

PLANT GROWTH REGULATORS

EFFECTIVE USE OF PLANT GROWTH REGULATORS ON PUTTING GREENS

By Bill Kreuser, Ph.D.



Mowing is the most labor- and fuel-intensive practice associated with turfgrass management and is a major component of most golf course management budgets. As a result, turfgrass managers have tried to reduce mowing requirements for decades. USGA Green Section agronomists first reported hormone growth regulators could reduce turfgrass clipping yield in the 1940s (Comman and Bengtson, 1940). By the mid-20th century, cell division inhibitors such as maleic hydrazide and melfluidide were commercially available plant growth regulators (PGRs) for use on turfgrass. While these products were revolutionary, their use was still limited to low-maintenance turf because they can sometimes be phytotoxic. An article published in *The Bull Sheet* (anonymous, 1959) stated: "Ten years from now you will be able to sit on a lawn that needs no mowing and reach up to pick a normal sized peach from the low branches of a dwarf tree. This will be possible because

within 10 years we will have an 'anti-gibberellin.'" While the first part of that statement has yet to be seen, gibberellic acid (GA) inhibiting growth regulators have definitely changed how we manage fine turfgrasses. GA inhibiting PGRs reduce clipping yield, provide good year-round safety, and promote a number of secondary benefits ranging from increased leaf color to increased stress tolerance and reduced nutrient requirements. Today, GA inhibiting PGRs like trinexapac-ethyl, flurprimidol, and paclobutrazol are staples of putting green management programs around the world.

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USGA WEBCAST: PLANT GROWTH REGULATORS FOR TURFGRASS



DIGITAL COLLECTION: PLANT GROWTH REGULATORS ON GOLF COURSES

A new feature to the USGA Green Section Record in 2015 now includes an interactive digital collection of supporting materials. In addition to the monthly major article, each digital collection includes supporting articles, a photo gallery and videos that provide additional, relevant information on the subject. The collections can be viewed online in a user-friendly digital magazine format, saved as a PDF or printed. We hope you find this new feature to be an extremely useful resource.

[View The "Plant Growth Regulators On Golf Courses" Collection Now](#)



FORE THE GOLFER

"Is there anything that can be applied to turf that will eliminate the need for mowing?"

OUR EXPERTS EXPLAIN WHY PLANT GROWTH REGULATORS ARE A VALUABLE MANAGEMENT TOOL FOR SUPERINTENDENTS.

CLICK ANYWHERE TO VIEW

RESEARCH YOU SHOULD KNOW

Gene Markers For Creeping Bentgrass Heat and Drought Tolerance

THE USGA IS SUPPORTING SCIENTISTS AT RUTGERS UNIVERSITY TO IDENTIFY HEAT AND DROUGHT TOLERANCE MOLECULAR MARKERS IN BENTGRASS.

REGIONAL UPDATES

The USGA Green Section is divided into four regions staffed by agronomists who work with golf facilities on care of the golf course. USGA agronomists provide regular regional updates outlining current issues and observations from the field. Be sure to view updates from multiple regions as featured ideas, techniques and solutions to problems often apply to other parts of the country.



NORTHEAST REGION
Spring has officially arrived in the Northeast Region, and golf course superintendents are working hard to get their courses ready for the season. Learn more about superintendents' concerns and what's happening at golf courses near you by watching the videos in this week's regional update.
[Read More](#)



SOUTHEAST REGION
From dealing with localized dry spots and plant parasitic nematodes to managing plant growth regulator programs, spring can be a challenging season in the Southeast. The USGA agronomists offer some advice that can help you deal with springtime challenges.
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WEST REGION
Excessive organic matter accumulation can hinder bermudagrass recovery from overseeding and limit water infiltration and root health. Rather than combat this condition for several years, this video describes the fast, aggressive strategy one superintendent in Nevada employed to quickly improve soil conditions.
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CENTRAL REGION
Communities are beginning to shift the focus of water conservation efforts from indoor to outdoor areas, further scrutinizing the use of water on lawns and golf courses. Discover how you can get involved to ensure golf courses are part of the solution and not the problem.
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What's New From The USGA Green Section



Two new Green Section positions are posted on the USGA's Current Opportunities page. [View Now](#)



The GCSAA is collecting important data from superintendents nationwide regarding nutrient use and management. Everyone's participation is needed to help measure industry efforts to better demonstrate environmental stewardship and ensure the future of the game. This survey is the second phase of the Golf Course Environmental Profile (GCEP), which began March 17. The first profile, conducted from 2006-2012, established baseline information, but updated information is needed. The USGA, in partnership with the GCSAA, is asking for your facility's participation in this critical project. [View Now](#)

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