



Cultivating FHB Research-Based Solutions for the U.S.

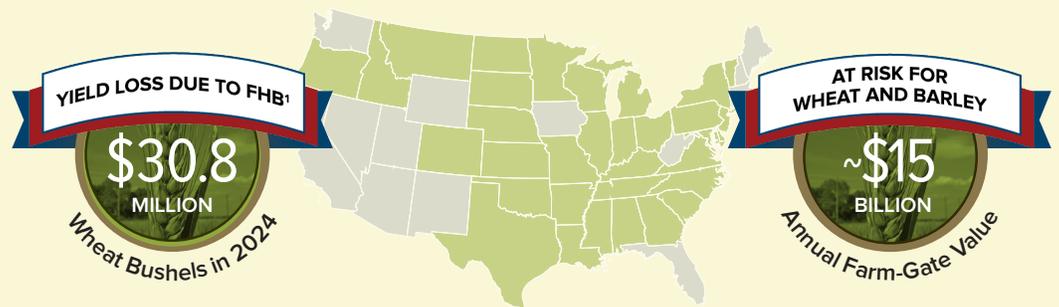
Fusarium head blight (scab) is one of the most significant crop diseases that threatens American agriculture. Scab impacts cereals, particularly wheat and barley, by reducing crop yield and quality with outbreaks reported in more than 30 states. The U.S. Wheat & Barley Scab Initiative (USWBSI) offers a stakeholder-driven collaborative model for research aimed at protecting the nation's wheat and barley crops from this devastating disease.

Practical Need for Answers

With FHB epidemics occurring at higher frequencies and expanding into additional U.S. states, as well as increased FHB risk from changing production practices, now is a critical time for continued discovery of targeted, research-driven FHB solutions that can be implemented by wheat and barley farmers.

FHB Threat

The disease affects wheat and barley yield and quality through kernel damage; while resulting mycotoxins contaminate grain, impacting marketability and food safety.



Innovative Ecosystem

Addressing a \$15 billion risk requires a solid and synchronized infrastructure with stable national funding. The USWBSI model connects four critical components to transform scientific potential into on-farm results.



FEDERAL LEADERSHIP

USDA-ARS

Administers \$15 Million in FHB research authorized in the Farm Bill, with up to \$8.6M allocated to USWBSI coordinated research and remainder to USDA-ARS



STATE RESEARCH ENGINE

Land Grant Universities & USDA-ARS State Offices

Executes research through 86 principal investigators across 30+ states, training 125+ future ag leaders; existing infrastructure and talent avoids duplication of resources while investing in ongoing pursuit of FHB answers



INDUSTRY STAKEHOLDERS

Milling, Brewing, Crop Protection, Pasta & Seed

Provides insight into food and feed chains from farm to consumer, sets quality standards and advocates for safety and continued research



FARMER ENGAGEMENT

Wheat & Barley Grower Commissions & Farmers

Ensures research targets timely problems, and addresses on-farm needs; 1,000+ farmers and extension/crop consultants connect throughout growing season via FHB Risk Tool monitoring and alerts

¹ SOURCE: Anderson, N., et al. [Wheat Disease Loss Estimates from the United States and Canada—2024](#). 2025. Crop Protection Network. CPN-3018-24. doi.org/10.31274/cpn-20250324-0.

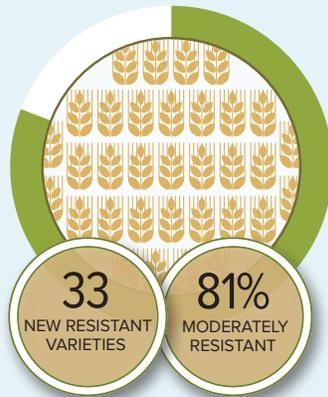
Quantifiable Outcomes

By integrating cutting-edge research with real-time data, USWBSI outcomes minimize the economic impact to farmers, food and feed processors, and brewers and strengthen food safety and supply.

Recent Annual Outcomes

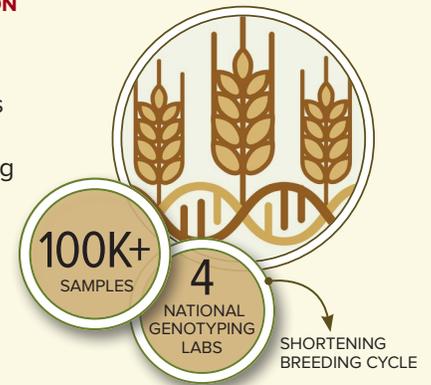
GENETIC ADVANCEMENT

Releasing new resistant varieties — with 33 in FY24 alone, the majority (81%) achieving “moderately resistant” status — offers farmers a key strategy for reducing losses due to FHB and DON.



GENOMIC ACCELERATION

Processing high-throughput analysis on tens of thousands of DNA samples annually, is identifying new mechanisms of resistance and shortening the breeding cycle.



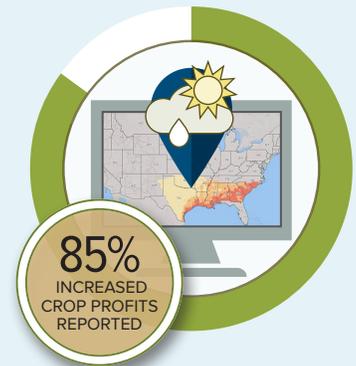
DISEASE MANAGEMENT

Validating best practices through nationwide trials in 20+ states, provides evaluation of new fungicide chemistries and application technologies to ensure optimal crop health.



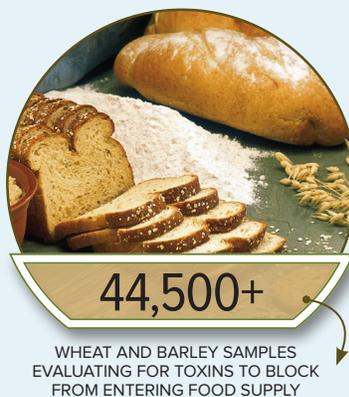
PREDICTIVE INTELLIGENCE

Empowering farmers in impacted states with the **FHB Risk Tool**, a real-time platform using weather modeling to forecast disease risk, guides precise application decisions; 85% of the 1,000+ users indicate increased crop profits.



FOOD SAFETY

Assessing mycotoxin levels in 44,500+ research samples ensures the selection of new varieties and fungicides that ultimately block toxins from entering the food supply chain for processors and end-users.



ECONOMIC IMPACT

Measuring the results, a comprehensive economic study confirmed USWBSI’s massive impact, citing for every \$1 invested, the USWBSI generates \$71 in benefits.²



² SOURCE: Wilson, W., et al. (2017). Economic Impact of USWBSI’s Scab Initiative to Reduce Fusarium Head Blight. Agribusiness and Applied Economics No. 774.



U.S. Wheat & Barley Scab Initiative (USWBSI)

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