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spring 2015 / www.ohiolawncare.org

OLCA NEWS



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

The Ohio Lawn Care Association will hold its 13th Annual Northeast Ohio Lawn Care Seminar on Thursday, June 18, 2015 at The Ohio State University/ OARDC, The Arden Shisler Center in Wooster, OH.

OLCA invites those involved in lawn and landscape maintenance to attend. Registration will begin at 8:30 am. Continuing education sessions will begin at 10:00 am and station rotations to begin at 12:15 after lunch.

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, Gina Zirkle, The Scotts Co.



With Spring well underway and everyone busy with the growing season, OLCA continues to focus on providing benefits and value to our members and the industry. As president, I look forward to the continued support from our Executive Director, Mark Bennett and our entire

OLCA board and membership to guide our direction for the future.

Before we look to the future, it is always good to take a step back and reflect on what the organization provides to you. I would like to thank Ray Iacobucci for his service as president to OLCA in 2014. He shared the new mission statement with you last year: "Serving the lawn care industry by providing essential resources for its members".

As part of our commitment to serve the lawn care industry, a list of our core member benefits are listed below:

Education: In order to enhance professionalism and the ability to compete in the dynamic lawn care marketplace, we provide members with timely educational services and information.

Regulatory/Government Affairs: OLCA is a legislative watchdog, providing members with pertinent updates and explanations of legislative activity affecting the lawn care industry.

Communication: OLCA is the voice of the lawn care industry in Ohio through all means of communication, continually reviewing these media for improvements.

Public Affairs: To encourage public awareness of lawn care industry practices, OLCA disseminates educational information to the green industry and public at large.

Research: OLCA is proactive in suggesting and funding research specific to the lawn care industry.

Member Benefits: OLCA seeks to enhance existing services and to investigate and establish new services to benefit membership.

Do not hesitate to reach out to us about the specifics of our organizational and membership benefits. I look forward to serving as president and continuing to provide better resources to our members and the industry.

FROM YOUR Executive Director, Mark Bennett, CAE, IOM



Summer is unofficially here and will be officially here soon. 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 attend OLCA's two Field Days.

I hope you will join us for one of OLCA's Field Days this summer. The first will be held on June 18 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 13 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. Plus you can earn pesticide recertification credit.

We at the office have been busy, in addition to planning for Field Days, working with the Ohio Department of Agriculture on soon-to-be-proposed rules on insurance for faulty workmanship not currently covered by most company's commercial liability and general liability policies. 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.

Are you leaving money on the table? 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 for every dollar you spend on your annual OLCA membership dues. Contact our office for additional information if you aren't part of OLCA's Group Plan already.

And finally, mark your calendar for November 7 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 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.

OLCA 2015 Officers and Trustees Spotlight

The Ohio Lawn Care Association (OLCA) 2015 Officers and Trustees were recently elected to the Board of Directors. Officers serve a one-year term and Trustees serve three-year terms beginning March 1.



**PRESIDENT
GINA ZIRKLE,
THE SCOTTS CO.**

How long have you been in the lawn care industry? My interest in Turfgrass

started when I picked my college focus – Plant Health Management with a minor in turfgrass science. My lawn care experience started in 2005 with my internship at The Scotts Miracle-Gro Co.

Why did you get involved with OLCA? I got involved in College. I thought it would be a good way to network with industry peers. After I graduated, I continued my membership for some of the member benefits as well as a way to continue networking.

Where do you see the lawn care industry headed in the next five years? As trends in lawn and landscaping continue to change, so will the needs of the customer. It is continually important to share the environmental, social, and economic benefits of a lawn. The real reason lawns were established around homes in the first place was to keep down on dust, soil erosion and provide a place for rain to filter. These are important aspects of turfgrass that the everyday homeowner may not realize or seems to be long forgotten.



**VICE-PRESIDENT
MARK SLAVIK,
RESIDEX/
TURFGRASS**

How long have you been in the lawn care industry? 29 years.

Why did you get involved with OLCA?

It was all Mike Sloma's fault. Just kidding. I wanted to become more involved and have an impact in the industry.

Where do you see the lawn care industry headed in the next five years? I see continued growth for the next five years. Lawn care seems to be resilient even when the economy is not doing well.

- President – Gina Zirkle, The Scotts Co.
- Vice-President – Mark Slavik, Residex/Turfgrass
- Secretary/Treasurer – Jeff Benton, St. Clair Lawn Care

TURFGRASS WEED CONTROL FOR PROFESSIONALS 2015 EDITION – NOW AVAILABLE!



This guide produced by Purdue University is an excellent resource that supplies turf herbicide and growth regulator information that turfgrass professionals can use to develop effective weed control programs for golf courses, athletic fields, sod farms, residential and commercial lawns, and other turfgrass systems.

Item: AY-336
Price: \$12.00
(This item is available in bulk pricing)

Format: Book and PDF
Language: English / Pages: 98

It is also available in digital (PDF) format. \$10.00/Each

Produced 12/19/2014
Author(s): Dr. Aaron Patton, Purdue U.

Edited by Dr. David Gardner, OSU



A GRATEFUL EMBRACE

On November 7, 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 13, 2015 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 – Bob Conklin



It's easier than before to nominate a Lawn Care Technician, formerly Applicator of the Year. Visit 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 13, 2015.

The 2014 Ohio Lawn Care Association Lawn Care Technician of the Year was awarded to Bob Conklin of TruGreen in Lexington, OH. Bob was presented the award during the OLCA Annual Meeting on January 8 at the Columbus Convention Center.

For a complete listing of past recipients, visit the OLCA website at www.OhioLawnCare.org. Nominate someone for 2015. An application is located in this issue and also available on the OLCA website.

13TH ANNUAL NORTHEAST OHIO LAWN CARE SEMINAR: Thursday, June 18, 2015 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** – OLCA Benefits, A Grateful Embrace and Legislative Update

10:00 am – **An Overview of the Problems Facing Bees – OSU Research & What Can be Done to Improve the Situation**, Dr. Reed M. Johnson, Assistant Professor, Dept. of Entomology (ODA CORE 1.0 hour)

11:00 am – **Accurate Spray Applications of Pesticides and Turf Product Update**, Jerry Husemann, BASF (ODA Cat 8, .5 hour)

11:45 am-12:15 pm – **Lunch**

Station Rotation Times: 12:30 pm-1:00 pm; 1:05 pm-1:35 pm; 1:40 pm-2:10 pm, 2:15 pm-2:45 pm & 2:55 pm-3:25 pm

Station #1 – Ornamental Weed Management/Control and Major Weed Issues, Randy Zondag, Lake County OSU Extension (ODA Cat 6A, .5 hours)

Station #2 – Tree and Shrub Insects Update and Management, Dr. Dave Shetlar and personnel, Dept. of Entomology, OSU (ODA Cat 6A, .5 hours)

Station #3 – Assessment of Accurate Granular Lawn Applications, Corey Pangborn, and Neil Shreve, Scotts LawnService (ODA CORE, .5 hours)

Station #4 – Lawn Weed Control– Identify, Manage and Product Update, Dr. David Gardener, Dept. of Horticulture & Crop Science, OSU (ODA Cat 8, .5 hours)

Station #5 – Supplier and Equipment Showcase, Vendors provide a five minute highlight of something “new” or of interest.

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.

DIAGNOSING TURF PROBLEMS: Is it a Disease?

Joseph Rimelspach, Dept. of Plant Pathology and Pam Sherratt, Dept. of Horticulture and Crop Science

Proper diagnosis is a critical step in the management of plant diseases. Without a solid diagnosis, it's impossible to suggest or develop an adequate management strategy. As with most things, the more you know, the better equipped you'll be to take corrective action. In the case of turfgrass disease diagnosis, the more you know about the host, environmental and biotic factors that favor disease development, the greater the likelihood of making a correct diagnosis. The following five-step approach is but just one of many approaches available for diagnosing turfgrass problems. Be open-minded and don't make a situation fit into a predetermined disease.

1. Define the problem. Gather as much information as possible about the situation such as grass species, cultivar or variety; age of the stand; recent fertilizer or pesticide applications made; cultural practices implemented; weather trends; irrigation practices; use of growth regulators; history of problems; etc. It is essential to correctly identify the plant affected and to be familiar with its healthy state and characteristics.

Be sure to take seasonal effects into account. For example, rough bluegrass (*Poa trivialis*) turning brown during the heat of summer (going dormant) or zoysia grass (*Zoysia japonica*) turning brown after frost or cool temperatures in the fall are normal responses to the environment. Creeping bentgrass (*Agrostis stolonifera*) going brown in May is another story.

Know your hosts and how they change with the seasons, only then can you determine that a problem exists.



Photos courtesy of Joe Rimelspach

Why is there brown areas in this lawn?

2. Examine the entire turfgrass plant community. Don't jump right into examining the affected individual plant or area. Observe the entire plant community. For example, if you're making a trip to a lawn to examine for a potential disease, take notice of other lawns and turf areas along the way. Make a few calls to other turf managers within close proximity.

Once at the affected lawn or section of the lawn with problems, take a minute to look at the entire lawn and surrounding turf. Take note of light conditions, wind direction, slope of the land, air movement, soil conditions, etc. Then, focus your attention on the affected plant(s) or area. Examine the leaves, stems, crowns and roots. Be thorough in making observations and avoid a snap diagnosis.

3. Look for patterns – diseases don't occur in straight lines! Is only a single plant affected? Is the problem restricted to a certain area or a single species? Are the symptoms randomly distributed, or can you see distinct patterns or clear lines of demarcation between healthy and affected plants? Is the damage occurring in a pattern consistent with recently performed maintenance practices?

Random patterns are often indicative of diseases or insect pests, whereas uniform damage, such as streaks or lines or

damage over a large area, is indicative of an abiotic (chemical, physical or mechanical) culprit.

4. Timing of events: How did the problem develop? Did it appear suddenly or over time? Has the damage spread or stayed in the same location? Does the damage coincide with changes in the weather?

Progressive development and spread of a problem over time is often associated with a pest or pathogen. Acute damage or that which occurs suddenly is more typically caused by abiotic factors such as environmental stress, mechanical damage (caused by mowers) or fertilizer/chemical injury.

5. Look for evidence of a pathogen or pest activity. Specifically, look for key diagnostic signs or symptoms that are indicative of pathogens or insect pests. For instance, the presence of large numbers of fruiting bodies or mycelium might lead one to suspect a fungal infection. If you've gathered sufficient background information and nothing strikes you as being obvious, such as a chemical misapplication, and you've eliminated the possibility of pathogens and insect pests, retrace your steps and focus your diagnosis on abiotic factors.

This is where things get tough, and you may need to enlist the services of a plant pest or disease diagnosis laboratory to help narrow the range of probable causes. Whenever possible, include photographs or digital images to aid the diagnostician in their task.

Turfgrass diseases

Most turfgrass diseases are caused by fungi and fungal-like organisms (oomycetes such as *Pythium*). One convenient, albeit not absolute, way to classify turfgrass diseases is to

do so based on the part of the plant being attacked (i.e., foliage, foliage and crowns, crowns and roots). Table 1 lists the major diseases caused by fungi and oomycetes. There is no economically important turfgrass diseases caused by a bacterium or viruses in lawns in Ohio. In rare cases nematodes may cause significant damage to lawns in Ohio. The impact of nematode feeding on cool-season grasses in temperate regions is not as well understood.

Disease prevention and control

As pressures mount to reduce inorganic fertilizer and pesticide inputs on turfgrass, interest has increased regarding the development and use of integrated pest management (IPM) programs that forego or limit the use of pesticides. Certain fungicides are not labeled for use on home lawns or residential turfgrass. So read the label carefully and follow all guidelines.

The first line of defense to prevent or minimize disease is through the selection of disease-resistant turfgrass species/cultivars and certified seed. Information regarding disease-resistant turfgrass can be obtained by contacting local seed distributors, extension specialists and via the National Turfgrass Evaluation Program (NTEP, <http://www.ntep.org>). The use of genetically resistant turfgrass should be considered when establishing or renovating turfgrass areas or when overseeding.

The second line of defense is the use of cultural management practices that favor turfgrass health over pathogen activity. Cultural practices related to seedbed preparation prior to establishment are critical for seedling and root diseases such as *Pythium* damping-off and the patch diseases.

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Table 1. Turfgrass Diseases Caused by Fungi and Oomycetes

FOLIAR DISEASES	FOLIAR & CROWN DISEASES	CROWN & ROOT DISEASES
Dollar spot (<i>Sclerotinia homoeocarpa</i>)	Anthraxnose (<i>Colletotrichum graminicola</i>)	Dead Spot (<i>Ophiospharella Agrostis</i>)
Gray leaf spot (<i>Pyricularia grisea</i>)	Brown patch (<i>Rhizoctoniasolani</i>)	Bermudagrass decline (<i>Gaeumannomyces Graminis var.graminis</i>)
Gray snow mold (<i>Typhula</i> species)	Leaf spot/melting out (<i>Bipolaris</i> , <i>Drechslera</i> and <i>Exserohilum</i> species)	Fairy ring (numerous Basidiomycete fungi)
Pink patch (<i>Limonomyces roseipellis</i>)	* <i>Pythium</i> blight (<i>Pythium aphanidermatum</i>)	Necrotic ring spot (<i>Ophiospharella korrae</i>)
Pink snow mold/ Microdochium patch (<i>Microdochium nivale</i>)	Red leaf spot (<i>Drechslera erythrospila</i>)	Seeding disease and Daming-off (* <i>Pythium</i> , <i>Fusarium</i> <i>Microdochium</i> and <i>Rhizoctonia</i> species)
Powdery mildew (<i>Erysiphe graminis</i>)	Yellow patch (<i>Rhizoctonia cerealis</i>)	Spring dead spot (<i>Gaeumannomyces Graminis var. graminis</i> , <i>Ophiosphaerella narmari</i> , <i>O. Korrae</i> and <i>O. herpotricha</i>) Summer patch (<i>magnaporthe poae</i>)
Red thread (<i>laetisaria fuciformis</i>)		Take-all patch (<i>Gaeumannomyces Graminis var. avenae</i>)
Rust (<i>Puccinia</i> species)		
Smut (numerous genera)		
*Yellow tuft or Downy mildew (<i>Sclerophthora amacrospora</i>)		

*Oomycete diseases

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Under certain situations, it may be possible to modify poor quality soil conditions under existing turfgrass swards through the use of core aeration and organic matter topdressing programs.

Disease management in established turfgrass swards is often achieved by modifying cultural management practices such as mowing, watering, fertilization, tree pruning, topdressing and core aeration. Intensively managed turfgrass is often predisposed to environmental and biotic stresses, so it's crucial that agronomic practices be timed to optimize turfgrass health. By providing growing conditions that favor plant growth over pathogen development or activity, it's possible to minimize or avoid disease. Plant pathologists have developed a simple model called "The Disease Triangle". Practices that influence the temperature, moisture and fertility status of the turfgrass have the greatest impact on disease development.

Fungicide applications are often essential where there is a demand for high-quality turfgrass during environmental periods that favor pathogen growth. In general, fungicides are most effective when applied prior to the onset of disease symptoms (preventive applications). Fungicides applied after the onset of disease symptoms are typically made to slow or stop pathogen activity and to protect asymptomatic or healthy turfgrass (post infection applications). Note: the pathogen is not killed or eliminated with post infection applications.

Other considerations for effective use of fungicides include: selection of an effective fungicide product; use of proper application – if liquid the water volume is important (i.e., minimum of 2 gallons per 1,000 square feet); and nozzle selection for liquid applications. In the case of dry / granular products often more time is required to enter the turf plant to suppress the disease or to prevent infection. Remember preventative applications or applications at the early onset of a disease are the most effective. Always read and follow label recommendations when applying fungicides.

**It could not look this good without you
(and a little help from us).**



Advanced Turf Solutions is a green industry distributor with a deep commitment to servicing customers better than anyone in the industry. ATS offers, not only the best selection of herbicides, insecticides, and ice melt in the market today, but also offers professional quality turfgrass seed mixes and blends for any situation.

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Cincinnati Area

8975 Empire Connector Dr.
Florence, KY 41042
Phone: 859-283-1172

Youngstown Area

603 N Meridian Rd
Youngstown, OH 44509
Phone 330-793-3775



New and Existing Natural Weed-Control Products for Organic Lawn Cares

by Dave Gardner, Dept. of Horticulture and Crop Science, OSU

Several new herbicide active ingredients and combination products have been introduced to the market during the past few years. In fact, the number of active ingredients registered for weed control in turfgrass has doubled since the year 2000. However, pesticide use in turfgrass continues to be controversial and in certain parts of the country applicators are banned from using conventional pesticides on playing fields, lawns, and playgrounds. Where these laws were enacted the goal was to minimize pesticide exposure to children and restrict the use of pesticides to minimal risk ingredients. The products mentioned below can, in most cases, be used on these areas. Of course, you should be familiar with the laws and regulations in the areas where you make applications.

Non Selective Herbicides

Natural weed control products that are non-selective have been around for many years, primarily for use in home lawn care. These materials are made of various plant oils or herbicidal soaps. Commercial grade vinegar (acetic acid) has also been used as a non-selective herbicide. An obvious disadvantage of these products is that, since they are non-selective, they also harm the desired turfgrass (Figure 1). In addition, while weed control with these products is very rapid, it is also, in most cases, temporary because these are contact herbicides. Contact herbicides provide no residual control, thus plants with underground structures, such as perennial broadleaf weeds and perennial grasses, as well as some well-established annuals, will grow back after application.

Scythe® Herbicide

Depending on what source you read, this is classified either as a synthetic or a natural product. However, this product is sold by many vendors who market to organic lawn care providers. The active ingredient is pelargonic acid and related fatty acids. These fatty acids are a very fast acting contact non-selective herbicide. The herbicide disrupts cell membranes and results in cell leakage followed by death of all contacted tissue. Burn down of the contacted plant tissue may be achieved in as little as 20 minutes.

Non-selective herbicides can be used with some success as directed spot sprays on weeds that do not spread or where weed infestations are not severe. However, caution to avoid contact with turfgrass should be exercised and repeat applications will be required for complete control.

Selective Herbicides

With the exception of corn gluten meal, selective organic herbicides are only a recent introduction to the turf market. Being selective brings the obvious advantage of the ability to make broadcast applications. However, because of economics, they are often applied as spot sprays or the application is limited to isolated weedy areas in the turf.

Corn Gluten Meal

In 1986, Dr. Nick Christians at Iowa State University attempted to use corn meal as a growth media to inoculate a newly seeded putting green with pythium. No pythium was introduced, but, interestingly, the bentgrass did not germinate on the plots that received the fresh corn meal. During the next ten years a series of studies were conducted that determined that corn gluten meal, a by-product of the wet milling process, contained the highest concentration of the substances that prevented the bentgrass germination in his pythium study. The substances are dipeptides that mimic the action of some of the conventional preemergence herbicides on the market. Corn gluten meal is a natural product. It is an ingredient in many animal feeds and is fit for human consumption (though not very appetizing). Corn gluten meal contains 10% nitrogen by weight. Recommended use rate is 20 lbs per 1000 sq ft applied 2 times per year – in early April to control crabgrass and then again in late summer/early fall to provide partial control of germinating broadleaf weeds. These two applications will provide 4 lbs of N per 1000 sq. ft. annually. The nitrogen is slowly available and in tests applications as high as 100 lbs per 1000 sq. ft. did not cause burn to the turf. Corn gluten meal is primarily intended to control crabgrass. During the first year of use, reductions in crabgrass germination are around 40% and some conventional preemergence herbicide may still be required. During subsequent years, however, crabgrass control with corn gluten meal can be as high as 80-90%, which is nearly as good as most conventional preemergence herbicides. In some areas of the country crabgrass control is good and in other areas corn gluten meal is less effective. The reason for this has never been determined.

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Some control of broadleaf weeds from seed, including dandelion and white clover, is also possible. A website describing the product in more detail as well as a list of suppliers can be found at <http://www.hort.iastate.edu/research/gluten/>.

Fiesta® Herbicide

Whether or not Fiesta® should be considered an organic product is debated. However, it is permissible to use it in many areas where conventional herbicide use has been banned. 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 (Figure 2). It is important to note, however, that this is also a contact herbicide. Research has been conducted at Ohio State University to determine if a program of sequential applications can be effective to achieve long term weed control. We tested two applications in the fall, followed by two applications in the spring compared to three applications in the spring. At each of these times we applied 1.25, 2.5 or 5 gallons per 1000 ft² of a 2%, 4% or 8% solution (9 total rate/percentage combinations).

First and foremost, our results suggest that three applications every 21 days in the spring provides better long term control than 2 applications in the fall followed by two applications in the spring (this would be more cost-effective as well). Our results also suggest that when using Fiesta® to achieve long term weed control, the total amount of Fiesta® applied over



Figure 1. Contact herbicides, such as fatty acids, plant oils or herbicidal soaps, control weeds very rapidly (this photo was taken 24 hours after application). However, they are non-selective and will also damage turfgrass.



Figure 2. Control of dandelion and clover is very rapid with Fiesta® herbicide. This image was taken 24 hours after application. The treated plot is noticeable darker green. The untreated control is to the left.



Figure 3. Season long control of dandelion, white clover, ground ivy and broadleaf plantain can be achieved with 3 applications of Fiesta® herbicide in the spring. The plot on the left is the untreated control and the plot on the right received 3 applications (Days 0, 21 and 42). The picture was taken 84 days after the final application of Fiesta herbicide.



Figure 4. Control of dandelion and ground ivy 14 days after application of A.D.I.O.S. herbicide in the spring at Ohio State University. The picture on the left is the untreated control and the picture on the right is treated with A.D.I.O.S.

a season is more important than the gallon per acre spray rate or percent concentration. In other words, control is a function of the amount of chelated iron applied and 2.5 gallons per 1000 ft² of an 8% solution will result in control similar to 5 gallons per 1000 ft² of a 4% solution. Either of these rates applied 3 times in the spring resulted in excellent control of dandelion, white clover and ground ivy and good control of broadleaf plantain for up to 98 days (56 days after the last application was made – Figure 3). Since burn down is so rapid, the amount of control after three applications may actually be a little longer than with a traditional herbicide that might take up to 28 days to achieve control. Fiesta® is also labeled to control black medic, common chickweed, dandelion, moss, algae, plantains, Shepard's purse, thistles, veronica, and white clover.

Fiesta® is more expensive than a standard three way herbicide. However, this product is legal to use in most areas where conventional pesticide use is banned, and will be an important tool for turfgrass managers under these restrictions. One last note, the main injury symptom is to turn affected plants black (actually ultra-dark green, but they look black). The chelated iron is selective of broadleaf plants. However, it will cause some darkening of the turfgrass, which can look more like a blackening or phytotoxic response to the turfgrass. This can be greatly reduced or avoided if used in cooler temperatures, such as in the 60's or 70'. Application when temperatures are in the 80's or 90's may result in a noticeable and dramatic blackening of the turfgrass. This will go away after a few mowings, but can be visually striking. In our tests, Kentucky bluegrass and perennial ryegrass were quite tolerant of Fiesta® even when applied in warmer weather. Fine fescue turned noticeably darker in warmer weather, but this was almost more of a benefit than detraction. The tall fescue we tested was more susceptible. But, again, this phytotoxicity issue may be avoided by applying in cooler temperatures.

A.D.I.O.S.

This herbicide, manufactured by Herbanatur, is also a recent addition for turfgrass managers. It is a patented product used in Canada and also gaining popularity in those parts of the United States where application of conventional herbicides is not allowed. This product should not be confused with ADIOS, which is a cancelled formulation of DSMA, or Adios from Arysta, which is a cotton defoliant.

The active ingredient of A.D.I.O.S. is sodium chloride, which can be effective as a selective herbicide against broadleaf weeds such as dandelion, white clover and even ground ivy.

Control is rapid, with considerable burning of the effected plant tissues within 24 hours. In trials at Ohio State, A.D.I.O.S. performed very well when applied in the fall, resulting in up to 100% weed control. When applied in spring we are getting around 60% control of dandelion and 80-90% control of ground ivy for 2-3 weeks (Figure 4). Some browning of the turfgrass may occur. This is more likely if the application is made in warmer weather. However, the injury goes away after about 7-10 days. Of course, this could be minimized by using the product as a spot or directed spray.

One thing to consider, since the active ingredient is sodium chloride, is whether there will be any long term deleterious effects on the soil. High concentrations of sodium chloride result in dispersion of soil particles, which will negatively affect the structure of the soil. At too high of a concentration, turfgrasses will not be able to continue to grow. Kentucky bluegrass is most susceptible, followed by ryegrass and tall fescue. The warm season grasses tend to be more tolerant of high salt concentrations. But, for the same reason that you may have trouble maintaining turfgrass in areas that receive high amounts of winter deicing salts, you may need to exercise caution when using this product. Its best to use as a spot spray, rather than a broadcast application. Also, you should try to avoid use on soils that already drain slowly, such as those high in clay. Research is ongoing at Ohio State on this issue. Of course, you can monitor sodium levels on your soils tests to insure that they are not getting too high for good turfgrass growth.

Future Organic Herbicides

Phoma macrostoma, a promising herbicide which was being developed by Scotts and Ag Canada has apparently been shelved due to high production costs. However, many other materials are being developed as organic herbicides and may be released in the next few years.

MARK YOUR CALENDAR!

JUNE 18:

Northeast Seminar • OARDC, Wooster

AUGUST 13:

Outdoor Summer Seminar • OSU, Columbus

NOVEMBER 7:

A Grateful Embrace

Dayton National Veterans Cemetery – Dayton, OH
Ohio Western Reserve Cemetery – Rittman, OH



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