2015 WSU-Mount Vernon Hard Winter Wheat Trial

Variety	Mkt class	5 yr ave (bu/a)	3 yr ave (bu/a)	2 yr ave (bu/a)	Yield (bu/a)	T. Wt. (lbs/bu)	Protein (%)	Head date	plant ht (in)	BYDV (0-9)	Rust
LCS Evina	HRW			142.3	**120.7**	**56.8**	11.7	18-May	47	1	R
HE9817/1.2	*HWW*				**118.7**	54.0	11.7	2-May	45	1	R
LCS Colonia	HRW		154.7	161.0	**109.5**	**56.6**	11.1	17-May	42	4	MR
Norwest 553	HRW	155.4	145.5	144.9	**106.6**	**57.6**	11.7	16-May	39	1	R
NSA10-2196	HRW				**101.6**	53.3	12.3	28-Apr	38	3	MR
OR2110019H	*HWW*				**96.3**	**55.4**	11.7	4-May	43	5	R
SAS W4	HRF		113.6	117.6	**91.6**	51.6	12.5	19-May	48	3	R
WA 8209	HRW			112.6	**89.7**	**57.1**	11.9	19-May	42	2	R
SAS13-69*	HRF			128.3	88.5	52.1	10.9	17-May	39	5	R
SAS W7	HRF			128.1	87.6	53.2	12.8	18-May	48	5	R
Einstein	SRW				86.4	52.5	**13.4**	18-May	33	4	R
OR2100081H	*HWW*			100.9	85.0	**55.9**	11.1	12-May	45	5	MR
SAS 6-4*	HRF		128.5	125.9	84.3	**55.0**	13.2	18-May	41	5	R
07PN013#38	HRW				83.1	**57.1**	11.3	12-May	31	3	R
Eiffel	HRW				83.1	53.4	11.8	24-May	39	6	R
3J110178	HRW				81.2	**57.1**	11.8	18-May	34	5	R
SAS W10*	SRW		128.1	130.1	80.7	48.6	11.1	21-May	33	5	R
Palou I	HRW				80.3	51.3	**13.2**	18-May	32	5	R
NSA10-7208	HRW			128.3	79.9	54.4	11.1	2-May	37	3	MR
WA 8231	*HWW*				79.9	**55.0**	10.3	18-May	46	4	R
Barok	SRW			116.9	78.8	**55.6**	11.2	20-May	35	6	R
LCS-Azimut	HRW		99.9	108.7	78.3	51.6	11.8	29-Apr	35	5	R
Skagit 1109	HRW		122.8	113.0	78.2	**57.0**	12.8	11-May	44	5	R
Estica	HRW			119.0	78.0	**55.8**	11.9	24-May	34	4	R
SAS W9*	SRW		121.4	127.6	71.4	53.3	**13.3**	20-May	34	5	R
SAS 4B*	HRF		104.1	102.1	67.9	51.3	11.7	19-May	42	6	R
Pactole	HRW		118.3	113.8	65.0	55.3	**13.1**	15-May	40	5	R
WA 8230	HRW				64.3	**55.0**	**13.1**	17-May	38	5	R
Ludwig	HRW				63.8	54.2	11.9	17-May	52	5	MS
Koreli	HRW				62.7	**55.3**	10.9	18-May	36	6	R
Hereward	HRW				60.5	52.7	11.7	23-May	30	6	R
*NZHW 13-66**	*HW*				58.5	54.3	11.7	19-May	39	7	MS
Red Russian	HRW				50.2	**57.1**	12.5	27-May	55	6	S
Barber II	HRW				44.6	**58.2**	**13.0**	15-May	50	6	S
SAS W3	HRF		91.4	77.9	41.9	49.4	**13.3**	18-May	45	5	MR
IDO1101	*HWW*				40.4	51.8	12.2	5-May	35	6	MS
Renan	HRW				33.9	51.0	12.7	18-May	37	7	R
SAS 78.11*	HW				28.7	48.4	**14.9**	21-May	36	7	MS
SAS 08-44*	HW			69.0	26.1	47.8	**14.1**	21-May	64	7	S
IDO1209DH	*HWW*				16.2	53.2	**15.4**	20-May	32	8	MR
Mean			106.7	118.4	73.6	53.9	12.2				
CV %					21.1	3.3	9.8				
LSD@0.1					31.4	3.6	2.4				
Max.			154.7	161.0	120.7	58.2	15.4				
Min.			91.4	69.0	16.2	47.8	10.3				

* 70 lbs/ac seeding rate, all others 100 lbs/ac

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Mount Vernon Hard Winter Wheat

1. The nursery was planted on October 9, 2014 with a double disc drill on 6-inch spacing. No fertilizer was applied in the fall. 1.5 lbs/ac of diuron herbicide was applied pre-emergence.
2. March 17, April 2 and April 30, 2015 applications of NPKS were applied totaling 140 lbs N/acre. Maestro 2EC and Harmony Extra SG were applied at labeled rates for weed control. No fungicides were applied. The nursery was harvested on July 23.
3. Harvest was on July 21 and yields ranged from 16.2 to 120.7 bushels/acre, test weights 47.8 to 58.2 lbs/bu and protein 10.3 to 15.3 %. Values within the 10% LSD range of the largest are shown in bold.
4. Barley Yellow Dwarf Virus (BYDV): a visual rating was assigned based on a 0-9 scale where 0 = no symptoms; 1 = trace amounts of yellowing at leaf tips, vigorous plant apperance; 5 = more extensive yellowing, some dwarfing, moderate plant vigor; 9 = marked dwarfing, complete yellowing, some sterility.
5. Heading date is when 50 % of the heads are 50 % emerged.
6. Stripe rust rating: R = resistant; MR = moderately resistant; MS =moderately susceptible; S = susceptible.

Discussion:

The severe infestation of Barley Yellow Dwarf Virus (BYDV) contributed to a yield reduction of 52% from the previous year. The yield of the varieties tend to follow the severity of the visual rating, giving a good indication of the genetic resistance or tolerance of that variety to the BYDV. Aphids are the vector that carry the virus to the plant and best management practices recommend reducing the aphid population by delaying planting, using an insecticidal seed treatment or spraying the plants with an insecticide.

For additional information contact Steve Lyon (slyon@wsu.edu).
For additional variety testing results visit: http://thebreadlab.wsu.edu/western-washington-variety-trials/