UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE

in cooperation with

STATE AGRICULTURAL EXPERIMENT STATIONS

Report on Hard Red Spring Wheat Varieties Grown in Cooperative Plot and Nursery Experiments in the Spring Wheat Region in 2014

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This is a joint progress report of cooperative investigations underway in the State Agricultural Experiment Stations and the Agricultural Research Service of the U.S. Department of Agriculture. It contains preliminary data which have not been sufficiently confirmed to justify general release, and interpretations may be modified after additional experimentation. Confirmed results will be published through established channels. This report is primarily a tool for use by cooperators and their official staffs, and for those persons having direct and special interest in the development of agricultural research programs.

This report includes data furnished by the State Agricultural Experiment Stations as well as by the Agricultural Research Service of the U.S. Department of Agriculture. This report is not intended for publication and should not be referred to in literature citations, nor quoted in publicity or advertising. Accuracy of information within this report is not guaranteed by the U.S. Government.

Use of the data may be granted for certain purposes upon written request to the agency or agencies involved.

Agricultural Research Service
U.S. Department of Agriculture
Midwest Area
St. Paul, Minnesota
February 24, 2015

2014 HARD RED SPRING WHEAT UNIFORM REGIONAL NURSERY REPORT

CONTENTS **PAGE**

COOPERATING AGENCIES, STATIONS, AND PERSONNEL FOR THE 2014 HRSWURN

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Entering Lines with Protected or Patented Genes into the Hard Red Spring Wheat Uniform Regional Nursery

Transgenic wheat lines may be considered for the nursery program ONLY if they have been granted permanent non-regulated status. Non-regulated status is granted only after the originator files a formal petition to de-regulate a line with APHIS. However, ultimately the decision whether to include or exclude such germplasm will reside with individual location cooperators.

U.S. SPRING WHEAT PRODUCTION, 2014

***SPRING WHEAT (OTHER THAN DURUM)*: Growers produced an estimated 595 million bushels of spring wheat. This production estimate is approximately 11.5 percent higher than year 2013 production. Yield averaged 46.7 bushels per acre, a decrease of less than 0.5 bushels per acre from year 2013. Area harvested totaled approximately 12,740 million acres, which is approximately 12.3 percent higher than the acreage harvested in 2013.**

Spring Wheat Production Statistics, 2012-2014*

	Acres Harvested (x1000)			Production (x1000 Bushels)			Yield (Bushels/Acre)		
	2012	2013	2014	2012	2013	2014	2012	2013	2014
Minnesota	1,310	1,160	1,180	74,670	66,120	64,900	57	57	55
Montana	2,900	2,830	2,980	95,700	104,710	104,300	33	37	35
North Dakota	5,700	5,060	6,140	256,500	235,290	291,650	45	46.5	47.5
South Dakota	1,020	1,165	1,280	41,820	51,260	71,680	41	44	56
USA	12,055	11,344	12,740	541,959	533,529	595,038	45	47.1	46.7

* Source: National Agricultural Statistics Service: (http://quickstats.nass.usda.gov) as of 2-10-15.

2014 NURSERY DESCRIPTION AND SUMMARY

The Hard Red Spring Wheat Uniform Regional Nursery (HRSWURN) was planted for the 84th year in 2014. The nursery contained 26 entries submitted by 6 different scientific or industry breeding programs, and 5 checks (Table 1). Trials were conducted as randomized complete blocks with three replicates except where noted. The HRSWURN was planted at 14 locations in 4 different states in the USA (MN, ND, SD, MT). Thirteen locations provided data included in this report (Figure 1, Table 2). Data summaries for each of the reporting locations are presented in individual tables. For each location summary, entries are listed in descending order of yield. Overall means across locations for a set of core traits are summarized in Table 16, and yield rankings for individual locations are found in Table 17. Entries were also evaluated for various diseases at different locations; these can be found by looking at individual location data summaries. Leaf rust and stem rust resistance was evaluated in St. Paul, MN. These rust data are presented in Tables 18-19. Entries were evaluated in *Fusarium* head blight nurseries at Crookston and St. Paul, MN; these results are provided in Tables 20 and 21. Molecular marker genotyping for select agronomic, quality and disease resistance traits was also performed; this information is presented in Table 22. The highest average yielding location was Crookston, MN, with 93.9 Bu/Ac, while the lowest yielding location was Selby, SD, with 56.3 Bu/Ac.

Figure 1. Hard Red Spring Wheat Uniform Regional Nursery Reporting Locations, 2014