

Bringing out the best in Plant Growth Regulation

# Legacy<sup>®</sup> Plant Growth Regulator

Product Use Guide

*Legacy*<sup>®</sup>  
Turf Growth Regulator



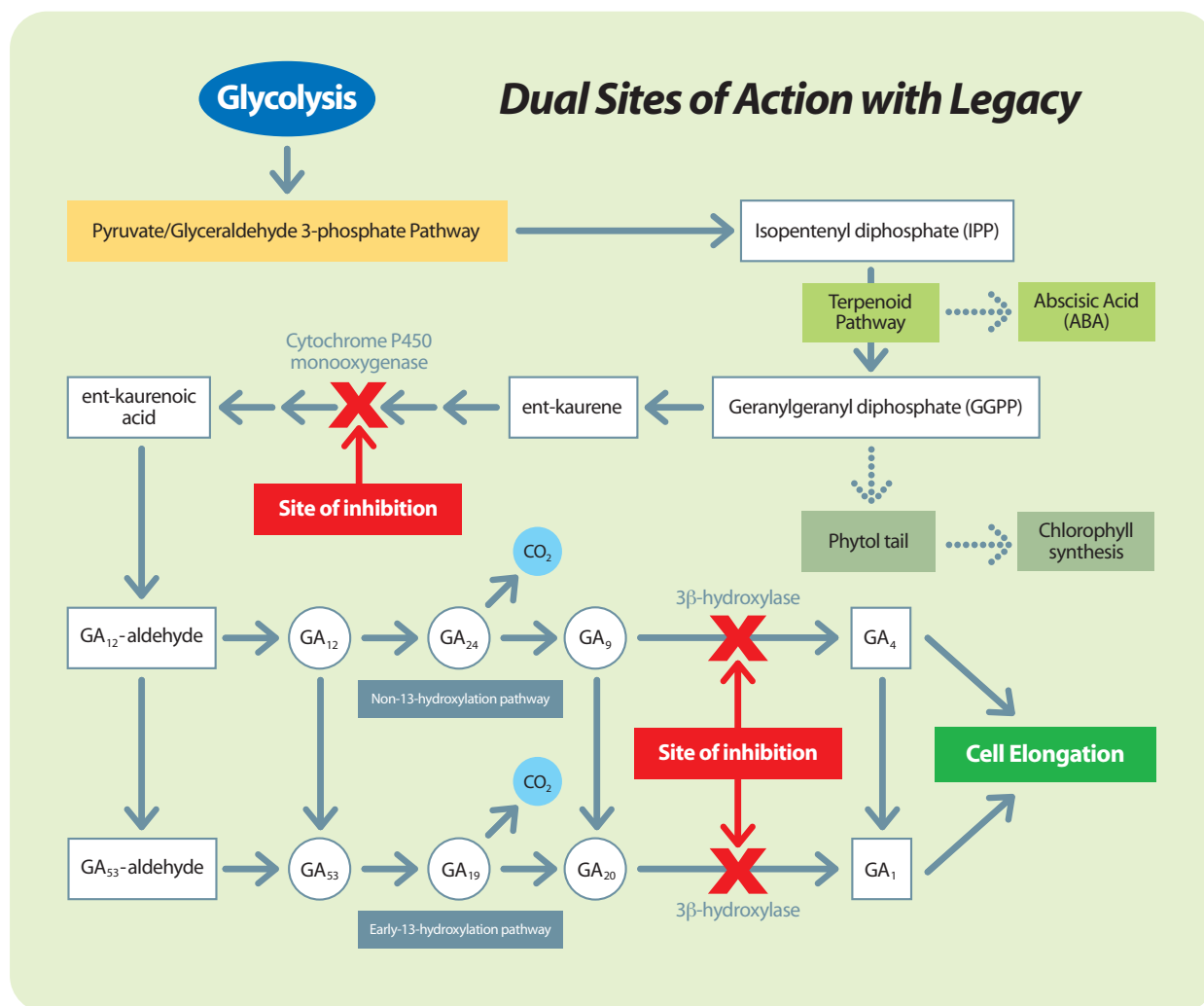
## A New Legacy is Handed Down

Legacy Plant Growth Regulator integrates patented synergistic plant growth regulator (PGR) technology to reduce stem elongation and leaf blade length in perennial cool- and warm-season turfgrasses on golf courses resulting in a more compact and dense growth habit. Legacy uniquely suppresses Gibberellic Acid (GA), the plant hormone responsible for cell elongation in most plants, which leads to its unsurpassed growth regulation.

Legacy's synergistic growth regulation, resulting from its dual sites of action and plant uptake, leads to enhanced growth suppression, improved turfgrass color and quality, extended spray intervals, discouragement of *Poa annua*, and more uniform growth regulation in mixed turfgrass stands.

## Dual Sites of Action Provides Synergy

Legacy is the only turf PGR that suppresses growth by inhibiting the production of Gibberellic Acid (GA) at two different sites within the biosynthetic pathway. By inhibiting GA production both early and late in the GA pathway, Legacy provides unparalleled GA inhibition efficiencies within the turfgrass plant.



Simplified version of the Gibberellic Acid biosynthesis pathway demonstrating the dual sites of action with Legacy.

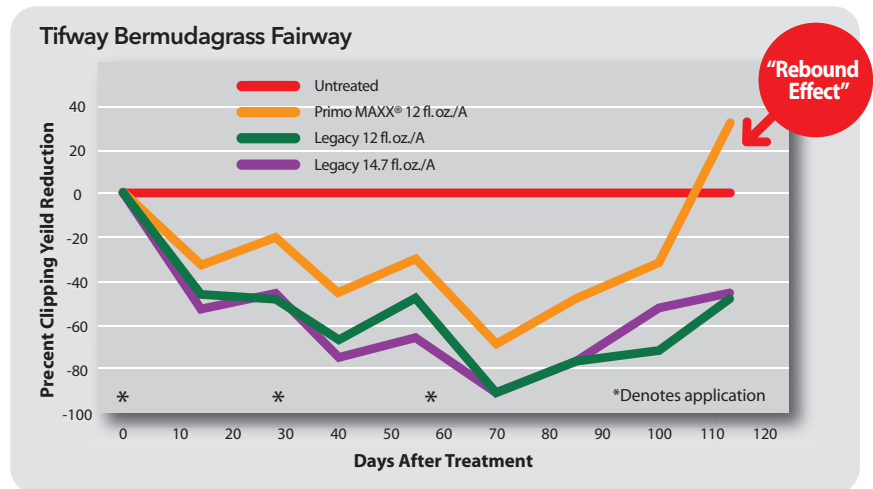
## Growth Regulation from Top to Bottom

In addition to GA inhibition at two different sites within the plant, Legacy enters the plant at multiple sites. Legacy provides both foliar and root uptake, ensuring sufficient active ingredient is translocated throughout the plant for maximum growth regulation to occur. The dual sites of uptake and action result in less potential for initial bronzing or discoloration. Legacy's systemic action quickly distributes the active ingredients to the growing point of the plant leading to unsurpassed growth regulation.

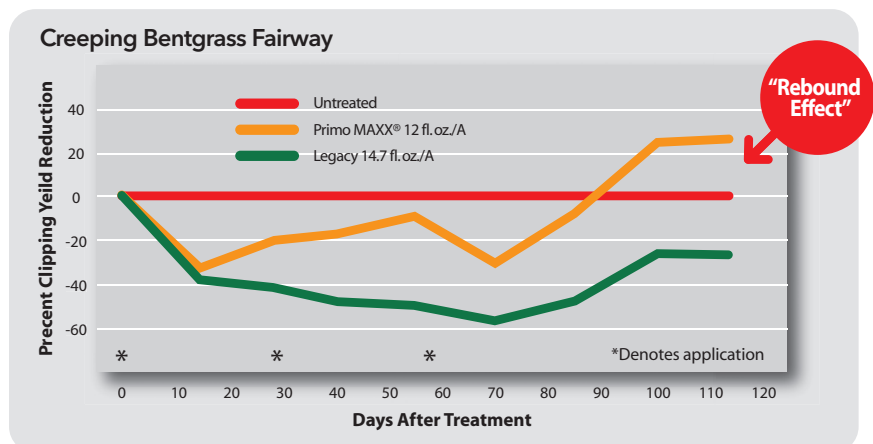
## Eliminate the "Rebound" Effect with Legacy

An application of a foliar-absorbed turf PGR acting at a single site late in the GA pathway, such as Primo MAXX, can often lead to a flush of growth near the end of the treatment cycle. This unwanted and proven phenomenon, known as the "rebound" effect, occurs when the plant has completely metabolized the active ingredient and suddenly resumes active growth.

Fortunately, Legacy's root-absorption component can eliminate this effect leading to a slower release of treated turfgrass, allowing you more time to make a subsequent application without scalping the turf or dealing with excessive clippings.



Percent clipping yield reduction (vs untreated plots) of Tifway bermudagrass fairways following multiple applications of Primo MAXX® and Legacy. Percent clipping yields less than 0% indicate less clippings compared to untreated plots or growth suppression whereas clipping yields greater than 0% indicate more clippings compared to untreated plots or rebounding turf. Note the Primo MAXX treated bermudagrass rebounds following the final treatment.

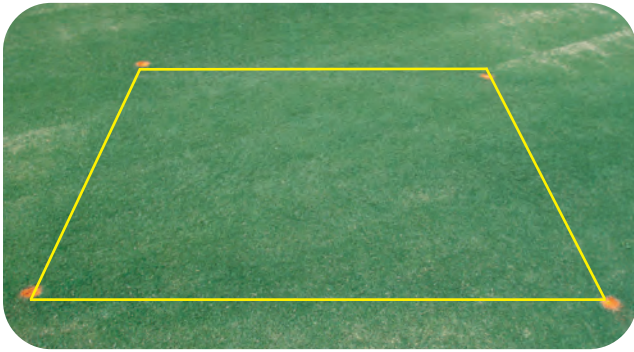


Percent clipping yield reduction (vs untreated plots) of creeping bentgrass fairways following multiple applications of Primo MAXX® and Legacy. Percent clipping yields less than 0% indicate less clippings compared to untreated plots or growth suppression whereas clipping yields greater than 0% indicate more clippings compared to untreated plots or rebounding turf. Note the Primo MAXX treated creeping bentgrass rebounds following the final treatment.

## Reduction of Scalping with Legacy



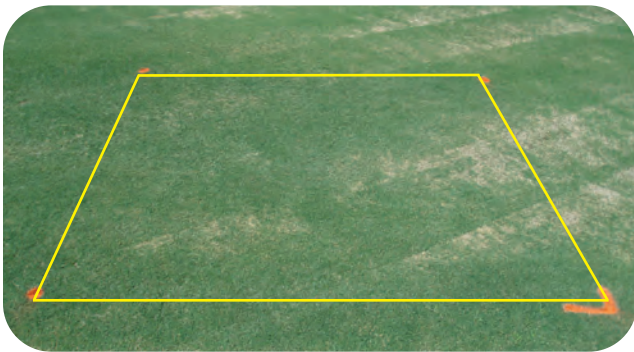
Untreated Tifway bermudagrass showing scalping.



Tifway bermudagrass treated with Legacy at 12 fl oz/A at 4 weeks after the final application. Note the lack of scalping and excellent turf quality and density.



Tifway bermudagrass treated with Legacy at 14.7 fl oz/A at 4 weeks after the final application. Note the lack of scalping and excellent turf quality and density.



Tifway bermudagrass treated with Primo MAXX® at 12 fl oz/A at 4 weeks after the final application. Note the presence of some scalping as the turf is beginning to release from growth regulation.

## Extended Control and Less Scalping

Legacy has shown to provide enhanced growth control when compared to other turf PGRs. This allows superintendents to extend their spray intervals resulting in fewer treatments annually, as well as labor and fuel savings.

One indicator of the lack of residual control of applied turf PGRs is scalping. When turf is regulated, the crown of the plant remains below the height of cut of the mower, thereby avoiding scalping. However, the crown of a rapidly growing plant oftentimes will reach well into the mowing zone resulting in scalped turf. The photos on the left depict this phenomenon and demonstrate the excellent residual control provided by Legacy.

## Improved Overall Turf Quality

Just as turf maintenance equipment, fertilizers, and cultural practices have improved over the years to help improve golf course playing conditions, now Legacy improves turf PGR technology. Legacy helps you to meet the high expectations you have for your golf course by providing superior turf density, darker green color with reduced initial bronzing or discoloration, less scalping, and improved overall turf quality.



Creeping bentgrass fairway approach treated with Legacy and Primo MAXX®.

## Applications of Legacy

A multi-application program using Legacy provides growth reduction of perennial turfgrass species resulting in decreased mowing frequency and turfgrass clippings.

Applications of Legacy should be made to actively growing turfgrass. Spring applications should be made after resumption of active seasonal growth of turfgrass. The final application of the season should be timed a minimum of 4 weeks before the onset of inactive grass growth or winter dormancy.

Refer to **Table 1.** for rate recommendations for growth regulation of perennial turfgrass species.

**Table 1. Recommended rate ranges for growth regulation of perennial turfgrass species with Legacy using a multiple application program.**

Turfgrass Species	Early Spring/Late Fall Applications	Repeat Applications	
		Rate (fl. oz./A) <sup>2</sup>	Treatment Interval
<b>Cool-Season Turfgrasses</b>	Rate (fl. oz./A) <sup>2,3</sup>	Rate (fl. oz./A) <sup>2</sup>	Treatment Interval
Bentgrass (golf course fairway)	10 to 15 fl. oz./A	10 to 20 fl. oz./A	2 to 6 weeks
Bentgrass putting greens	5 to 8 fl. oz./A	5 to 10 fl. oz./A	2 to 4 weeks
Kentucky Bluegrass / Perennial Ryegrass Mixture	15 to 22 fl. oz./A	15 to 30 fl. oz./A	2 to 6 weeks
Perennial Ryegrass <sup>1</sup>	15 to 22 fl. oz./A	15 to 30 fl. oz./A	2 to 6 weeks
<b>Warm-Season Turfgrasses</b>			
Seashore Paspalum	10 to 15 fl. oz./A	10 to 20 fl. oz./A	2 to 6 weeks
Tifway Bermudagrass	10 to 15 fl. oz./A	10 to 20 fl. oz./A	2 to 6 weeks
TifSport Bermudagrass	8 to 12 fl. oz./A	8 to 16 fl. oz./A	2 to 6 weeks
Zoysiagrass	8 to 12 fl. oz./A	8 to 16 fl. oz./A	2 to 6 weeks

1 For perennial ryegrass overseeded fairways, applications should be delayed until perennial ryegrass is well established (three to four weeks after germination). Final spring application should be made a minimum of 4 weeks prior to expected bermudagrass green-up.

2 Higher rate ranges should be utilized for perennial turfgrass species maintained at higher mowing heights.

3 Use lower rate ranges during early spring or late fall when turfgrass growth and vigor are reduced.

## Dollar Spot (*Sclerotinia Homeocarpa*) Suppression by Legacy in Creeping Bentgrass

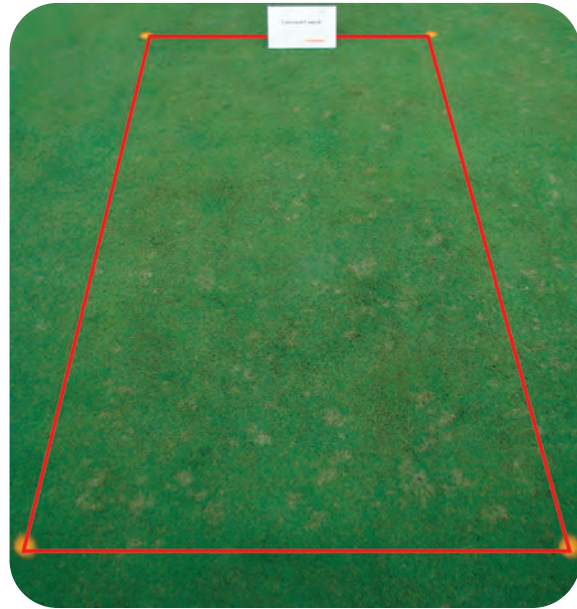
One of active ingredients in Legacy is from the pyrimidine class of chemistry which is structurally similar to pyrimidine fungicides that provide Dollar Spot control. Programmed applications of Legacy for turf growth suppression or for slowing the encroachment of *Poa annua* have also been shown to suppress Dollar Spot incidence in creeping bentgrass fairways, greens and tees. Research results have shown that Legacy applications at labeled rates and application intervals can significantly reduce Dollar Spot incidence and populations when compared to untreated control plots. Legacy should not be used to replace labeled fungicides for the control of Dollar Spot; rather, programmed use of Legacy may result in longer or improved control of Dollar Spot in conjunction with conventional fungicides, or delays in the appearance of Dollar Spot disease, thus leading to the potential for an overall reduction in annual fungicide use.

### Save Time and Labor with Legacy

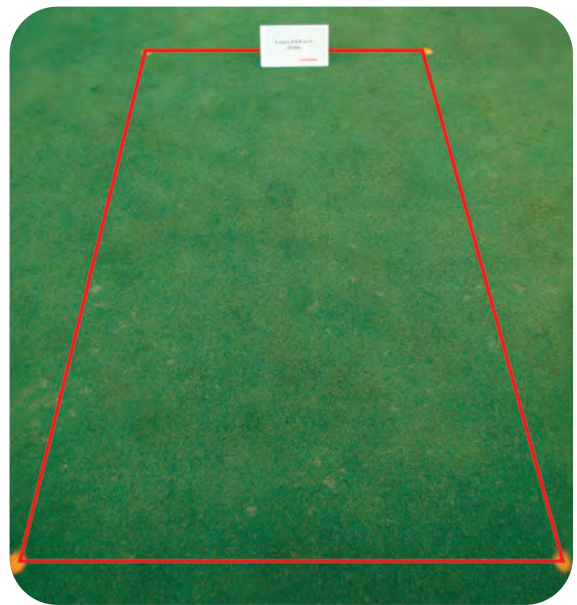
Using Legacy can reduce time, labor and fuel inputs into maintenance of warm and cool season golf course fairways. The unmatched growth regulation and extended residual control make Legacy a great candidate to reduce the inputs of mowing and maintaining fairways. Case studies have proved that programmed Legacy applications to golf course fairways can significantly reduce mowing frequency, clipping removal practices and most importantly fuel and labor associated with these activities.

Superintendents have found Legacy pays for itself after calculating the labor and fuel saved while on a season long fairway program—this means all the turf enhancement benefits of using Legacy are FREE.

## Dollar Spot Reduction with Legacy



Untreated



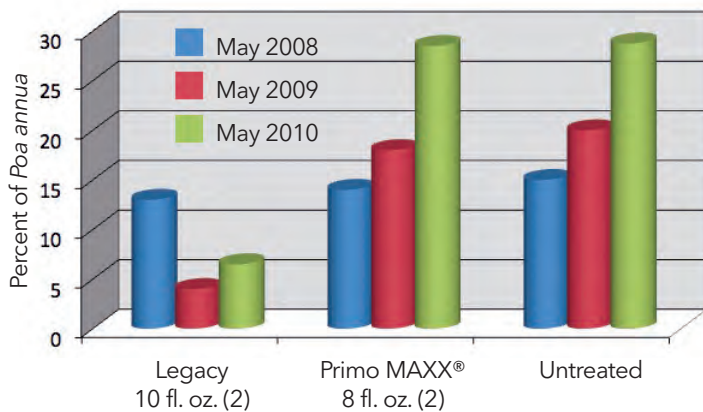
Legacy 8 fl. oz./A (2 weeks)

Legacy applied without any additional fungicide treatments reduced Dollar Spot compared to untreated plots in a 2009 trial on creeping bentgrass greens at North Carolina State University.

## Stop the Encroachment of *Poa annua* with Legacy

A growth regulation program using Legacy suppresses *Poa annua* in cool-season turfgrasses. Research has demonstrated that programmed applications of Legacy are very effective at suppressing *Poa annua* populations in cool-season turfgrasses when compared to applications of trinexapac-ethyl alone, which are shown to encourage *Poa annua* populations.

Percent *Poa annua* Cover - Creeping Bentgrass Golf Green  
May 2008 thru May 2010 Bigelow, 2009



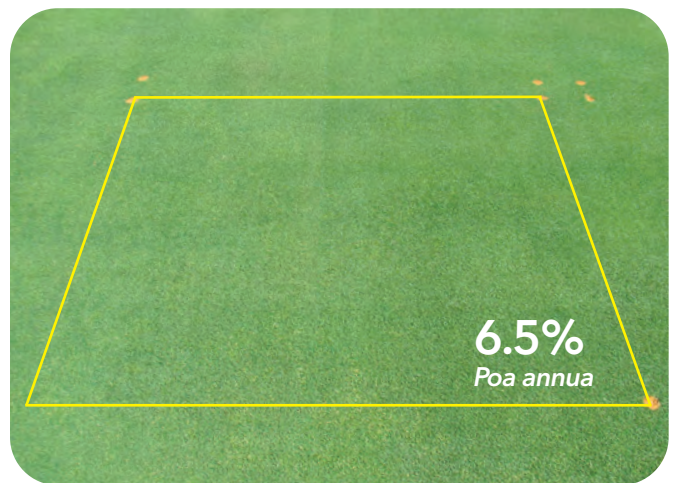
Percent *Poa annua* cover resulting from programmed biweekly applications of Legacy at 10 fl. oz./A and Primo MAXX® at 8 fl. oz./A at Purdue University from 2008 - 2010. Ratings in May 2010 show Legacy applications reduced *Poa annua* populations whereas Primo MAXX allowed *Poa annua* populations to increase.

For *Poa annua* conversion, users should consider programmed applications of Cutless® 50W or MEC alone. Cutless has been proven to be the premier product for superintendents wanting to shift the competitive advantage from *Poa annua* to the desired turfgrass species, and hence reduce their *Poa annua* populations.

## Discourage *Poa annua* with Legacy



Untreated



Legacy 10 fl. oz./A (2 weeks)



Primo MAXX® 8 fl. oz./A (2 weeks)

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**Legacy. The Next Generation of Turf Growth Regulation Technology.**

- Enhanced growth suppression
- Improved turfgrass color and quality
- Extended spray intervals
- Reduced "bronzing"
- Elimination of the "rebound" effect
- More uniform growth regulation on mixed turfgrass varieties
- Stops the encroachment of *Poa annua*
- Saves labor and fuel associated with mowing



Legacy is a registered trademark of SePRO Corporation. Primo MAXX is a registered trademark of a Syngenta Group Company. The synergy derived from the combination of Type IIA and Type IIB PGRs is covered under U.S. Patent No. 7,135,435. Always read and follow label directions. © Copyright 2018 SePRO Corporation. Printed in U.S.A. Revised 08/27/2018.

*The*  
**Stewards**  
*of*  
**Turf**