

Cutless[®] Turf Growth Regulator

Cutless is the premier growth regulator for turf quality enhancement and *Poa annua* conversion. Cutless does not inhibit lateral turf spread similar to other turf PGRs, provides dollar spot suppression, and is available is two proven formulations. Following application clipping production and mowing frequency requirements will be reduced.

Turf response to Cutless

Cutless has a high level of turf safety when used according to label recommendations. It works by inhibiting gibberellic acid biosynthesis, a plant hormone that promotes cell elongation and expansion. Not all turf species are regulated equally by Cutless. Warm-season turf species are generally more sensitive than cool-season species. Within cool-season species, *Poa annua* is the most sensitive to Cutless. This benefit can be used to shift the competitive advantage

in a mixed turf stand away from *Poa annua* to creeping bentgrass or other desirable turf (Figure 1).

Where can Cutless be used?

Cutless can be applied to actively growing cool- and warm-season turfgrasses including:

- · Bentgrass greens, tees, and fairways
- · Kentucky bluegrass tees and fairways
- · Perennial ryegrass tees and fairways
- Seashore paspalum tees and fairways
- Bermudagrass tees and fairways
- Zoysiagrass tees and fairways



Figure 1. Cutless treated creeping bentgrass aggressively beginning to grow or "creep" into a suppressed *Poa annua* stand.

How do I start a Cutless growth regulation program?

An effective Cutless growth regulation program involves application at regular intervals to healthy, actively growing turf. For best results, applications should begin at the resumption of active growth in the spring, continue through the fall, then discontinued 4 weeks prior to winter dormancy.

Getting started is simple as selecting the proper application rate and reapplication interval for your turf species and area. After the initial application adjust the application rate by 2 fl. oz./A (MEC) or 0.65 oz./A (50W) up or down each subsequent application until the desired level of growth regulation is achieved. See the table below for suggested starting rates and reapplication intervals:

Cutless Rate Chart					
Bentgrass Greens	Bentgrass Fairways & Tees	Ryegrass Fairways & Tees	Kentucky Bluegrass Fairways & Tees	Bermudagrass Fairways & Tees	Zoysiagrass Fairways & Tees
Cutless 50W					
6	12	12	12	8	8
Cutless MEC					
18	36	36	36	24	24
Reapplication Interval					
2 weeks or 430 GDD Base 32°F	3 weeks or 700 GDD Base 32°F	3 weeks	3 weeks	4 weeks	4 weeks

Poa annua conversion

Cutless suppresses *Poa annua* growth more than creeping bentgrass and other desirable cool-season turfgrasses. This benefit allows turfgrass managers to shift the competitive growth advantage away from *Poa annua* to desirable turf with regular Cutless applications. In comparison to paclobutrazol, Cutless provides less growth regulation of desirable turf while providing the same degree of *Poa annua* growth regulation, making Cutless the premier conversion



Figure 2. Maximum growth suppression of a bentgrass fairway following application of various plant growth regulators.

tool (Figure 2; Figure 3). Cutless does not inhibit lateral growth similar to paclobutrazol (Figure 4) and allows for more rapid creep of bentgrass into *Poa annua* stands (Figure 1). This program provides a gradual perennial grass conversion







reducing *Poa annua*populations over one to
several growing seasons.

Temporary discoloration of *Poa annua* is possible with higher rates of Cutless, especially during

Figure 3. Growth suppression of Poa annua following application of Cutless MEC and Primo MAXX.

temperature extremes. To maximize seedling establishment during interseeding or overseeding practices, delay Cutless application 14 days prior to and after date of seed germination.

For best results, applications should be continued through summer months when *Poa annua* is stressed due to temperature and other factors.

Dollar Spot suppression

The Cutless active ingredient is similar to pyrimidine fungicides that provide dollar spot control. Research has shown Cutless applications at labeled rates and application intervals can significantly reduce dollar spot incidence and populations when compared to untreated control plots (Figure 5). Cutless



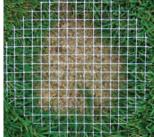


Figure 4. Lateral regrowth of creeping bentgrass following removal of a 4.25" diameter plug and application of 16 oz./A of Cutless 50W (left) vs. paclobutrazol (right).

is not intended to replace labeled fungicides. Programmed use may result in longer or improved control of dollar spot in conjunction with conventional fungicides, leading to potential for an overall reduction in annual fungicide use.



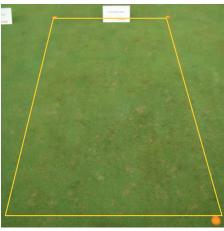


Figure 5. Dollar spot suppression following Cutless 50W application at 6 oz/A (left) vs. nontreated (right).

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