

**Minnesota Wheat Research and Promotion Council
CROP YEAR 2013 RESEARCH REPORTING FORM
Form Due November 15, 2013**

1. PROJECT TITLE: <p style="text-align: center;">Developing an Interactive Web-based Variety Selection Tool for Wheat</p>	
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c. PI #3 Name:	
4. REPORT DATE November 15, 2013	5. REPORTING PERIOD January 2011 to December 2012
6. TERMINAL REPORT <u> X </u> PROGRESS REPORT _____	
7. AMOUNT OF GRANT:	
8. PUBLICATIONS Wiersma, J. and J. Ransom. 2011. Wheat information project (WHIP): Another web-based variety trials database. Abstracts of the Annual Meeting of ASA.	

9: EXECUTIVE SUMMARY

Research Question:

Can a web-based tool be developed to assist growers in North Dakota and Minnesota in more efficiently selecting new spring wheat varieties?

Results:

The basic variety selection tool envisioned by this project has been developed. The interface requires the user to input a zip code to retrieve yield, test weight and protein data from research sites closest to the entered zip code. It also generates an LSD value for the one, two and three year means that are also generated by the program for each variety. The user can also select varieties that he or she would like to compare, head-to-head. The database currently has three years of data. Not all of the bugs have been worked out, but the tool is functional. It can be accessed at <http://www.ag.ndsu.edu/varietyselectiontool/>.

Application/Use:

This tool will allow growers and crop consultants to quickly review variety performance data. It is anticipated that as users explore the available data with this tool, they will be better able to select varieties that are more productive and better match the environments where they will be grown. The head to head comparison application within the tool allows users to quickly compare currently used varieties with those that are of interest across many locations.

Materials and Methods:

The user interface was developed and was tested with a few farmer groups in 2012. Some suggested alterations were made. Methodology for generating LSD values was incorporated into the program and was refined in 2013. We have worked with both NDSU and U of M regarding the hosting of the web site. The programmer is simplifying the process for entering data so that support staff can do so easily. The most recent data (2013) is being entered so that users can access these data base for the upcoming year.

Economic Benefit to a Typical 500 Acre Wheat Enterprise:

In recent years, the number of new varieties of wheat released for production in North Dakota and Minnesota has increased dramatically. In 2011 and 2012, for example, 12 new HRSW varieties were released for potential use in the region, and two were released in 2013. These were added to the more than 35 other varieties that have been released in the past decade. This broad array of varieties provides unprecedented options to farmers to effectively match the variety to the environment where it will be grown and/or where it will be marketed. This tool should greatly aid farmers in selecting the right variety for their farm. Past data has shown that growers have greatly benefited from planting newer adapted varieties. This tool should facilitate the processes of adopting these more productive varieties. If a grower can add four bushels per acre through variety choice with this tool, the value to a 500 acre wheat enterprise would be \$12,000 assuming a wheat price of \$6 per bushel.

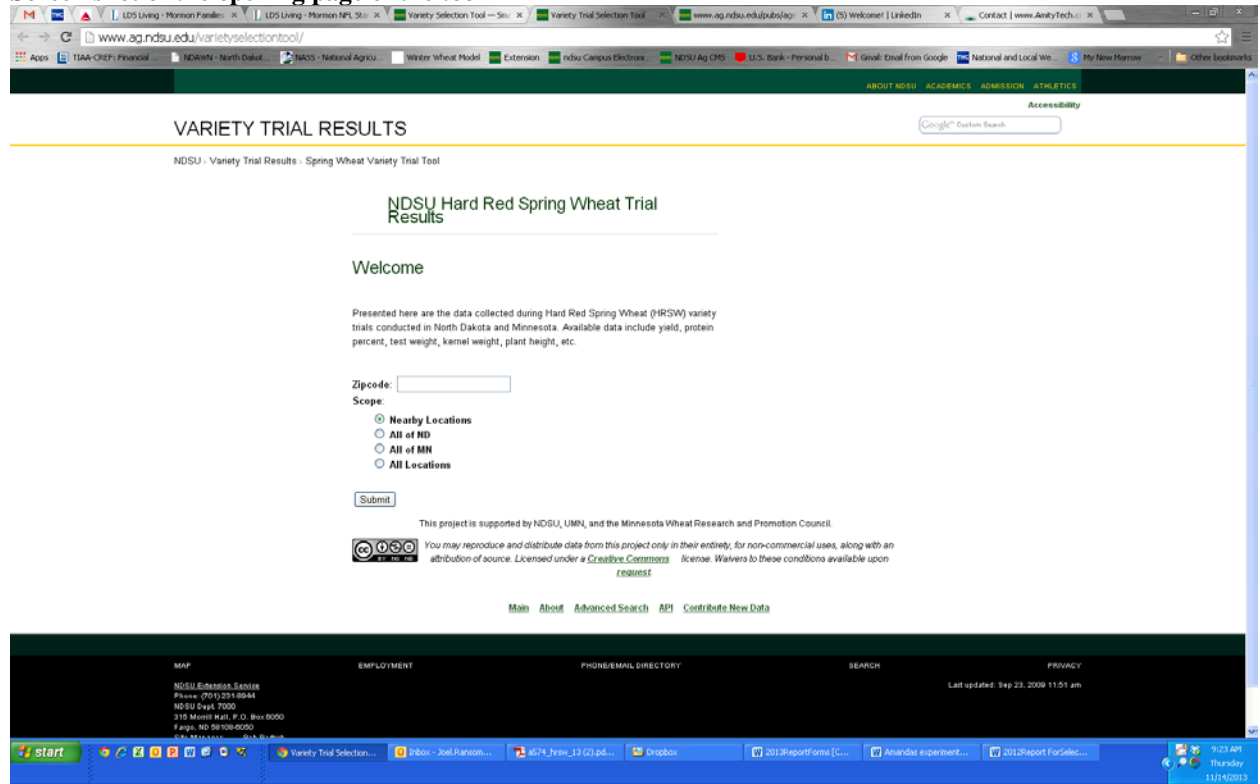
10: RELATED RESEARCH None

11: RECOMMENDED FUTURE RESEARCH

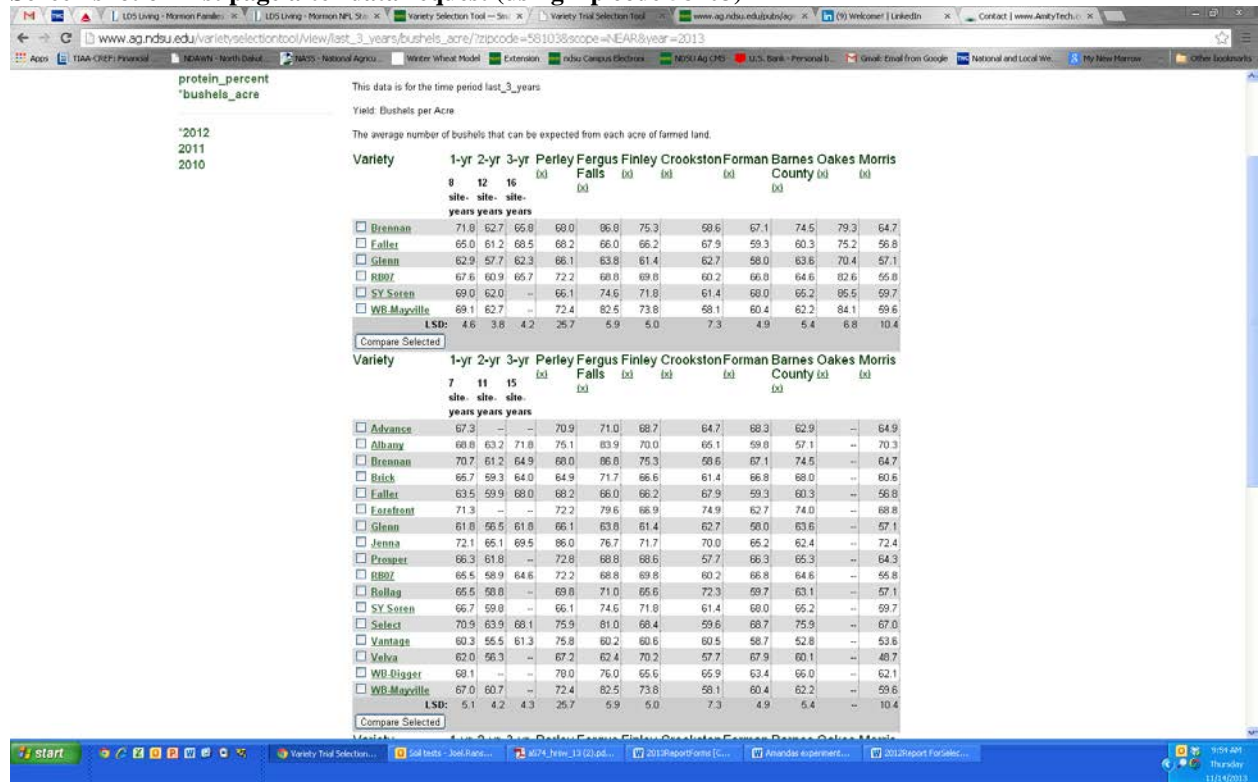
It is recommended that this selection tool be further refined. Improvements are needed in the displaying of data. This tool could also be expanded for use with other classes of wheat. The possibility of developing an app from this program for smart phones should also be explored.

12: APPENDIX

Screen shot of the opening page of the tool



Screen shot of first page after data request (using zip code 58103)



Screen shot of head to head comparisons.

RESULTS

ring Wheat Variety Trial Tool - Search Results

Search Results

[Clear head-to-head comparison](#)

This data is for the time period last_3_years

Yield: Bushels per Acre

The average number of bushels that can be expected from each acre of farmed land.

Variety	1-yr	2-yr	3-yr	Perley Falls	Fergus Falls	Finley Falls	Crookston	Forman	Barnes	Oakes	Morris	Lakota	Stephen	Carrington	Park	Strathcona	De Graff	Hallock	Wishek	Roseau	Cando	Lamberton	Hannover	Saint Le	Paul Center	Minot
<input type="checkbox"/> Faller	61.9	57.6	--	68.2	66.0	66.2	67.9	59.3	60.3	75.2	56.8	81.1	80.4	46.8	82.4	60.3	85.9	95.4	53.9	82.4	71.2	40.9	--	45.1	57.3	47.4
<input type="checkbox"/> Glenn	57.0	--	--	66.1	63.8	61.4	62.7	58.0	63.6	70.4	57.1	76.7	69.7	39.5	73.9	60.6	80.8	78.3	44.0	61.0	59.8	36.4	60.4	36.3	51.8	46.3
<input type="checkbox"/> R007	62.6	56.2	--	72.2	68.8	69.8	60.2	66.8	64.6	82.6	55.8	78.0	75.1	44.2	77.5	68.4	87.9	89.1	49.7	74.8	71.1	40.8	--	45.2	59.2	46.4
<input type="checkbox"/> SY Soren	64.0	--	--	66.1	74.6	71.8	61.4	68.0	65.2	85.5	59.7	74.5	84.3	44.9	79.2	82.0	80.3	93.6	46.9	80.9	65.5	37.7	--	48.3	66.1	36.4
LSD:	--	--	--	25.7	5.9	5.0	7.3	4.9	5.4	6.8	10.4	6.9	9.2	5.9	4.0	6.6	11.7	12.8	--	7.7	4.7	9.4	4.7	5.8	3.8	4.8

[Compare Selected](#)

This project is supported by NDSU, UMN, and the Minnesota Wheat Research and Promotion Council.

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EMPLOYMENT PHONE/EMAIL DIRECTORY SEARCH PRIVACY

Last updated: Sep 23, 2009 11:51 am

Windows taskbar: Start, Variety Trial Selection..., Soil tests - Joe, Rans..., 4014_trm_12 (2).pd..., 2012ReportFerm..., Anandas e.pernent..., 2012ReportFerg...

System tray: 9:56 AM Thursday 11/14/2013