

Title: Western Regional Soft Spring Wheat Evaluation -2017

Personnel: Bob Stougaard, NWARC, Kalispell

Objective: To evaluate soft spring wheat varieties and experimental lines developed for the western US for agronomic performance in environments and cropping systems representative of northwestern Montana.

Results:

High temperatures and low rainfall reduced crop height, which averaged only 19.6 inches. Height ranged from 17.2 for IDO1403S to a high of 22.7 inches for Louise. Heading spanned 7 days with an average of 174 days (June 23). IDO1401S was the earliest at 170 days and Alpowa was the latest at 177.3 days. High temperatures and low rainfall also depressed yields, which only averaged 26.2 bu/A. Yields range from a high of 34.9 bu/A for WA8277 to a low of 20.8 bu/A for WB6121. Grain protein averaged 12.41 %, and ranged from a high of 13.17 for IDO1403S to a low of 11.44 % for Alturas planted at 80 lb/A. Test weights averaged 58.9 lb/bu, with WA8277 having the heaviest grain at 60.0 lb/bu and Louise the lightest at 57.2 lb/bu. Falling numbers were high, averaging 379.6 seconds. Alpowa had the highest falling number at 466.0, while the low seeding rate of Alturas had the lowest at 309.3 seconds.

Summary:

Drought and high temperatures depressed yield, which averaged 26.2 bu/A.

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 Soft Spring Wheat Nursery, Kalispell MT, 2017.

Cultivar	HD Julian	HT inches	YLD bu/A	PRO %	TWT lb/bu	FN sec
WA 8277	172.0	21.5	34.9	11.50	61.0	322.4
ARSDH09X122-9	176.0	20.6	30.5	13.05	59.9	345.2
14-FAC-2019	177.0	20.5	30.1	12.27	57.6	425.1
Louise	177.0	22.7	29.6	12.54	57.2	378.3
WA 8278	176.3	20.2	29.1	12.08	59.2	437.8
Treasure	176.7	19.3	28.7	12.12	58.6	426.0
Alpowa	177.3	18.9	27.8	12.97	59.1	466.0
IDO1405S	172.3	20.0	26.8	13.10	58.0	387.9
Alturas 160 lb/A	175.3	20.1	26.6	11.62	59.5	317.4
UI Stone	172.3	19.8	25.0	11.54	59.5	376.8
Alturas 80 lb/A	176.7	18.9	23.8	11.44	59.4	309.3
Penewawa 80 lb/A	174.0	19.3	23.0	12.75	58.5	353.2
IDO1401S	170.0	18.4	21.1	12.55	59.1	402.7
Penewawa 160 lb/A	174.3	18.9	20.9	12.74	58.5	362.2
IDO1403S	173.0	17.2	20.9	13.17	58.3	403.3
WB6121	170.7	17.6	20.8	13.04	59.3	359.4
Mean	174.4	19.6	26.2	12.41	58.9	379.6
LSD P=.05	1.72	2.17	6.99	0.38	0.85	11.13
CV	0.59	6.65	16	1.83	0.86	70.42
Pr>F	0.0001	0.0020	0.0046	0.0001	0.0001	0.0018

HD: heading date, HT: height, YLD: yield, PRO: protein, TWT: test weight

FN: falling number