

Turfgrass Growth Regulators For Professional Managers

Patrick E. McCullough, Extension Agronomist – Weed Science

Chemical	Turfgrasses	Broadcast Rate/Acre		REI	Remarks and Precautions
		Amount of Formulation	Pounds Active Ingredient		
flurprimidol (Cutless) 50W	bermudagrass, (Tif 419, 328 and common), zoysiagrass	See label.	See label.	See Label	Cutless may be used on medium to high quality, well maintained turfgrasses. Refer to label for rates for different bermudagrass cultivars and zoysiagrass. Apply after full spring green-up (usually mid-May to mid-June) for the first application. An additional application may be made in the late summer to bermudagrasses only. Treated areas should receive 0.5 inches of rainfall or irrigation within 24 hours of application. Make uniform application with a boom-type sprayer and avoid overlaps.
flurprimidol (Cutless) 50W	bentgrass putting greens	0.25 - 0.5 lbs.	0.125 - 0.25	See Label	Apply to actively growing bentgrass putting greens to suppress annual bluegrass. Apply in the spring after 3 to 4 mowings or in the fall. If necessary, repeat the application at 3 to 6 week intervals. DO NOT exceed 2.0 lbs. ai/acre per growing season. Make the final fall application 8 weeks before the onset of winter dormancy. Delay reseeding for 2 weeks after application.
flurprimidol + trinexapac-ethyl (Legacy) 1.1 + 0.41 lb/gal	bentgrass, KY bluegrass, perennial ryegrass, bermudagrass, seashore paspalum, zoysiagrass	See Label	See Label	See Label	Controls annual grasses and selected broadleaf weeds. DO NOT apply to newly sprigged grasses until well established. DO NOT apply to golf course greens. DO NOT make a spring application to fall planted turfgrasses. Delay reseeding for 6 weeks (low rate) and for 12-16 weeks (high rate) after application.
maleic hydrazide (Retard) 2.25 lb./gal.	bahiagrass, Ky. bluegrass, Tall fescue, Common bermudagrass	1.3 gal.	3.0	See Label	Flurprimidol + trineapac-ethyl (Legacy) can be applied to actively growing turf for clipping management and annual bluegrass suppression. Apply Legacy for annual bluegrass suppression in fairway height bentgrass at 8 to 15 Fl. Oz./acre in early spring upon active turfgrass growth. Repeat applications of 8 to 20 Fl. Oz./acre of Legacy should be made at 3 to 6 week intervals until late summer or early fall. Apply 15 to 25 Fl. Oz./acre for annual bluegrass suppression in Kentucky bluegrass and perennial ryegrass mixtures mowed at fairway heights. Reduced rates of Legacy should be considered in bentgrass fairways with high populations of annual bluegrass or when temporary annual bluegrass discolorations cannot be tolerated. For both warm and cool-season grasses, applications should be discontinued a minimum of 4 weeks before the onset of inactive growth or winter dormancy.
mefluidide (Embark) 2S	Ky. bluegrass, centipede, tall fescue, common bermudagrass	1.5 - 4.0 pts.	0.38 - 1.0	See Label	Use the low rate on Ky. bluegrass, centipede and tall fescue. Use the high rate on common bermudagrass. Mowing 3 weeks after application to centipede will extend the period of seedhead suppression. Apply after uniform spring green-up but prior to seedhead emergence. Suppresses vegetative and seedhead development. Recommended for turf grasses on difficult-to-mow sites. Not recommended for turfgrasses when maintained under intensive management systems. DO NOT mow two days prior to or after application. Remove clippings prior to application. The addition of a nonionic surfactant (0.25% v/v) may enhance suppression; however, temporary discoloration may increase. DO NOT apply within 4 growing months of seeding or reseed within 3 days of an application. Embark requires an 8-hour rain-free period for optimum activity.
paclobutrazol (Trimmit) 2SC	hybrid bermudagrass, St. Augustinegrass	See Label	See Label	12	Recommended for hybrid bermudagrass golf course fairways, tees and roughs, and St. Augustinegrass. Apply in spring after uniform green-up. Do not seed within 6 weeks prior to or 2 weeks after application. Do not aerify or drag greens with steel mats while under growth regulation effects. Not recommended for use on common bermudagrass. DO NOT sprig within 4 weeks of application. On newly sprigged or sodded turf delay application until the sod has firmly rooted or sprigs have achieved complete soil coverage.
paclobutrazol (Trimmit) 2SC	bentgrass and bermudagrass putting greens	6.4 - 16.0 fl. ozs.	0.1 - 0.25	See Label	Used on creeping bentgrass greens to suppress annual bluegrass. Apply in the spring at least one month before the onset of high air temperatures. Repeat applications can be made at 4 to 6 week intervals. For late summer and early fall applications, apply Trimmit at least one month before hard frost. Do not use on bermudagrass greens except for winter overseeding enhancement (see Label).

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.

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prohexadione-Ca (Anew) 27.5%	Ky. bluegrass, bermudagrass, bentgrass, perennial ryegrass	1.8-44 oz.	0.031-0.76 lb.	See Label	Apply to actively growing turfgrasses for growth regulation and clipping management. Anew is absorbed by turfgrass foliage and is rainfast within 1 hour. Use of a non-ionic surfactant may improve spray coverage of the turf foliage to maximize efficacy. DO NOT apply more than 26 oz. per 1000ft ² per year.
trinexapac-ethyl (Governor) (Groom PGR) 1 MC (Primo) 1 MC (Primo) 25 WSB (T-Nex) 1 AQ	bahiagrass, Ky. Bluegrass, bermudagrass, centipedegrass, tall fescue, St. Augustinegrass, zoysiagrass bentgrass putting greens, bermudagrass putting greens	See Label.	See Label.	See Label	Apply to actively-growing turfgrasses. The rate of application is dependent upon turfgrass species and desired length of growth suppression. Refer to the Primo label for additional information. Repeat applications may be made as soon as the treated turfgrass resumes growth. Primo is foliage-absorbed and is rainfast within one hour of application. Primo does not require the addition of a surfactant. Primo may cause temporary yellowing (about one week). Primo is labeled for use on home lawns, commercial lawns, golf courses, golf course putting greens, sod farms, athletic fields, cemeteries and other similar areas. Additionally, Primo may be applied to bermudagrass to enhance establishment of cool-season turfgrasses (overseeding). Apply Primo before verticutting, scalping, spiking or other similar operations. Apply Primo 1 to 5 days before overseeding. Primo may also be used for growth regulation of grasses around monuments and structural materials. At normal dilution rates, Primo does not stain brass, bronze, concrete, marble, granite and other types of stone.
trinexapac-ethyl 0.11lb/gal + flurrimidol 0.44 lb/gal + paclobutrazol 0.44 lb/gal	Ky. bluegrass, bermudagrass, bentgrass putting greens, perennial ryegrass	18-40 oz.	0.015-0.034 + 0.062-0.14 + 0.062-0.14	See Label	Apply to actively growing turfgrass for growth regulation and annual bluegrass suppression. DO NOT apply to residential lawns. DO NOT apply to bermudagrass golf greens or overseed putting greens. DO NOT apply to saturated soils or areas where annual bluegrass is desired turfgrass. DO NOT exceed 580 fl. oz./acre per year. DO NOT apply for commercial sod or seed production.

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