

‘Yellowstone’ Winter Wheat

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Yellowstone is a white-chaffed hard red winter wheat developed by the Montana Agricultural Experiment Station and released to seed growers in 2005. Yellowstone’s pedigree is ‘Judith’ x ‘Promontory’. Yellowstone is a very high yielding (Table 1) winter hardy variety with medium test weight, maturity, height, and grain protein (Table 2). Yellowstone has good milling and excellent baking quality (Table 3). It is resistant to stripe rust, but susceptible to stem rust. Yellowstone potentially could occupy acreage currently planted to Neeley, Tiber, CDC Falcon, Promontory, and Morgan. Yellowstone is recommended in Districts 1-5. Plant Variety Protection #200600284. To be sold by variety name only as a class of certified seed.

Table 1. Yield of Yellowstone, 2002-2008, compared to a set of recommended winter wheat varieties.

Variety	Recommended Districts						non-rec.	All Locations
	1 Kalispell	2 Bozeman ^{1/}	3 Huntley ^{2/}	4 Moccasin ^{3/}	5 Conrad ^{4/}	5 Havre ^{5/}	6- Sidney & Williston	
location-years	7	14	39	29	10	18	14	131
Yellowstone	111.5**	77.7**	67.9**	54.3**	62.9*	57.5**	54.0*	65.4**
Pryor	95.3	70.3	67.4*	52.9*	64.7**	55.0*	50.1	62.7
Promontory	108.0*	74.8*	63.3	51.8	58.3	53.0	43.7	60.9
CDC Falcon	94.4	69.5	62.2	50.9	61.7*	55.6*	53.1*	60.7
Neeley	83.9	67.9	63.5	50.6	58.5	52.7	48.2	59.1
Rocky	89.4	69.0	59.3	49.9	61.4*	54.5*	46.0	58.4
Jerry ^{6/}	86.5	69.1		48.2	53.5	52.5	55.7**	
LSD (0.05)	15.6	4.8	3.0	1.8	5.4	3.4	3.7	1.6

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)

1/ includes data from Dry Creek, Willow Creek

4/ includes data from The Knees

2/ includes data from Forsyth, Hardin area, Lodge Grass, Molt, Rapelje

5/ includes data from North Havre, Loma

3/ includes data from Denton, Geraldine, Winifred

6/ Jerry not grown at Huntley in 2008

Table 2. Agronomic characteristics of Yellowstone, 2002-2008, compared to a set of recommended winter wheat varieties

Variety	Test weight lb/bu	Winter survival %	Heading date		Plant height in	Lodging score 1/ (0-9)	Protein %	Sawfly cutting %	Stripe rust %	Coleoptile length in
			Julian	Calendar						
location-years	129	16	65		130	12	130	5	6	5
CDC Falcon	60.0	58	162.2	11-Jun	29.9	1.8	12.5	22	33	2.7
Jerry^{2/}		63**						31	8	2.9
Neeley	59.7	49	164.9	14-Jun	34.6	3.6	12.8**	29	52	3.3
Promontory	61.7**	40	162.3	11-Jun	32.8	2.3	12.3	33	3	2.5
Pryor	59.7	49	164.4	13-Jun	30.6	1.6	12.2	11	25	2.6
Rocky	61.5*	50	161.2	10-Jun	35.6	5.1	12.6	19	25	3.3
Yellowstone	59.6	54	163.6	13-Jun	33.7	2.3	12.6*	28	3	2.5
LSD (0.05)	0.3	5	0.4		0.4	1.1	0.2	12	16	0.1

** = indicates highest value within a column

^{1/} 0 = best

* = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)

^{2/} Jerry not grown at Huntley in 2008

Table 3. Mill and bake characteristics of Yellowstone, 2002-2007, compared to a set of recommended winter wheat varieties

Variety	PPO ^{1/}	Kernel hardness	Flour yield %	Flour protein %	Flour Ash %	Mixograph mix time min	Mixograph absorbtion %	Baking mix time min	Baking absorbtion %	Loaf volume cc
location-years	8	16	24	24	24	24	24	24	24	24
CDC Falcon	0.846	70.3	64.7	11.4	0.41	4.7	60.1	8.0	70.6	1054
Jerry	0.943	69.1	68.3*	11.9**	0.40*	4.5	61.6**	7.0	71.7	1035
Neeley	0.639	76.1	65.8	11.6	0.40*	4.7	60.5	7.4	71.2	1031
Promontory	0.282**	76.4	68.5**	11.3	0.39**	4.3	60.1	6.0	70.9	1038
Pryor	0.812	77.3	67.7	11.4	0.40*	3.3	59.7	4.4	69.1	1011
Yellowstone	0.571	78.6	67.9	11.7*	0.40*	7.2	61.5*	12.1	73.7**	1085**
LSD (0.05)	0.116	2.2	0.6	0.3	0.01	0.4	0.8	0.9	0.9	26

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)

^{1/} low is best for noodles