Fall Control Options for Annual Bluegrass

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STAY CONNECTED
and Gain Knowledge

After a rather challenging spring and summer season for the green industry, I reach out to you this autumn with optimism that the remainder of your 2015 season will be more relaxed and enjoyable. Many green-industry professionals were truly put to the test in 2015 with a slew of obstacles that included (but are certainly not limited to) winter injury, product recalls, lack of rainfall in May, insect pressure all season long, lack of funding for much-needed infrastructural improvements and poorly draining soils after copious amounts of rain in June and July, and the list could go on and on.

As one mentor of mine once preached to me, “It never gets easier.” I consider his wisdom to be very true to this day. As green-industry leaders, we will always be challenged in no matter what sector of the industry we work. My advice to all who may read my message today — stay connected, gain knowledge and believe in yourself.

Staying connected and gaining knowledge are two valuable benefits of being a member of the Pennsylvania Turfgrass Council. In addition to this quarterly magazine, the PTC offers several educational opportunities, including the Penn State Golf Turf Conference, Eastern PA Turf Conference, Western PA Turf Conference, Northeastern PA Turf Conference and Penn State Field Days. Please see page 8 for dates and locations of these upcoming events. Additional updates and accomplishments of the PTC and Penn State’s turf team can be found by following us on Twitter @PaTurf, Facebook (Pennsylvania Turfgrass Council) and our website (paturf.org). Don’t miss out on leading-edge research provided by our turf team at Penn State!

Finally, please take the time to share this publication with your friends and colleagues. Thank you for reading this update and for your continued support of the PTC. If the PTC or I can help you in any way this fall, please do not hesitate to contact the PTC office (814-237-0767 or info@paturf.org) or me (610-451-3229 or andrewd@berkshirecountryclub.org).

Andrew Dooley
2015–2016 PTC President
PTC Invites You to — BECOME A MEMBER! —

By joining the Pennsylvania Turfgrass Council (PTC), your club or company, or you as an individual, become part of an organization dedicated to promoting professionalism in all aspects of the turfgrass industry and support of the Center for Turfgrass Science at Penn State University.

- PTC provides educational opportunities for practitioners in all turfgrass-related industries.
- PTC provides grants and other support for education and research programs at Penn State University.
- PTC encourages future industry leadership by granting scholarships and awards.
- PTC acts as a liaison to the green industry by promoting open dialogue with government agencies, private institutions and the general public.

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Penn State Golf Turf Conference will once again be held between Tuesday, November 10, and Thursday, November 12, at the Nittany Lion Inn on the University Park campus. A full schedule of speakers will deliver the latest and greatest information about managing golf turf. Dr. Cale Bigelow, Professor of Agronomy at Purdue University, will be the featured pre-conference seminar speaker. Dr. Bigelow will discuss the economics of managing annual bluegrass vs. creeping bentgrass.

Additional speakers include USGA agronomists, university professors and industry leaders. Topics will range from pest management to tournament preparation to golf course architecture.

Our keynote session will feature a roundtable discussion on winterkill that has plagued many golf courses throughout Pennsylvania. Dr. Kevin Frank, Associate Professor and Turfgrass Extension Specialist at Michigan State University, will lead the winterkill discussion.

In addition to the lineup of education, we will once again host a complimentary Happy Hour on Wednesday following the announcement of the Pennsylvania Turfgrass Council’s Dr. George Hamilton Distinguished Service Award recipient. The Penn State Turf Club will also host its annual Turf Club Luncheon and be on site with a full inventory of Club merchandise to make completing your holiday shopping easy. State pesticide credits and GCSAA education points will also be offered.

We hope to see everyone there! Check http://www.cvent.com/d/srq5y2 for details and to register online.
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Fall Annual Bluegrass Control Options

By Jeffrey Borger, Senior Instructor in Turfgrass Weed Management, Penn State University

The widely accepted annual bluegrass control option of a post-emergence selective material applied during the growing season can be effective for the elimination of annual bluegrass (Photo 1). Many products are available for this strategy. It is commonplace to start applying materials during spring and conclude before the cooling fall months of the year. Today, the concept of fall-applied materials and pre-emergence strategies may have taken a back seat to the aforementioned. If annual bluegrass control measures were continued into the fall of the year, it may be possible to eliminate more of the population. Let’s explore some of these concepts.

The use of Class B plant growth regulators (PGRs) to convert a mixed sward to a more uniform stand of creeping bentgrass or perennial ryegrass is typical. Examples of Class B PGRs used to control annual bluegrass...
are flurprimidol and paclobutrazol. Remember that the Class F PGRs are any combination of PGRs and also are effective in the postemergence selective control of annual bluegrass. Extending these control options through the fall months has provided additional reduction of the annual bluegrass population.

If the Class B PGRs are stopped before fall, then the Class D PGR applications may be something to consider. A Class D PGR, ethofumesate, offers fall applications and has been found to control annual bluegrass. This product should be applied before the ground is frozen and possibly in the spring of the year after greenup, if needed. This product is not to be applied to greens. Ethofumesate should be applied twice, once in the fall and then again about one month later. The second application can be applied any time before the ground freezes. The timing of the first and second application is critical if bad weather is imminent. Hence, tank-mixing the second application of ethofumesate with a snow mold fungicide may be a possibility.

Annual bluegrass is a winter annual plant and can be more aggressive in cooler temperatures than either creeping bentgrass or perennial ryegrass (Photo 2). The annual bluegrass seeds present on the site will germinate and grow during the fall months. At this time, there can be many young or germinating plants that may not have a fully developed root system. Consider this plant’s developmental stage as an opportunity for the control of annual bluegrass. To expand on this concept of immature plants and germinating seeds, let’s consider some preemergence control options.

Several products are labeled for preemergence control of annual bluegrass. Just like any preemergence product, they must be applied prior to seed germination. Annual bluegrass seeds can germinate at any time of the year when conditions are favorable (Photo 3). Because annual bluegrass is a winter annual by definition, the majority of the seed should germinate in fall and produce seed in spring. It follows that the preemergence products should be applied in late summer or early fall. In the mid-Atlantic region, this date is typically just before September 1. Naturally, the cooling air and soil temperatures are the driving factors, and the application date should be adjusted for the specific region.

To consider using a preemergence herbicide for the control of annual
bluegrass, many things must be evaluated. Obviously, the product is important, as many materials may be labeled for application to a fairway and not greens. The longevity of the product after application should also be considered. The possible need for overseeding in the late fall or early spring may preclude the use of a preemergence. Products that prevent annual bluegrass seed from germinating also prevent creeping bentgrass and perennial ryegrass (and most cool-season grasses) from germinating. If a preemergence herbicide was applied to a site in fall, it may be necessary to break the barrier that prevented the annual bluegrass seed germination to allow the desirable seed to germinate if a spring overseeding is needed. Knowing the attributes of the preemergence product used is very important in your management of the site.

Once established, annual bluegrass can persist on a site for many years. The plant can produce viable seed every growing season, causing annual bluegrass infestations to continue. The combination of postemergence, fall-applied materials and fall-applied preemergence products can increase the window to control annual bluegrass on a site. If the site is newly established and has almost no annual bluegrass, considering a preemergence program may also be of value. This may not be the best strategy for a teeing area, since overseeding after the preemergence application most likely will be needed. Preemergence applications to fairways or roughs may be a consideration. If annual bluegrass is prevented from germinating in rough areas, seed will not be produced, and the chance for the seed dispersal into other areas of the golf course may reduce (Photo 4). Again, this concept applies to areas that do not already have an annual bluegrass population.

No matter the choices made to control annual bluegrass, they will need to be a part of the overall maintenance plan. Sound agronomic decisions to grow healthy turfgrass should be the foundation of the plan. The tactics for the control of annual bluegrass must be adjusted and integrated to achieve the best playing surface possible.

This article contains information on the use of plant growth regulators (PGRs) and herbicides for weed control in turfgrasses. However, labels constantly change. It is the responsibility of the reader to follow all directions and precautions shown on the label before use. PGRs and herbicides suggested for use are based on the information found on the label or research conducted at Penn State University. PGRs and herbicides will not always provide complete control. Neither the author nor the publisher guarantee or warrant published standards on any product mentioned, nor does the use of an active ingredient/product imply approval of that active ingredient/product to the exclusion of others that may also be suitable.
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Several field assessments have reported silicate (Si) depletion in shallow soil depths of intensively managed agricultural systems. Ca/Mg-silicate-based amendments are liming agents with calcium carbonate equivalency (CCE) ranging from 55% to 90%. Once absorbed by plant roots and deposited in cell walls, silicic acid has been reported to elicit wear tolerance and/or resistance to pathogens.

Our research objective was to quantify growth, nutritional and ball-speed responses of a creeping bentgrass ‘Penn G2’ putting green to six (6) split applications of Harsco Ca/Mg-silicate Excellerator or a pelletized dolomitic/calcitic limestone blend (1:1), totaling 50 lbs./1,000 ft² annually. Measures of canopy density/color, ball-roll distance, soil pH, acetic-acid-extractable soil Si, clipping yield and tissue nutrient concentrations were collected over the two-year study.

Field results showed that all amendment applications raised surface soil pH by 0.1 to 0.2 units. Described rates of Ca/Mg-silicates increased mean leaf Si by 0.23% to 0.29%, yet this greater leaf Si content had no influence on the bentgrass putting green mean vigor/growth, mean ball roll distance or mean canopy color/density over the experimental period. Leaf Si content was well correlated to soil-extractable Si in the surface 1 to 10 cm.

Update submitted by Max Schlossberg, Ph.D., Assoc. Prof. Turfgrass Nutrition, and Derek Pruyne, M.S. Agronomy ’14, Center for Turfgrass Science, Penn State University.

At Penn State’s Center for Sports Surface Research, we are excited about our current projects on both natural and synthetic turf. As more and more field managers are utilizing fraze mowing as a maintenance tool, we plan to study its effects on traction and other surface stability characteristics. We will also be continuing our research with cold-tolerant bermudagrasses, such as Patriot, Latitude 36 and Northbridge.

Graduate student Evan Mascitti recently completed his research on maintenance of sod for in-season re-sodding. His study evaluated the effects of nitrogen timing/rate, topdressing and mowing heights on sod strength and divot resistance. Evan successfully defended his thesis and is now employed by H&K Sports Fields, LLC, in his home state of Wisconsin.

We also have several ongoing studies on synthetic turf baseball systems, and we continue to evaluate traction on both natural and synthetic turf. The traction database on our website (ssrc.psu.edu) has been updated and now includes traction levels of over 40 shoes. Our website also includes links to scientific research related to many “hot-button” issues in sports turf and serves as a great resource for parents, administrators, etc., who have questions about the safety and performance of synthetic and natural turf.

Update submitted by Tom Serensits, Manager, Center for Sports Surface Research, Penn State University.

To date, 30 studies have been conducted in 2015 that focused on either broadleaf or grassy pre- or post-emergence control. Included in some of these studies were evaluations of plant growth regulators (PGRs). I continue to teach and develop new methods of teaching. I teach 12 classes (27 credits) in total in the four-year Turfgrass Science major, in the two-year Golf Turf Management Program and for the World Campus.

Update submitted by Jeffrey Borger, Senior Instructor in Turfgrass Weed Management, Penn State University.
Jon Schriner (B.S. ’07) is now the superintendent at Butler’s Golf Course in Elizabeth, Pennsylvania.

Brandon Crim (Cert. ’09) is now the superintendent of Boise Ranch Golf Course in Boise, Idaho.

Congratulations to Turfgrass Science students Bill Ellinger and Chris Marra, recipients of the 2015 Pennsylvania Turfgrass Council scholarships!

Recipients of the 2015 PTC scholarships: Chris Marra (left) and Bill Ellinger (right), with Tom Bettle, Penn State Turfgrass Research Facilities Manager.

Congratulations to these undergraduate and associate program students who graduated this past spring semester!

Associate’s degree in Turfgrass Management
- Benjamin Anderson
- Ronald Carroll
- David Etter
- Jay Mullen
- Brady Pnacek
- Richard Williams

Bachelor’s degree in Turfgrass Science
- Michael Bischoff
- Steven Brown
- Justin Eckert
- William Ellinger
- Elliott Garrison
- Jared Hafer
- Andrew Keller
- Mason Kreider
- Blake Kummer
- McCade Lynch
- Christopher Marra
- Brett Niner
- David Ochs
- Kyle Patterson
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- Jonathan Swartz
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Consider Attending STMA National Conference in San Diego

By Dan Douglas, KAFMO President and Head Groundskeeper, Reading Fightin Phils

A few years ago, the Reading Phillies ran a marketing campaign asking “How Do You Fan?” Do you come to a game for the baseball? Food? Entertainment? Quality time with family and friends?

With that in mind, I’ll ask, “How Do You Conference?” Many of you will attend STMA’s 27th Conference and Exhibition in San Diego in January for the outstanding educational seminars. The highlight for others will be the tours of facilities. Many will take the time to sightsee a beautiful city. Personally, I’m going for the golf and to socialize with the friends I made by going to this conference for the past two decades.

There are many reasons to attend the conference. All of them are good. “How Do You Conference?”

Enter KAFMO’s “Field of Distinction” Award Program and Enhance Your Reputation

By Dave Anderson, KAFMO Awards Committee Chairman and Hempfield SD

It’s been my pleasure over the past several years not only to present the Field of Distinction Awards at the annual February KAFMO Conference but also to notify the winner(s). It has been especially satisfying to see how the quality of the submissions has improved over the years.

When judging each submission, the primary focus of the committee is to determine how the field has been improved. Yes, an aesthetically pleasing field is important, but not as important as having a safe, playable field, no matter the level of play. Sometimes, we hear that small school and community fields have little chance of winning the Field of Distinction because they do not have the budget or the resources that larger schools, colleges and even professional fields have. However, the committee does take into account what a field manager must do with limited resources and manpower.

Coming from a public-school situation, I am very aware of the challenges that a public school or community field manager faces when readying a field for a game or a season. I feel it is important to recognize those managers who have found
creative ways to meet those challenges. It is also very important in the eyes of the committee that Field of Distinction honorees show improvements that have been achieved through the education resources made available at the Conference and Field Days and through information available on our website at www.kafmo.org.

I would encourage any field manager who has thought about applying for Field of Distinction but hasn’t, to seriously consider submitting his or her field for the 2016 awards. Winners receive a commemorative plaque, KAFMO jackets and local media attention.

One winner’s story
Past Field of Distinction Award winner Brent Seville from McConnellsburg HS says, “I feel as though the Field of Distinction ‘put us on the map’, so to speak. We have had at least three PIAA state playoff games held at our facility since receiving the award. I have been at the school district for 15 years and previously had been told that we never were considered as a state playoff spot in the past. We are constantly getting positive compliments about our complex, from outsiders and local community members. We are very grateful to have received such a prestigious award, which is something we’ve all added to our resumes as well.”

TIPS: Training, Ideas, Professionalism, Solutions
Keeping Grass Between the Hash Marks through November

By Keith Lehman, Pine Grove Area SD

I’ve always felt the key was to have the turf stand as healthy as possible going into the season, and that process starts the day after the last event the previous fall. It is an ongoing cycle. I feel core aeration after the fall season (and in early spring, if possible), proper mowing practices to promote a thick stand, irrigation when necessary to promote deep rooting, a solid fertilizer maintenance program including weed and insect control and (as Dr. Andy McNitt says) seed–seed–seed are all important to keep a high percent of living turf between those hash marks.

I do not screen-drag the cores in the fall aeration process but will include screening, seeding and fertilizing in the spring process. We maintain our athletic field turf height two to three times per week during the main growing season and do not want excessive clippings on the stand after mowing. If necessary, a second opposite direction cut will be completed.

When irrigation is necessary, a deep watering will take place. Soil test results every three to four years are critical in putting together my fertilizer program. Observation while mowing assists me when determining to include weed and insect control in the program.

Seeding takes place during the spring aeration process, if completed, or I will spot-seed with compost coverage. I also try to seed between the hash marks before every Friday night football game. Add these maintenance practices to some “good luck” that the scheduled events that take place will permit recovery and that events do not take place during excessive moisture conditions. Include self-pride when performing your duties, and there should still be green between the hashes in November.

With the fall sports season now in full swing, one of the last things you might think a grounds manager would be concerned about would be being spring sports. Actually, October is an excellent time to get your baseball and softball fields ready before the onset of winter. All too often, schools attempt to do their infield work for baseball and softball in late winter or early spring when field conditions are too wet and air temperatures too cold. These conditions may lead to a delay in getting a ball field ready for spring activities.

October is usually drier and warm enough for edging and cutting “lips” that form where the infield meets the grass fields, grading the infield and doing spot-seeding if necessary. Take advantage of the great October weather, so you can put your ball fields “to bed” for the winter, knowing that they will be ready when it comes time to “PLAY BALL.”
Calendar of Events

November 10–12
Penn State
Golf Turf Conference
Nittany Lion Inn
State College, PA

January 5–6, 2016
Eastern Pennsylvania
Turfgrass Conference
Valley Forge Casino Resort
King of Prussia, PA

January 19–22, 2016
STMA Conference
and Exhibition
San Diego, CA

January 28, 2016
Northeastern PA Turfgrass
Conference & Tradeshow
Woodlands Inn and Resort
Wilkes Barre, PA

February 6–11, 2016
Golf Industry Show
San Diego Convention Ctr.
San Diego, CA

February 19, 2016
20th Annual KAFMO
Athletic Field Conference
Holiday Inn Harrisburg/Hershey
Grantville, PA

February 22–25, 2016
TPI International Education
Conference & Field Day
(Turfgrass Producers Int'l.)
Hyatt Regency Houston
Houston, Texas

February 23–25, 2016
Western PA Turfgrass
Conference & Tradeshow
Doubletree Hilton
Cranberry, PA

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