

Title: Western Regional Hard Spring Wheat Nursery - 2017
Personnel: Bob Stougaard, NWARC, Kalispell
Objective: To evaluate experimental and commercially available hard spring wheat cultivars for agronomic performance in environments representative of northwestern Montana.

Results:

This nursery was established to evaluate hard red and hard white spring wheat varieties that are normally be targeted for use in the Pacific Northwest. This year's heat and drought resulted in a shorter crop, with plant height averaging 21 inches. WA 8259 was the tallest variety at 24 inches, and Patwin 515 was the shortest, at 17.1 inches. Heading spanned 7 days, with UI Platinum and IDO1604S being the earliest varieties at 170 days, and Patwin 515 the latest at 176.7 days. There were no statistical differences among varieties for yield. Numerically, WA 8282 was the highest yielding variety, producing 45.5 2 bu/A, whereas IDO1604S was the lowest yielding variety, at 28.1 bu/A. Egan had the highest protein at 16.11 %, and UI Platinum the lowest at 12.94 percent. Test weights were low, averaging 58.5 lb/bu. WA 8281 had the highest test weight at 60.8 lb/bu and Patwin 515HP the lowest at 54.9 lb/bu. Falling numbers were high and all entries avoided dockage this year. IDO1602S had the highest falling number at 401.7 while Patwin 515 had the lowest at 346.

Summary:

Statistical differences were detected for all response variables, except yield. The heat and drought resulted in shorter plants, low yields and test weights, and high proteins and falling numbers.

Table 1. Materials and Methods.

Seeding Date:	5/3/2017	Harvest Date:	8/11/2017
Julian Date:	123	Julian Date:	223
Seeding Rate:	85 lb/A	Soil Type:	Creston SiL
Previous Crop:	Peas	Soil Test:	29-16-156
Tillage:	Conventional	Fertilizer:	150-30-30

Table 2. Agronomic data from the Western Regional Hard Spring Wheat Nursery, Kalispell MT, 2017.

Cultivar	Heading Julian	Height inches	Yield bu/A	Protein %	TWT lb/bu	FN sec
WA 8282	171.3	23.1	45.5	13.67	58.7	393.7
12SB0197	176.0	20.6	44.1	13.43	57.0	365.0
Vida	176.0	21.4	41.1	13.55	59.2	354.3
WA 8259	172.3	24.0	39.9	15.25	59.9	375.7
IDO1602S	171.0	21.9	39.1	13.65	59.6	401.7
WA 8281	172.0	23.5	38.5	13.89	60.8	386.7
Patwin-515HP	176.0	18.4	38.0	15.52	54.9	356.0
Glee	171.0	21.6	37.4	14.03	59.5	386.3
WB9518	175.7	20.1	37.3	15.06	58.4	364.7
UI Winchester	172.0	21.4	37.2	13.99	58.3	377.3
Jefferson	173.0	22.6	37.0	14.20	59.1	383.0
Egan	176.3	21.9	33.0	16.11	56.1	400.3
WA 8261	171.3	21.5	32.6	14.54	60.4	373.7
UI Platinum	170.0	18.8	32.3	12.94	59.3	389.7
Patwin 515	176.7	17.1	30.8	14.54	56.3	346.0
IDO1604S	170.0	19.0	28.1	13.08	58.5	368.0
Mean	173.2	21.1	37.0	14.22	58.5	376.4
LSD P=.05	2.007	2.309	12.63	0.506	0.736	32.291
CV	0.7	6.58	20.48	2.14	0.75	5.15
Pr>F	0.0001	0.0001	0.3580	0.0001	0.0001	0.0329

TWT: test weight, FN: falling number