foliage (see label). If Tenacity is tank-mixed with atrazine or simazine for use on St. Augustinegrass or centipedeagrass use only 4.0 fl. oz. of Tenacity and 0.5 lbs. ai/A of either atrazine or simazine. Zoysiagrass, 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.
metribuzin (Sencor) 75 Turf	bermudagrass	5	0.67 lb.	0.5	See Label	Dormant bermudagrass: Apply to emerged winter annual weeds. Make only one application per season. Actively growing bermudagrass: Apply to bermudagrass that is actively growing and not under stressed conditions. Controls goosegrass and selected annual weeds. DO NOT make more than two applications per season. Sencor may cause temporary discoloration. Delay mowing treated areas for at least 3 days.
metribuzin (Sencor) 75 Turf + MSMA (Several trade names)	bermudagrass	5+17	2.6 dry oz. + See Label	0.125 + 2.0	See Label	This tank mix provides better control of goosegrass than the use of MSMA alone. Apply ONLY to established bermudagrass that is actively growing and not under stressed conditions. Two applications spaced 7-10 days apart may be necessary for acceptable control.

Supplemental 2(ee) label recommendations may be available for some listed pesticides. It is the end-user's responsibility to consult the manufacturer or websites like www.CDMS.net for additional recommendations.

Turfgrass Weed Control for Professional Managers

Patrick E. McCullough, Extension Agronomist – Weed Science

Use Stage and Herbicide	Turfgrasses	WSSA Group	Broadcast Rate/Acre		REI	Remarks and Precautions
			Amount of Formulation	Pounds Active Ingredient		
Postemergence Herbicides - continued						
metsulfuron (Manor) 60DF (Blade) 60DF (Various) 60DF	bermudagrass, centipede, Ky. bluegrass, St. Augustinegrass, zoysiagrass	2	0.25-1.0 oz.	0.009-0.037	See Label	Controls a wide range of broadleaf weeds, 'Pensacola' bahiagrass and wild garlic/onion. May also be used hasten the spring transition of bermudagrass overseeded with perennial ryegrass to bermudagrass. Add a nonionic surfactant at 0.25% v/v. DO NOT exceed 0.5 oz. on centipede or Kentucky bluegrass. DO NOT overseed for 8 weeks after application, or plant woody ornamentals in treated areas for one year after application. Not recommended for use on tall fescue.
Metsulfuron + Sulfentrazone (Blindside) 66WDG (6%+66%)	bermudagrass, centipede, St. Augustinegrass, tall fescue, zoysiagrass	17+17	3.25-10 oz.	0.13-0.41 (0.01+0.12 to 0.038+0.375)	12	Apply for selective post-emergence control of annual grasses, broadleaf weeds, and sedges in established turf areas including, but not limited to, residential, commercial and institutional lawns, athletic fields, commercial sod farms, golf course fairways, and golf course roughs. Best weed control results will be obtained when no rainfall or irrigation occurs within 24 hours after application. If no rainfall or irrigation occurs within 7 days after applications in the amount of 0.5 inches, then irrigation of at least 0.5 inches is recommended. Do not apply to tall fescue at temperatures above 75° F. Do not apply to centipede during spring transition. Use the lowest rate for tall fescue. Do not apply to golf course putting greens, collars, or tees. Do not use on turfgrass other than those listed on the label or turfgrass under stress. See product label for further information before use.
MSMA (Buena Vista) 6.0 lbs./gal. (Daconate) 6.0 lbs./gal. (Other trade names) DSMA (DSMA Liquid) 3.6 lbs./gal. (Weed-E-Rad 360) 3.6 lbs./gal. (Other trade names)	bermudagrass, Ky. bluegrass, tall fescue	17+17	2.7 pts. 2.7 pts. 1.0 gal. 1.0 gal.	2.0 2.0 3.6 3.6	See Label	These herbicides control emerged annual grasses, bahiagrass, and dallisgrass and provide fair control of nutsedge. Multiple applications spaced 7-10 days apart are needed for acceptable control. Temporary discoloration of turf will occur. May be applied to newly sprigged bermudagrass at the above rates. On new stands of fescue, apply one-half rate after 3 mowings. Add a surfactant according to label directions. Zoysiagrass cultivars vary in tolerance to MSMA. 'Meyer' is more tolerant than 'Emerald' or 'Matrella'. DO NOT apply to centipede or St. Augustinegrass.
penoxsulam + sulfentrazone + 2,4-D + dicamba (Avenue South)	bermudagrass, buffalograss, centipede, Kentucky bluegrass, ryegrass, seashore paspalum, St. Augustinegrass, tall fescue, zoysiagrass	2+4+14	3 to 6 pints		48	Provides postemergence control of annual and perennial broadleaf weeds in established residential and non-residential turf including lawns, parks, golf courses, sports facilities, and sod farms. Do not apply this product to golf greens, collars, tees, bentgrass, carpetgrass, dichondra, legumes, and lawns where desirable clovers are present. Applications made when ambient temperatures are above 90°F (85°F for St. Augustinegrass) may cause undesirable turf injury. Environmental conditions and spray tank, liquid fertilizers, and tank mixtures containing other emulsifiable concentrates may reduce the selectivity on turfgrass. Do not collect grass clippings for use as mulch around plants. Do not broadcast apply to bare ground or paved surfaces.



Supplemental 2(ee) label recommendations may be available for some listed pesticides. It is the end-user's responsibility to consult the manufacturer or websites like www.CDMS.net for additional recommendations.

Turfgrass Weed Control for Professional Managers

Patrick E. McCullough, Extension Agronomist – Weed Science

Use Stage and Herbicide	Turfgrasses	WSSA Group	Broadcast Rate/Acre		REI	Remarks and Precautions
			Amount of Formulation	Pounds Active Ingredient		
Postemergence Herbicides - continued						
pronamide (Kerb T/O) 50WSP	bermudagrass, centipedegrass, St. Augustinegrass, zoysiagrass	3	1.5-3.0 lbs.	0.75-1.5	24	Pronamide will control emerged annual bluegrass, corn speedwell, and common chickweed. Increase rate as annual bluegrass approaches maturity. Pronamide acts slowly (3-5 weeks) on seedling to mature annual bluegrass. DO NOT apply to any cool season grass. A light overhead irrigation is necessary to move Kerb into the weed root zone if not rainfall occurs within 24-48 hours. Kerb is a Restricted Use Herbicide.
quinclorac (Drive) 75DF (Drive XLR8) 1.5SL	bermudagrass, Ky. bluegrass, seashore paspalum, tall fescue, zoysiagrass	4	1.0 lb. 64 fl. oz.	0.75 0.75	12	Provides excellent control of crabgrass, barnyardgrass and clovers with one application. Multiple applications will also provide control of torpedograss. Add methylated seed oil at 1.5 pts./A to the spray mix. DO NOT mow 2 days before or after application. Drive may also be applied before, at, and during seedling emergence of bermudagrass, tall fescue and zoysiagrass. DO NOT add an adjuvant until 28 days after emergence. Apply under conditions of good soil moisture. For best results do not irrigate for 24 hours after application. DO NOT apply to bahiagrass, carpetgrass, St. Augustinegrass or centipedegrass. DO NOT apply to exposed feeder roots of ornamental trees and shrubs.
quinclorac (0.75 lb./gal) + 2,4-D (1 lb./gal) + dicamba (0.125 lb./gal.) (Qunicept)	Bentgrass, bermudagrass, buffalograss, KY. bluegrass, ryegrass, tall fescue, zoysiagrass	4+4+4	7-8 pts.	0.66+0.88 + 0.1-0.75 + 1+0.125	48	Apply to residential and nonresidential cool-season turfgrasses for broadleaf weed control and suppression or control of grassy weeds. Apply lower rates on bermudagrass and zoysiagrass and DO NOT apply to Golf Greens. Controls young barnyardgrass, crabgrass, and foxtails but repeat applications may be needed for complete control of mature plants. DO NOT apply when temperatures exceed 90° F or if turf is under stress from drought, heat, or disease.
quinclorac + dicamba + MCP (One-Time) 2.45 SL	bentgrass, bermudagrass, Ky. bluegrass, seashore paspalum, tall fescue, zoysiagrass	4+4+4	21-64 Fl. Oz.	0.25+0.03+ 0.12-0.75+ 0.1+0.375	48	Controls broadleaf weeds, barnyardgrass, crabgrass, foxtails, and torpedograss in cool and warm-season turfgrasses. Repeat applications may be needed for grassy weed control. DO NOT apply more than 128 fl. oz./acre in one year or more than two applications per year. DO NOT apply to golf course collars, greens, or turf grown for sod. DO NOT apply to fine fescue, bahiagrass, St. Augustinegrass, or centipedegrass.
quinclorac + carfentrazone (SquareOne) 70 WDG 0.66+0.04	bermudagrass, bluegrasses, buffalograss, fine fescue, perennial ryegrass, Seashore Paspalum, tall fescue, zoysiagrass	4+14	8-18 oz.	0.35-.079 (0.33+0.02 to 0.75+0.05)	12	Apply for postemergence control of annual grasses and broadleaf weeds in established turf areas including, residential, commercial, and industrial lawns, athletic fields, commercial sod farms, golf course fairways, and golf course roughs. SquareOne is absorbed by shoots, foliage, and roots, and can be applied to several turfgrasses at 7 days or more after emergence by both seeding and sprigging (See Label). Application to zoysiagrass should be delayed until at least 14 days after emergence to avoid extended discoloration. Slight discoloration may be observed immediately after application for hybrid bermudagrasses, however, normal turf color returns by 12 days after emergence if no other stresses are present. Areas treated with SquareOne Herbicide may be seeded or overseeded one day following application. This product may be applied to established sod. See product label for further information before use.

Supplemental 2(ee) label recommendations may be available for some listed pesticides. It is the end-user's responsibility to consult the manufacturer or websites like www.CDMS.net for additional recommendations.

Turfgrass Weed Control for Professional Managers

Patrick E. McCullough, Extension Agronomist – Weed Science

Use Stage and Herbicide	Turfgrasses	WSSA Group	Broadcast Rate/Acre		REI	Remarks and Precautions
			Amount of Formulation	Pounds Active Ingredient		
Postemergence Herbicides - continued						
rimsulfuron (TranXit GTA) 25DF	bermudagrass, centipedegrass, zoysiagrass	2	1.0-2.0 Oz.	0.016-0.032	See Label	May be used: a) to control annual bluegrass before overseeding bermudagrass with perennial ryegrass or <i>Poa Trivialis</i> ; b) to control annual bluegrass and certain weeds in non-overseeded bermudagrass, centipedegrass and zoysiagrass and c) to remove perennial ryegrass or <i>Poa trivialis</i> from bermudagrass in the late spring. Add a nonionic surfactant at 0.25% v/v. Apply 10-14 days in late summer or early fall before overseeding bermudagrass. DO NOT apply after overseeding, or to bentgrass putting greens. To hasten spring transition on overseeded bermudagrass, apply at the 60 to 75% green-up growth stage of bermudagrass, or approximately 2-3 weeks before transition is desired. DO NOT apply to residential lawns, cool-season turfgrasses or to newly sprigged or sodded bermudagrass.
sethoxydim (Segment) 1.0 lb./gal.	centipedegrass, fine fescue	1	1.5-2.25 pts.	0.19-0.28	12	Apply sethoxydim only to centipedegrass and fine fescues (creeping red, Chewings, hard fescue). Other turfgrasses, including tall fescue, will be severely injured by sethoxydim. Controls annual grasses and suppresses bahiagrass growth. Apply no sooner than 3 weeks after green-up. DO NOT exceed 1.5 pts./acre on seedling centipedegrass. DO NOT mow 7 days prior to or after application. Two applications per season may be utilized in seedling and established centipedegrass. For bahiagrass suppression, repeat treatment 10-14 days after the first application. No adjuvant is needed with Segment.
sulfentrazone (Dismiss) 4.0SC (Spartan) 4F	bermudagrass, centipedegrass, Ky. bluegrass, seashore paspalum, St. Augustinegrass, tall fescue, zoysiagrass	14	4.0-12.0 fl. oz.	0.125-0.375	12	Controls nutsedge(s), annual sedges, kyllinga species and a wide range of broadleaf weeds. Add a nonionic surfactant at 0.25 v/v to the spray mix. Apply to established grasses, or to newly established grasses (seeded or sodded) after the second mowing. Treated areas may be reseeded or sodded 3 months after application. Overseeding with perennial ryegrass may be done 6 weeks after application if slight injury to ryegrass can be tolerated. Do not apply Dismiss within 3 months of sod harvest. Dismiss is not recommended for use on golf course putting greens. Spartan is labeled for use only on seed and sod farms.
sulfentrazone (0.06 lb./gal.) + 2,4-D (1.4 lbs. gal.) + MCPP (0.5 lb./gal.) + dicamba (0.22 lb./gal.) (Surge)	bermudagrass, Ky. bluegrass, tall fescue, zoysiagrass	14+4+4+4	2.75-4.0 pts.	--	48	Controls a wide range of broadleaf weeds, including spotted spurge. This product will also provide some suppression of small, actively-growing yellow nutsedge. 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 3 weeks after application. DO NOT apply at air temperatures > 90°F, or during the spring transition of warm-season turfgrasses.
sulfentrazone (0.06 lb./gal.) + quinclorac (0.5 lb./gal.) + dicamba (0.09 lb./gal) (Q4, Q4 Plus)	bermudagrass, buffalograss, Ky. bluegrass, ryegrass, tall fescue, zoysiagrass	14+4+4+4	7-8 pts.	0.05+0.04+0.77+0.08 - 0.06+0.5+0.88+0.09	48	Apply to cool-season turfgrasses for broadleaf weed control and suppression or control of grassy weeds. DO NOT apply to bentgrasses or greens. See labels for use on warm-season grasses. Controls young barnyardgrass, crabgrass, and foxtails but repeat applications will be needed for complete control of mature plants. DO NOT apply when temperatures exceed 90°F or if turf is under stress from drought, heat, or disease.

Supplemental 2(ee) label recommendations may be available for some listed pesticides. It is the end-user's responsibility to consult the manufacturer or websites like www.CDMS.net for additional recommendations.

Turfgrass Weed Control for Professional Managers

Patrick E. McCullough, Extension Agronomist – Weed Science

Use Stage and Herbicide	Turfgrasses	WSSA Group	Broadcast Rate/Acre		REI	Remarks and Precautions
			Amount of Formulation	Pounds Active Ingredient		
Postemergence Herbicides - continued						
sulfosulfuron (Certainty) 75DF	bermudagrass, centipedegrass, St. Augustinegrass, zoysiagrass	2	0.75-1.25 oz.	0.035-0.07	12	Controls nutsedge(s), annual sedges, kyllinga species, annual bluegrass, tall fescue, and certain broadleaf weeds in warm-season turfgrasses. Add a nonionic surfactant at 0.25 v/v to the spray mix. Avoid mowing for 1-2 days before and after application. For nutsedge repeat the application at 4 to 10 weeks if regrowth is observed. Certainty may be applied 7-10 days before overseeding bermudagrass with perennial ryegrass. Certainty is not recommended for use on putting greens.
thiocarbazono-methyl 10% + foramsulfuron 20% + halosulfuron 31% (Tribute Total) 61% WDG	bermudagrass	2+2+2	1-3.2 oz.	0.006-0.02	12	Provides selective, postemergence control of annual and perennial grassy weeds, sedges and kyllingas, and broadleaf weeds growing in well-established bermudagrass. Use only on commercial and residential turf including golf courses (excluding greens and overseeded tees), residential and commercial lawns, sports fields, cemeteries, parks, campgrounds, recreational areas, roadsides, school grounds, and sod farms. For postemergence control of dallisgrass in well-established bermudagrass, use 3.2 oz./acre and include the addition of a methylated seed soil and ammonium sulfate. Make an application in late summer / early fall while the weeds are still actively growing and not under stress. Follow up with a second application after 4-6 weeks. Tribute Total also controls annual bluegrass, overseeded ryegrass, creeping bentgrass, and other weeds. See label for further information.
thiocarbazono + iodosulfuron + dicamba (Celsius 68 WG)	bahiagrass, bermudagrass, centipedegrass, St. Augustinegrass, zoysiagrass	2+2+4	2.5-4.9 oz.	See Label	24	This product is intended for commercial application (licensed applicators only) to residential lawns, commercial lawns, golf courses, sports fields, parks, campsites, recreational areas, residential lawns, roadsides, school grounds, cemeteries, sod farms to control annual and perennial broadleaf weeds and grasses in warm-season grasses. For certain weeds, a second application made two to four weeks later may be needed for complete weed control (see label). Total amount of product applied in a calendar year must not exceed 7.4 oz. per acre. See label before use. Do not apply to areas with desirable carpetgrass or bahiagrass.
topramezone (Pylex) 2.8 lbs./gal	centipedegrass, fine fescue, Ky. bluegrass, perennial ryegrass, tall fescue	27	1-2 fl. oz.	0.023-0.046	12	Apply for postemergence control of crabgrass, goosegrass, foxtails, clovers, and other broadleaf weeds. Repeat applications with triclopyr in late summer will suppress bermudagrass in tall fescue. Labeled use areas include commercial lawns, golf courses, sod farms, parks, residential turf, and athletic fields. Apply with crop oil concentrate or methylated seed oil at 0.5-1% v/v. Treatments may be made before seeding tolerant turfgrass species, but do not apply within 28 days after seeding. Do not apply more than 2 fl. oz./acre per application. Do not apply more than 4 fl. oz./acre (0.089 lb. ai/acre) per year. Do not apply to golf greens.
triclopyr (Turflon Ester Ultra) 4.0 lb/gal.	tall fescue, zoysiagrass	4	1.0-2.0 pts.	0.5-1.0	12	Controls wild violet, ground ivy, yellow woodsorrel, and selected other broadleaf weeds. Tank mix with recommended rates of Fusilade II or Acclaim Extra to suppress bermudagrass in tall fescue and zoysiagrass. Repeat the application 3-4 times at intervals of 4 weeks. Do not apply to other turfgrass species, unless injury can be tolerated. Areas treated with Turflon Ester can be reseeded 3 weeks after application.

Supplemental 2(ee) label recommendations may be available for some listed pesticides. It is the end-user's responsibility to consult the manufacturer or websites like www.CDMS.net for additional recommendations.

Turfgrass Weed Control for Professional Managers

Patrick E. McCullough, Extension Agronomist – Weed Science

Use Stage and Herbicide	Turfgrasses	WSSA Group	Broadcast Rate/Acre		REI	Remarks and Precautions
			Amount of Formulation	Pounds Active Ingredient		
Postemergence Herbicides - continued						
triclopyr + clopyralid (Confront) 2.25 + 0.75 lbs./gal.	bermudagrass, centipedegrass, Ky. bluegrass, tall fescue, zoysiagrass	4+4	1.0-2.0 pts.	0.3+0.1 - 0.6+0.2	48	Controls a wide range of broadleaf weeds. Repeat the application in approximately 4 weeks if necessary. Repeat treatments will also be necessary for the control of violets and woodsorrel. Newly seeded turf should be mowed 2-3 times before treatment. DO NOT water for 6 hours after application or apply at air temperatures > 85°F. DO NOT apply to exposed roots of shallow rooted trees and shrubs. DO NOT reseed for 3 weeks after application. Not labeled for use on residential turfgrasses.
trifloxysulfuron-sodium (Monument) 75DG	bermudagrass, zoysiagrass	2	0.33-0.56 oz.	0.015-0.026	12	Controls nutsedge(s), green kyllinga, annual bluegrass, tall fescue, torpedograss and certain broadleaf weeds in established bermudagrass and zoysiagrass. Monument is not recommended for use on other turfgrass species. Add a nonionic surfactant at 0.25-0.5% v/v to the spray mix. Monument at rates of 0.1-0.3 oz./acre may be used as a spring transition aid for the removal of perennial ryegrass and <i>Poa trivialis</i> . Avoid mowing for 1-2 days before and after application. For nutsedge repeat the application at 4-6 weeks if regrowth is observed. DO NOT overseed bermudagrass with cool-season turfgrasses for 3 weeks after application.
Turf Renovation						
glyphosate (Roundup Pro) 4 lbs./gal.	Existing vegetation	9	1.0-5.0 qts.	1.0-5.0	4	Apply to areas that are being renovated (establishment of desirable turfgrass) to kill existing vegetation. Refer to Roundup Pro label for recommended rates for specific species. Apply to actively growing bermudagrass when seedheads appear. Repeat treatment may be required for complete control. Tillage or renovation techniques (vertical mowing, coring, slicing) should be delayed for 7 days after treatment. Avoid contact of spray with ornamentals.
Preemergence Herbicides – Golf Course Putting Greens						
bensulide (Bensumec) 4LF (Pre-San) 7G	bentgrass, bermudagrass	8	1.9-3.1 gals. 107.0-180.0 lbs.	7.5-12.5 7.5-12.5	See Label	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.
pronamide (Kerb T/O) 50WSP	bermudagrass	3	1.0-2.0	0.5-1.0	24	Preemergence or postemergence applications of Kerb will control annual bluegrass. Apply to non-overseeded bermudagrass greens. Do not apply closer than 90 days before overseeding cool-season grasses unless deactivation with activated charcoal is planned. To deactivate Kerb with activated charcoal, such as Gro-Safe, use 10 lbs. charcoal per 1,000 sq. ft. Reseed no sooner than 7 days after charcoal application. A light overhead irrigation is necessary to move Kerb into the weed root zone if no rainfall occurs within 24 hours. DO NOT apply Kerb to any cool-season turfgrass. Kerb is a Restricted Use Herbicide.
siduron (Tupersan) 50 WP	creeping bentgrass	7	4.0-24 lbs.	2.0-12.0	4	May be applied at the time of seeding or to established creeping bentgrass for crabgrass spp. control. Siduron does not control goosegrass or annual bluegrass. Irrigate within 3 days of application with 2 inch of water/acre if rainfall does not occur. Tupersan at 1.0 lb. product per 1,000 sq. ft. may be used as band treatment along the perimeter of creeping bentgrass putting greens to suppress stolon growth of bermudagrass. Make the initial application in the March/April time frame. Repeat applications can be made at 4-5 week intervals.

Supplemental 2(ee) label recommendations may be available for some listed pesticides. It is the end-user's responsibility to consult the manufacturer or websites like www.CDMS.net for additional recommendations.