

Indiana Invasive Species Council
Wednesday 17 May 2023. 10:30 am to 1:30 pm Eastern Standard Time

1. Call to Order

2. Roll Call

- Council Members Present
 - Phyllis Boyd, Director, representing Indianapolis Parks & Recreation, phyllis.boyd@indy.gov
 - Rick Haggard, Executive Director, Indiana Nursery and Landscape Association, representing industry, haggard.rick@att.net
 - Alicia Kelley, IN CAPS State Survey Coordinator, representing Dean of Agriculture, Purdue University (Secretariat), ajkelley@purdue.edu
 - Matt Kraushar, (IISC Chair), Roadside Maintenance Specialist, representing Indiana Department of Transportation, mkraushar@indot.in.gov
 - Heather Reynolds, Professor and Director of Graduate Studies in Biology, Indiana University, representing research, hlreynol@indiana.edu
 - Kate Sanders, Resource Specialist, representing Indiana State Department of Agriculture, kasanders1@isda.in.gov
 - Joe Schmees, IN Freshwater Strategy Manager, The Nature Conservancy, representing land trusts, joseph.schmees@tnc.org
 - Mike Warner, President of ArborTerra Consulting, Inc., representing Indiana forest industry, mwarner@arboterra.com
 - Kelli Werling, Director of Swine Health Programs, representing Indiana State Board of Animal Health, kwerling@boah.in.gov
- Non-Council Members Present
 - Eric Bitner, representing Megan Abraham, representing Indiana Department of Natural Resources, Division of Entomology and Plant Pathology, ebitner@dnr.in.gov
 - Robert (Bob) Bruner, Exotic Forest Pest Educator, Department of Entomology, Purdue University, rfbruner@purdue.edu
 - Phil Marshall, Forest Health Specialist, Division of Forestry, pmarshall@dnr.IN.gov
 - Aaron Patton, Professor of Horticulture, Turfgrass Extension Specialist, Purdue University, Department of Horticulture & Landscape Architecture, ajpatton@purdue.edu
 - Liz Rice, Indiana Association of Soil and Water Conservation Districts
 - Dan Shaver, State Forester, NRCS Indiana, daniel.shaver@usda.gov
 - Dawn Slack, State of Indiana Cooperative Invasives Management (SICIM), Project Coordinator / (Chair) IISC Invasive Plant Advisory Committee, dawn@sicim.info
 - Steve Yaninek, Professor of Entomology, former Council member, yaninek@purdue.edu

3. Adoption of Agenda (M. Kraushar)

- Discussion: No discussion
 - Motion: K. Werling
 - Second: H. Reynolds
 - Vote: Passed

4. Review and approval of minutes from prior meeting (M. Kraushar)

- Discussion: Accepted with minor changes
 - Motion: K. Sanders
 - Second: K. Werling
 - Vote: Passed

5. Guest Presentation on Tall Fescue (Dr. Aaron Patton)

- Tall fescue (*Schedonorus arundinaceus*) and the Invasive Plant Advisory Committee's Species List/Ranking
- Full presentation attached to minutes (Appendix I)
- Discussion:

- M. Kraushar: Thank you Dr. Patton. This is valid information and a great assessment of a plant species. There were also good recommendations for the Invasive Plant Advisory Committee on improving plant assessments. Dawn has communicated to the Council that IPAC tries to keep their assessment as close to other states as possible so they are comparable. However, there are some opportunities to improve certain portions, especially the discussion portions where we can add clarity. Personally I will add, the cultivar piece is a challenge. This has been a frequent discussion. When a botanist cannot identify certain cultivars, the sale becomes a challenge. Another challenge we should overcome is the misinterpretation of the intent of the invasiveness rankings. The rankings are intended to convey the ability of the plant to invade natural areas. Certain management practices will change how easily a plant can become invasive; for example, Liriope cannot go far if it's planted in a concrete box, but if management practices cease and the plant escapes, then there is a high potential for ecological impact. Differentiating the management component in the rankings is a challenge, but it is important conversation for the invasive species community.
- A. Kelley: If the movement potential for tall fescue is low, but we are still seeing it in natural areas, do we know how this movement occurred?
- D. Slack: Sometimes it is planted intentionally, or it was planted in a development area that is now being mitigated and restored.
- H. Reynolds: In terms of its dispersal, I would be interested to hear Dawn's perspective on why there is a lack of clarity on the spread of tall fescue. Just because there is a lack of evidence on its movement, doesn't mean it doesn't move. Maybe studies haven't been done. I also wanted to ask about the comment regarding tall fescue being 20% of the industry, which suggests there are other viable alternatives. I understand the points about it needing less water, but we have to compare that to competing problems like invasiveness. I also wanted to ask how many complaints have been received, because it sounds like there are only two entities within Bloomington that are taking legal action to ban tall fescue.
- A. Patton: I would argue that the intent of these rankings to be used for natural areas is not clear, because the City of Bloomington is taking this assessment intended for a natural area and applying it to an urban lawn. Are you defining a natural area as a lawn? Because the City of Bloomington believes this invasive assessment should apply to their urban areas.
- H. Reynolds: They are not saying it is invasive in a lawn situation, they are saying it is an invasive plant species that should not be used because it escapes to natural areas.
- R. Bruner: Something else we should point out is that tall fescue is widely adopted in pastures. About 20% of Monroe county is pasture. If the City of Bloomington wants to take this step, I would be concerned about the county making a poor decision that would have a negative impact on farmers.
- D. Slack: I do understand where everyone is coming from because you are using tall fescue in a specific application. But you cannot guarantee that you will manage a species forever. We see invasive species in abandoned sites all the time that cause ecological harm to the environment when left unmanaged. The intent of the assessments is to determine the impact to those natural areas. Tall fescue has been assessed as having a negative impact, not just in Indiana. I'm not saying it is invasive in a lawn or landscaped formal area. What we have found is that when we are in natural areas, there are negative impacts. However, we do need more data and there isn't a lot of research on it. We would love to have more people on the assessment team who can bring new knowledge and perspective.
- A. Patton: To go back to Heather's question about alternatives, historically Kentucky bluegrass was the primary species grown by sod growers because it makes rhizomes. Tall fescue makes a poor sod because it doesn't make rhizomes. However, the demand from landscapers for tall fescue sod varieties is increasing, and so the total amount of tall fescue in Indiana is also increasing. The alternative is Kentucky bluegrass, which we are trying to discourage because it requires significantly more inputs. In regards to the number of complaints, it is important to mention that currently it is only tall fescue sod within the City of Bloomington limits that is being affected. Most landscapers will use tall fescue seed for a lawn, and so the ordinance doesn't affect them currently. I do think there would

be a large stakeholder voice in support of continued use of tall fescue if they were made aware it is on the IISC's list.

- M. Warner: I think the assessment process is strong and well proven. I do see where there is some room for clarification on how the rankings are defined and how they might be used. The intent is not for the entire list of species to be eliminated from use.
- D. Shaver: I agree that there are some issues with how the list is presented. We are the body that created the list, but if someone takes it and uses it in a different context, we have very little control over that. NRCS still utilizes tall fescue in a number of our practices, such as waterways, pastures, and critical area plantings. We understand there is invasive potential to it, that it's not good for wildlife, and it limits our ability to do early successional restoration; but it's not something we're looking to ban for use in turfs. To me this issue is of another group taking our list and using it out of context. Part of that could be our responsibility to put some cautionary statements on our list, but part of that is the group that chooses to use the list, and we don't have sway over how they use it.
- M. Kraushar: From an INDOT perspective, we choose not to use anything on the list ranked High. I think we can more effectively communicate the intent of the rankings, and add discussion about the effect of management on the invasiveness of the species.

6. 5-minute recess

7. Member Reports/Updates

- Indiana Department of Natural Resources, Division of Entomology and Plant Pathology (E. Bitner)
 - We have been issuing stop sales for Terrestrial Plant Rule because invasive plants are still being shipped in, primarily barberry
 - Spotted lanternfly is two counties, Switzerland and Huntington counties; we are actively delimiting, detecting, and controlling those populations.
 - We are actively surveying for box tree moth
 - We are sending in samples for a Sudden Oak Death survey in nurseries. We have not found the pathogen yet.
 - We are working with Dawn to speak at the upcoming SICIM meeting
- The Nature Conservancy/Land Trusts (J. Schmees)
 - TNC completed successful prescribed burn season for over 3000 acres
 - Working on boundary lines for surveys of our preserves
 - Utilizing drones has been very useful to look at properties to monitor for potential invasives
 - Three Weed Wrangles have been completed so far and more are scheduled
 - TNC will be hosting educational opportunities at Flagship Preserves
 - We connect interested parties to their local CISMAs to become involved
- Purdue University College of Agriculture (A. Kelley)
 - Two extension events are coming up that are an opportunity to reach Extension Educators
 - Annual Agriculture Natural Resources (ANR) Retreat
 - November 15-16th 2023 (12 - 4 PM EDT)
 - Beck Ag Center, 4550 US-52, West Lafayette, IN 47906
 - <https://extension.purdue.edu/events/2023/11/annual-agriculture-natural-resources-anr-retreat.html>
 - Purdue Extension Professional Development Conference
 - December 13-14th 2023
 - Tippecanoe County 4-H Fairgrounds, 1406 Teal Road, Lafayette, IN 47905
 - R. Bruner: This is also an opportunity for the council to educate Extension personnel on the nature of the IISC. Anyone wanting to be involved can contact me.
- State Board of Animal Health (K. Werling)
 - Avian & Poultry Health
 - There has been a total of 6,737 detections of H5N1 HPAI in wild birds in 49 states as of May 12, 2023. Indiana has had a total of 58 wild bird detections. A total of 834 cases have been diagnosed in domestic birds representing over 86.5 million birds in 47 states. Indiana's last diagnosis of HPAI in domestic commercial poultry was on December 11, 2022. Indiana's last

diagnosis of HPAI in backyard poultry was May 3, 2023 in Posey County. Indiana declared freedom from HPAI on April 19, 2023 (status is connected to last commercial case).

- Cattle Health
 - There have been three separate cases of *Theileria orientalis* Chitose diagnosed in Orange, Dubois, and Gibson counties since September 2022. Indiana's first case of *Theileria orientalis* Ikeda was diagnosed in mid-March.
- The Asian-Longhorned Tick was detected in Indiana for the first time on May 2, 2023. Specimen was collected through routine tick surveillance (tick drag) at the Plinter Ridge Fish & Wildlife Area in Switzerland County on April 13, 2023.
 - The tick was not attached to a person or an animal. It was collected in the field by a medical entomologist at the Indiana Department of Health as part of a routine tick surveillance program.
 - ALHTs are not native to the US, but have been present in the US as an invasive species since at least 2017. Indiana is the 19th state to have detected ALHTs.
 - Asian longhorned ticks can spread quickly because the females can reproduce without mating (parthenogenesis) and can lay up to 2,000 eggs at a time.
 - BOAH actions: veterinary and animal health advisories, called cattle veterinarians in the affected areas.
- Cervid Health
 - On January 31, 2023, Wisconsin officials notified BOAH that an Indiana farmed cervid herd was determined to be a CWD (chronic wasting disease) traceback-exposed herd. The CWD positive Wisconsin herd resides in an area of their state considered to be endemic for CWD. The herd owner had purchased a yearling white-tailed deer buck from Indiana in December of 2020. Upon depopulation of the Wisconsin herd, that buck was determined to be among the CWD positive deer.
 - The Indiana traceback herd has been quarantined, and BOAH field veterinarians have conducted initial antemortem testing by collecting blood samples and recto-mucosal biopsies for CWD testing and genetic disease susceptibility. All biopsies in the first round of testing resulted in "not detected" for the CWD prion.
 - Further epi-links from our Indiana traceback herd have resulted in traces to Kentucky and Illinois as well as three additional Indiana sites. Many of the traced animals have already been found to be CWD negative on postmortem testing.
 - A large portion of Indiana's cervid herds are conducting their triannual TB accreditation testing this year. Even with this increase in testing, we have experienced an unusual number of suspect results (12 total).
 - Currently, Indiana has 5 herds under quarantine awaiting follow-up testing on these suspect animals. If the second round of serology testing is negative, the animals are reclassified as negative. If the results come back as suspect again, those deer get classified as reactors and can only be cleared with necropsy and lymph node submission.
 - These suspect animals are distributed widely across the state of Indiana and are not located in one region.
 - We have reached out to cervid health leadership within USDA as well as the National Veterinary Services Laboratory to determine if other states are also experiencing these suspect increases and/or if there are possible explanations for the higher-than-normal rate. It appears that Indiana is currently the only state with this uptick in suspects; however, the state of Missouri experienced a very similar, unexplained, phenomenon in recent years, which did not result in any TB diagnoses.
- Foreign Animal Disease Investigations
 - In addition to responding to numerous public reports of sick birds or increased mortality in poultry flocks, BOAH also conducted three foreign animal disease investigations this quarter. These investigations included ruling out foreign vesicular diseases in a swine farrowing

operation and an alpaca farm as well as RHDV-2 in a pet rabbit. All tests were negative for foreign and emerging diseases.

- Indiana Department of Transportation (M. Kraushar)
 - We continue to do treatment of Callery pear
 - We are underway with contracts for weed treatments
- Indiana State Department of Agriculture (K. Sanders)
 - Don Lamb is the new director of ISDA
 - Deputy Director Jordan Seger is no longer with ISDA
- Research (H. Reynolds)
 - A notice from the Midwest Invasive Plant Network was released about garlic mustard aphids
 - E. Bitner: There are two reports of this aphid on EDDmaps that have not been verified. One is near Clark State Forest, and the other is near Muncie.
 - Dr. Daniel Park will be giving a research talk about digital herbarium collections and community science
 - Action item: Send information to the council regarding garlic mustard aphids and Dr. Park's talk
- Nursery (R. Haggard)
 - With shortage of material, other vendors are coming into the state that are trying to sell materials through "color palette". They do have barberry; member who received it was unaware of invasive status. Not well-known companies, but due to shortage they are marketing this way. Email was sent to remind vendors that it is banned at the species level, and cultivar does not matter.
 - We are dealing with plant injuries from winter
 - Make people aware of pop-ups that are selling invasives based on color
- Parks and Recreation (P. Boyd)
 - We have finished updating our 5-year comprehensive master plan. As a part of that, Chapter 4 deals with work we do with the Office of Land Stewardship.
 - Land Stewardship Progress update is on page 128 of Comprehensive Master Plan.
 - Of the 11,000 acres in the Indy Parks system, Land Stewardship is managing 2,018 acres.
 - Increased wetlands from 2.5 acres to 44 acres
 - Increased planted prairies from 12 acres to 300 acres
 - Increased woodland restoration from 160 acres to 1526 acres
 - Increased the number of invasive plant species managed from a few to 70
 - Converted more than 735 acres from turf and agriculture to native plant communities
 - We are planning to expand the areas that are managed in the next few years
 - Priorities for parks and lands that are naturally managed. We are also applying for grants to manage lands in underserved areas.
 - To track our work, crews will use GPS to document their paths and the specifics of what work they did at those sites.
 - Washington Park is an example of the work that has been accomplished. This park has not been managed in a decade. We have done a lot of work to clear the area and open the site lines to make the space more desirable and inviting to that community.
 - Indy Land Stewardship requires reports of the invasive plant management work that has been done. This provides more details on the management actions taken to control and document invasive species.
 - Plan is available online and open for public comment at www.planindyparks.com
 - M. Kraushar: With regards to tracking, what app are you using for tracking paths?
 - P. Boyd: They have a GPS device with monitors which tracks where they go.
- Forestry Industry (M. Warner)
 - The biennial report was sent.
 - Inflow of money from the Inflation Reduction Act (IRA) into USDA-NRCS provides potential for money towards forestry management practices on private land. Invasive species management can be included in forestry management plans as a supporting practice for carbon sequestration.

- Dan: This year, NRCS is making an effort to work with small farms and urban landowners. We have been adjusting our practices to allow those to be used on smaller urban areas. That has opened up the opportunity for more landowners to apply for a conservation program. This will help with the campaign against invasive species.
- Dan: The money coming into USDA-NRCS will be in different fund pools. Our planners will receive an application, and then based on the practices, they put it into the fund pool that is most likely to fund it.
- Indiana Plant Advisory Committee (IPAC) and State of Indiana Cooperative Invasives Management (SICIM) (D. Slack)
 - IPAC
 - IPAC has begun assessing species from list presented to the council previously.
 - I will give IPAC a report and provide Dr. Patton's contact.
 - III (Indiana Invasive Initiative)
 - We continue to conduct surveys and weed wrangles.
 - We have added a few CISMAs, 50 total representing 72 counties. More will be added by the end of the year.
 - Free regional trainings
 - <https://www.sicim.info/regional-trainings>
 - Reminder about Indiana Invasive Species Conference – June 29th
 - <https://www.sicim.info/invasivespeciesconference>
 - Annual report is out. The link was sent to M. Kraushar who can share to those interested
 - CWI (Clean Water Indiana) grants
 - CWI program was funded at \$6 million. Funds are available to SWCDs and CISMA partners for conservation efforts.
 - J. Schmees: That's the biggest increase in the history of CWI. Benjamin Harris Trust got \$10 million. Lake and River Enhancement Program got a change in statute to increase fees for larger boats.
 - M. Warner: The original ask was \$8.6 million. A lot of people worked in the background to get \$6 million. Not all of that will go to invasive species management. I think there was \$1.5 million of the \$8.6 targeted toward invasive species to help support III and SICIM. Those funds are distributed and allocated through the State Soil Conservation Board. These are state funds that will be used for invasive species management which we have not had before, so this is a big deal.

8. Old Business

- Outstanding Action Items from prior meetings
 - Action Item: Eric Fischer to share schedule for Boat Landing Blitz.
 - Action Item: Megan Abraham to provide timeline for amendment process to Council and listserv.
 - Terrestrial Plant Rule additions/status update (M. Abraham)
- Recodification of IISC (M. Kraushar)
 - Made it through the legislature; codification was included in budget. IISC is extended as-is through 2031.
 - Action item: M. Kraushar will locate the legislative code that was passed.
 - Legislative code will be attached to minutes (Appendix II)
- Elect Chair Position
 - M. Kraushar asking for volunteers on the Chair position.
 - H. Reynolds recommends a nominating process which includes Vice Chair so that subsequent chair is already in line.
 - K. Sanders suggests committee to nominate chairs who can discuss with potential candidates in private to gauge their willingness.
 - Council will brainstorm on a succession plan for next meeting.
- Invasive Species Awareness Week

- CISMAs complained that they did not have enough time to plan events during this week and requested to be informed of it sooner next year.
- Intent of the council is to have that week align with the national week, so the CISMA group can plan for that.
- Hybrid Meeting Policy
 - Official policy document edited based on recommendations during the last meeting.
 - Final version was circulated to the Council.
 - Policy attached to minutes (Appendix III)
 - Motion to approve: K. Werling
 - Second: J. Schmees
 - Vote: Passed

9. New Business

- Media/Outreach Committee
 - M. Kraushar proposes forming a committee dedicated to IISC outreach
 - A. Kelley and R. Bruner volunteer for the committee.
 - H. Reynolds suggests committee is focused on the website, and any information that needs to be disseminated through agency partners.
 - M. Kraushar requests Council's input on possible funding for printable materials
 - H. Reynolds: Which printables are you referring to?
 - D. Slack: When we do outreach events, we are providing printable handouts for people to take home. People like having Terrestrial Plant Guide in hand to take with the field with them. The price has increased for that guide. If the Council could agree to print 100 per year, that would help us.
 - H. Reynolds: Our primary source of funding comes from the biennial conference, so we could maybe use a portion of those funds.
 - S. Yaninek: The Council has a balance of \$5,628. That is money we generated from our meetings. I believe there was a request from an Extension group to print some of the documents and they would be willing to pay for it.
 - H. Reynolds: Since we generate funds from our conferences, can we consider allocating a portion of the budget for printing the guides?
 - D. Slack: The III holds a conference every year. A portion of the funds generated from the conference roll over into the conference for the next year. We haven't asked IISC for money because SICIM has covered it, but there is a need for assistance with printing the Terrestrial Plant Rule.
 - H. Reynolds: If we have money available, I think we should use it for the guides, and consider contributing more substantially to the conference to generate more money for the Council funds.
 - D. Slack: Our immediate need is about 100, currently priced at \$14.
 - Action item – D. Slack reach out to A. Kelley about printing options.
 - Action item – A. Kelley to look into printing options.
- Indiana Forest Stewardship Advisory Council
 - Upcoming meeting 6/6/23
 - IISC is an official member of that group
 - M. Kraushar will attend on behalf of the council
- 2023 Biennial Report
 - Action item: M. Kraushar will be reaching out to one other person for assistance with biannual report due in 2023

10. Next Meeting date

- Proposed: 16 August 10:30 am
- Location: Meeting room at The Nature Conservancy

11. Review of assigned action items

- A. Kelley to send information to Council about Purdue Extension outreach opportunities
- H. Reynolds to send information regarding garlic mustard aphids and research talk from Dr. Daniel Park
- M. Kraushar to locate legislative code of Council recodification for inclusion in minutes
- A. Kelley to brainstorm ideas on improving outreach and visibility for the Council
- D. Slack to reach out to A. Kelley about printing discussion
- A. Kelley will look into printing options at Purdue
- M. Kraushar to reach out to someone about assistance with the biennial report

12. Next meeting

- 15 November 2023

13. Adjournment

- Motion: K. Sanders
- Second: J. Schmees
- Vote: Passed

APPENDIX I

Dr. Aaron Patton Presentation on Tall Fescue



TALL FESCUE

Dr. Aaron Patton

About me

- From Bloomington, Indiana
- Discovered in high school and college that I love plants
 - turf and weed science
- Decided to go to graduate school because he enjoyed learning and helping others learn
- M.S. and Ph.D. from Purdue University (Agronomy)
- Faculty member at Purdue University since 2010 in the Department of Horticulture & Landscape Architecture
 - Professor and Turfgrass Extension Specialist

About tall fescue

- C₃ cool-season grass
- Native to Eurasia
- Name: *Festuca arundinacea* (syn.; *Schedonorus arundinaceus*, *Lolium arundinaceum*)
- Naturalized in the US (introduced in mid-1800s)
 - Historical NOTE: Was in herbarium samples in 18 counties of Indiana in 1929. (Deam, 1929)
- Utilized in Indiana (estimated acres)
 - Grassland, pasture, range (1,000,000 acres)
 - Roadside (60,000+ acres)
 - Lawns (113,845 acres)
 - Sod farm (800 acres) ~20% of sod farm turf
 - Golf (5,000 acres) 10% of golf course turf
 - Parks and athletic turf (? ~10,000 acres)

**~1,200,000 acres
of tall fescue in
Indiana**



Why is tall fescue used on lawns

- Drought tolerant compared to Kentucky bluegrass
- Quick establishment than Kentucky bluegrass
- Lower N requirement than Kentucky bluegrass
- Improved cultivars (“turf-type”)
- Resistance to some common lawn diseases (i.e. summer patch)
- Somewhat resistant to weed invasion
- Main contains endophytes (good and bad)

For these reasons, the Purdue Turf Program routinely recommends tall fescue

Concerns about tall fescue



Official IISC Invasive Plant List

Common Name	Latin Name	Invasive Rank	Current IN Legal Status
tall fescue	<i>Schenodorus arundinacea</i>	Medium	None

August 3, 2005 template version

Assessment of Invasive Species in Indiana's Natural Areas

*****OFFICIAL Tall Fescue (*Schenodorus arundinacea*) ASSESSMENT*****

Answers are underlined and in **bold**, comments are inserted in *italics*

Impact of tall fescue on the Invasive Plant List - 2015

- I was first alerted to tall fescue being on the invasive plant list around 2015.
- The concern was brought to me by the State Master Gardener Program Coordinator.
- Her received an inquiry from a MG.
- I brushed this off and didn't give this issue much attention. I told him that "they were wrong" and "tall fescue is not invasive"

Impact of tall fescue on the Invasive Plant List - 2022

- _____ of a Garden center in Bloomington, IN contacted me for assistance.
 - They sell plant material and supplies and offer landscaping services.
- Tall fescue was “included in our scope of work in the installation of new lawns; including slope stabilization etc.”
- “The City of Bloomington Planning Department reviews projects as they are completed and established lawns are a part of the “final occupancy” process.”
- “They are of the opinion that Fescue Lawns are not acceptable and are requiring lawns to be Bluegrass.”

Impact of tall fescue on the Invasive Plant List - 2022

quoted verbiage response to the stakeholder from the City Planner:

"our **Unified Development Ordinance**, in its current version, **prohibits turf-type tall fescue**. Also prohibited are all cultivars of tall fescue Although some forage-type tall fescues, like KY-31, are bad choices for lawn landscaping (and some turf-type fescues resolve those issues), the landscaping (un)desirability was not the main factor in designating tall fescue as a prohibited species. Rather, **tall fescue is prohibited because of its proven capability for invasive spread**. If you would like advocate for inclusion of some tall fescue varieties in the permitted plant lists, I would encourage you to **share information showing that the turf-type tall fescues are less capable of invasive spread**."



Kentucky-31 tall fescue



turf-type tall fescue

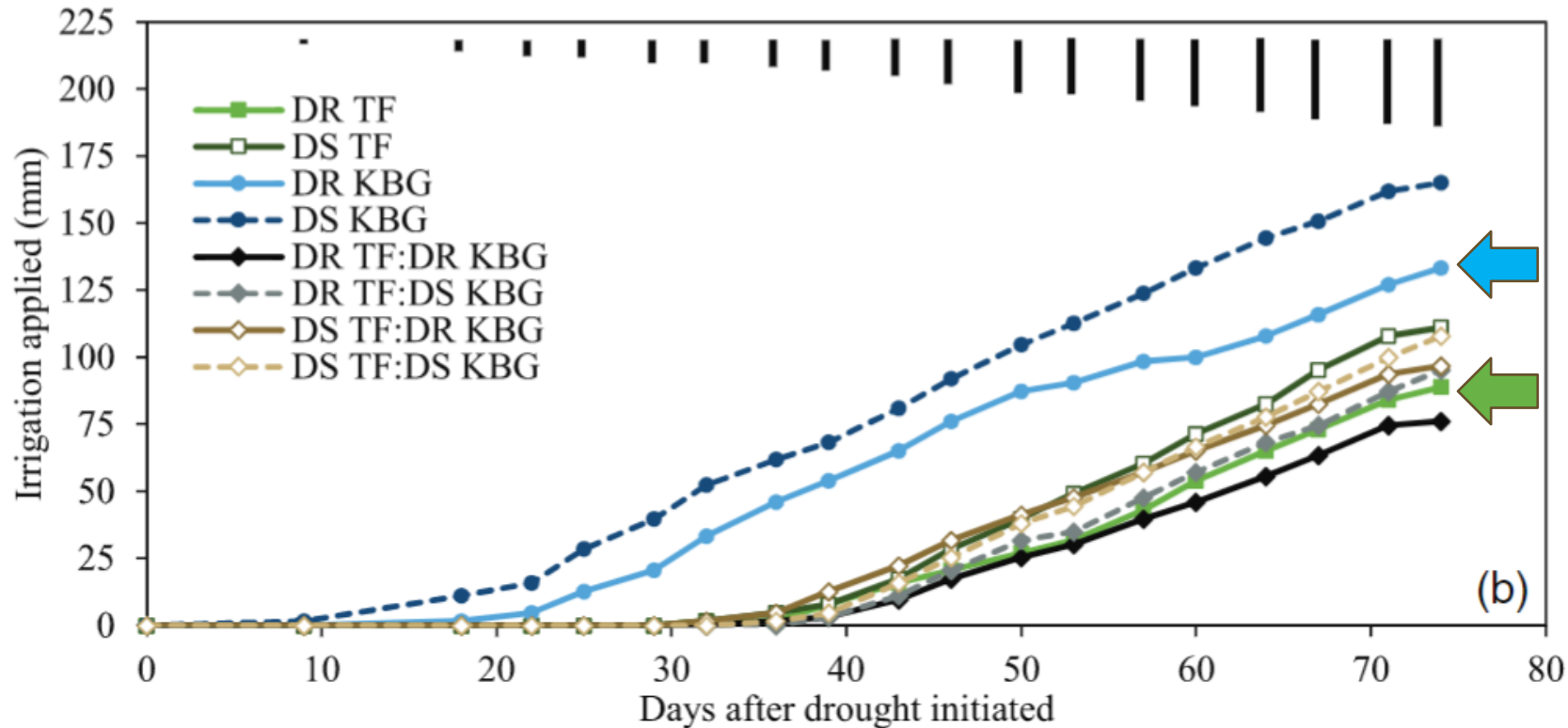
Impact of tall fescue on the Invasive Plant List - 2022

“all below are quotes from the Garden Center”

- Their solution to eliminating the use of Fescue is to use Bluegrass Seed / Sod only.
- I am not a lawn expert, but for this area---for many reasons, I do not believe this is the solution.
 - It requires a lot more water to keep it healthy.
 - With the on-going concern for water conservation (and water quality), I would think this alone would be a factor that COB would take into consideration before they elect to have us install Kentucky Bluegrass lawns.
 - It requires more use of chemicals to control diseases that it is susceptible to in our area.
 - It does not establish as quickly as a fescue lawn, which does not help with vegetative slope establishment.
- Would you be willing to chime in on my concerns and share your thoughts?

Recent Purdue research on drought tolerance

- Purdue data shows that Kentucky bluegrass needs about 2x as much irrigation as tall fescue in a lawn.



Details



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ARTICLE

Response of drought susceptible and resistant Kentucky bluegrass and tall fescue cultivars and mixtures to limited irrigation

[View article page](#)

Jada S. Powlen, Aaron J. Patton, Yiwei Jiang, Melodee L. Fraser, Cale A. Bigelow

[CITE](#)

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Impact of tall fescue on the Invasive Plant List - 2022

“all below are quotes from the Garden Center”

- Late last year, I went online and printed several informative articles regarding fescue from the Purdue web-site and provided them to one of the City Planners. She listened with an open ear, but replied that it was going to take more effort to get their ordinance regarding turf revised.
- I am not alone with wanting to make this happen, as I am now getting calls from Architects and Designers that want to know how I am coming along with this process.
- I would greatly appreciate your help in whatever capacity you are willing to do so. I believe your input would be most helpful.

Impact of tall fescue on the Invasive Plant List - 2023 (2/15/23)

All "quotes" below

- This is _____ with _____ down in Bloomington.
- Officials with the Bloomington city government have decided to put Fescue on the city ordinance laws as a plant that is invasive and will not be able to be planted in B-town anymore.
- There will be a informational meeting next week at city hall to discuss the matter with landscapers and contractors. TTTF has been a godsend to us down here ever since Zac Reicher started telling everyone to plant TTTF.
- What is your take on TTTF? If planted in a suburban yard is it invasive. If so how would it spread, rhizomes , seed?
- If you could let me know before the 21st what you think I would appreciate it.
- Honestly, there are folks in the city government who are really anti-turf so this may all be moot. But I would at least like to show them the science before they ban tall fescue

August 3, 2005 template version
**Assessment of Invasive Species in
Indiana's Natural Areas**



*****OFFICIAL Tall Fescue (*Schenodorus arundinacea*) ASSESSMENT*****
Answers are underlined and in **bold**, comments are inserted in *italics*

Invasive Ranking Summary	Score	
Ecological Impacts	10.5	
Potential For Expansion	31	
Difficulty of Management	23	
	Total Score: 64.5	Medium
<i>Rankings: Low < 45, Medium 45 – 80, High > 80</i>		

Assessed at September 1, 2004 meeting by Ellen Jacquart (TNC), Richard Phillabaum (INDOT), Tom Good (Div. of Reclamation), Keith Johnson (Purdue Univ. Forage), Jennifer Rudgers (IU), Phil O'Connor (Div. of Forestry), Keith Clay (IU), Bob Waltz (Div. of Entomology and Plant Pathology), Larry Nees (State Chemist and Seed Commissioner), Kenneth Smith (Div. of Water), Darrell Brown (NRCS Forage), Lee Casebere (Div. of Nature Preserves), Dan Saffen (Div. of Engineering), Brian MacGowan (Wildlife Society), Gary Langell (Div. of Fish and Wildlife)

There was a lot of discussion on this. Most agreed that tall fescue could be found in many natural areas, but it may be from past plantings or nearby populations. We had no direct evidence for movement of this species out of plantings and into natural areas, but there are at least a few cases where it seems very unlikely that the fescue population is from a planting. All agreed it is tremendously persistent and does hamper efforts to restore fields to trees or prairie.

Ecological Impacts

Section	Score	Turf Score	Rationale
II-a	$4 + 3 = 7$?	
II-b	Yes, x 1.5	?	
Total	10.5		

Batcher (2000): "Songbirds consume tall fescue seeds, and both seeds and foliage are used by small mammals (Wasser 1982). However, some small mammals feeding on fescue infected by the endophyte may become ill as a result of the toxins the endophyte produces (see Impacts and Threats Posed by Tall Fescue section above). Fields dominated by F. arundinacea were found to be poor habitat for bobwhite and quail in Kentucky due to lack of high quality, preferred foods, and improper vegetation structure and composition for nesting and foraging habitat (Barnes et al. 1994). Tall fescue palatability for elk has been reported as poor (Wasser 1982) and elk may show a preference for other grasses. Several studies showed varying preferences by white tailed deer for F. arundinacea (Fire Effects Information System (1996))." Because of its ability to outcompete native vegetation, tall fescue should not be used for wetland mitigation, reforestation, or rehabilitation where managing for wildlife and plant diversity are intended (Burchick 1993)."

Sources of information:

Wasser, 1982; Barnes et al., 1994; FEIS, 1996; Batcher, 2000

- An evaluation of white-tailed deer feeding habits in Missouri using video recording of feed preferences indicates that **tall fescue was an important component of the diet** (Beringer et al., 2004).

Beringer, J., Millspaugh, J. J., Sartwell, J., & Woeck, R. (2004). Real-time video recording of food selection by captive white-tailed deer. *Wildlife Society Bulletin*, 648-654.

II-b Range of Habitats in Which Species is Invasive

- Forest: 1)Dry upland, 2)Dry-mesic upland, 3)Mesic upland, 4)Mesic floodplain, 5)Wet-mesic floodplain, 6)Wet floodplain, 7)Bluegrass till plain flatwoods*, 8)Boreal flatwoods*, 9)Central till plain flatwoods, 10)Dry flatwoods*, 11)Sand flatwoods*, 12)Southwestern lowland mesic flatwoods*
- Savanna: 13)Mesic savanna*, 14)Dry sand savanna*, 15)Dry-mesic sand savanna*
- Barrens: 16)Limestone bedrock*, 17)Sandstone bedrock*, 18)Siltstone bedrock*, 19)Chert*, 20)Gravel*, 21)Sand*, 22) Clay*
- Prairie: 23)Dry-mesic prairie*, 24)Mesic prairie*, 25)Wet prairie*, 26)Dry sand prairie*, 27)Dry-mesic sand prairie*, 28)Wet-mesic sand prairie*, **29)Wet sand prairie***
- Wetland: **30)Marl beach*, 31)Acid bog*, 32)Circumneutral bog*, 33)Fen*, 34)Forested fen*, 35)Muck and Sand flats*, 36)Marsh, 37)Sedge meadow*, 38)Panne*, 39)Acid seep*, 40)Calcareous seep*, 41)Circumneutral seep*, 42)Forest swamp, 43)Shrub swamp**
- Lake: **44)Lake, 45)Pond**
- Stream: **46)Low-gradient creek, 47)Medium-gradient creek, 48)High-gradient creek, 49)Low-gradient river, 50)Medium-gradient river, 51)Major river**
- Primary: **52)Aquatic cave***, 53)Terrestrial cave*, 54)Eroding cliff*, 55)Limestone cliff*, 56)Overhang cliff*, 57)Sandstone cliff*, 58)Lake dune*, 59)Gravel wash*

Potential for Expansion

Section	Score	Turf Score	Rationale for reduced rating in turf
III-c2i – reproduction cycle	5	0	Can't sexually reproduce when mown
III-c2ii – seed + veg.	5	1	Doesn't produce seed in a lawn
III-c2iii – veg. reproduct.	3	3	
III-c2iv – freq. reproduct.	5	0	Can't sexually reproduce when mown
III-c2v – number of seed	3	0	No seed when mown
III-c2vii – germination	5	0	No seed present to germinate when mown
III-c2viii – competitive	5	5	
Total	31	9	

Difficulty of Management

Section	Score	Turf Score	Rationale for reduced rating in turf
IV-iv – site restoration/renovation	5	5	
IV-v – total area >100 acres	5	5	
IV-vi – recruitment of seed	10	0	Can't produce seed when mown
IV-vii – occurs in >20 sites	3	3	
Total	23	13	

Assessment of Invasiveness for Turf

Invasive Rank Summary	Score	Turf Score
Ecological Impacts	10.5	10.5
Potential for Expansion	31	9
Difficulty of Management	23	13
Total	64.5	32.5
Ranking	Medium	Low

- Management influences the invasiveness of a plant.
- Some plants may not be invasive when actively managed.

Request for Committee Consideration

- Revision of tall fescue assessment
 - *“We had no direct evidence for movement of this species out of plantings and into natural areas.” IISC*
- Public misuse or misunderstanding of assessment
 - Unintended negative outcomes to plants listed as “Medium” or “Caution” or “Low” on invasive species list
- Consider a carve out or exemption in your assessment
 - Management related impacts on invasiveness
 - Cultivar related impacts on invasiveness
- Consider ad-hoc reviewers on your assessment committee and request stakeholder feedback before finalizing assessments

APPENDIX II

Indiana House Bill 1001 Budget

READ AS FOLLOWS [EFFECTIVE JULY 1, 2023]: Sec. 28. (a) The natural resources commission shall categorize salaries of enforcement officers within each rank based upon the rank held and the number of years of service in the department through the twentieth year. The salary ranges that the commission assigns to each rank shall be divided into a base salary and ~~twenty (20)~~ **fifteen (15)** increments above the base salary with:

- (1) the base salary in the rank paid to a person with less than one (1) year of service in the department; and
- (2) the highest salary in the rank paid to a person with at least ~~twenty (20)~~ **fifteen (15)** years of service in the department.

(b) The salary matrix prescribed by this section shall be reviewed and approved by the state budget agency biennially in even-numbered years before implementation.

(c) The salaries for law enforcement officers of the law enforcement division of the department must be equal to the salaries of police employees of the state police department under IC 10-11-2-13, based upon years of service in the department and rank held.

(d) The requirement of subsection (c) does not affect:

- (1) any rights or liabilities accrued; or
- (2) any proceedings begun;

on or before June 30, 1999. Those rights, liabilities, and proceedings continue and shall be imposed and enforced under prior civil law and procedure as if the requirement of subsection (c) had not been enacted.

SECTION 145. IC 14-13-6-19, AS AMENDED BY P.L.118-2009, SECTION 1, IS AMENDED TO READ AS FOLLOWS [EFFECTIVE JULY 1, 2023]: Sec. 19. (a) The Wabash River heritage corridor commission fund is established for the purpose of paying:

- (1) reimbursement of the expenses of members under section 13 of this chapter;
- (2) other administrative costs and expenses reasonably incurred under this chapter, including expenses for publications and postage; and
- (3) costs incurred in fulfilling the directives of the Wabash River heritage corridor commission master plan, including multicounty projects and marketing and educational tools such as video tape productions, signs, and promotional literature.

(b) The fund shall be administered by the director under the direction of the commission.

(c) The expenses of administering the fund shall be paid from money in the fund.

(d) The sources of money for the fund are:

- (1) appropriations made to the fund; and
- (2) any other funds obtained by the commission under section 22 of this chapter.

(e) The treasurer of state shall invest the money in the fund not currently needed to meet the obligations of the fund in the same manner as other public funds may be invested. Interest that accrues from these investments shall be deposited in the fund.

(f) Money in the fund at the end of a state fiscal year does not revert to the state general fund but remains in the fund for the purposes of the fund.

(g) Money in the fund is continuously appropriated for the purposes of the fund.

SECTION 146. IC 15-16-10-13, AS AMENDED BY P.L.27-2015, SECTION 3, IS AMENDED TO READ AS FOLLOWS [EFFECTIVE JUNE 30, 2023]: Sec. 13. This chapter expires July 1, ~~2023~~ **2031**.

SECTION 147. IC 16-21-10-13.3, AS AMENDED BY P.L.30-2016, SECTION 40, IS AMENDED TO READ AS FOLLOWS [EFFECTIVE JULY 1, 2023]: Sec. 13.3. (a) This section is effective beginning February 1, 2015. As used in this section, "plan" refers to the healthy Indiana plan established in



APPENDIX III

INDIANA INVASIVE PLANT COUNCIL

COUNCIL MEMBER PARTICIPATION BY ELECTRONIC MEANS

Pursuant to Indiana Code § 5-14-1.5-3.6, the Indiana Invasive Species Council (hereafter, the “Council”) adopts the following Policy regarding electronic participation by Council members during a Council meeting. This Policy was adopted by the Council at its 17 May 2023 meeting to be effective upon adoption.

I. PREAMBLE

This Policy is promulgated with the intent and applied to:

- A. Balance the ease of Council member access to and participation in orderly proceedings, especially where there are occurrences that pose impediments to physical attendance;
- B. Follow Indiana Code § 5-14-1.5-3.6, and any amendments thereto, in a manner consistent with the requirements of the Open Door Law;
- C. Aid in the recruitment of Council members on a statewide basis whose ability to participate electronically in some meetings would further enhance the attainment and representation; and
- D. Encourage Council members to physically attend meetings whenever possible.

II. POLICY PROVISIONS

- A. At least 1/3 of all Council members (4 members) must be physically present at the designated meeting site for the Council meeting.
- B. Where multiple Council members request electronic participation for a Council meeting, and there is the possibility the Council may not have the required number of Council members physically present at the Council meeting site, the Council’s Chair shall determine which Council members may attend the Council meeting via electronic means pursuant to this Policy.
- C. A Council member is required to obtain prior authorization to participate electronically under this Policy.
 - A Council member wishing to attend a meeting via electronic means shall notify the Council’s Chair no later than 48 hours before the scheduled start of the Council meeting unless exigent circumstances make travel to the meeting location unsafe or impractical.
 - In that case the authorization must be requested from the Chair at least 4 hours in advance of the Council meeting.
- D. A Council member participating via electronic means may do so by telephone, computer, video conferencing, or any other method of communication that allows for simultaneous communication and is capable of being recorded by members of the public present at the designated meeting site.
- E. A Council member participating in a meeting via electronic means pursuant to this policy is not required to do so in a setting that is open to the public.
- F. The Chair with the assistance of the Attorney General or his/her designated representative is delegated to supervise and coordinate electronic participation pursuant to this Policy by the Council members.
- G. Each Council member must physically attend at least one (1) Council meeting annually. A Council member is not precluded from attending via electronic means pursuant to this Policy until such Council member physically attends a Council meeting in a calendar year.
 - For a Council member appointed or designated after the beginning of a calendar year, the appointed or designated Council member must physically attend a Council meeting within the calendar year during which the Council member was appointed or designated.
- H. A Council member participating via electronic means under this Policy is considered present at the Council

meeting and may vote at the Council meeting on any matter.

- I. A Council member participating via electronic means may cast the deciding vote on any matter properly before the Council.
- J. Where at least one (1) Council member is participating via electronic means pursuant to this Policy, all votes of the Council will be taken by roll call.
- K. This Policy does not create a right for the public to observe and record an executive session of the Council conducted pursuant to I.C. § 5-14-1.5-6.1, or any other applicable law.

III. REVIEW AND AMENDMENT

This Policy shall remain in effect unless amended by the Council in an open meeting.