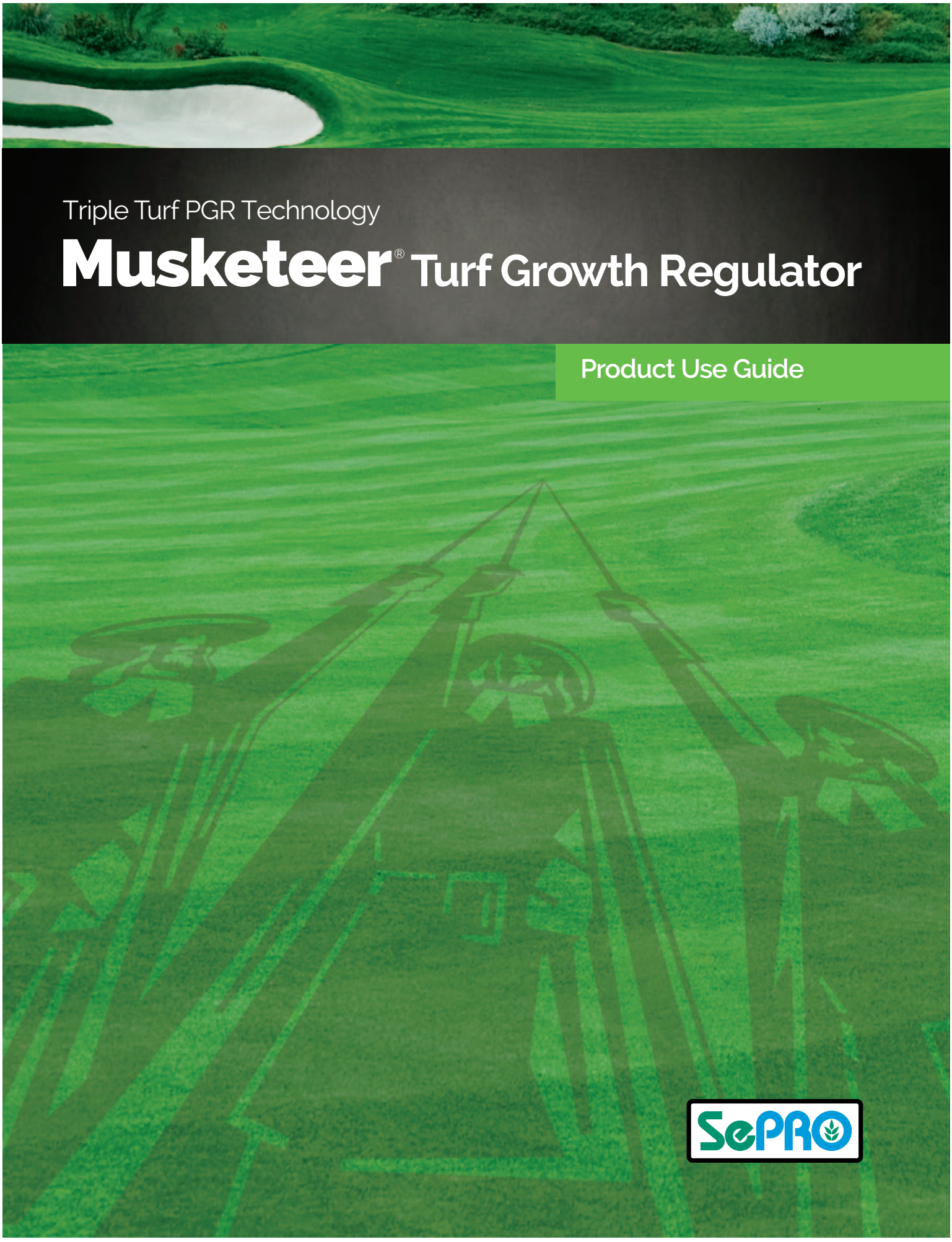


Triple Turf PGR Technology

Musketeer® Turf Growth Regulator

Product Use Guide

SePRO

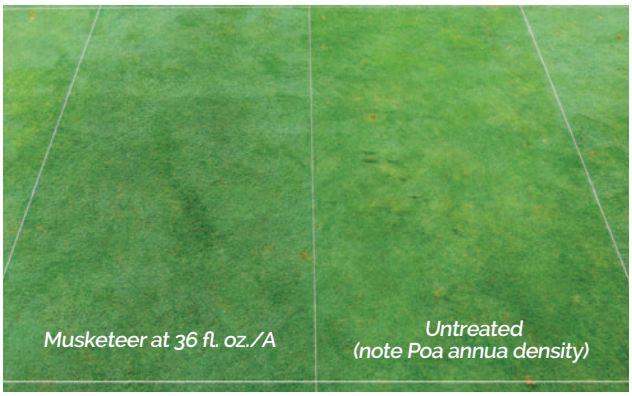
Musketeer® Turf Growth Regulator

Musketeer is the first turf plant growth regulator (PGR) to incorporate Triple turf PGR technology to uniquely and effectively suppress Gibberellic Acid synthesis, leading to superior growth regulation of targeted turfgrasses. Musketeer is the result of SePRO research and based upon patented turf PGR technology.

Specifically formulated to aggressively target growth suppression of *Poa annua* in cool-season turfgrass species, such as creeping bentgrass, while providing excellent turfgrass enhancement. The result—more bentgrass and less *Poa annua*.

Turf Response to Musketeer

Musketeer's triple turf PGR technology delivers enhanced growth suppression of *Poa annua* without negatively impacting the lateral growth and health of creeping bentgrass compared to formulations of paclobutrazol alone. Musketeer contains optimum ratios of flurprimidol, paclobutrazol, and trinexapac-ethyl to selectively suppress *Poa annua* growth while allowing the bentgrass (or other desired turf species) to continue to grow vigorously.



Poa annua control following applications of Musketeer (left) on a creeping bentgrass/Poa annua fairway compared to untreated (right).

Where Can Musketeer Be Used?

Musketeer can be applied to actively growing cool- and warm-season turfgrass. Species include:

Creeping Bentgrass (greens, tees, fairways)
Perennial Ryegrass
Kentucky Bluegrass/Perennial Ryegrass Blends
Hybrid Bermudagrass

Note: Do not use Musketeer on bermudagrass golf greens.

Applying Musketeer

A multiple application program using Musketeer provides: 1)*Poa annua* suppression and cool season turf conversion; and 2) growth reduction of perennial turfgrass species resulting in decreased mowing frequency and turfgrass clippings. For cool-season grasses, begin initial applications in early spring following resumption of active growth. For warm-season grasses, begin initial applications when the grass has completely recovered from winter dormancy and is growing vigorously. For both warm- and cool-season grasses, discontinue applications a minimum of 4 weeks before the onset of inactive grass growth or winter dormancy.

Close-up of a creeping bentgrass/Poa annua fairway. Note the conversion of the Poa annua (left) as compared to bentgrass conversion following 5 applications of Musketeer at 36 fl. oz./A every 3 weeks (right).

Musketeer for *Poa annua* Conversion/Reduction

A multiple application program using Musketeer provides *Poa annua* suppression and cool-season turf conversion. This program provides a gradual perennial grass conversion reducing *Poa annua* populations over one to several growing seasons.

Rates should be adjusted to fit the users targeted level of conversion based also upon starting *Poa annua* population. **Use the table below for rate recommendations on turf species.**

Application Rates

Turfgrass Species	Percent *Poa annua*	Initial Spring Application[1]	Repeat Application[1]	
		Rate of Musketeer (fl. oz./A)	Rate of Musketeer (fl. oz./A)	Treatment Interval
Bentgrass (golf course fairway)	0 - 80%	18 - 30	18 - 36	2 to 6 weeks
Bentgrass Putting Greens	< 50%	12 - 18	12 - 22	2 to 4 weeks
Bentgrass Putting Greens	> 50%	12 - 15	12 - 18	2 to 4 weeks
Kentucky Bluegrass/Perennial Ryegrass Mixture	0 - 80%	18 - 30	18 - 36	2 to 6 weeks
Perennial Ryegrass[2] (overseeded fairways)	0 - 80%	20 - 30	20 - 40	2 to 6 weeks
Hybrid Bermudagrass (fairways only)	N/A	15 - 30	20 - 30	2 to 6 weeks

[1] *Apply in early spring following resumption of active growth of the grass. Discontinue fall applications 4 weeks before the onset of inactive grass growth or winter dormancy.*

[2] *For perennial ryegrass overseeded fairways, delay applications until perennial ryegrass is well established (4 weeks after germination).*

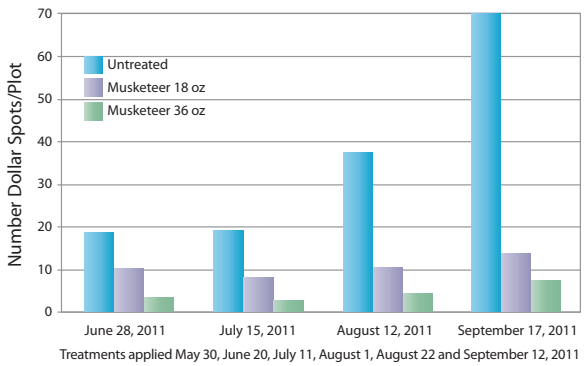
Temporary initial discoloration of *Poa annua* is possible with higher rates of Musketeer, especially during temperature extremes. To maximize seedling establishment during interseeding or overseeding practices, delay applications of Musketeer for 14 days prior to and/or after date of seeding.

For best reduction of *Poa annua*, applications of Musketeer should begin at the resumption of active growth in the spring and continue through the fall and discontinued prior to fall/winter dormancy. Applications should be continued even through summer months when *Poa annua* is stressed due to temperature and other factors.

Dollar Spot Suppression by Musketeer in Creeping Bentgrass

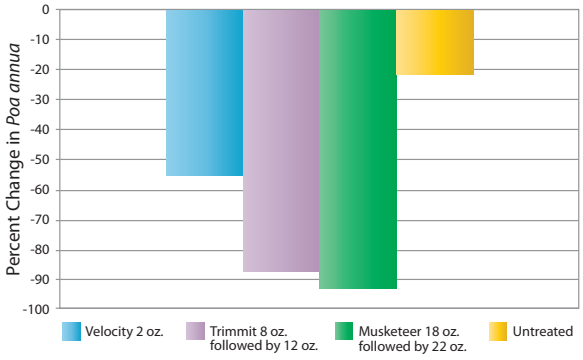
Two of the active ingredients in Musketeer are structurally similar to pyrimidine and triazole fungicides that provide Dollar Spot control. Programmed applications of Musketeer for turf growth suppression or *Poa annua* conversion have also been shown to suppress Dollar Spot incidence in creeping bentgrass fairways, greens and tees. Research results have shown Musketeer program applications at labeled rates and application intervals can significantly reduce Dollar Spot incidence and populations when compared to untreated control plots. Musketeer is not intended to replace labeled fungicides; rather programmed use may result in longer or improved control of Dollar Spot in conjunction with conventional fungicides. Thus leading to the potential for an overall reduction in annual fungicide use.

Dollar Spot Occurrence in Creeping Bentgrass Fairways
Dr. Frank Rossi, Cornell



Dollar Spot occurrence in a creeping bentgrass fairway following applications of Musketeer. Curative Dollar Spot fungicide applications were discontinued after the July rating.

Percent Change in *Poa annua* in Creeping Bentgrass Greens
Hathaway, Michigan State



Percent change in Poa annua population in a creeping bentgrass green following multiple biweekly applications of PGRs and herbicides.

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The Stewards of Turf