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## Upcoming Event: Turf & Landscape Field Day (2023)

(Ashley Ryan Breed, [ashbreed@purdue.edu](mailto:ashbreed@purdue.edu))



Field day attendees observe different techniques of turf and landscape care.

### Turf industry tradeshow and research tours at Purdue Turf and Landscape Field Day

WEST LAFAYETTE, Ind. – Purdue University’s Turf and Landscape Field Day will take place on Tuesday, July 18, 8 a.m. to 3 p.m., at the William H. Daniel Turfgrass Research and Diagnostic Center. The annual, one-day event will comprise of research tours, info sessions, and a tradeshow.

“The 2023 field day will feature 18 faculty, staff, and graduate students from Purdue showcasing research, best management practices, and pests of concern. In addition to morning presentations, there will be four afternoon workshops that include

turfgrass health, weed identification and control, getting started with using UAVs (drones), and a tour of the Purdue Arboretum discussing opportunities and challenges of native plantings,” said Kyle Daniel, Purdue Extension specialist. A tradeshow with over 40 exhibitors, displaying equipment and turf and landscape products, will also be included in the day’s activities.

The William H. Daniel Turfgrass Research and Diagnostic Center is located at 1340 Cherry Lane, West Lafayette, Indiana. Registration begins at 8 a.m. EDT the morning of the event, and a Women of the Green Industry tour will occur at 3:30 p.m. after the field day concludes. More information, including pre-registration instructions for attendees and exhibitors, education credits, pricing, and directions, can be found [HERE](#).

## MRTF’s President-Elect Initiative: Chip In Program

(Ashley Ryan Breed, [ashbreed@purdue.edu](mailto:ashbreed@purdue.edu))

### JOIN THE PROGRAM TODAY!

The MRTF is looking for public and private courses to contribute financially through one of the many flexible options of our “Chip In” Program.

Proceeds benefit the MRTF Turf Program Enhancement Endowment

Flexible contribution options:

- \$1/feet rental (added, pick a month)
- \$1/round (added, pick a month)
- \$20/member annual dues
- Cash donation
- *other*

This program helps enhance the sustainability of golf courses and improve playing conditions.

Participants receive:
 

- Custom poster for their pro shop highlighting their participation.
- Recognition online and at all major MRTF events.

For more information and details on how to join, please contact either:  
 Mike Dunk, 765-749-0651, [mike@coyotecrossinggolf.com](mailto:mike@coyotecrossinggolf.com)  
 Devin Moyers, 317-376-3709, [devin-moyers@kmturf.com](mailto:devin-moyers@kmturf.com)

## MRTF Financial Update

(Aaron J Patton, [ajpatton@purdue.edu](mailto:ajpatton@purdue.edu))

### YOUR Support Makes a DIFFERENCE!

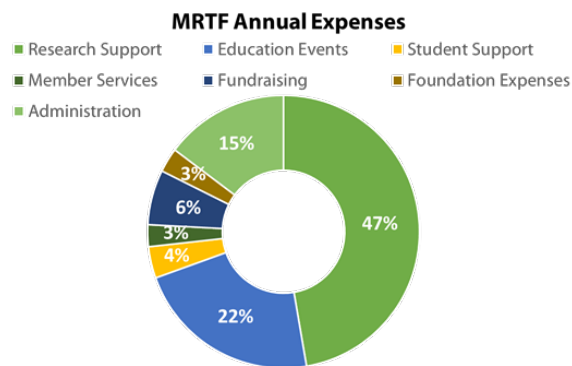
Have you ever wondered how the MRTF operates or where your membership dues, registration income, or donation ends up? Well, I thought I would take a few moments to share how this all works and why your involvement in the MRTF makes a difference.

The MRTF is governed by a diverse board of directors (lawn, golf, sports, distributors, etc.) made up of your peers in the industry. This board of directors provides guidance and direction for the

executive committee and for our Purdue Turf Program. The overall mission of the MRTF is to support turf research and education at Purdue University for the advancement of the turfgrass industry. Since 1945, the MRTF has been fulfilling this mission.

To help carry out the MRTF mission, the board directs funds for turf research at Purdue University, supports the W.H. Daniel Turfgrass Research and Diagnostic Center operating budget, sustains turf research through endowments at Purdue University, champions student scholarships, offers regional educational and networking opportunities, provides opportunities for pesticide continuing certification hours (CCHs), informs and engages its membership, recognizes the service achievements and professionalism of members, and acknowledges the environmental stewardship efforts of our members. That's a lot!

Where in the world do we get the funds to accomplish all of those services that support our mission? From you! Your membership dues, registration fees, and donations all go to support our mission. Furthermore, the MRTF board of directors makes every effort to steward the income it receives.



From our 2022-2023 FY budget, the MRTF is budgeting to direct 47% of its revenue toward research. This amounted to approximately \$114,000 for the Daniel Turf Center, research projects, or endowment growth. By keeping our education event costs (22% of the budget) to a minimum, we maximize our ability to support turf research. Furthermore, we have minimal administrative costs compared to most foundations spending only 15% of our budget on salary, training, and travel for our Executive Secretary. All other positions on the MRTF board of directors are voluntary, including my position as Executive Director. This keeps our costs low and maximizes our impact. We also invested \$9,000 (4% of the budget) in scholarships or growing our student travel endowment to reward deserving students. We spend about \$8,000 annually (~4% of the budget) on member services such as membership renewal (print & postage) and award receptions. Last but not least, we incur about \$7,000 a year in foundation expenses (accounting, insurance, etc.) necessary to maintain our 501(c)3 status and keep the foundation functioning well.

I trust this short look into our finances provides you with some more insight into how the MRTF operates and the impact that your participation makes. We work diligently to be good stewards of the dollars you contribute annually to the foundation. I hope that you will think about the impact your dollars make each time you renew your membership, register for an event, or provide a

donation. Learn more about the MRTF online at our updated website, [www.mrtf.org](http://www.mrtf.org).

Thank you for your support!

Dr. Aaron Patton, MRTF Executive Director

## Research Spotlight: The Right Way to Control Ground Ivy (Summer 2023)

(Aaron J Patton, [ajpatton@purdue.edu](mailto:ajpatton@purdue.edu))

### The Right Way to Control Ground Ivy

*The Rate and Product Make a Difference*

By Aaron Patton, Ph.D.

Herbicide	White clover	Dandelion	Ground ivy	Wild violet
2,4-D	P	E	F	P
dichlorprop (2,4-DP)	P	P	P	P
MCPA	F	G	P	P
MCPP, mecoprop	F	P	P	P
dicamba	E	P	P	P
clopyralid	E	F	P	P
fluroxypyr	E	F	G	P
triclopyr	F	P	G	G
quinclorac	E	F	F-P	P

Rating Key: E=excellent (≥90% control). G=good (75-90% control). F=fair (50-75% control). P=poor control (≤50% control).

The go-to product for broadleaf weed control is often a pre-mixture of phenoxy herbicides such as 2,4-D; mecoprop (MCP); or MCPA, as well as the benzoic acid dicamba. These ingredients make up the majority of what are commonly referred to as “three-way” herbicides. These pre-mixtures are versatile in that they can be used on both cool- and warm-season grasses, they have excellent turf safety, they are available at low cost, and they provide consistent control of common broadleaf weeds such as dandelion and white clover. However, some other tough broadleaf weeds such as ground ivy and wild violet are poorly controlled with “three-way” herbicides and applicators should choose products with triclopyr for better results.

Ground ivy — sometimes called creeping Charlie by homeowners — is a tough-to-control broadleaf weed found growing in full sun and shade. Cultural practices such as fertilizing, mowing, irrigation, and overseeding do not effectively reduce ground ivy so herbicides are needed. In cool-season turfgrass, herbicides that work best to control ground ivy include fluroxypyr and triclopyr. Although there are many products that contain triclopyr, triclopyr by itself at 1 quart/A of Turlon Estra Ultra typically provides the best results in our research. Additionally, good ground ivy control can be achieved by tank-mixing triclopyr at 1 pint/A tank-mixed with another herbicide containing 2,4-D.

MRTF member Gary Crum (Lawn Tamer in Frankfort, IN) asked me in 2018 if all formulations of triclopyr were equally effective at controlling ground ivy. I assumed that they all might be, but all good questions deserve an answer. In 2019, I conducted an experiment that tested four different formulations of triclopyr including the ester (Turflon Ester Ultra), acid (Trycera), amine (Garlon 3A), and choline (Vastlan) formulation. NOTE: Garlon and

Vastlan are not labeled for managed turf but are used in pastures. All were applied at three rates equivalent to 0.25, 0.5 or 1.0 lbs acid equivalent (ae)/Acre. For Turflon Ester Ultra, this was equivalent to 0.5 pint, 1.0 pint, and 1 quart per acre, respectively. The results showed that all four formulations worked similar to one another (91-96% ground ivy control averaged across the three rates) with all providing improved ground ivy control at the higher rates. Six weeks after an application of the herbicides in early May, the low, medium, and high rates resulted in 85%, 96%, and 99% ground ivy control, respectively.

Herbicides available to turf professionals for controlling tough broadleaf weeds like ground ivy. Chose products with triclopyr and apply at the high label rate for best results with wild violet.

NOTE: Not all are labeled for residential turf.

Key Ingredient  
Triclopyr  
Commercially available herbicides containing one of the listed key ingredients:  
Battlemisq III, Charge III, Chaser Ultra 2, Equilizer 2, Glancho, Last Call, Momentum FX2, Momentum 4-Score, Sure Power, Tallspin, Tetra, Vista XRT  
4-Speed XT, Aquasweep, Battlemisq II, Chaser, Chaser 2 amine, Confident, Cool Power, Cross-road, Eliminate, Everette, Foundation, Horsepower, Momentum FX2,  
Momentum 4-Score, Tallspin, Three-Way Ester II, Sure Power, Tetra, Triad T2 Select, Triclopyr 4, Turflon I amine, Turflon Ester Ultra, Tyronex, T2DNE

<sup>1</sup> *Ingredient may be the only ingredient in the herbicide or be one of up to four ingredients in the herbicide.*

In summary, sometimes the tough to control weeds aren't really that tough, we are just picking the wrong product. All formulations of triclopyr are effective at controlling ground ivy and by selecting products with more triclopyr in the formulation or by applying a higher rate of triclopyr (within label limits), it is possible to improve ground ivy control. For more information on weed control, get a copy of [Turfgrass Weed Control for Professionals Publication](#).

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## Research Spotlight: Bermudagrass Cultivar Evaluation (Summer 2023)

(Cale Bigelow)

Research Update - Bigelow June 2023

### Bermudagrass Cultivar Evaluation - Winter Survival



As I write this research update we are about one week from the official astronomical start of summer and conditions for sustained, vigorous turf growth in the Lower Midwest has been met with fits and starts. This is especially true for the warm-season grasses like bermudagrass. Throughout Central Indiana and some of our

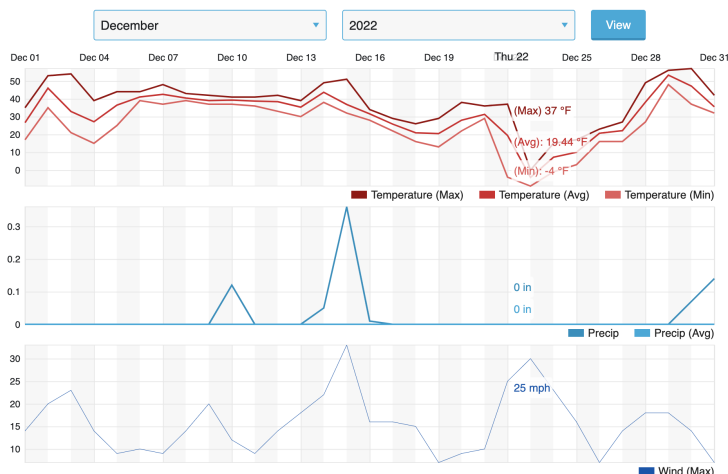
surrounding states bermudagrass has continued to gain acceptance for athletic fields as well as high traffic golf areas like driving ranges. It is well regarded for its ability to tolerate close mowing (<0.5"), strong summer vigor, drought tolerance, sports traction characteristics, deep rooting and ability to self-repair into divots or worn areas via underground rhizomes and aboveground stolons.

While bermudagrass has several strengths (Remember there is NO PERFECT GRASS!), it does have a number of potential weaknesses. These include a dormant winter appearance where it turns straw brown for months, susceptibility to diseases like spring dead spot and most importantly in a climate like the Midwest the potential for winter-kill due to unpredictable frigid winter temperatures.

My research program continually participates with The National Turfgrass Evaluation Program (NTEP) to evaluate existing and experimental grasses and cultivars/varieties for the performance and regional adaptation. In these NTEP studies we plant the grasses and evaluate them for a period of 5 years. Information about the NTEP program is freely accessible to the public and can be accessed at the [www.ntep.org](http://www.ntep.org) website. The grasses are evaluated for criteria like establishment rate, visual appearance, pest susceptibility/damage (e.g. disease, weeds, insects) and long-term persistence. In June of 2019 we planted the most recent NTEP bermudagrass trial. For this trial, 42 bermudagrass entries were planted and each replicated three times. There are both seeded and vegetatively established bermudagrass. The vegetative entries were established using plugs. As far as cultivars there were numerous standards like Tifway, Latitude 36, Patriot, and Yukon as well as a wide range of experimental germplasm from turfgrass breeding programs like Oklahoma State and Mississippi State. Our trial is maintained at 0.75 inches and receives supplemental irrigation and moderate summer fertilization to promote a dense, healthy turf.

### Spring Green-Up and Winter-Kill 2023

As spring is slowly turning to summer 2023 I have been in regular contact with my friends and colleagues across the transition zone. During the last 5 weeks I have been getting repeated reports of what appears to be bermudagrass winter-kill, and in some situations it is quite extensive. When they asked what I was seeing up this way, my only response has been that it has been too early to tell, but it appeared that we also sustained some winter-kill in my cultivar trial. There are numerous factors that may influence the severity of winter-kill, but the key factor is suboptimal chilling temperatures. This is often exacerbated in situations where the bermudagrass is not protected by a blanket of snow and/or synthetic turf covers.



In late December, 2022 much of the United States experienced an “Arctic blast”. To provide context on 21 December in West Lafayette the high/low air temperatures were 36/29 °F and on 23 December temperatures plummeted to 0/-9 °F (Fig. 1) Note: those do not include wind-chill temperatures! Wind speeds during the time ranged from 25-30 mph with gusts up to 55 mph. All of this is a recipe for potential winter-kill for bermudagrass.

### Now what?

For areas that were subject to winter-kill (Fig. 2), at this point “*It is what it is...*” and now it’s time to replant if you want contiguous grass coverage for late-summer use. There are several options for re-establishment and these include: sod, sprigging and seeding. Sodding and sprigging with take the least time to fully establish which may be necessary for an area that will be utilized in late July for things like high school sports. The decision on what method one may choose for re-establishment can be complicated. For example, do you need to try and match the cultivar that did not survive? Can you use this as an opportunity to “upgrade your genetics” for a more winter-hardy, improved cultivar? This may be an opportunity to also upgrade soil drainage, as excess soil moisture can be a factor affecting winter survival.

As far as which of the 42 cultivars that have reliably survived our West Lafayette winters the past few years there are some that are more reliable for our area than others (Note: all of our cultivar have sustained “some” winter-kill, especially in Dec. 2022). As far as commercially available cultivars, the “usual suspects” of widely adopted cold-hardy vegetatively planted grasses like Patriot, Tahoma 31, Latitude 36, Northbridge survived reasonably. Further another one, Astro, that I have not seen planted in our region has performed as well as Tahoma 31 at our location for spring green-up the past two winters. By comparison, an old standard, Tifway, did not. Among the seeded bermudagrasses, as a whole they were more affected by cold temperatures than the vegetative cultivars. Some of the commercially available seeded options that have minimally survived include Yukon and Rio. What is really important, however, is that in addition to these aforementioned commercially available cultivars there are some really, really strong experimental entries that hopefully will find a commercial home and provide our turf managers with options for superior genetics to minimize the regular threat of winter-kill on bermudagrass.

## Campus Spotlight: New Pesticide Storage Building

(Ashley Ryan Breed, [ashbreed@purdue.edu](mailto:ashbreed@purdue.edu))



The new pesticide storage building at the W. H. Daniel Turfgrass Center was donated by Meridian Hills Country Club, at the advice of Jared Weight (superintendent). Mike Dunk (Superintendent, Coyote Crossing) and Devin Moyers (Kenny Machinery) worked with Jared to arrange for the donation and subsequently move the building to its current home. Scott Reckard (Kenny Machinery) organized/coordinated with Colin Nysewande (RPM) to deliver and place the 14,000 lb building onsite at the Turf Center in early April. The pesticide storage building sits near the Structural Pesticide Training Building behind the turf center. We plan to make good use of the new addition by storing both general plot maintenance and research materials and acting as a visual aide in pesticide training events.

We want to thank all who were involved in the donation and transportation of the building. It will get lots of use!

*Glenn Hardebeck and the MRTF*

## Campus Spotlight: College of Ag Super Heroes

(Ashley Ryan Breed, [ashbreed@purdue.edu](mailto:ashbreed@purdue.edu))

The MRTF’s support of the William H. Daniel Turfgrass Research and Diagnostic Center really pays off. Congrats to Glenn and Ben for this awesome recognition of all their hard work!



Dear College of Agriculture Colleagues,

This week's *College of Ag Super Heroes* are Glenn Hardebeck, turfgrass research center manager, and Benjamin Royal, turfgrass research facility technician. Both work at the William H. Daniel Turfgrass Research and Diagnostic Center and are members of the Department of Horticulture and Landscape Architecture.

Glenn and Ben go above and beyond when it comes to working with those hosting events at the center, located on Cherry Lane just off campus. In addition to ensuring the facilities are top notch, they also provide equipment for hands-on demonstrations and contribute their knowledge on relevant topics.

A faculty member stated, "Without the cooperation of Glenn and Ben, the programs could not have been as successful as they were. You can't go wrong working with a team of individuals who are constantly asking, 'What do you need?'"

*College of Ag Super Heroes* are individuals who are doing great things for the college in ways that oftentimes go unrecognized. During my time as interim dean, I'll be sending out periodic emails highlighting some of these individuals.

Thank you, Glenn and Ben, for your spirit of collaboration to help others within the college host successful programs at your facilities.

**Dr. Ken Foster, PhD**

**Interim Dean | College of Agriculture**

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## Calendar of Events

(Ashley Ryan Breed, [ashbreed@purdue.edu](mailto:ashbreed@purdue.edu))

### January 30 - February 1, 2023

Indiana Green Expo; Indiana Convention Center, Indianapolis, IN

### Spring, TBA

Day of service

### July 18, 2023

Turf & Landscape Field Day; Daniel Turf Center, West Lafayette, IN

### August 1, 2023

Lawn-care Diagnostic Training; Daniel Turf Center, West Lafayette, IN

### October 2, 2023

MRTF Golf Day -Fundraiser; Pine Valley Country Club, Fort Wayne, IN

### Fall, TBA

Day of service

### November 16-17, 2023

Turf & Landscape Seminar; Daniel Turf Center, West Lafayette, IN

### December 2023

Herbicide Workshop (Virtual Class)

### December 7, 2023

Herbicide Workshop; Holiday Inn Purdue, Fort Wayne, IN

### December 12, 2023

Herbicide Workshop; The Fort Golf Resort, Indianapolis, IN

### January 17-19, 2024

Indiana Green Expo, Indianapolis Convention Center, Indianapolis, IN

To get updates on events, please follow us on [Facebook](#) and regularly visit our website: [www.mrtf.org](http://www.mrtf.org).

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Editor: Ashley Ryan Breed | Midwest Regional Turf Foundation, P.O. Box 2285, West Lafayette, IN 47996-2285