NPDN
NATIONAL PLANT DIAGNOSTIC NETWORK

IMPACT ON WHEAT DISEASE LOSS

RELEVANCE – WHEAT DISEASE LOSS

- Kansas is the largest contiguous dryland winter wheat producer in the world. (7.2 million acres/year in KS)
- Kansas wheat has an average annual value of $1.8 billion.
- Over the past decade in Kansas, an average of over $166 million per year has been lost because of wheat diseases.

RESPONSE – K-STATE PLANT DISEASE DIAGNOSTIC LAB

The K-State Plant Disease Diagnostic Lab (PDDL) tests for a wide variety of diseases including rust fungi, wheat viruses, *Fusarium* head blight (FHB), and others. This service allows farmers to make timely management decisions, which increases yield and reduces unnecessary pesticide applications making wheat production more profitable in Kansas.

RESULTS – K-STATE PDDL HELP FARMERS

- On average 304 diagnoses (or tests) are performed on Kansas wheat every year by the K-State PDDL.
- In 2017, the K-State PDDL diagnosed 877 problems in wheat, covering almost 60% of Kansas counties.

IMPACT OF K-STATE PDDL ON KANSAS WHEAT

By enhancing the ability to differentiate between various pathogens, the K-State PPDL empowers stakeholders to implement tailored management strategies, optimizing resources and helping safeguard the long-term sustainability of global food security and economic stability.

"The KSU Plant Diagnostic Lab is the front line of defense for wheat farmers in Kansas in the battle against wheat diseases. Disease-related losses in wheat can be significant, and Kansas wheat farmers rely on the lab to identify the diseases they have which allows them to make informed management decisions." – Aaron Harries, V.P. of Research and Operations for Kansas Wheat Commission

"Funding provided by the NPDN has improved communication and collaboration among member states and with agency partners which has enhanced early disease detection and surveillance of emerging threats." – Judy O'Mara, Director of K-State Plant Disease Diagnostic Lab

March 29, 2024

GPDN
GREAT PLAINS DIAGNOSTIC NETWORK

"The training and professional development I receive because of the NPDN funding gives me access to new technical knowledge that allows for the detection of pathogens that are challenging to identify." – Chandler Day, Associate Diagnostician for K-State Plant Disease Diagnostic Lab