

Report of the 2009 Uniform Regional Scab Nursery for Spring Wheat Parents

Coordinator: David F. Garvin
USDA-ARS, Plant Science Research Unit
411 Borlaug Hall, University of Minnesota
1991 Upper Buford Circle, St. Paul, MN 55108

Report prepared by: David F. Garvin and Zachary Blankenheim

The Uniform Regional Scab Nursery for Spring Wheat Parents (URSN) was grown for the 15th year in 2009. Five mist-irrigated locations at Brookings, SD, St. Paul and Crookston, MN, Langdon, ND, and Glenlea, Manitoba, Canada were planted.

A total of 33 entries were included in the 2009 URSN, including the resistant checks 2375, BacUp, and ND2710, and the susceptible checks Wheaton and Oslo. The other entries were contributed by 7 university, and industry breeding programs.

A core set of traits evaluated provided from most locations included FHB incidence, FHB severity, disease index (incidence x severity), and visual scabby kernel ratings (VSK \cong tombstone \cong FDK). Additional trait data such as grain deoxynivalenol content, plot yield, and heading date, are presented in individual location summary tables. Overall means for traits over locations are presented, as are relative rankings for incidence, severity, disease index, VSK and DON. Correlation coefficients are provided between incidence, severity, disease index, and VSK. Further, molecular marker genotypes for a set of FHB resistance QTLs and 13 other traits are provided for entries.

This material is based upon work supported by the U.S. Department of Agriculture, in cooperation with the U.S. Wheat & Barley Scab Initiative. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the authors and do not necessarily reflect the view of the U.S. Department of Agriculture.

St. Paul, MN
March, 2010

CONTENTS	PAGE
Cooperating Agencies, Stations and Personnel	1
Table 1. List of Entries in the 2009 URSN	2
Tables 2-6. Nursery Data by Individual Location	3-7
Table 7. Trait Means Over Locations, with Rankings	8
Table 8. Correlations Between Traits, by Location	9
Table 9. Correlations Between Traits Over Locations	10
Table 10. Molecular Marker Genotypes for Selected Genes and Traits	11-12

Cooperators for the 2008 Uniform Regional Scab Nursery for Spring Wheat Parents

North Dakota State University (Langdon):

Scott Halley

South Dakota State University (Brookings):

Karl Glover

University of Minnesota (St. Paul, Crookston):

Jim Anderson, Ruth Dill-Macky, and John Wiersma

Agri-Food Canada, Glenlea, Manitoba:

Jeannie Gilbert and Gavin Humphreys