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spring 2016 / www.ohiolawncare.org

OLCA NEWS

IT PAYS TO BE GREEN



MARK YOUR CALENDAR!
OLCA FIELD DAY
OARDC, The Arden Shisler Center,
Wooster, OH

The Ohio Lawn Care Association will hold its 14th Annual Northeast Ohio Lawn Care Seminar and CEO Forum on Thursday, June 16, 2016, at The Ohio State University/OARDC, The Arden Shisler Center in Wooster, Ohio.

OLCA invites those professionals involved in lawn and landscape maintenance to attend. Registration will begin at 8:30 am and continuing education sessions will begin at 9:45 am with station rotations set for 11:30 am. This year, the first station will begin before lunch. The final station will conclude by 3:00 pm.

A complete list of continuing education sessions and online registration is available at www.OhioLawnCare.org. If you have any questions, please contact OLCA at 800-510-5296.

A MESSAGE from your President, Mark Slavik, Residex/Turfgrass



Spring has officially begun in Ohio. I hope everyone has gotten off to an early start and I wish you all a successful and profitable year for 2016.

OLCA will continue to focus on the needs of its members as well as providing benefits and value to our members and the industry. As President, I am looking forward to continued support from our Executive Director, Mark Bennett, and our entire OLCA Board and membership to help guide our direction for the future.

I would like to thank Gina Zirkle for her service as President to OLCA in 2015. She has been an excellent leader and will continue to provide her valuable services to the OLCA Board.

As we begin to look towards the future, Mark Bennett and the OLCA Board members have been working hard on making improvements. Our website has been updated with a whole new look and is much easier to navigate. Podcasts have also been added which are geared towards subjects that pertain to our industry.

As part of our commitment to the lawn care industry, below are even more added benefits:

Workers' Compensation Group Rating Program

The average member saves \$2,500 a year on their annual workers' compensation premium.

Technical Training Programs

Attend an OLCA Field Day geared toward lawn and landscape professionals while earning ODA Pesticide Applicators license re-certification credit.

Business Opportunities

Improve your lawn care company's bottom line by joining OLCA and taking advantage of small business tools.

FROM YOUR Executive Director, Mark Bennett, CAE, IOM



The warmer weather will soon be here to stay for a while. Hopefully your business is busy keeping lawns and grass across the state lush and green. As part of your summer activities, we invite you to mark your calendars and plan to attend OLCA's two outdoor Field Days.

The first will be held on June 16 at the Ohio Agricultural Research and Development Center at the Ohio State University Wooster campus. Online registration is open now and space is limited, so reserve your spot today. The second will be on August 11 at the Ohio Turfgrass Foundation Research & Education Facility at OSU in Columbus. These days are a great opportunity to learn the latest in lawn and pest research as well as help grow your business and enhance your company's lawn care operations and services. We've changed up our program this year to offer you additional stations. Plus you can earn pesticide recertification credit.

We at the office have been busy, in addition to planning for Field Days, updating the OLCA website and adding new member benefits like the "Spotlight on Business" series of videos to help you improve your company's bottom line. We have also worked closely as a member of the Ohio Professional Applicators for Responsible Regulation (OPARR) on legislation which has been introduced in the Ohio General Assembly which may have a direct effect on your daily business operations.

Did you know that OLCA members who are part of the Association's Worker Compensation Group save an average of more than \$2,500 annually on their workers compensation premium? That's like earning \$20 back for every dollar you spend on your annual OLCA membership dues. Contact our office for additional information.

Be sure to mark your calendar for November 12 where OLCA members will help beautify the hallowed grounds at the Dayton National Veterans Cemetery in Dayton and the Ohio Western Reserve Cemetery in Rittman. This annual event is a fantastic way for the lawn care industry to give back by winterizing the grounds of the cemeteries with fertilizer. This is OLCA's community outreach project and is reliant upon volunteers just like you.

As always, feel free to contact me at 614-501-1100 x 3187 or mbennett@offinger.com with your questions or concerns.



NEW WEBSITE – The new Buckeye Yard and Garden Line (BYGL) website for 2016 is now available

Tim Rhodus and Bud Witney, Horticulture & Crop Science, OSU

On the home page you will see many interesting ideas related to navigation, presentation and visual identity.

PHOTOS – The top banner is a rotating set of timely graphics linking to selected stories while along the bottom of the site is a visual navigation to each of the most recent articles.

CONVENIENCE – The main menu enables users to access anything in just one click. Learn about: usage permissions, profiles of ENLT Team members, browsing articles, searching current and past articles, receiving the newsletter and supporting the team.

WHAT'S NEW – The center column is designed to maximize the impact of "new" articles. Readers are presented the title, lead photograph, approximately 500 words and a link to Read more.

QUICK SCAN – The right column enables users to scan the most recent additions to BYGL - five most current articles for each category. BYGLosophy items are randomly presented on the upper right side and drawn from a collection of several hundred quotes preserved from the past twenty years.

SEARCH AND EVENTS – The left column offers a quick search of the entire site, a listing of upcoming events, and a quick listing of ALL articles under each category.

MOBILE FRIENDLY – Not visible but very important to the readers of BYGL is the responsive nature of the layout. The site will automatically adjust the menu, the arrangement of content and the size of the graphics when accessed from a mobile browser.

Subscribing to the BYGL – Learn more about these options.

- There are numerous options for receiving the BYGL:
- **Browse** the website each day to catch the new stories being created by the team of BYGL writers.
- **Subscribe** to the weekly BYGL email containing complete articles and delivered each Monday morning.
- **Coming soon - BYGL Alert!**, a new option for receiving an email message as soon as a new article is published

Build-A-BYGL

1. This **NEW** option for 2016 allows you to create a custom newsletter by selecting

BYGL articles published between any two dates of your choosing. The resulting newsletter will contain: **the full text for each article but none of the photos will be displayed.** This option maybe ideal for those who want "just the story and not the photos."

2. The second option is to create a custom newsletter that shows an **opening paragraph for each article and a leading photo.** This option maybe ideal for those who want a colorful photo and just an introduction to the article.

Printing

- When you view a single article, click on the **View PDF** link and print.
- When you Build-A-BYGL, print the resulting newsletter or save as a PDF for sharing with others using your browser.
- When you receive the weekly email, print from your email software.

We hope you enjoy the new site, while at the same time continuing to receive the latest and greatest information from the ENLT Team that you have been enjoying for over 20 years. Be sure to let us know what you like about the BYGL.



A GRATEFUL EMBRACE

On November 12, OLCA, ONLA and the Ohio Western Reserve Cemetery in Rittman, OH will partake in the annual community service of beautifying the hallowed grounds at the Dayton National Veterans Cemetery in Dayton, OH and Ohio Western Reserve Cemetery in Rittman, OH.

RSVP to attend by visiting the OLCA website at www.OhioLawnCare.org and registering online. Questions? Contact Lori Landry at 800-510-5296, ext. 3351.





Ohio Lawn Care Association Lawn Care Technician of the Year Nomination Form

Mail your completed nomination form and required documentation by November 14, 2016 to:
OLCA Lawn Care Technician of the Year • 1100-H Brandywine Blvd • Zanesville, OH 43701 • Fax: 740-452-2552

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Rules and Regulations:

- Must be a member company of OLCA
- Must be recommended by company owner, manager or supervisor
- Can only win the award one time
- 1 employee submission per company
- Must have proof of State of Ohio License
- Minimum 2 years experience

Nominated By:

Company Name, Person and Title _____

Name of Manager (if nominating self) _____

Company Address _____

Company Phone _____

Applicators Name, Years of Experience _____

Applicators License _____

Describe why you think this person deserves the honor and recognition from his/her peers as Ohio
Lawn Care Technician of the Year? (Leadership, Customer Relations, Knowledge of Job, Job Performance, Problem Solving)

Greatest Achievement? _____

Best Customer Comment: _____

Attach any customer letters if available.



LAWN CARE TECHNICIAN OF THE YEAR – Todd Hatcher



Nominate someone today for Lawn Care Technician of the Year by visiting the OLCA website at www.OhioLawnCare.org under the Membership tab and click on Lawn Care Technician of the Year. Nominate an Applicator online or print and return the nomination form by November 14, 2016.

The 2015 Ohio Lawn Care Association Lawn Care Technician of the Year was awarded to Todd Hatcher of Leisure Lawn, West Carrollton, Ohio. Todd was presented the award during the OLCA Annual Meeting on December 10, 2015 at the Columbus Convention Center.

For a complete listing of past recipients, visit the OLCA website at www.OhioLawnCare.org. Nominate someone for 2016. An application is located in this issue and also available on the OLCA website.

14TH ANNUAL NORTHEAST OHIO LAWN CARE SEMINAR: Thursday, June 16, 2016 The Ohio State University OARDC, The Arden Shisler Center

Everyone involved in lawn and landscape maintenance is invited to this informative event. To allow for hands-on instruction and personal interaction, registration will be limited to the first 200 participants. The group will be divided into sub-groups that will spend 30 minutes at each station. The format allows for hands-on instruction followed by questions and answers. The seminar will feature presentations covering the following topics:

8:30 am – **Registration**

9:30 am – **Welcome – Value for Your OLCA Membership?, Legislative/Regulatory Update, A Grateful Embrace**, OLCA President Mark Slavik

9:45 am – **Bees and Pollinators (& Other Insect Challenges)**, Denise Ellsworth, Program Director, Dept. Entomology, (ODA Core 0.5 hours)

10:20 am – **Pesticide Update: Proper Use, PPE, Following the Label, the Ohio Law and Q&A**, Jim Belt, Ohio Dept. of Agriculture, (ODA Core 0.5 hours)

10:55 am – **Ride-On Applicator Equipment Best Practices, Z-Spray** (ODA Core 0.5 hours)

11:30 am – **Station #1 Tree & Shrub Pest Management and Update**, Nancy Taylor, Director, OSU Plant and Pest Diagnostic Clinic, (ODA Category 6A, 0.5 hours)

12:00 pm-12:40 pm – **Lunch**

Station Rotation Times: 12:45-1:15; 1:20-1:50; 1:55-2:25; 2:30-3:00

Station #2 – Effective Use of Adjuvants and Herbicide Combinations for Summer Weed Control, Dr. Ron Calhoun, Residex, LLC (ODA Category 8, 0.5 hours)

Station #3 – Lawn Weed Control – Identify, Manage and Product Update, Dr. David Gardner, Department of Horticulture & Crop Science, OSU (ODA Category 8, 0.5 hours)

Station #4 – Supplier and Equipment Showcase, Vendors provide a five minute highlight of something “new” or of interest.

Station #5 – Lawn Diseases and Problem Diagnostics, Joe Rimelspach, Department of Plant Pathology, (ODA Category 8, 0.5 hours)

2:00 pm-4:00 pm – **Ohio Department of Agriculture Pesticide Applicators License Testing** – If you are planning to take the Pesticide Applicators Licensing Test, you need to schedule with the ODA by calling 800-282-1955 or online at www.ohioagriculture.gov. Select Regulatory Programs, and then Schedule an Exam. You must bring a photo ID with you to the test.

Registration is available online at www.OhioLawnCare.org or by contacting OLCA at 800-510-5296.

MEET DR. ZANE RAUDENBUSH



Hello Everyone! My Name is Zane Raudenbush and I was recently hired as the new Coordinator of the Turfgrass Management program at the Ohio State Agricultural Technical Institute (ATI) in Wooster.

This article is meant to give you a little background about myself and my goals for the turfgrass management program at ATI. I didn't always aspire to be a turfgrass scientist, but I had an interest in turfgrass at a young age. I grew up in Port Allegany, a small town in northwest Pennsylvania. Unlike most of the towns in my area, Port Allegany had a nine-hole golf course where my friends and I spent our summers playing countless rounds of golf. When I was 14, the owner of the course asked if I would be willing to wash golf carts and fill water coolers in exchange for a student membership. After several weeks of washing carts, I was offered a part-time position on the grounds crew under the Superintendent, Josh Ayers.

Josh was a hidden gem. He had a degree in turfgrass management and plenty of experience at top conditioned golf courses; a pretty rare occurrence in my neck of the woods. I was one of Josh's two employees, so there were plenty of "teachable moments". Regardless, Josh was a great mentor and encouraged me to consider a bachelor's degree in turfgrass science.

After visiting several colleges, I decided to attend Rutgers University in New Jersey where I met Dr. Richard Hurley. From the moment I met Rich, he emphasized how important it was to start building a "network", and suggested I gain experience at higher-end golf courses. He put me in contact with John Zimmers, golf course Superintendent at Oakmont Country Club. The day after my high school graduation in 2004 I moved to Oakmont, Pennsylvania, and began working

on the grounds crew at Oakmont Country Club, where preparations were underway for the 2007 US Open.

Upon graduation, I worked as an Assistant Superintendent at Bayonne Golf Club and West Shore Country Club, but in 2010 I decided to pursue a master's degree at Kansas State University under the direction of Dr. Steve Keeley. My research focused on the efficacy and volatility of broadleaf weed herbicides when applied to lawn-height turfgrass. Steve and I produced two refereed journal publications from this project, but more importantly, it developed my passion for turfgrass research.

As I neared the final stretches of my master's degree, Steve encouraged me to pursue a doctoral degree at Kansas State, and allowed me to research a topic of my choice. We tossed around several ideas, but always arrived back at silvery-thread moss in putting greens. I battled with silvery-thread moss at Bayonne Golf Club and knew very little research existed.

Lastly, I can't begin to tell you how grateful I am for the opportunity to teach and mentor the next generation of turfgrass managers at ATI. My goal as the coordinator of the program is to help train and prepare our students for a successful career in the turfgrass industry. The mission at Ohio State ATI is to learn-by-doing, and our students will do just that! Graduates of ATI will be required to master complex concepts, but more importantly, they will have the ability to apply these concepts to real-world scenarios. This hands on approach is only possible because of the unique facilities offered at Ohio State ATI, which allow us to provide real-world training that is often difficult to achieve within the confines of traditional classrooms.

Additionally, I want our students to know there are employment opportunities with sod producers, sports field managers, park managers, lawn care operators, equipment and supply distributors, golf courses, and many more!

I look forward to meeting many of you.

INSURANCE COMPLIANCE FOR OHIO LAWN CARE LICENSEES

Richard P. Bersnak, Vice President
of Commercial Sales and Business
Development, The Keenan Agency, Inc.

The newly revised statute effective May 5, 2016 provides clearer guidance for Lawn Care Operators in Ohio, however there are still many considerations for the individuals and entities who are obligated to carry coverage required by the statute. It is important you make sure your insurance agent clearly understands how important this coverage is for your business. Failure to have the right coverage in place when a random visit from a field inspector occurs, when a claim is incurred or when your insurer will not pay for your customer's damaged lawn will be your businesses worst nightmare.

Here are the basics you need to understand:

You are required to carry Commercial General Liability insurance which includes Premises and Operations coverage on an occurrence policy form. This terminology is (or should be) understood by any licensed Property and Casualty insurance agent in Ohio. In addition, the policy must provide coverage for damage to a customer's yard as a result of your work. The term your work is also included in every standard General Liability policy however, your work is excluded from all General Liability policies unless your insurer is willing to remove the exclusion for an additional premium. Some insurers will provide this endorsement however most will not. Insurers simply do not want to guarantee your work – they feel that doing so makes your liability policy a Warranty.

An alternative way to provide coverage for your work is to purchase a Contractors Pollution Liability policy that covers your work and the resultant damages caused by the application of fertilizers, herbicides or pesticides or any other form of chemical. Pollution Liability policies are designed to cover liability incurred by contractors who use any form of pollutant in their operations. Think of painting contractors using bulk quantities of paint on commercial buildings, industrial weed control or right of way contractors, pest control services or any other type of commercial contractor using chemicals in their day to day operations. Insurance policies are not usually specific to any one form of pollutant. They use a very broad definition when describing a pollutant as opposed to naming specific chemicals.

Professional Liability

The individual or business entity must also purchase

Professional Liability if the licensee uses pesticides in its service program. Professional Liability would come into play if a customer was given the wrong diagnosis, incorrect advice regarding an appropriate product to be used on a property, the wrong property was treated, improper mixing or formulation of products. The failure to read product usage instructions on the instruction label could also lead to a claim when your work was not the cause of the claim; it was the technician's error by not reading the manufacturers' instructions.

Professional Liability coverage is written on a different type of policy form referred to as Claims Made. Professional Liability policies pay claims based on when the event occurred, the effective date of the business' first claims made policy (the first effective date) and when the actual claim was reported to the insurance company. In other words, for Professional liability to be effective you must keep the coverage in force continuously from year to year in order to have coverage for mistakes committed in prior years but reported in the current policy year. Doctors, Attorneys, C.P. A.'s and most other types of professional service companies will typically carry claims made coverage. Think of an accounting firm who makes a huge error in a tax return or financial statement for a client. The client has to re-file its returns for 3 or 4 previous years. The accountants could be liable for the business' penalties, interest and the cost to have another accountant clean up the mess. Think of the effect this could have with other business relationships such as banks, customers or regulators.

This sort of coverage can be very difficult to understand, especially if it is not clearly understood by your agent. If he or she cannot explain it well, they obviously do not understand it either. The retroactive date is very important to maintain from year to year. It should always be the policy effective date for the first year you purchased claims made coverage.

Tips for purchasing the right coverage:

1. Commercial General Liability policies can be endorsed to cover what is referred to as Contractors Professional Liability for a reasonably small premium. This coverage is probably worthless if the basic policy still excludes your work. In addition, depending on the complexity of the endorsement, there could also be a Pollution Exclusion in the policy or an endorsement that negates coverage.

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2. Certificates of Insurance are not the same as your policy language. Regulators and the insurance industry are in agreement for the most part that a Certificate of Insurance only outlines limits, dates and types of coverage. When a claim is presented, it is the policy language that determines what is or is not covered. An agent does not have the authority to determine whether a policy will respond to a claim.
3. Deductibles for your work claims can be on a per claim basis or on a per occurrence basis.
 - a) If your coverage has a per claim deductible you will have to pay a deductible for every customer who makes a claim against you. If two of your techs filled their tanks with bad product (or the tanks were sabotaged) and unknowingly treated 40 lawns that day, damaging them all to varying degrees, you could be facing 40 individual claims. If your deductible was \$1,000 per claim, you are potentially looking at \$40,000 in claims costs plus all of the other headaches that go with situations like that.
 - b) If your coverage has a per occurrence deductible and the same situation previously described occurred, you would be looking at one \$1000 deductible for the entire occurrence. A substantial difference for any business.
4. Make sure you understand the importance of the retroactive date found in every professional liability policy. If you switch insurers and they will not honor your original retroactive date you are giving up a substantial amount of coverage in the future. Current claims made policies will respond to prior acts if your coverage has been in place continuously since your retro date and reported in a timely manner.

Other considerations regarding Lawn Care businesses

Commercial auto policies exclude the clean-up costs resulting from a collision, upset or other damage to the vehicle or tanks. Haz-mat contractors can charge upwards of \$30,000 for a serious spill clean-up. This coverage is readily available and most insurers make a reasonable charge for this endorsement. Personally owned trucks you use in your business and insure under your personal policy will not usually pay for pollution related clean-up costs.

Businessowners policies will pay some premises pollution clean-up costs at your business location which are a result of a fire, windstorm or other outside peril in varying amounts typically up to \$25,000. Other claims due to poor containment, diking, wicking into common walls for example may not be covered due to the policy's pollution exclusions. Read your policy exclusions and consult with your agent especially when your product inventories are high in season.

Summary

The clarification of Ohio Administrative Code rule 901:5-11-07 regarding Financial Responsibility for Pesticide Businesses is new territory for everyone involved.

Insurers who have not provided the coverage (for your work) in the past are still deciding whether to provide coverage under the rule clarification. The insurers who have modified or endorsed their policies to provide the coverage are probably not experienced in handling new claims covering a customer's damaged lawn. Specialty pollution liability underwriters who have provided this type of coverage for years need to familiarize themselves with the Ohio statute to make sure their policies will respond. These underwriters will in all likelihood be able to include Professional Liability for pesticide applicators.

If you are doing business with an agent who does not understand your business, the services you provide or the statute, it is important that they realize that you must have the right coverage in order to protect your license. Remember that information provided on a certificate of insurance is just simply an outline of limits, type of coverage and policy dates. It does not guarantee that a claim will be paid. Every incident is different, and the coverage you purchase can vary from insurer to insurer and agent to agent.

Finally, if you are not comfortable with the answers you are getting, ask for a copy of a sample policy or related endorsements to review yourself.



LEGISLATIVE UPDATE

Belinda Jones, OLCA Lobbyist

ODA FINANCIAL RESPONSIBILITY RULE ENACTED

As reported in prior articles and emails, the Ohio Department of Agriculture (ODA) and the Joint Committee on Agency Rule Review (JCARR) has finalized the Financial Responsibility Rule (a.k.a. the "insurance rule"). The need for change in this rule is that over the last couple of years, in certain circumstances, where an applicator filed an insurance claim, they were surprised to learn that their policy DID NOT cover errors made on the client's actual property (however, it would have covered problems with adjacent properties in the case of drift).

Over the last couple of years, ODA has held numerous interested party meetings with a variety of stakeholders including OLCA. While OLCA's board stayed "neutral" on the proposed changes, they were engaged in the process and urged the involvement of a few prominent green industry insurance providers.

Here is a link to the new rule: http://www.agri.ohio.gov/public_docs/ProposedRules/2016.02.05%20-%20AMR%20-%20Pesticide%20Insurance%20FINAL.pdf

Not sure of your coverage? Contact your insurance provider today!

MEDICAL MARIJUANA BILL PASSES THE OHIO HOUSE

In spite of a flurry of floor speeches using words like "reluctant, concerned, and doubtful", the Ohio House of Representatives passed HB 523, the "medical marijuana bill". If ultimately signed into law, HB 523 would legalize marijuana for medical purposes in Ohio. Even with all of the doubt expressed in House floor speeches, many of the proponents of the bill said they were swayed by personal stories and the feeling that the lawmakers needed to lead on the issue, not fall behind as an outside group writes the rules into Ohio's Constitution.

Predictions are that HB 523 (Huffman) will make it through the Legislature by the time lawmakers break for the

summer. Rep. Kirk Schuring (R-Canton), who led the select committee process, said he expects the Senate to pass it with minimal changes.

Sponsor Rep. Steve Huffman (R-Tipp City), the sponsor of the bill, indicated that the process behind the bill was "methodical and well investigated". After over 22 hours of testimony from more than 100 witnesses, HB 523, although "not perfect" is a product that the select committee has not taken lightly.

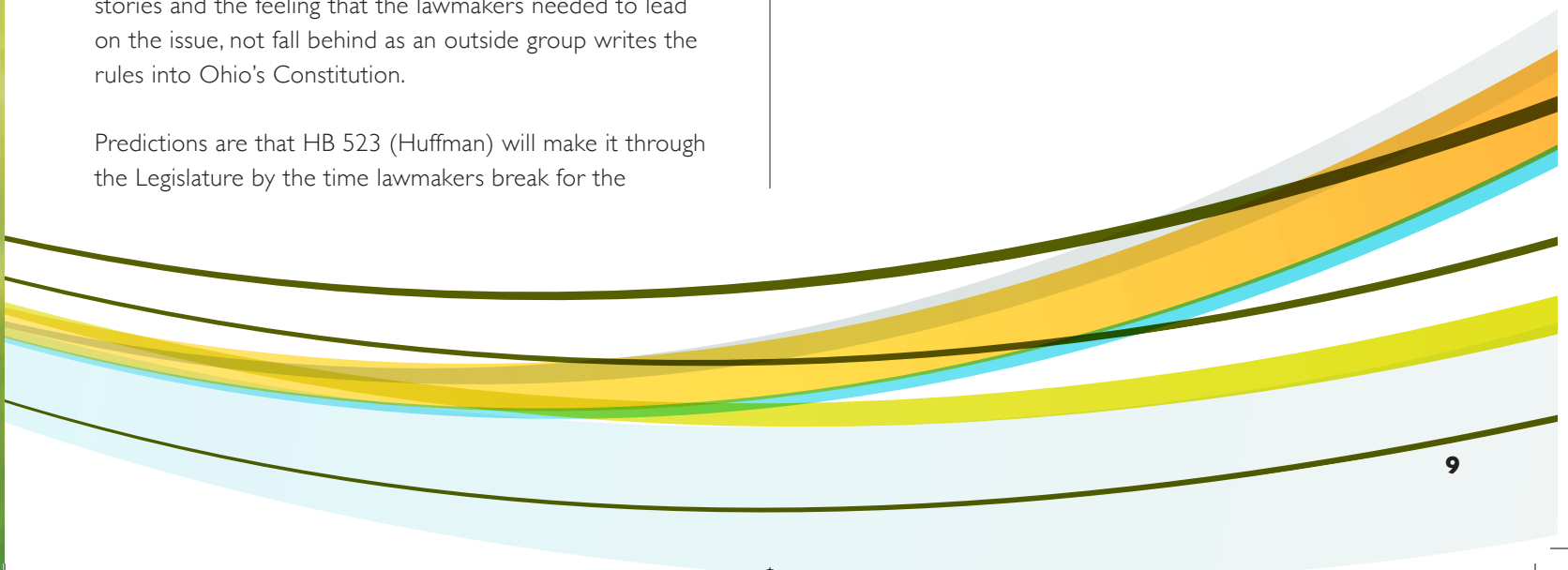
Additionally, proponents repeatedly concurred that this is an issue that should be solved by the Legislature, not on the ballot. "We were elected to lead, not be led down the row with a constitutional amendment that we will never be able to change," Said Huffman.

TURFGRASS DAY AT THE CAPITAL

In accordance with state law adopted a few years ago, turfgrass professionals from individual companies and organizations like OLCA, OTF, OPARR, Sports Turf and the various local chapters of Golf Course Supt Assn will be reminding members of the Ohio General Assembly that May 22-28 is Turfgrass Week in Ohio.

While in past years, we have hosted a carnival like atmosphere on the state house lawn, this year we will be delivering mugs and a fact sheet to all 132 members of the Ohio House and the Ohio Senate.

If you would like a copy of the fact sheet so that you can include it in a personal letter to your legislator, please contact Belinda Jones at bjones@capitol-consulting.net.





BROADLEAF WEED CONTROL UPDATE

D.S. Gardner and J. R. Street, Dept. of Horticulture and Crop Science, The Ohio State University

Portions of this article originally published in Turf Magazine, <http://www.turfmagazine.com/> or Sportsfield Management Magazine <http://www.sportsfieldmanagementmagazine.com/>

Several new herbicide active ingredients and combination products have been introduced to the market during the past few years. Perhaps most notable was Imprelis™. However, sales of the product were suspended in August 2011 due to concerns about possible non-target injury on pines, spruces, and other ornamental species. It is unclear at the time of this writing if, or when, Imprelis will again be made available for use on turfgrass. There have been many other herbicides introduced for broadleaf weed control in the past few years. In fact, the number of active ingredients registered for broadleaf weed control in turfgrass has doubled since the year 2000. This article will review those newer herbicides that can be used on cool season turfgrasses (released since 2010). You should always consult the label prior to use to verify that the product is safe for your type of turf.

NEWER ACTIVE INGREDIENTS FOR BROADLEAF WEED CONTROL

Florasulam

This is a newer postemergence herbicide from Dow AgroSciences that is marketed as Defendor™ herbicide. It is currently available in a co-pack with Dimension™ 2EW. Defendor herbicide is not intended for use during the summer months but rather Dimension and Defendor™ should be applied together in the spring and this can either be with one application or with split applications

about 8 weeks apart. Florasulam works well in cooler temperatures. It has a very low use rate compared to most other herbicides used in turfgrass. Defendor™ can be used safely on all major turfgrasses and should be applied at typical preemergence crabgrass timing. To prevent dandelion flowering, application should be made prior to dandelion bloom. Weeds controlled include dandelion, white clover, common and mouse-ear chickweed, mustard, and shepherd's purse. Because it is meant to go out with Dimension, the application is made considerably earlier than other broadleaf herbicides. However, florasulam results in very long lasting control. Research conducted at The Ohio State University shows that a single application of Defendor™ herbicide will give >90% control of both dandelion and white clover for 84 days. On plots receiving sequential applications control was still nearly 100% at 98 days after the initial application. An application on March 31 resulted in a 100% decrease in dandelion bloom. This product may be an excellent choice in areas that are sensitive to the application of 2,4-D.

Chelated iron

Fiesta® herbicide contains a proprietary chelated iron that, when applied to turf, acts as a selective postemergence herbicide against a wide spectrum of broadleaf weeds. Control is very rapid, with nearly 100% burn down achieved often within 24 hours. It is important to note that this is a contact herbicide. Preliminary results at The Ohio State University suggest that when using this product to achieve long term weed control, the total amount of Fiesta applied over a season is at least as important as the schedule of the applications. Best results thus far have been with three applications of an 8% solution applied at 2.5 gallons per 1000 square feet at 21 day intervals. This has resulted in excellent control of dandelion, white clover and ground ivy and good control of broadleaf plantain for up to 70 days. Since burn down is so rapid, the amount of control is actually longer than with a traditional herbicide that might take up to 28 days to achieve control. This product is legal to use in Canada, where there is a ban on pesticide use in turf and will be an important tool for turfgrass managers in locations in the United States that are under similar restrictions. The product can discolor the turfgrass by turning it dark green or even black if used in hot weather. Because of this, it should be used in cooler weather (50-65°F) to reduce the potential



darkening of the turfgrass.

NEWER COMBINATION PRODUCTS FOR BROADLEAF WEED CONTROL

There are many other combination herbicides registered for use in turfgrass. Table 1 provides a summary of those combination products that can be used on cool season turfgrass. Some of the other more recent additions to this list include 4 Speed® (2,4-D, MCPP, dicamba, and pyraflufen), 4 Speed XT® (2,4-D, dicamba, triclopyr, and pyraflufen), and T-Zone® (2,4-D, dicamba, triclopyr, and sulfentrazone). Each provides excellent control of broadleaf weeds.

2DQ

This product contains 2,4-D, dicamba and quinclorac. Even though this product contains quinclorac, the rate is lower so it will not have activity on crabgrass. The quinclorac in this formulation serves strictly as a broadleaf herbicide. The performance of this herbicide is comparable to many of the three way herbicides on the market, such as Trimec, Escalade 2 or Triplet.

Last Call™ Herbicide

This is a new combination herbicide from NuFarm that contains the active ingredients dicamba, fluroxypyr and fenoxaprop. Because it contains fenoxaprop it has activity not only on broadleaf weeds, but also on crabgrass. Fenoxaprop is typically thought to be more active on leaf stage crabgrass than on tillering crabgrass.

However, our research suggests that Last Call can be effective against crabgrass that is in the 1-2 or even 2-4 tiller stage at application. It is labeled for golf fairways and roughs, residential and commercial turfgrass and sports fields and is safe on Kentucky bluegrass, perennial ryegrass, tall fescue, fine fescue and zoysiagrass. Do not use on desirable bermudagrass or creeping bentgrass. In fact, Last Call is also labelled for selective removal of bermudagrass. Another important note with this product is that tank-mixing it with 2,4-D may reduce the effectiveness of Last Call. Do not apply Last Call within 21 days of a 2,4-D application, or 5 days before a 2,4-D application. Consult the label for specifics.

Change Up™ Herbicide

Another new combination herbicide from NuFarm, Change Up contains the active ingredients MCPA, fluroxypyr and dicamba. Control of broadleaf weeds is very good with this formulation and this is a good product to consider in areas that are sensitive to the use of 2,4-D. You should use the 1.25 pts per acre rate on creeping bentgrass. But, do not use on golf course putting greens or tees.

Combination Herbicides Containing Quinclorac

Many newer combination products have been formulated in an attempt to control both broadleaf weeds and grassy weeds postemergence with a single application. Some of these products also will control yellow nutsedge. Quinclorac is of course not new, but increasingly quinclorac is appearing in combination products, not just for crabgrass control, but also for broadleaf weed control, particularly clover. Products that control both crabgrass and broadleaf weeds include Quincept® (2,4-D, dicamba, and quinclorac), Onetime® (MCPP, dicamba and quinclorac), Q4® (2,4-D, dicamba, sulfentrazone, and quinclorac) and Solitaire® (quinclorac and sulfentrazone). Spring time turfgrass establishment from seed has always been a challenge because of competing weed pressure, particularly crabgrass. However, SquareOne®, which combines quinclorac and carfentrazone, is labeled for and can be effective when establishing turfgrass from seed.

TIMING OF APPLICATION OF BROADLEAF HERBICIDES

Turfgrass managers typically will apply broadleaf herbicides in the spring for the control of weeds such as dandelion, white clover, and the plantains. Ironically, this can result in large bare patches that are filled in by annual grasses, such as crabgrass, and annual broadleaf weeds, such as spurge. In addition, weed control tends to be less effective with springtime applications. Dandelions, white clover, and several other key lawn weeds, are perennials. That is, they persist from year to year via an underground storage structure that may or may not include a taproot.

It is probably not possible or practical to tell a client in April to hold off on dandelion control until November. However, fall always has, and will continue to be, the best time of year to control perennial broadleaf weeds (Figure 1). Fall herbicide applications offer several advantages over springtime applications. Most annual ornamental plants and vegetables have reached maturity and leaves of trees and shrubs are beginning to turn color and fall off the plant. Therefore, the chance of non-target injury due to drift is greatly reduced. Also, winter annual weeds such as henbit and common chickweed are controlled if the application is done after they germinate. But, the major advantage of fall applications is effectiveness of control.

Perennial weeds typically generate new vegetative growth in the early spring, flowers in late spring or early summer, and then persist into fall.

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During the spring, when the weed is generating new vegetative growth, it uses carbohydrates stored over winter in the underground storage structures. To bring these materials to the generating leaves, the plant translocates the carbohydrates from below ground upward. In order to get effective control the herbicide must translocate throughout the root system and the underground structures. If you apply herbicides in the spring they must move against this upward translocation stream. Spring applied herbicides are almost never as effective as they could be, because the herbicide can't as effectively reach all of the below ground structures of the weed. During the fall, the weed begins to store carbohydrates for over-winter and for next year's growth. When this occurs, the translocation stream is downward. Herbicides applied when the plant is actively translocating carbohydrates underground are also more effectively moved into the roots and storage structures, resulting in better overall control of below ground structures.

In most situations you will encounter annual and perennial broadleaf weeds in the same turf stand. However, in rare instances in a mature lawn (or if you are seeding a lawn), you may encounter a turf area with annual broadleaf weeds only. If this is the case, then fall application of herbicides are probably not warranted since annual weeds are at the end of their life cycle. The only situation in which you would target annual weeds in the fall is if their cover is so great as to interfere with good growth of the turfgrass. Annual broadleaf weeds and annual grassy weeds are more appropriately controlled using preemergence herbicides applied in the spring. If, however, you encounter a significant percentage of perennial weeds, then fall is the best time to spray. While not all-inclusive, Figure 1 accounts for a significant percentage of the perennial broadleaf weeds present in most lawns.

The key to maximizing control of perennial broadleaf weeds is to apply the right herbicides at the right time of year.

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Figure 1. Most of our difficult broadleaf weed problems in turfgrass are caused by perennials. Oftentimes, best control of perennial broadleaf weeds can be achieved with a late fall herbicide application.

PERENNIAL BROADLEAF WEEDS

FIGURE INCLUDES RECOMMENDED TIMING OF HERBICIDE APPLICATION FOR BEST CONTROL.



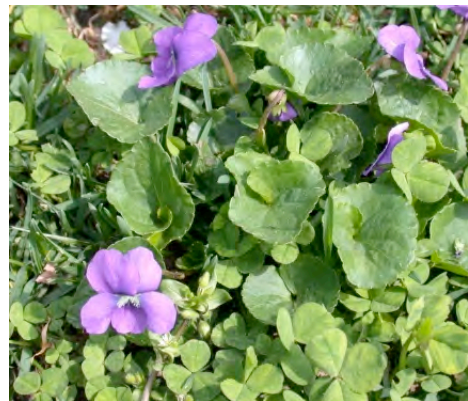
White Clover

Trifolium repens
Fall



Dandelion

Taraxacum officinale
Late spring or fall



Wild Violet

Viola papilionacea
Spring or fall



Blackseed Plantain

Plantago rugelii
Fall



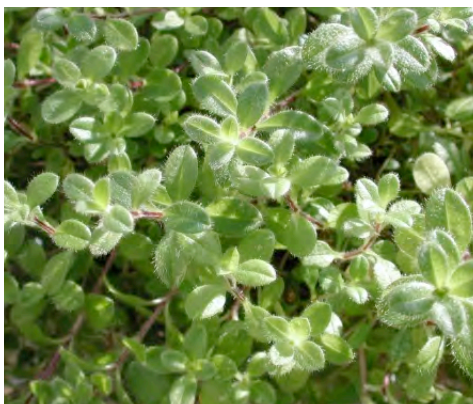
Buckhorn Plantain

Plantago lanceolata
Fall



Canada Thistle

Cirsium arvense
Fall



Mouse ear Chickweed

Cerastium vulgatum
Fall



Curly Dock

Rumex crispus
Fall



Ground Ivy

Glechoma hederacea
Fall



**Table 1. Broadleaf Herbicides and Combination Products**

Products	2,4-D	2,4-DP	MCPA	MCPP	Dicamba	Clopyralid	Fluroxypyr	Quinclorac	Triclopyr	Carfentrazone	Sulfentrazone	Pyrflufen	Fenoxaprop ¹
Formula 40, Dymec, Weedone LV4, Weedar 64, LESCO A-4D, Weedestroy AM-40, Opti-Amine, Hardball, Barrage HF													
MCPP 4-Amine, Turfgro MCPP 4K, Mecomec 2.5, Mecomec 4 2 Plus 2													
Banvel, Diablo, Vanquish													
Four-Power Plus, Super D Weedone													
Trimec Classic, Trimec 899, Trimec 992, Trimec LAF-637, Strike 3, Three Way Selective, Trimec Bent, Bent Selective, Triplet WS, Triplet SF, Trexsan, Mec-Amine-D, Mec Amine-BG, Trimec Plus, 3-D													
MCPA 4-Amine													
Tri-Power, Trimec Encore													
Weedone DPC, Turf D-DP													
Trimec Turf Ester, Super Trimec, Brushmaster													
Three Way Ester, Tri-ester, Tri-amine, Dissolve, Spoiler													
Tri-ester II, Tri-amine II													
Turflon Ester Ultra, Triclopyr 4													
Chaser, Chaser 2, Turflon II amine													
Cool Power, Horsepower, Three-Way Ester II, Eliminate													
Lontrel													
Chaser Ultra													
Confront, 2-D													
Momentum													
Battleship													
Millenium Ultra 2, Millenium Ultra Plus													
Spotlight													
Chaser Ultra 2													
Tailspin													
Battleship III													
Change Up													
Last Call													
Momentum FX, Momentum FX2													
Escalade 2													
Strike Three Ultra 3													
Drive, Drive XLR8, Quinclorac 75 DF, QuinPro, Eject 75DF													
Onetime													
Quincept, Momentum Q, 2DQ													
Quicksilver, Quicksilver T & O													
Shutout													
Speedzone													
Powerzone													
Dismiss													
Surge, SureZone													
Q4, Q4 Plus													
Octane													
Solitaire													
4 Speed, Redzone 2													
4 Speed XT													
T-Zone													

Note: Not all products mentioned are still currently for sale. Mention of trade name is for example only and does not constitute endorsement over other products which may be similar.¹fenoxaprop included in combination products but is a grassy herbicide



Figure 2. Common winter annual broadleaf weeds of the Midwest.



Common Chickweed –

Stellaria media

(Glabrous leaves are rounded at the base and pointed at the tip. Small white flowers with deeply notched petals)



Henbit –

Lamium amplexicaule

(Square stems. Terminal leaves attached directly to main stem. Lower leaves on short branches)



Hairy Bittercress –

Cardamine hirsuta

(Long narrow silicles [seed pods] explosively disperse seed up to 10 feet. Alternately arranged round leaflets)

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You should also consult the label to determine if the addition of a surfactant is warranted. The best time to apply herbicides is generally around the same time that the last mowing and fertilization of the year occurs (November; and, depending on weather conditions, even into the first two weeks of December in the Midwest). Air temperatures should be consistently in the 40's and 50's. Many university trials have proven that the best control of perennial broadleaf weeds occurs if they are sprayed at this time. There are a couple of things to remember about late fall herbicide applications. The plant is not metabolizing as quickly, and you will not see the dramatic burn down and twisting, epinasty that you normally see with an application in warmer weather. However, while it may not appear as though the application was effective, if you return to that

spot next spring the weed will be dead and not coming back. Also, most broadleaf herbicides come in either amine or ester formulations. This is true of the phenoxy herbicides, including 2,4-D and MCPP, and the pyridinoy herbicides such as triclopyr. The ester formulation tends to penetrate the weed tissue better, resulting in more complete control. This is especially true as temperatures cool in the fall. Ester formulations should be your choice when spraying in temperatures below 60 degrees. The caveat to esters is that they are very volatile and should be avoided when temperatures are warmer than 65 to 70 degrees. Remember that postemergence herbicides are most effective if applied during sunny weather with no rainfall within 24 hours of application. Another important advantage of fall broadleaf herbicide applications is that you can get good control of germinated winter annual broadleaf weeds (Figure 2).

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GRASSY WEED CONTROL UPDATE

D.S. Gardner and J. R. Street, Dept. of Horticulture and Crop Science, The Ohio State University

Portions of this article originally published in Turf Magazine, <http://www.turfmagazine.com/> or Sportsfield Management Magazine <http://www.sportsfieldmanagementmagazine.com/>

As with the broadleaf herbicides, several new active ingredients for grassy weed control have been released in the past several years. Many of these products offer selectivity of control or effectiveness that were not previously available. Table 1 provides some recommendations for the use of these products, based on observations from trial work. However, be aware that the label for these products may include other weeds that may also be controlled.

NEWER ACTIVE INGREDIENTS FOR GRASSY WEED CONTROL

Amicarbazone

Xonerate® herbicide, from Arysta Lifesciences, is labelled for golf courses, sod farms, commercial and residential turfgrass and athletic turf. It is used for control of annual bluegrass and 22 other annual weeds that are listed on the label. Research has shown some favorable results with the use of this product. Control of annual bluegrass with any herbicide can be variable, but research has shown up to 95% control is possible with Xonerate. For cool season turfgrasses such as Kentucky bluegrass and perennial ryegrass the label includes 2 application schedules but most university research is recommending the lighter and more frequent 1.0 oz application schedule and to not apply when temperatures are too warm (above 85 degrees). Xonerate may be used on dormant and actively growing warm season turfgrasses but again, make sure to refer to the label for specific application instructions.

Topramazone

A recent introduction from BASF marketed as Pylex® Herbicide, which has a similar mode of action to that of mesotrione, the active ingredient in Tenacity herbicide. Topramazone inhibits carotenoid biosynthesis which results in bleaching of affected leaf tissues. Pylex® is only for use on centipedegrass or the cool season turfgrasses Kentucky bluegrass, perennial ryegrass and tall or fine fescue. It can be used on golf courses but, as of this writing, Pylex® is labeled only for spot treatment applications on sports turf and there is a special section on the label that articulates this. It is possible though that in the near future the spot application restriction will be lifted and broadcast applications will be permitted. In addition, there is a supplemental label for broadcast application on residential turfgrass. Topramazone has both pre and postemergence activity and Pylex is labelled for the control of 15 grassy and 39 broadleaf weeds, both annual and perennial.

Pylex® has a broad spectrum of weeds that it is labelled to control. It is excellent for the control of goosegrass and sedges. In addition, research has found that it can be very effective for the postemergence control of tillering crabgrass. In OSU trials, we found that control was similar, or in some cases, better than, control of crabgrass with mesotrione or quinclorac. Pylex® also has activity on perennial grassy weeds and is labelled for either suppression or control of creeping bentgrass, bermudagrass, dallisgrass and nimblewill. Control of these weeds is achieved with a 3 application schedule similar to that of mesotrione. Consult the label for specifics. For broadleaf weed control, research at Ohio State University has found that topramazone has good activity against white clover but is not as active against broadleaf weeds such as dandelion or ground ivy. Similar to mesotrione, Pylex® can be applied on the day of seeding for suppression or control of germinating grassy and broadleaf weeds but is safe to seedlings of tolerant turfgrass species.

Dimethinamid-P

Marketed by BASF as Tower® herbicide, this product is labelled for use on golf courses and for landscapes and grounds.

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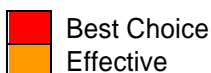


Table 1. Herbicides for Grassy Weed Control

Weed Species	Preemergence											Postemergence										
	Bensulide	Dimethenamid-p	Ethofumesate	Benefin	Pendimethalin	Prodiamine	Dithiopyr ¹	Siduron	Oxadiazon	Dipeptides	Mesotrione ²	Topramazone ²	Amicarbazone	Fenoxaprop	Quinclorac	Byspyribac	Chlorsulfuron	Halosulfuron	Bentazon	Sulfentrazone	Glyphosate	
Summer Annual Grassy Weeds																						
Barnyardgrass	✓		✓	✓	✓	✓	✓		✓					✓	✓							
Crabgrass (Large)	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓							
Crabgrass (Smooth)	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓							
Dallisgrass							✓					✓										
Goosegrass		✓		✓		✓	✓		✓		✓	✓		✓								
Green Foxtail	✓		✓	✓	✓	✓	✓	✓						✓	✓							
Johnsongrass						✓								✓								
Lovegrass						✓																
Witchgrass						✓																
Yellow Foxtail	✓		✓	✓	✓	✓	✓	✓			✓			✓	✓							
Winter Annual Grassy Weeds																						
Annual Bluegrass	✓		✓	✓	✓	✓	✓		✓				✓			✓						
Downy Brome							✓	✓														
Perennial Grassy Weeds																						
Nimblewill											✓	✓									✓	
Orchardgrass											✓										✓	
Quackgrass																					✓	
Rough bluegrass																					✓	
Smooth Brome																					✓	
Timothy																					✓	
Weedy Turfgrasses																						
Bermudagrass																					✓	
Creeping bentgrass											✓	✓									✓	
Perennial ryegrass																	✓				✓	
Tall fescue																	✓				✓	
Sedge																						
Yellow Nutsedge		✓									✓							✓	✓	✓		

¹ Dithiopyr also has early postemergence activity on crabgrass

² Can be used pre- or post-emergence against annual grasses and sedges, and post against perennial grasses.





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It has a supplemental label that allows its use only on athletic surfaces with warm season turfgrass species. Tower is labelled for use on cool season turfgrass used on golf courses, but it is not labelled for use on athletic turf that contains cool season grasses. One of the reasons for this labelling decision is that dimethinamid-P will discolor, but not control annual and rough bluegrass on cool season athletic fields. On warm season turfgrass the label also cautions not to use Tower because it will injure and thin (but not control) annual bluegrass. Dimethinamid-P is a preemergence herbicide that has good activity on annual weeds, including goosegrass, which it is particularly effective at controlling. Another advantage of this herbicide is that, for a preemergence herbicide, it has a relatively quick reseeding interval of 6 weeks.

Prodiamine + Quinclorac

While there is variation in duration of control among products, one of the disadvantages of using a preemergence herbicide to control crabgrass can be that the residual activity, or length of control, is not adequate to last the entire season. On the other hand, one of the disadvantages of using a postemergence herbicide for control of crabgrass is that they are often times less effective than desired if the crabgrass is actively flowering or tillering. This can be partially offset by applying the postemergence herbicide earlier, while the crabgrass is still in leaf stage. However, this is a temporary solution because crabgrass is usually still germinating and thus the controlled leaf stage crabgrass will be replaced by seedlings that germinate following application.

The product Calvalcade® PQ was introduced a couple years ago by SipcamAdvan. It combines the preemergence herbicide prodiamine with the postemergence herbicide quinclorac. If this product is used when emerged crabgrass is in leaf stage (the month of May in the Midwest) then the emerged crabgrass is controlled by the quinclorac. In addition, the prodiamine is applied late enough that you are much more likely to see residual activity that lasts for the remainder of the season. Calvalcade PQ should ideally be applied when there is leaf stage crabgrass about 1 month after germination has started (the middle of May in the Midwest). The product can be used earlier, but you increase the risk of not having adequate residual control. You can also use the product later, but you increase the odds of getting incomplete control of the tillered crabgrass. However, research at The Ohio Turfgrass Foundation Research and Education Center has shown that when applied to leaf stage crabgrass during the month of May that 85-95% control

can be achieved for the duration of the season. It should also be mentioned as a reminder, even though not new, that dithiopyr (Dimension) has early postemergence activity on leaf stage crabgrass as well as residual preemergence activity allowing for early post and preemergence activity on crabgrass in a single spring application. It is available in many granular formulations.

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LATE SPRING & EARLY SUMMER LAWN DISEASES

J. W. Rimelspach T. E. Hicks and
Francesca Peduto-Hand, Department
of Plant Pathology – The Ohio State
University

Remember the majority of lawn problems are not caused by diseases but are the result of two key factors:

1. From adverse weather conditions that are not conducive for growing cool-season grasses in the summer.
2. From injury / damage to the turf plants from maintenance procedure that were not properly executed.

This article will focus on and review several of the more common infectious diseases that can occur in lawns in Ohio and the Midwest. These are caused by fungi. Remember if a fungicide treatment is used to manage a turfgrass disease successfully - an effective product needs to be selected and then - applied as a preventative application.

Often there are questions if the fungus that causes lawn diseases is moved from lawn to lawn on mowers, equipment, on shoes or boots, etc.? The answer is NO, not to any significant degree, the environment and normal life cycles of these diseases are the key factors for survival and spread of the pathogens. Keep in mind that the different grasses that make up a lawn will vary in their susceptibility to different diseases.

RED THREAD

Diagnostic Information

Cool, mild temperatures, humid, overcast periods typical to Ohio's wet spring and autumn provide the best environment for disease development. Prolonged leaf wetness and slow turfgrass growth also contribute to disease development and severity. Red thread is most severe under low Nitrogen and / or low Phosphorous levels. In Ohio, Red thread has been recorded as being active in every month of the year but in most years spring and early summer or the fall is when the disease is most active.

Management and Control Strategy

- In general, any practice that encourages optimal growth of turf should be employed such as maintenance of a balanced

fertility program, good drainage, good light, etc. Increased N and P fertility has been correlated to decreased red thread susceptibility.

- Varieties with different levels of red thread susceptibility are listed at the National Turfgrass Evaluation Program website: www.ntep.org
- Manage water properly to prevent drought stress and avoid prolonged leaf wetness
- There are many good fungicides that can be used as preventative treatments. Refer to the information sheet on our web site "Fungicides for Residential Turf" for specific products and follow label recommendations. turfdisease.osu.edu/



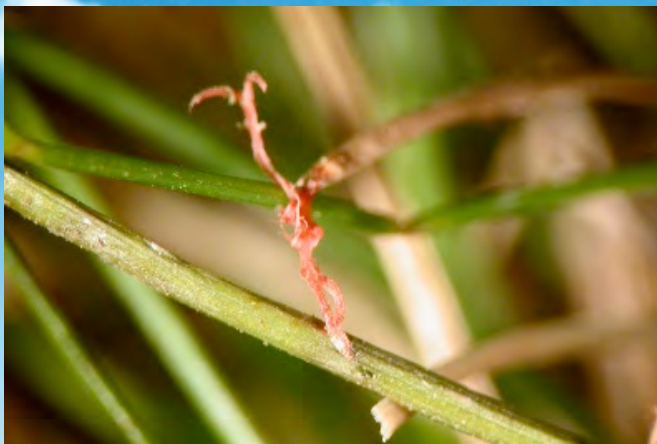
Over-all view of symptoms of red thread in a lawn. (Photo by J.W. Rimelspach)



Affected "spot" with red thread in a lawn of bluegrass and ryegrass. (Photo by J.W. Rimelspach)

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Close up of the red thread fungus growing out of the end of a perennial ryegrass leaf. (Photo by J.W. Rimelspach)



Red thread fungus growing out of turfgrass leaves. (Photo by David Gardner)

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DOLLAR SPOT

Diagnostic Information

The first symptoms of the disease appear as tiny yellow spots on individual grass blades. The spot expands to a straw colored or tan band with dark reddish-brown margins. The tip of the affected leaf often remains green. The tan band, or lesion, is often narrower in width than the leaf, resulting in the lesion taking on an “hourglass” shape. The entire blade soon becomes bleached. As the grass dies and the infected areas enlarge, light straw-colored spots 2 to 3 inches in diameter appear in the lawn. A fine, cobwebby white mold may be visible early in the morning when heavy dew is present. This mycelia growth of the fungus will disappear as the turf dries. The turf in these spots may be killed all the

way from the lesion to where the plant comes into contact with the soil. If left unchecked, the spots may merge and form large, irregular straw-colored patches. On low cut turf, such as that on golf greens and fairways, the spots are often well defined and smaller than those on high cut residential or commercial turf and as the name implies are about the size of a silver dollar. Thus, the descriptive term “dollar spot.”

Management and Control Strategy

- Adequate fertilizer program. Proper nitrogen fertility will greatly reduce the occurrence and severity of dollar spot. Refer to Home Yard and Garden fact sheet 4006, “Fertilization of Lawns.” Note: Careful consideration must be given to fertility programs to avoid excessive nitrogen fertility which aggravates other diseases such as Brown Patch.
- Avoid periods of prolonged leaf wetness. Avoid over watering and frequent late afternoon or evening irrigation that prolongs the time grass stays wet. This is especially true for mornings when heavy dew is likely. Prune trees and shrubs to facilitate optimal penetration of sunlight and remove barriers or wind blocks to promote optimal air movement so grass dries faster.
- Irrigate turf during dry conditions. Provide adequate soil moisture for continuous and optimal turf growth.
- Select resistant cultivars. Before seeding, consider recommended cultivars that are resistant to dollar spot. This is especially helpful when planting Kentucky bluegrass, check with the National Turfgrass Evaluation Program.
- Chemical control used early in disease development can be quite successful. Once dollar spot gains a foothold



Dollar spot damage – in a Kentucky bluegrass lawn (photo by J.W. Rimelspach)



Dollar spot lesions on a Kentucky bluegrass blade. Note there is a band across the leaf, the center is a tan color with darker brown edges before the normal green leaf color. (Photo by Dr. David Gardner)



Active dollar spot in the morning when the turfgrass is still wet from dew and fungi is present. As the grass dries the fungi (mycelium) dissipates and not present however the fungus is inside the leaf tissue and will grow again when the leaves are wet and or there is adequate humidity in the turf canopy. (Photo by J.W. Rimelspach)

and is widespread, chemical management will be difficult. For specific fungicides refer to the OSU Turfgrass Pathology Program web site: turf.disease.osu.edu Read the label and follow all instructions.

BROWN PATCH

Diagnostic Information

There are many challenges to acutely diagnosis Brown Patch /Rhizoctonia Blight caused by (*Rhizoctonia solani*) in lawns. Since all common turfgrasses can get the disease it is difficult to rule out the disease on the bases of the type of grass in the lawn. However, many tall fescue lawns are prime candidates to be the first to develop brown patch when weather is favorable for the disease. There are differences in

susceptibility by the different cultivars of tall fescue. Check the web site of the national Turfgrass Evaluation Program for rating tall fescue cultivars and susceptibility to brown patch at – www.ntep.org. A key factor that needs to be present for active Brown Patch/Rhizoctonia Blight is wet conditions (heavy rainfall, over irrigation, wet & humid sites, poorly drained areas, long periods of wet foliage/thatch and soils). If there are “brown patches” in a lawn and the turf and site are dry continue the diagnostic process since Brown Patch/Rhizoctonia Blight is most likely NOT the problem. A lush stand of turf is also a high candidate for the disease, especially if the lawn is wet and the temperatures are right. If there are questions about the specific diagnosis of this disease, submit a sample to a turf diagnostic lab for verification. In the lab a trained diagnostician can easily look for the fungus and usually confirm the problem.

Management and Control Strategy

- Wet leaf blades greatly increases infection and disease. If the lawn needs moisture, water deep and infrequent, early in the day, so the grass leaves will dry quickly. Do not water in the late afternoon or early evening. Night watering is not recommended in hot, humid weather. Avoid frequent light sprinklings.
- Avoid nitrogen applications that cause a flush of succulent growth since it is very susceptible to brown patch. Avoid nitrogen fertilizer applications before or during hot weather whenever possible. Several lighter fertilizer applications are less likely to trigger disease than one heavy application.
- Turfgrass cultivars that are more resistant to brown patch may be available. A source of information on turfgrass assessment for disease is the National Turfgrass Evaluation Program in Beltsville, MD or check the web site at <http://www.ntep.org> or contact the state land grant University for State Recommendations.
- Fungicide Management: When a lawn has had previous brown patch problems, fungicides may be applied when humid weather and hot nights are predicted. Applications should continue according to the fungicide label for as long as the hot, humid weather persists. For specific fungicides refer to the OSU Turfgrass Pathology Program web site: <http://turf.disease.osu.edu>.

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A patch caused by “Brown patch” in a tall fescue lawn. (Photo by J.W. Rimelspach)



Brown patch fungus (mycelium) in tall fescue lawn. (Photo by J.W. Rimelspach)



Lesions caused by brown patch on the tall fescue leaves. (Photo by J.W. Rimelspach)

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Look under publications for – Management of Turfgrass Diseases Bulletin (L-187 Disease Section). Read the label and follow all instructions.

SUMMER PATCH

Diagnostic Information

Summer patch, is a crown and root infecting disease caused by the fungus (*Magnaporthe poae*). Since there is damage to the roots, the root system cannot function properly to take up water, so under heat and drought conditions symptoms of wilt, decline and death develop.

Symptoms – include brown more or less circular patches. The fungus attacks the below ground parts of the grass plants (roots, crowns, stolons, and rhizomes). In the summer it is difficult to distinguish between summer patch and necrotic ring spot on a Kentucky bluegrass lawn since the overall symptom patterns are very similar. The key to managing the diseases is growing healthy stress free turfgrass.

Turfgrass Affected – most common in Kentucky bluegrass and fine fescue. Diagnostic features – Dead “circular” patches usually ½ - 2 feet in diameter (circles or crescents) the affected circle is often sunken. Dead rings with green grass in the middle are referred to as frog-eye patches. Over time different type of grass(s) may develop in the center of the patch. These are resistant to the diseases. The roots, stems and crown area are often dark brown on the affected plants due to the presence of the pathogen fungus growing on these parts of the plants.

Management and Control Strategy

There are three main approaches: maintenance of healthy turf/culture, grass resistance to the disease and chemical applications.

Cultural:

- Reduce compaction (a good way to relieve compaction is through the use of a core removal machine, which removes a small plug of turf and soil. This procedure should be done several times a year and it is recommended to pull a minimal of 20 cores per square foot. The goal is to dramatically improve the root growth and health of the Turfgrass.
- Raise mowing height if possible (≥ 2.5 inches).
- Water frequently to avoid ANY MOISTURE stress. Since



the root system is not functioning properly soil moisture levels need to be carefully managed. Avoid wilt! Also do not over water and create a water logged root zone since this will cause a further decline of an already weak root system.

- Properly prepare site for sod, address compaction and poor quality soils. The goal is to have a similar soil as the sod was originally grown on.
- Maintain the Turfgrass with a very slow release fertilizer. Do not allow the lawn to be “hungry” again remember the roots are not functioning well so continues slow realer feeding in needed to maintain growth and health.

Genetic:

- Overseed with a resistant cultivar of Kentucky bluegrass check the National Turfgrass Evaluation Program (NTEP) trials for resistant cultivars at <http://hort.unl.edu/ntep/>
- The use of genetic resistance turfgrasses is limited to new seeding, renovation and overseeding.
- Perennial ryegrass and turf type tall fescues do not have this problem but because they have different colors and textures it is often hard to blend these with a Kentucky bluegrass lawn.

Chemical Management:

This is a disease that is very difficult to manage. Fungicide applications alone will usually not control the disease. Applications should be made in the spring when the pathogen is infecting the plants and long before symptoms develop. A general rule of thumb is to make the first application of a fungicide when the soil temperature is 65°F at 3 inches for several days in a row. Once grass turns brown in the summer fungicide applications do little to improve the lawn. Total turfgrass health management is recommended through the use of aggressive management strategies.



Circular symptom pattern of “patch” disease in a lawn. However affected turf be in spots and streaks.



Summer patch in a Kentucky bluegrass sodded lawn. Often the most severe damage occurs in areas subjected to the most heat and drought stress.



Summer patch in a Kentucky bluegrass sodded lawn in southern Ohio.



1100-H Brandywine Blvd
Zanesville OH USA 43701-7303

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