

Washington Grain Commission
Wheat and Barley Research Annual Progress Reports and Final Reports

Project #: 4150-1217

Progress Report Year: 2 of 3

Title: Evaluation of Barley Varieties

Investigator(s): Stephen Guy, Ryan Higginbotham

Executive summary:

In 2014, the Cereal Variety Testing Program (VTP) conducted 10 variety trials across Eastern Washington. The total number of individual barley plots evaluated was 1,260. Entries in the trials included submissions from Washington State University, private breeding companies, and other public breeding programs. Variety performance information is delivered to barley growers and other clientele through field tours (8 tours in 2014), grower meetings (6 in 2014), the variety testing website (over 12,000 unique visitors in 2014), emails with preliminary results after harvest (over 160 recipients), the variety selection tool (located on smallgrains.wsu.edu), *Wheat Life* article, seed buyers guide, annual technical report, direct contact with clientele, and reports to the Washington Grain Commission. The variety trials are used by WSU breeders for variety release decisions, by pathologists to rate disease reactions, and for county Extension programming.

Impact:

The economic impact of the WSU VTP is measured by providing information to growers and seed industry personnel that leads to variety selections that maximize profitability and minimize risk. Choosing an appropriate barley variety to plant is one of the easiest ways that a grower can increase production and decrease costs (through decreased inputs). Although current barley acreage in Washington is declining, it is important for the VTP to continue to evaluate the growing list of available barley varieties. It is also important for the program to evaluate new breeding lines for potential variety release. The trials provide an avenue for growers to see what's available, and a platform to continue to promote barley production in Washington. Without the VTP, many growers in Washington would not have access to barley variety performance data in their areas of production. Growers who choose to plant barley will see an increased economic return by choosing high yielding barley varieties showcased in the WSU VTP.

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WGC project title: Evaluation of Barley Varieties
Project PI(s): Ryan Higginbotham
Project initiation date: July 1, 2013
Project year: 2 of 3

Objective	Deliverable	Progress	Timeline	Communication
1. Conduct barley variety trials in Eastern Washington	10 spring barley trials, 36 entries/trial	2014 trials complete (42 entries/trial)	Trials are planted in the spring, data results are available to growers at the end of the harvest season. Field tours in summer.	Grower Meetings: 6 in 2014; accepting invites for 2015
		2015 trials in planning		Field tours: 8 in 2014; estimate 10 tours in 2015
				Email list serve: results sent after processing
				Annual Report: 2014 technical report 14-3
				WSCIA spring seed guide
			Wheat Life article	
2. Public and private entries in trials	All widely grown, commercially available varieties included in trials.	2014 barley trial: 53% WSU, 33% Private, 14% Other Public	Entries by Feb. 15	Solicit spring entries February 1
3. Trials and data available to other projects	Participation by other projects/programs	Data is used by breeders for variety release and promotional materials. To this point, the grain itself is not used in any further testing outside the VTP. New avenues for collaboration need to be explored.	Ongoing cooperation and collaboration that fit with timelines and other listed objectives	VTP data used for variety release
4. Extension programming	Grower Meetings	Due to new PI, few mtgs. planned for 2015	Oct. 2014 - Feb. 2015	Grower Meetings: 6 in 2014; accepting invites for 2015
	Field Tours (with county Extension)	20+ planned for 2015	May 2015 - July 2015	*Field Tours: 18 in 2014 (listed below)
	Email List serve	2014 results delivered	July 2015 - Sept. 2015	Email list serve: data sent to 160+ members
	Website	up to date with 2014 data & 2015 maps	summer & fall	Website: more than 12,000 unique IP users
	Annual Report	Published in December 2014	December	Annual Report: 2014 technical report 14-3
	WSCIA Seed Buyers Guides	in preparation	spring in Feb. winter in May	To be published in 2015
	Wheat Life	spring and winter articles will be prepared	spring in Jan. winter in April	Wheat Life: 3 articles planned for 2015
	Variety Selection Tool (http://smallgrains.wsu.edu)	Selection tool updated with 2014 trial data. Tool uses 2-year average data from WSU VTP program. Selection tool has been accessed by 200+ people.	Post harvest/as data is processed	The variety selection tool has been highlighted/promoted at grower meetings, field tours, and through a Wheat Life article. The tool has been accessed by 200+ people through the website.

*** 2014 PNW CROP TOUR SCHEDULE--BARLEY SITES**

Location	Date	Attendance
Fairfield	17-June	35
Almira	18-June	110
Mayview	19-June	20
Reardan	25-June	15
Dayton	26-June	20
Farmington	16-July	38
St. John	16-July	18
Lamont	16-July	19