

Product Evaluation Trials

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For those of you who do not know me, my name is Andrew Hollman and I work with Dr. Horgan and Dr. Watkins as a research associate/scientist. It is my job to implement and manage their research objectives and assist any of their graduate students. Although there is a plethora of research projects and trials that are occurring within the turfgrass research working group, this update will just touch on some of the chemical trials we are managing this year.

Poa Seedhead Suppression

One recurring issue on golf course putting greens is the flush of annual bluegrass seedheads that appear in the spring of the year and continue for many weeks. Although there is disagreement on whether these seedheads are merely a cosmetic nuisance or an inhibition of play, superintendents frequently apply growth regulators to help limit the amount of seedheads that are produced by annual bluegrass in their putting greens. Multiple applications of Primo and Proxy are the standard growth regulators applied to limit the production of seedheads and slow the growth of annual bluegrass. These applications can be effective if they are timed properly. Unfortunately, timing is the main problem in achieving consistent seedhead suppression from one season to the next. Preliminary studies have shown promise in achieving more consistent seedhead suppression by adding a fall Proxy application to the normal spring applications. The aim of this study is to determine if a fall Proxy application gives more consistent seedhead suppression than just a spring application. This study is being conducted at Town and Country Club on a nursery green that is a mix of annual bluegrass and creeping bentgrass. Listed below are the treatments with the

rates and application codes (A = Fall, B = Forsythia full bloom, C = 4 weeks after B).

Pre-emergence Crabgrass Control

Another trial we are conducting is examining whether a new formulation of Dimension EW herbicide is as effective as the present dithiopyr formulations for pre-emergent crabgrass control.

effective control of fairy ring and localized dry spots. Another goal of this trial is to see if early applications of Bayleton can delay the onset of dollar spot or control summer patch. This trial is replicated on our putting green with one of the trials receiving solid tine aeration and a surfactant before treatments were applied while the other trial did not receive aeration or a surfactant.

Preemergence Crabgrass Control				
Trt #	Treatment Name	Rate		Timing
1	Dimension Ultra 2EW	0.5	LB AI / ACRE	Pre-emergent
2	Dimension EC	0.5	LB AI / ACRE	Pre-emergent
3	Dimension Ultra WSP	0.5	LB AI / ACRE	Pre-emergent
4	Untreated Control			Pre-emergent

Postemergence Broadleaf Weed Control

A post emergent trial that we are conducting is comparing fluroxpyr to other competitive post-emergent products.

Annual Bluegrass Removal/Transition Program

The largest trial we are conducting would not be possible without the cooper-

Postemergence Broadleaf Weed Control				
Trt #	Treatment Name	Rate		Timing
1	Spotlight	1.0	PT PR / ACRE	Spring
	2,4-D Amine	2.0	PT PR / ACRE	
2	Spotlight	2.0	PT PR / ACRE	Spring
	2, 4-D Amine	1.0	PT PR / ACRE	Spring
3	Spotlight	2.0	PT PR / ACRE	Spring
4	Escalade 2	3.0	PT PR / ACRE	Spring
5	Confront	2.0	PT PR / ACRE	Spring
6	Untreated Control			

Fairy Ring and LDS Control

On the USGA putting green at the TROE Center we are conducting a fungicide trial to evaluate whether early preventative applications of Bayleton provide

ation of Jack MacKenzie and the North Oaks Golf Club, Dale Caldwell and the Minneapolis Golf Club and Jeff Ische and Golden Valley Country Club.

Recent winters in Minnesota have led to considerable annual bluegrass death on golf course putting surfaces and fairways. These harsh winters have proven to be a good control method for removal of annual bluegrass on turf surfaces that are predominantly creeping bentgrass. However, a large number of golf clubs in the Twin Cities Metropolitan Area are just the opposite, predominantly annual bluegrass with patches of creeping bentgrass. In

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Poa Seedhead Suppression

Tt #	Treatment Name	Product Rate		Timing
1	Untreated Control			
2	Proxy	5.0	FL OZ / 1000 FT2	A
3	Proxy	5.0	FL OZ / 1000 FT2	BC
	Primo	0.125	FL OZ / 1000 FT2	BC
4	Proxy	5.0	FL OZ / 1000 FT2	ABC
5	Proxy	3.0	FL OZ / 1000 FT2	A
6	Proxy	3.0	FL OZ / 1000 TT2	BC
	Primo	0.125	FL OZ / 1000 FT2	BC
7	Proxy	3.0	FL OZ / 1000 FT2	ABC
	Primo	0.125	FL OZ / 1000 FT2	ABC

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addition, some of our older clubs are planning considerable renovation projects to restore golf course playing conditions to the original design specifications.

The purpose of this research project is to develop an annual bluegrass removal/transition program that golf course superintendents can use in Minnesota. Previous research has been conducted using Trimmer in North Carolina (Fred Yelverton) and Illinois (Bruce Branham). Unfortunately, our winners in Minnesota are unique and provide an opportunity for research that North Carolina and Illinois cannot duplicate.

Materials and Methods: This research project will evaluate the use of Trimmer 2SC for suppression of annual bluegrass. Timing and rates of application in addition to the number of applications will be evaluated. The following is a list of proposed treatments following discussion with the superintendents and the Trimmer label.

Fairy Ring and LDS Control

Trt #	Treatment Name	Rate Timing	Interval
1	Untreated Control		
2	Bayleton SC	1.0 FL OZ / 1000 FT2	Preventative 14-day
3	Bayleton SC	2.0 FL OZ / 1000 FT2	Preventative 21-day
4	Lynx	1.0 FL OZ / 1000 FT2	Preventative 14-day
5	Lynx	2.0 FL OZ / 1000 FT2	Preventative 21-day
6	Prostar	2.2 OZ / 1000 FT2	Preventative 21-day
7	Bayleton SC	1.0 FL / OZ 1000 FT2	Preventative 21-day
	Prostar	2.2 OZ / 1000 FT2	21-day

Treatment initiation is May for spring timing (B), July for summer timing (C), and September for fall timing (A). Treatments 19 and 20 will be applied from April to October at 4-week intervals. Roundup Pro was selected to demonstrate the use of a nonselective herbicide.

For those plots that only receive one application of Trimmer per season or Glyphosate, bentgrass slit seeding will occur at the recommended interval following application (2 to 4 wks).

Prior to treatment initiation, plots will be rated for percent annual bluegrass and percent creeping bentgrass. Following application of treatments, plots will be rated for turfgrass quality, phytotoxicity, percent annual bluegrass and percent

creeping bentgrass. To develop an annual bluegrass removal program, the experiment will continue through 2007.

Some of this research will be on display at Field Day on July 27, 2006. Please join us at the TROE Center for a morning of education.

(See Annual Bluegrass Removal/Transition Program graph on Page 23.)

SUMMER VENDORS' APPRECIATION EVENT

9:30 AM
TUESDAY, JUNE 27
HERITAGE LINKS GOLF CLUB
LAKEVILLE, MN

ALL MGCSA AFFILIATES
ARE WELCOME AND
ENCOURAGED TO ATTEND

TOPICS DISCUSSED:
GREEN EXPO: PAST & PRESENT
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Annual Bluegrass Removal / Transition Program

Trt #	Name	lbs a.i. / A / application	product rate / application	Timing	lbs a.i. / yr / A		
1	Trimmit	0.1250 LB A/A	8	FL OZ/A	A	Fall	0.1250
2	Trimmit	0.1250 LB A/A	8	FL OZ/A	B	Spring	0.1250
3	Trimmit	0.1250 LB A/A	8	FL OZ/A	C	Summer	0.1250
4	Trimmit	0.1250 LB A/A	8	FL OZ/A	A,B	Fall, Spring	0.2500
5	Trimmit	0.1250 LB A/A	8	FL OZ/A	A,C	Fall, Summer	0.2500
6	Trimmit	0.1250 LB A/A	8	FL OZ/A	A,B,C	Fall, Spring, Summer	0.3750
7	Trimmit	0.2500 LB A/A	16	FL OZ/A	A	Fall	0.2500
8	Trimmit	0.2500 LB A/A	16	FL OZ/A	B	Spring	0.2500
9	Trimmit	0.2500 LB A/A	16	FL OZ/A	C	Summer	0.2500
10	Trimmit	0.2500 LB A/A	16	FL OZ/A	A,B	Fall, Spring	0.5000
11	Trimmit	0.2500 LB A/A	16	FL OZ/A	A,C	Fall, Summer	0.5000
12	Trimmit	0.2500 LB A/A	16	FL OZ/A	A,B,C	Fall, Spring, Summer	0.7500
13	Trimmit	0.5000 LB A/A	32	FL OZ/A	A	Fall	0.5000
14	Trimmit	0.5000 LB A/A	32	FL OZ/A	B	Spring	0.5000
15	Trimmit	0.5000 LB A/A	32	FL OZ/A	C	Summer	0.5000
16	Trimmit	0.5000 LB A/A	32	FL OZ/A	A,B	Fall, Spring	1.0000
17	Trimmit	0.5000 LB A/A	32	FL OZ/A	A,C	Fall, Summer	1.0000
18	Trimmit	0.5000 LB A/A	32	FL OZ/A	A,B,C	Fall, Spring, Summer	1.5000
19	Trimmit	0.1250 LB A/A	8	FL OZ/A	D	Every 4 wk	0.8750
20	Trimmit	0.0625 LB A/A	4	FL OZ/A	D	Every 4 wk	0.4375
21	Glyphosate		2	QT/A	B	Spring	
22	Untreated						

A=fall B=spring C=summer D=4 wk interval

Guidelines for Safe Handling of Drinking Water at a Golf Course

The following are guidelines if you are providing drinking water dispensers at your golf course. If the following guidelines cannot be implemented, providing bottled water as an alternative to dispensers is strongly recommended.

If you are a licensed food and beverage establishment, you must use NSF approved or equivalent equipment. A trained food service staff member should do the handling of water and the filling and cleaning of dispensers.

Dispenser filling

- ~ Wash hands with soap and water prior to handling water or ice.
- ~ Water and ice must come from an approved water supply system, either a municipal system or a well that is routinely tested and meets safe drinking water standards.
- ~ The dispenser should be stored away from chemical storage or contaminants.
- ~ The dispenser should be filled in an area free of environmental contaminants, such as dust, chemicals and insects.
- ~ The dispenser should not be placed on the floor while filling but rather on a clean and sanitary surface.
- ~ The hose used to fill the dispenser must be food grade (no garden hoses) and stored in a protected manner.
- ~ Hoses should be used exclusively for drinking water dispenser filling and not to fill other equipment or tanks, such as pesticides, herbicides or used to clean other things.
- ~ Plumbing used to draw water must meet the Minnesota plumbing code and have proper backflow devices.
- ~ Ice must be dispensed with an ice scoop to prevent direct hand contact with the ice.
- ~ Water in the container should be drained and refilled daily to prevent the growth of organisms.
- ~ Dispenser containers must not be stored outside overnight.

Water dispensers

- ~ The water dispenser should be constructed of food grade material and be easily cleanable.
- ~ The spigot should be a gravity flow design to prevent contamination during use.
- ~ Dispensers should be designed and placed in a manner to decrease the risk of tampering.
- ~ The dispenser and nozzle should be washed, rinsed and sanitized daily. Wash with soapy water inside and out, followed by a thorough clean water.
- ~ Rinse and sanitize using a bleach solution of one tablespoon per two gallons of water.
- ~ Provide an area for air-drying of the dispenser and nozzle.
- ~ Single use disposable cups should be provided.

For further information, contact: Minnesota Department of Health Environmental Health Services
121 East 7th Place, Suite 220, St. Paul, MN 55101651-215-0870 or www.health.state.mn.us