FUSARIUM FOCUS

USWBSI Executive Committee Strategy Meeting Assessed Current Funding Situation

The USWBSI Executive Committee met in April to assess the USWBSI strategy and review the Action Plan for the next funding cycle.

The USWBSI Executive Committee (EC) met in person on April 14-15, 2025 at the Hyatt Regency Mall of America, in Bloomington, Minnesota for its annual strategy session. During the meeting the EC discussed components of the funding process, USWBSI governance, and heard updates from its stakeholder advocacy groups (National Wheat Improvement Committee, National Barley Improvement Committee, and North American Millers' Association) as well as from the USDA-ARS, industry, and growers. The EC also assessed the current funding situation and recommended new approaches for messaging the impact of USWBSI research and increasing outreach to the next generation of farmers. The ideas were brought forward to the Steering Committee as part of the review of updating the Action Plan and Research Priorities of the USWBSI. *(See following story for highlights from the RA and CP committee reports).*

CALL FOR NOMINATIONS

USWBSI is Accepting Nominations for Researcher Co-Chair

The U.S. Wheat & Barley Scab Initiative (USWBSI) is now accepting nominations for its next Researcher Co-Chair. This leadership role is pivotal for guiding the Initiative's scientific direction, coordinating research priorities, and fostering collaboration across the Fusarium Head Blight (FHB) research community.

Following eight years of dedicated service by **Ruth Dill-Macky**, the USWBSI seeks a new Researcher Co-Chair who demonstrates a strong commitment to the Initiative's mission, collaborative leadership, and scientific excellence. Nominations, including self-nominations, are welcomed through **June 30, 2025**.

To view the full position description and submit a nomination, visit the USWBSI Researcher Co-Chair Call for Nominations. Help shape the future of USWBSI—nominate a leader today.

USWBSI Steering Committee Hears Research Accomplishments at Biennial Meeting

On Thursday, April 17, 2025, 35 U.S. Wheat and Barley Scab Initiative Steering Committee members met virtually for their biennial meeting. During the meeting, facilitated by **Richard Magnusson**, USWBSI grower co-chair and **Ruth Dill-Macky**, USWBSI researcher co-chair, attendees heard updates on the accomplishments during the past three years of funding from the ten different Research Categories within the last funding cycle. The following highlights from the reports show an impressive level of progress and impact gained toward the USWBSI's mission.

Kaitlyn Bissonnette, FHB Management (MGMT) chair, began the reports with accomplishments from FHB Management and the Integrated Management Coordinated Project. The RA has made progress with the *Fusarium* spp. diversity project, which is co-funded by Pathogen Biology and Genetics, including increased sampling efforts to broader geographies through the IM-CP's work, now conducted in 21 states, and understanding more about the *Fusarium* pathogen distribution, co-inoculation, and chemotypes. The FHB Risk Tool is continuing to deploy prediction models, expand to new geographies (currently deployed in 22 states), and improve the accuracy by integrating more observation points. The fungicide sensitivity project is ongoing, assessing field populations through the use of centralized labs collaborating on shared protocols for standardization. Long-term storage and isolate transfer are underway.

The main goal of the Food Safety and Toxicology (FST) RA is to provide access to deoxynivalenol (DON) analysis for

Research Accomplishments, continued on page 2

FUSARIUM FOCUS

Fusarium Focus is an online newsletter published periodically by the U.S. Wheat & Barley Scab Initiative (USWBSI) and distributed to the USWBSI community.

Content Creation: Amber Hoffstetter
Design: Dawn Mathers

The USWBSI is a national multi-disciplinary and multi-institutional research consortium whose goal is to develop effective control measures that minimize the threat of Fusarium Head Blight (scab), including the production of mycotoxins, for producers, processors and consumers of wheat and barley. The USWBSI's annual budget comes from Federal funds appropriated through the USDA-ARS and is distributed to more than 120 research projects in 31 states.

U.S. Wheat & Barley Scab Initiative (USWBSI)
Networking & Facilitation Office (NFO)
Michelle Bjerkness, Director of Operations
495 Borlaug Hall / 1991 Upper Buford Circle / St. Paul, MN 55108

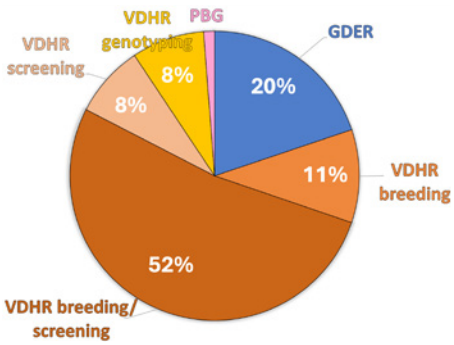
nfo@scabusa.org / 517.290.5023
https://scabusa.org
Twitter @USWBSI / Linkedin #uswbsi

Research Accomplishments, continued from page 1

USWBSI research projects through the labs in Minnesota, North Dakota, and Virginia. Collectively they processed more than 137,000 samples since 2022. **Mark Busman**, presenting on behalf of chair Dave Kendra, also shared accomplishments from the FST research projects. One project is looking at essential oil nanomulsions for their antifungal properties and potential for reducing FHB and its associated mycotoxins, while the second project is working towards measuring DON using a handheld device.

Harold Trick, Gene Discovery and Engineering Resistance (GDER) chair, provided updates from the GDER researchers. A mutational breeding population of einkorn wheat with FHB resistance was developed and has been made available. A mutagenized population of 'Kronos', a durum wheat variety, is being developed for trichothecene and FHB resistance. Knockdown defense repressors are exhibiting enhanced FHB resistance including a decrease in observed *fusarium* damaged kernels and lower DON. GDER also identified three high priority candidate genes through the use of fine-mapping. *Fhb7* from *Thinopyrum elongatum* was introduced into barley. "Wheat and barley transformation facilities are in place and actively producing both transgenic and gene edited material for users," said Trick.

The Pathogen Biology and Genetics (PBG) Chair, **Guixia Hao**, informed the SC that in the past three years, they've confirmed that there is no correlation between chemotype and aggressiveness between the cross of a 3-ADON strain with a 15-ADON strain. PBG also performed a genome-wide association study of *Fusarium* isolates and identified SNPs associated with fungal growth, fungicide resistance, and toxin production. The fungal diversity project identified multiple *Fusarium* spp. and chemotypes including NIV strains present in the collection from Illinois. The *Fusarium* diversity and barley resistance project found that barley resistance varied by strain used for inoculation. PBG has identified G protein-coupled receptors critical for FHB, and the regulation roles of *TRI6*, *TRI10*, and *TRI14* in DON production. Spherical nucleic acid nanomaterials and fungal endophyte-mediated RNAi silencing systems were tested.



BAR-CP Chair Mitch Elmore shared the proportion of the Barley Coordinated Project funding utilized for breeding compared to fundamental research.

Switching gears to the Coordinated Projects (CP), **Mitch Elmore**, Barley Coordinated Project (BAR-CP) chair, provided an update from the single largest CP. The CP supported breeding programs in 10 states for both winter and spring barley, facilitated doubled haploid production to accelerate breeding, reduced the genotyping cost through the use of multi-crop chips with barley probes, and established winter barley FHB nurseries in eight states.

Research Accomplishments, continued on page 3

Research Accomplishments, continued from page 2

The BAR-CP also supported fundamental and crop engineering-based research including the transfer of *Fhb7* to barley, understanding the genetic basis of type II resistance, and developing gene editing approaches to target the barley ortholog of *Fhb1*.

Shaobin Zhong presented on behalf of chair Andrew Friskop for the Durum Coordinated Project (DUR-CP). The reported acreage planted to the least susceptible durum variety has averaged 66% in North Dakota and 34% in Montana. The CP has developed elite lines carrying *Cdu1*, *Fhb1*, *Fhb7*, and 5AS/5AL QTL with good yield potential. Candidate genes have been identified for FHB susceptibility as targets for gene editing to improve resistance.

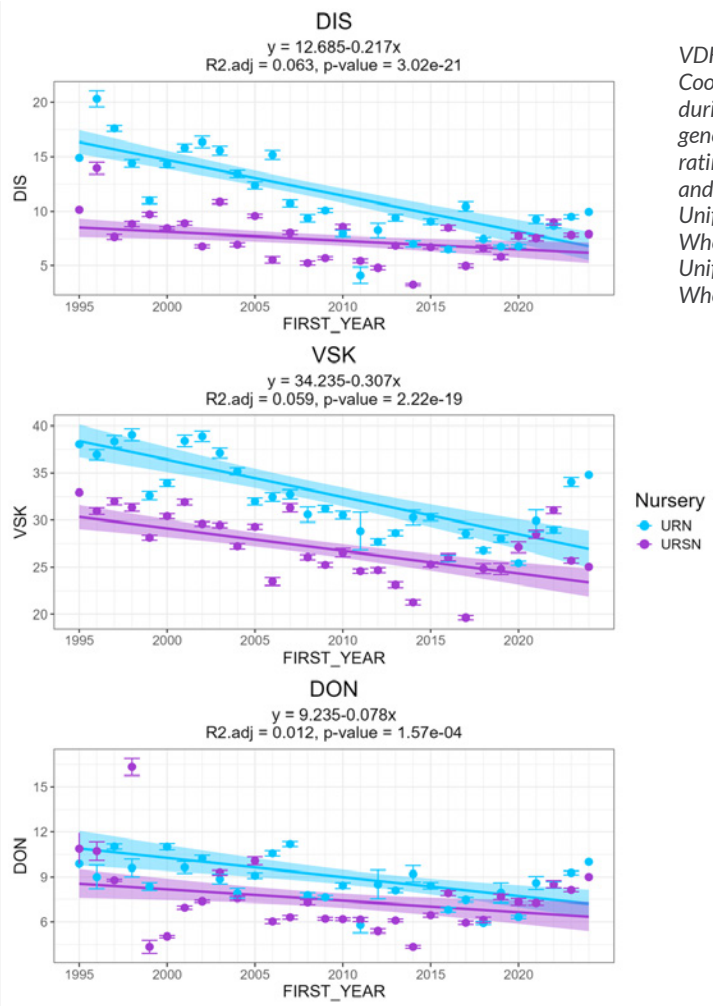
Sunish Sehgal, Hard Winter Wheat Coordinated Project (HWW-CP) chair, informed the SC that four new varieties were released. Resistant hard winter wheat varieties are being grown by farmers. Sources of FHB resistance were found and mapped including *Fhb9* and *Rht8*, a few QTLs were mapped, and markers were identified. Marker assisted backcrossng lines with *Fhb1* + *Fhb9* + 5A have been shared to the breeders. The HWW-CP is working to develop *Fhb1/Fhb7/Fhb9* lines, a multi-trait genomic selection coordinated effort is underway, and is looking at AI assisted FDK and DON estimation. Many promising lines with FHB resistance are currently in the pipeline and the frequency of *Fhb1* has increased in the North Dakota, South Dakota, and Nebraska breeding programs.

The Variety Development and Host Resistance (VDHR) Spring Wheat Coordinated Project (VDHR-SPR) released five new varieties which are moderately resistant to FHB in the last three years. **Jason Cook**, VDHR-SPR chair, informed the SC that a 3K Illumina assay for genomic selection was also developed and the breeders are working to pyramid *Fhb1*, *Fhb2*, *Fhb4*, *Fhb5*, *Fhb7*, and the 5A QTL into elite breeding lines. VDHR-SPR is already implementing genomic selection for FHB into all the spring wheat breeding programs.

The VDHR-Northern Winter Wheat (VDHR-NWW) update was provided by chair **Jessica Rutkoski**. Since 2022, 18 new varieties, including those licensed commercially, were released. Sixteen of these were classified as moderately resistant and two were considered moderate. Forty-seven new varieties were delivered to seedsmen for further testing. VDHR-NWW's rate of genetic gain for FHB is significant and 70% of new breeding lines have at least one known FHB QTL. VDHR-NWW is focused on developing and adopting improved or new breeding methodologies. Currently, five of the six breeding programs are implementing genomic selection for FHB resistance, routinely. Additionally, seven new breeding methodology research articles were published. VDHR-NWW has improved their efficiency through a greater coordination on testing and genotyping.

The last presenter was **Rick Boyles**, VDHR Southern Soft Winter Wheat (VDHR-SWW) CP chair. Within the last three years, VDHR-SWW has released 22 cultivars, 17 of which were licensed. Nine of these varieties have *Fhb1* and 11 have more than one FHB QTL. Fourteen of the newly released cultivars were developed using doubled haploid technology. The frequency of *Fhb1* within the germplasm has increased from 16% to 26% and there is an effort to introgress *Fhb7* into elite cultivars adapted to the southern region. In the Uniform Scab Nursery, 21 of the entries have *H13* + *Fhb1*, while 30 entries have both *Fhb1* and *F1BJ*. VDHR-SWW has developed speed breeding infrastructure and protocols and identified the short segments of *Fhb1*.

After the Chairs presentations were complete, breakout sessions were held around FHB Management, Food Safety and Toxicology, Gene Discovery and Engineering Resistance, Pathogen Biology and Genetics, and Variety Development and Host Resistance. These breakout sessions allowed stakeholders to provide input on the USWBSI Research Priorities and Goals. Following the breakout sessions, the facilitators of each session provided feedback on the discussion and recommendations to the entire SC. An updated Action Plan is currently being finalized, based on the input gained, and is expected to be published in May 2025 in alignment with the new FY26 Request for Pre-Proposals (RFP) which will be published in June 2025 kicking off the new 4-year funding cycle. ●



VDHR-SPR Chair Jason Cook shared these graphics during his report showing genetic gain for FHB disease rating, visual scab kernels, and deoxynivalenol in the Uniform Regional Spring Wheat Nursery and the Uniform Regional Spring Wheat Scab Nursery.

USWBSI LEADERSHIP

Meet the New Members of the USWBSI Steering Committee

Elections for new Executive Committee, Steering Committee, and Research Area and Coordinated Project Committees were held in the Fall of 2024. Here are the new Steering Committee members whose terms started January 1, 2025.

Meriem Aoun, Oklahoma State University, Stillwater, Oklahoma. Aoun received her doctorate degree from North Dakota State University. She is an assistant professor and small grains pathologist working on the genetics of disease resistance in wheat. She aids in the development of new Oklahoma State University winter wheat varieties by evaluating breeding lines for resistance to multiple fungal and viral diseases. In her extension role, she scouts and diagnoses wheat diseases and provides management recommendations to growers. Aoun serves on the Steering Committee as the Southern Association of Agricultural Experiment Station Directors representative.

Mitch Elmore, USDA-ARS Cereal Disease Lab, St. Paul, Minnesota. Elmore received a B.S. in biological sciences from St. Louis University and a Ph.D. in plant biology with a designated emphasis in biotechnology at the University of California at Davis. His graduate research focused on the molecular mechanisms of pathogen effector recognition, as well as host cellular changes upon activation of different types of plant immune receptors using quantitative proteomics. He received a NIFA-AFRI Postdoctoral Fellowship and worked at USDA-ARS/ Iowa State University identifying host targets of barley powdery mildew effectors. At Iowa State, he also worked on integrating transcriptome, proteome, phosphoproteome, and phenome data to reconstruct signaling networks that drive plant drought and hormone responses. In 2021, he joined the USDA-ARS Cereal Disease Lab as a research molecular geneticist studying the molecular basis of Fusarium Head Blight (FHB) in barley. Elmore's lab uses multi-omics and systems biology approaches to dissect host and pathogen signaling, and to identify genetic determinants of FHB resistance and susceptibility for crop improvement. Elmore serves on the Steering Committee given he is the new chair of the Barley Coordinated Project.

Guixia Hao, USDA-ARS Mycotoxin Prevention and Applied Microbiology Research Unit, Peoria, Illinois. Hao received her Ph.D. from Beijing Forest University, China. She conducted postdoctoral research at Cornell University and USDA-ARS, Fort Pierce, FL. Currently, she is a research molecular biologist working with a group of scientists on the project "Improving Food Safety by Controlling Mycotoxin Contamination and Enhancing Climate Resilience of Wheat and Barley." Her research is primarily focused on the characterization of genes and secreted proteins that affect *F. graminearum* pathogenesis and mycotoxin production and identification of targets to enhance food safety and crop production. Various approaches, such as genetics, functional genomics, mutagenesis, RNAi, transient and transgenic gene expression, are applied to study gene functions and develop novel methods for reducing disease and mycotoxin contamination. Hao serves on the Steering Committee given she is the new chair of the Pathogen Biology and Genetics Research Area.

Terra Hartman, Bayer Crop Science, Glyndon, Minnesota. Hartman grew up on a farm in southeastern Nebraska. She received her Bachelor's degree in biology from Doane University in Crete, Nebraska in 2016. While working towards her Bachelor's degree she also worked as a field technician at BASF, where she assisted with herbicide and fungicide research trials in corn, soybean, and wheat. She received her Master's degree in agronomy with a plant pathology specialization from the University of Nebraska-Lincoln in 2018. After finishing graduate school in 2019, she started working as a field scientist at Bayer, where she is currently employed. She conducts fungicide efficacy and development trials, primarily in wheat, canola, potatoes, corn, sugar beets, and pulses. Fusarium head blight trials make up a large portion of the research that she does, and she finds it very interesting to learn about and work with the pathogen. Hartman represents the crop protection industry on the Steering Committee.

Jordan Hawbaker, private grower, Portal, North Dakota. Hawbaker farms spring wheat, durum, canola, dry field peas, and soybeans. He attended North Dakota State University up until he had the opportunity to expand his farm in 2004. He has served on several boards including the U.S. Durum Growers Board where he recently finished his term in November. Hawbaker serves on the Steering Committee as the appointed representative for the U.S. Durum Growers Association.

Steering Committee, continued on page 5

Steering Committee, continued from page 4

Jessica Rutkoski, University of Illinois at Urbana-Champaign, Urbana, Illinois. Rutkoski is an assistant professor and small grains breeder. One of her major goals is to make winter wheat more profitable for growers so that it can play a larger role in the cropping system in Illinois. To achieve this goal her program develops wheat lines with characteristics important for profitability in the wheat/double-crop soybean system. These characteristics include high yield, scab resistance, early maturity, and high test-weight. She also conducts research on plant breeding and phenotyping methods in pursuit of breakthroughs that will accelerate genetic gains in yield and other complex traits. Rutkoski serves on the Steering Committee given she is the new chair of the Variety Development and Host Resistance Northern Winter Wheat Coordinated Project.

Harold Trick, Kansas State University, Manhattan, Kansas. Trick received his B.S. in biochemistry and his M.A. in biology from the SUNY-Binghamton. His master's thesis focused on ultrastructure and cytochemistry of red algae. He received his Ph.D. in biology at Florida State University exploring methods to create asymmetric hybrids between two tobacco species. His post-doctoral research on soybean tissue culture and genetic engineering was performed at The Ohio State University. In 1998 he joined the faculty in the Department of Plant Pathology at Kansas State University and formed the KSU Plant Transformation Facility. He was promoted to full professor in 2010. His current research emphases are related to plant protection and enhancing abiotic stress tolerances in wheat and soybean. He is also active in the U.S. Wheat and Barley Scab Initiative where he runs the wheat transformation/gene editing facility. Trick serves on the Steering Committee given he is the new chair of the Gene Discovery and Engineering Resistance Research Area. ●

2025 Field Days

MAY 20, 21, 22, 2025	Michigan State University Extension and the Michigan Wheat Program will host three regional field days. Visit one of three locations of the state wheat variety trials in Allegan, Huron, and Gratiot counties to interact with Dennis Pennington, Michigan State University Extension wheat specialist. For more information visit the article by MSU Extension.
JUNE 4-6, 10, 2025	Colorado State University's Crop Testing Program is hosting the 2025 Wheat Field Days on June 4 through the 6 and June 10. The schedule is as follows: Wednesday, June 4, - Akron at 8:15 a.m. and Yuma at 4 p.m.; Thursday, June 5 – Walsh at 10 a.m. and Brandon at 4 p.m.; Friday, June 6 – Burlington at 8 a.m., Genoa at 11:30 a.m., and Roggen at 4:30 p.m. The schedule resumes on Tuesday, June 10 with Julesburg at 8 a.m. and Orchard at 4 p.m. For more information and directions visit https://csucrops.org/wfd/.
JUNE 25, 2025	Michigan Wheat Program's Annual Summer Field Day at 1:00 p.m. ET. For more information visit https://miwheat.org/. ●

Watch the 2024 Scabinar Rebroadcast to Earn a CEU

The USWBSI offered another live version of its Scabinar in 2024 with new topics to educate growers, crop consultants, extension, and industry personnel on Fusarium Head Blight (FHB) of wheat and barley and the best way to manage the disease and its associated mycotoxin deoxynivalenol (DON).

The 2024 Scabinar is being rebroadcast for those who missed the live event. Watch the recording provided on the USWBSI YouTube Channel and pass the Scabinar quiz to earn 1 CEU in integrated pest management.

The recording includes presentations by featured experts from across different wheat and barley production regions in the U.S. with topics focused on fungicides and their use for managing FHB and DON. Presenters include: **Carl Bradley**, from the University of Kentucky, providing a history of fungicide testing, registration, and use in the U.S., **Pierce Paul**, the Ohio State University, gave an update on the efficacy of fungicides for FHB and DON in wheat, while **Christina Cowger**, USDA-ARS, provided the same information for barley, **Rob Proulx**, from North Dakota State University, gave updated recommendations for fungicide application, and finally **Martin Chilvers**, Michigan State University, presented an update on efforts to identify and monitor fungicide resistance. After the presentation, a question-and-answer panel was moderated by **Andrew Friskop** (North Dakota State University) for all the speakers and additional panelists **Juliet Marshall** (University of Idaho) and **Kelsey Andersen Onofre** (Kansas State University).

Watch for details for a new live webinar in Spring 2026 with updated topics and presenters. ●

GPFHB Hosts Webinar on USWBSI Wheat Transformation Lab

The Graduate Students and Post-docs in FHB spring webinar attracted 15 graduate students and post-docs to learn more about the U.S. Wheat and Barley Scab Initiative funded centralized wheat transformation/gene editing facility at Kansas State University, managed by **Harold Trick**. During the webinar, Trick provided an overview on the work of the facility which was established to reduce redundancy in research projects and provide a central location for researchers to receive wheat lines transformed with newly identified genes. The center receives the constructs for genes, creates transformed plants, and then sends the transformed seeds back out to collaborators. "It's important to get your constructs in the correct order before sending them into the lab because this process takes a lot of time," said Trick. All information provided to Trick's lab is confidential to protect intellectual property. Trick outlined the process for wheat tissue culture to attendees and how his lab performs transformation using a homemade gene gun. In addition, Trick reviewed the timeline for wheat transformation explaining that it's a

long process anywhere from 5 to 9 months from the time of bombardment depending on cultivar class (spring vs. winter). Once the transformed seeds are created, Trick can ship them to the requesting lab if an APHIS permit for interstate transport was obtained.

Looking forward with wheat transformation, Trick's lab is always trying to improve their elite cultivar transformations. Not all cultivars are able to be transformed and it's dependent on how the cultivar responds in tissue culture. They're also looking at Agrobacterium transformation and are working to convert some of their material to this format. Finally, Trick's lab is working to enhance their gene editing techniques because the current efficiency is less than creating transgenics. After the presentation, attendees had the opportunity to ask questions.

Visit the Transformation Labs webpage for more information about the USWBSI funded Wheat and Barley Transformation Labs. The webinar recording can be assessed from both the Transformation Labs webpage and the GPFHB webpage.

To receive more information about upcoming GPFHB events join the email listserv.

GPFHB is a USWBSI network of graduate students and post-docs whose goal is to provide educational, career, and social opportunities for those in FHB research and beyond. The focus of GPFHB is to bring together the current generation of graduate students and post-docs with other members of this community to provide information on relative topics.

FHB Paper in *Plant Health Progress* is Most Read in 2024

Congratulations to graduate student, **Abbeah Navasca**, on her paper "Development and Validation of a TaqMan Multiplex Real-Time PCR Assay for High-Throughout Quantification of *Fusarium graminearum* Biomass in Barley Spikes and Grains," published in *Plant Health Progress* on March 4, 2024 which received the most-read article of 2024 award. Navasca is a Ph.D. student with **Thomas Baldwin**, in the Department of Plant Pathology at North Dakota State University. Her research focuses on *Fusarium* species and their ability to acquire and adapt genomic regions for pathogenicity in response to crop rotation. This material is based upon work supported by the U.S. Department of Agriculture, under Agreement No. 59-0206-2-096. This is a cooperative project with the U.S. Wheat and Barley Scab Initiative.

COMMUNITY NEWS

Illinois Votes for Wheat CheckoFF

By a vote of 207 to 69, farmers in Illinois voted to pass a referendum to implement a voluntary wheat check-off program. The referendum was announced on April 17, 2025. In the coming weeks, the Illinois Wheat Checkoff Committee and the Illinois Department of Agriculture will implement procedures to elect members to the Illinois Wheat Development Board in the fall of 2025. The program will go into effect January 1, 2026 with a 1.5 cent per bushel assessment rate which will be primarily dedicated to advancing wheat production. The wheat checkoff will function similarly to the other commodity checkoffs in the state, assisting with marketing, research, and development.

Barley Advocates Hit the Hill Amidst Much Uncertainty

ASHLEY MCFARLAND / *NBIC Vice President & Technical Director*

The National Barley Improvement Committee, which represents the U.S. barley community of growers, researchers, processors, users, and allied industries, spent a week in early March in Washington, D.C. advocating on behalf of federal research funding for the barley industry. Twenty-eight stakeholders visited over 90 offices delivering a unified message on the importance of federal barley research programs, threatened by recent terminations and federal freezes on hiring and funding.

NBIC's priorities focused on federal appropriations requests to support various research initiatives nested within the USDA Agricultural Research Service: the Resilient Barley Initiative (RBI), the Barley Pest Initiative (BPI), the U.S. Wheat and Barley Scab Initiative (USWBSI), and the Small Grains Genomic Initiative (SGGI). Each leverages federal funds to support work across multiple states within ARS research units and Land Grant universities. Additionally, researchers leverage investments from private industry made by the American Malting Barley Association and state check-off dollars to support these programs.

The ability to carry out this work recently came under threat due to the terminations of over 25 ARS scientists and support staff working directly with barley. Although most of those positions were brought back, this challenge is further exacerbated by the freeze on hiring, which is limiting the ability to hire the seasonal workforce each year to carry out the field season. Finally, uncertainties around the availability of federal funding have added additional chaos for research partners at universities, not knowing if the funds are available to carry out the cooperative agreements they hold with ARS. With the passage of a full-year CR for FY25 on March 14th, funds will be slowly released, but will come under scrutiny as the Administration applies additional screening of projects and agreements.

Members of the NBIC fly-in stressed the importance of agricultural research and the incredible return on investment realized, especially as so many of our global competitors are outpacing our investments. Given the new Administration's priority to support domestic self-reliance and reversal of the agricultural trade deficit, initiatives like the RBI are critical to bolster resilience in the supply chain and to lessen the reliance on imported barley.

"This year was one of the most challenging Hill climbs in recent history given the uncertainty around federal agricultural research funding, specifically as it relates to our longstanding partner, the Agricultural Research Service," said **Ashley McFarland**, who serves as executive secretary of the NBIC. "I believe we brought a very strong team to D.C. to deliver a unified message around the importance of the barley industry to the U.S. and the necessary investments required to support it. Despite not receiving much clarity in our meetings, we were repeatedly thanked by Congressional offices for showing up and sharing our priorities."

In addition to the annual Hill climb, the NBIC has been extremely active in advocacy efforts related to the terminated positions and looming Reduction in Force (RIF) plans. In partnership with other barley organizations, a letter was submitted to ARS administrators and the USDA Research, Education, and Economics mission area highlighting the critical research priorities necessary to support a sustainable, domestic barley industry. A conversation on the importance of this work was also recently featured in a Master Brewers Association of the Americas podcast, (episode 331) with host John Bryce. NBIC stands committed to the barley research infrastructure, both in terms of human and physical capacity.

The American Malting Barley Association is a trade organization, which represents the interests of end users of malting barley, including maltsters, brewers, distillers, and food processors. Our work seeks to maintain a stable and high-quality supply of malting barley for our members throughout the U.S. Learn more here: www.ambainc.org.

The National Barley Improvement Committee represents the U.S. barley community of growers, researchers, processors, users, and allied industries. We advocate for sound agricultural policy and strong public support for agricultural research throughout the U.S. Learn more here: http://ambainc.org/nbic/.

NBIC team discussing research priorities with Kate Leonard in Senator Peters' (MI) office.

Members of NBIC meet with U.S. Representative Thompson (PA).

A Strong Showing on the Hill: NWIC Fly-In 2025 Recap

CHRISTINA HAGERTY / *National Wheat Improvement Committee Chair*

In the face of ongoing uncertainty and a rapidly evolving political and funding landscape, our 2025 National Wheat Improvement Committee Fly-In was a success. The energy and commitment demonstrated by our delegation underscored the importance of maintaining a unified voice for wheat research and innovation in Washington, D.C. We are especially grateful to all who participated—presence and preparation made a real impact.

A particular highlight this year was the strong grower representation on the Hill. Their presence added authenticity and urgency to our advocacy, reminding policymakers that behind every policy decision are real producers, families, and communities.

Our sincere thanks go to **Jack Long**, **Jake Westlin**, **Molly Miller**, and **Kim Cooper** for their outstanding coordination and seamless logistics. Their behind-the-scenes work enabled us to focus on what mattered most: delivering our message effectively.

Over the course of the Fly-In, we conducted 25 meetings with Congressional offices. These included both House and Senate Agriculture Appropriations members, key staffers from the Senate Agriculture Committee, and leadership from USDA-ARS. We were fortunate to engage directly with **Joon Park**, **Oswald Crasta**, **Mike Arnold**, **Nora Lapitan**, and **Jeffery Silverstein**. Our group of 20 attendees brought diverse expertise and perspectives to each conversation. Personally, one of the most engaging and productive meetings I experienced was with **Elizabeth Dent**, whose thoughtful questions and insights made for a memorable exchange.

Thank you again to all who made this year's Fly-In a success. Your dedication to advancing wheat research and public-sector collaboration is what keeps our efforts moving forward—even in challenging times.

Key Takeaways from Our Hill Visits

- Our priority issues were met with thoughtful attention and a warm reception.
- Congressional support for ARS remains strong across the board.
- Red-state representatives continue to engage actively on wheat issues.
- Many meetings offered opportunities to educate curious and receptive staffers, particularly around funding mechanisms and public research needs.
- Notably, no office expressed support for privatizing wheat research—affirming that wheat remains a firmly public-sector commodity.
- ARS leadership has not yet communicated a target percentage or timeline for any potential Reduction in Force (RIFs).
- Funding for the U.S. Wheat and Barley Scab Initiative (USWBSI) is expected to remain level compared to last year. While there is a delay in the release of funds, they are anticipated to be distributed once the apportionment is received at the USDA.
- Non-Assistance Cooperative Agreements (NACAs) and Cooperative Agreements (CAs) with universities are expected to continue, although they will undergo an additional review process. We recommend framing this review under the themes of **Crop Protection** and **Food Security**.

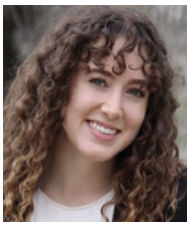
The National Association of Wheat Growers (NAWG) is the primary representative of U.S. wheat growers. NAWG and its 20 member-states work to coordinate and implement policy priorities in the following areas: farm policy, conservation, energy, research, trade (on Capitol Hill), biotechnology, and others. https://wheatworld.org/. The National Wheat Improvement Committee (NWIC) is a non-profit organization composed of 24 voting members whose mission is to communicate, educate, and advocate on behalf of the scientific well-being of the U.S. wheat industry. NAWG is the Secretariat of the Committee, and the two organizations work together each year to outline and advocate research priorities. https://wheatworld.org/coalitions/.

OSU Cereal Pathologist, Christina Hagerty and Oregon Grower, Clint Carlson at the 2025 NWIC Fly In.

COMMUNITY UPDATES

Kudos On Your New Degrees

Julian Cooper graduated from the University of Minnesota with his doctorate degree in applied plant science. His project with **Cory Hirsch** focused on overcoming the phenomics bottleneck in plant breeding using next generation phenotyping.



Lola McMullan graduated from Virginia Tech with her master of science degree in plant pathology. Her research with **David Schmale** and **Bastiaan Bargmann** investigated mycotoxins in callus culture.

Sam Mellow will be graduating this May from Rutgers University, The State University of New Jersey, with his master of science degree in cell and developmental biology. His project with **John McLaughlin** focused on investigating the role of heat shock proteins and extracellular vesicles on plant resistance to FHB.

Welcome New Students

Reecha Acharya is a new Ph.D. student with **Brian Steffenson** and **Kevin Smith** in the Department of Agronomy and Plant Genetics at the University of Minnesota. She'll be working on mapping QTL for FHB resistance in a multi-parent barley population.

Joseph Chonza is a new M.S. student with **Pierce Paul** in the Department of Plant Pathology at The Ohio State University. Chonza's research will focus on rainfastness and integrated management for FHB.

Good Luck on Your Internship

Six Southern Illinois University Edwardsville students start their internships at Grow Pro Genetics on May 19.

- **Dennis Fofie Kwarkye**'s project will be working on managing FHB with biocontrol agents.
- **Allison Mettenburg**'s project will focus on wheat health and ladybug/aphid interactions.
- **Ezekiel Tosin Babatunde** will create environmental profiles of testing locations.
- **Iyanuoluwa Fatunmbi** is looking at multi-year analysis of satellite and yield data.
- **Precious Adjadji** will analyze soil by yield data.
- **Patrick Twum**'s project will focus on the economic benefits of selling seed versus cleaning wheat.

Update on Position Changes

Guihua Bai, Ph.D., has resigned from the USDA-ARS Central Small Grain Genotyping Lab in Manhattan, KS. Bai is currently an adjunct professor at Kansas State University. He can be reached at gbai@ksu.edu.

CALENDAR

USWBSI EVENTS

DECEMBER

7-9 2025 National Fusarium Head Blight Forum, Denver, CO

OTHER EVENTS

MAY

19-23 2025 National Association for Plant Breeding, Kona, HI

20-22 Michigan State University Extension and Michigan Wheat Program Field Days, MI

JUNE

4-6, 10 Colorado State University's Crop Testing Program 2025 Wheat Field Days, CO

25 Michigan Wheat Program's Annual Summer Field Day, MI

AUGUST

2-5 Plant Health 2025, Honolulu, HI

OCTOBER

21-24 17th European Fusarium Seminar, Bordeaux, France

NOVEMBER

9-12 2025 ASA, CSSA, SSSA International Annual Meeting, Salt Lake City, UT