



# U.S. Wheat & Barley Scab Initiative

Enhancing food safety and supply by reducing the impact of *Fusarium Head Blight* (scab) on wheat and barley.



The U.S. Wheat & Barley Scab Initiative (USWBSI) requests the 2023 Farm Bill "support for research regarding diseases of wheat and barley caused by *Fusarium graminearum*" authorization be increased from \$15 to \$20 million annually.

## USWBSI requests a \$5 million increase be included in the 2023 Farm Bill

### Rising research costs are eroding the ability to conduct current research

- Salaries for researchers (post-doctoral, technical support personnel) and graduate student (tuition costs and stipends) along with associated fringe benefits have increased substantially since the last Farm Bill.
- With 67% of USWBSI's competitive funding supporting research personnel, the impact of these inflationary costs has reduced our ability to meet the mission of the USWBSI.
- Varietal development, key to best management practices developed by the USWBSI, is personnel intensive, and requires additional funding to continue delivering solutions for growers.

### Additional support would also be used to expand efforts in areas of high impact including:

- Developing high throughput phenotyping utilizing artificial intelligence in ground-based rovers and aerial drones.
- Improving FHB resistance in wheat and barley through cutting-edge approaches such as haplotype-based analysis, nanotechnology, metagenomics-informed trait development, and CRISPR-mediated gene insertion.
- Enhancing FHB forecasting models which directly inform grower responses to outbreaks.

## Increased support for novel approaches is needed to combat *Fusarium Head Blight*

- Each year, researchers from our network of U.S. Land Grant Institutions and USDA-ARS facilities, submit proposed work that far exceeds our funding abilities, leaving innovative and impactful research unfunded.
- An increase in funding to protect wheat and barley yield and quality across the U.S. would allow for a \$2.9 million expansion of the competitive grants process and add \$2.1 million for USDA-ARS for these important food crops.
- A 2017 USWBSI-commissioned economic study estimated a 1:70 return on investment; **the proposed increase has a \$350 million potential economic impact.**
- Recent technological advancements increase the potential for the USWBSI to respond to current research limitations. For example, while genotyping has expanded over the last decade, our breeding progress is limited by our capacity for high throughput phenotyping.
- The unique model of the USWBSI facilitates ongoing cross-disciplinary research and continued advancements.

## USWBSI Research Offers Direct Results for U.S. Wheat/Barley Growers

