

USDA-ARS Cereal Disease Laboratory provides sample envelopes and self-addressed stamped envelopes.

Please promptly mail leaf, stem, and crown rust collections to:

Dr. Oluseyi Fajolu/ Dr. Shahryar Kianian  
Cereal Disease Laboratory, USDA-ARS  
1551 Lindig Street  
University of Minnesota  
St. Paul, MN 55108

*Send stripe rust collections to:*

Dr. Xianming Chen USDA-ARS  
Washington State University  
410 SE Dairy RD, 114B – 101  
Pullman, WA 99164

*Note: Stripe rust collections are vulnerable to heat. An overnight courier service is preferred for sending stripe rust collections.*

*For questions on stripe rust, send email to [xianming.chen@usda.gov](mailto:xianming.chen@usda.gov)*

*For the latest cereal rust news from the field, subscribe to the [cereal-rust-survey listserv](#). To subscribe and for more information, send an email to [oluseyi.fajolu@usda.gov](mailto:oluseyi.fajolu@usda.gov)*



United States Department of Agriculture

**Agricultural Research Service**

## Cereal Rust Diseases



Leaf Rust



Stem Rust



Stripe Rust



Crown Rust

*Join the fight against these devastating diseases*

## Why Collect Cereal Rust Samples?

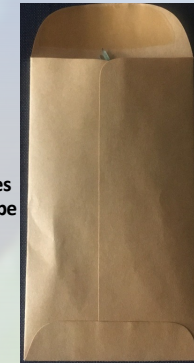
- Rusts are among the most damaging diseases of cereal crops.
- Cereal rusts occur every year as the pathogens can overwinter in the field or blow in from other locations.
- The ability of the fungi to change and to develop new virulent races makes continual monitoring of rust across the cereal growing regions of great importance.
- Understanding the rust pathogen populations in the fields allows for predicting the effectiveness of resistant cultivars, and it is crucial for developing durable resistant varieties.
- Major rust epidemics have occurred resulting in greater than 50% loss in cereal production.
- Use of resistant varieties is considered the best way to control cereal losses to rust.
- USDA-ARS Cereal Disease Laboratory is committed to research that help protect wheat, oat, and barley from rust epidemics, but we need **YOU**.

## Guidelines for making cereal rust sample collections



1. Cut ~4-inch long portions of leaves or stems with rust

2. Place approx. 5 pieces of leaves or stems into the sample envelope



3. Dry plant materials at room temperature for 2 – 3 days. Do not seal or expose samples to direct sunlight or heat.

RUST SURVEY			
Stem	Crown	Leaf	Stripe
Collected by:			
Date:	Host:		
Cultivar:			
County:			
City:	State:		
Remarks:			

Record important information for each sample  
Use one sample envelope for only one type of rust per cultivar  
4. Place sample envelopes into the mailing envelope and send to us

Leaf rust  
Stem rust  
Crown rust

Stripe rust

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You can send multiple sample envelopes in one mailing envelope

***Cereal rust fungi are “shifty enemies” and are constantly changing. The knowledge gained from race surveys and sample testing today can help salvage the cereal fields tomorrow.***