

Recommended Winter Wheat Varieties

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2016 Recommended Varieties: Hard Winter Wheat for Montana by District							
Variety	Origin (Release year)	Districts					
		1	2	3	4	5	6
		Northw est	Southw est	Southeast	Central	North Central	Northeast
Bearpaw ^{1/}	Montana (2011)			D	D	D	
Broadview	Alberta/Meridian Seeds (2009)					D	D
Carter	WestBred (2006)		D	D	D	D	D
CDC Falcon	Saskatchewan/WestBred (1999)		DI	DI	DI	DI	DI
Colter	Montana (2013)		D	D	D	D	
Decade	Montana/North Dakota (2010)			D	D	D	D
Jerry	North Dakota (2001)						D
Judee ^{1/}	Montana (2011)			D	D	D	
Ledger	WestBred (2004)		D		D	D	
Loma	Montana (2016)	D	D	D	D	D	D
Northern	Montana (2015)		D	D	D	D	
SY Wolf	Syngenta (2010)		D	D	D	D	
Warhorse ^{1/}	Montana (2015)			D	D	D	
WB-Quake	WestBred (2011)	D	D	D	D	D	D
Yellowstone	Montana (2005)	D	D	D	D	D	

D = Dryland
I = Irrigated
1/ = saw fly areas only

Table 1. Yield of Recommended Winter Wheat varieties, 2014-2016^{1/}

Variety	Districts							All Locations
	1 Kalispell	2 Bozeman	3 Huntley ^{2/}	4 Moccasin ^{3/}	5 Conrad ^{4/}	5 Havre ^{5/}	6- Sidney & Williston	
location-years	3	3	8	7	7	6	3	37
Yellowstone	125.3	96.0	72.6	65.7	93.0	70.2	62.2	80.1
Colter	148.7	92.7	69.3	65.2	87.9	65.6	56.7	78.8
Northern	138.4	88.3	68.2	65.6	91.4	67.5	53.2	78.1
SY Wolf	113.9	88.9	68.3	64.9	96.3	67.8	57.0	77.3
Loma	137.5	95.3	68.8	62.4	87.6	59.6	48.9	75.7
Warhorse	129.5	79.6	63.5	62.8	75.2	60.0	42.7	70.0
Judee	126.9	77.2	57.8	57.1	85.3	63.5	42.8	69.7
CDC Falcon	85.9	68.4	63.3	58.9	84.7	63.1	55.1	68.1
WB-Quake	122.5	78.3	56.5	55.2	75.9	59.9	46.4	66.8
Decade	67.0	64.1	65.8	58.3	84.4	60.0	51.6	65.8
Broadview	74.5	60.6	57.9	57.8	85.4	61.3	58.3	65.2
Bearpaw	72.2	60.6	58.1	57.9	76.1	57.0	43.9	61.5
Jerry	66.2	61.7	56.5	55.9	74.6	51.6	51.9	59.9
LSD (0.05)	36.5	16.4	6.3	6.0	6.5	6.8	ns	5.2

bold = indicates highest value within a column

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

1/ = 2014-2016 Intrastate and 2016 Off-Station tests

2/ includes data from Fort Smith, Hardin area, Hysham, Molt, Rapelje

3/ includes data from Belt, Denton, Geraldine, Highwood, Winifred

4/ includes data from Choteau, Cut Bank, The Knees, Shelby

5/ includes data from Carter, Loma, Turner

Carter' and 'Ledger' are also on the recommended list, but testing discontinued in 2015 and 2016, respectively

Table 2. Agronomic characteristics of Recommended Varieties, 2014-2016^{1/}

Variety	Test weight lb/bu	Winter survival %	Heading date		Plant height in	Lodging %	Protein %	Sawfly cutting %	Stripe rust %	Coleoptile length in
			Julian	Calendar						
location-years	37	1	24		37	7	35	3	5	2
Bearpaw	58.5	73	157.8	7-Jun	32.7	29	12.5	7	62	3.0
Broadview	58.8	95	158.9	8-Jun	33.8	41	12.3	42	58	2.8
CDC Falcon	59.0	94	158.2	7-Jun	31.6	36	12.2	40	42	2.9
Colter	59.6	90	160.1	9-Jun	34.9	15	12.5	47	15	2.9
Decade	58.9	78	157.5	7-Jun	33.2	28	12.3	26	63	3.2
Jerry	58.1	98	159.2	8-Jun	37.4	35	12.5	46	73	3.2
Judee	60.4	40	158.2	7-Jun	33.1	29	12.5	18	11	3.8
Loma	59.4	95	160.6	10-Jun	32.2	38	12.3	11	12	-
Northern	59.6	85	160.2	9-Jun	33.8	20	12.5	16	15	2.5
SY Wolf	60.6	55	156.8	6-Jun	32.7	32	12.1	26	18	3.0
Warhorse	59.7	78	159.3	8-Jun	33.0	15	12.7	1	10	3.3
WB-Quake	59.8	75	160.1	9-Jun	33.2	27	12.4	16	22	2.8
Yellowstone	59.6	93	159.3	8-Jun	35.2	27	11.9	34	26	2.7
LSD (0.05)	0.6	22	0.5		0.6	ns	0.3	29	17	0.2

^{1/} = 2014-2016 Intrastate and 2016 Off-Station tests

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Table 3. Mill and bake characteristics of Recommended Winter Wheat Varieties, 2014-2015

Variety	PPO ^{1/}	Kernel hardness	Flour			Mixograph			Baking		
			yield %	protein %	Ash %	tolerance (1-6)	mix time min	absorption %	mix time min	absorption %	volume cc
location-years	8	8	8	8	8	8	8	8	8	8	8
Bearpaw	0.227	81.6	70.6	11.5	0.42	3.5	4.3	59.5	6.7	69.7	992
Colter	0.233	79.3	69.3	11.5	0.42	5.0	9.0	63.9	19.8	75.7	1034
Decade	0.253	73.2	69.3	11.6	0.41	4.9	8.4	63.3	20.9	74.3	1051
Judee	0.246	80.6	69.4	11.7	0.41	4.3	5.3	61.0	9.7	71.3	1136
Loma	0.154	81.8	71.9	11.3	0.42	4.3	6.3	62.7	18.3	74.4	1106
Northern	0.081	87.9	70.8	11.7	0.45	3.6	3.7	61.1	5.9	70.8	1069
SY Wolf	0.222	75.6	68.7	11.1	0.41	2.5	4.4	58.0	6.3	68.2	957
Warhorse	0.238	91.5	69.3	12.1	0.44	3.5	4.7	62.0	7.8	72.8	1063
Yellowstone	0.199	80.5	69.7	11.0	0.43	4.8	7.7	62.2	16.1	73.6	1031
LSD (0.05)	0.034	2.7	1	0.5	0.01	0.8	1.1	1.5	3.3	1.5	47

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

^{1/} polyphenol oxidase, low is best for noodles