

**Motion that "MT970116" be recommended in districts 1-6 under dryland and irrigated conditions effective 2007.**

That "MT970116" be released as public variety with PVP Title V.

MT970116 is a two-rowed smooth awned barley developed from a cross between Klages and Baronesse in 1992. F<sub>1</sub> plants were harvested in 1993 and single heads were harvested and advanced using single seed descent in the F<sub>2</sub> generation in 1994. Single F<sub>5</sub> plants were selected and harvested in 1995. In 1996, F<sub>6</sub> generation two row plots were selected based on agronomic and quality characteristics. MT970116 was tested in replicated dryland and irrigated yield trials at Montana Agricultural Research Centers from 1997-2005. MT970116 was in the dryland offstation trials from 2001-2005 and the irrigated malt offstation trials from 2002-2005.

MT970116 is higher yielding and has higher test weight than Harrington and Merit over all Intrastate locations. MT970116 has higher plump percent than Merit and Harrington and is lower in protein compared to Merit over all intrastate locations. MT970116 heads approximately two days earlier than Harrington and is taller than Harrington and Merit. In the dryland offstations tests from 2001-2005, MT970116 had higher yields, test weights and plump percent and lower protein than Harrington. MT970116 was moderately resistant to stripe rust and susceptible to net blotch at Kalispell in 2005. MT970116 should be adapted in the dryland and higher moisture areas in the Northern Great Plains.

MT970116 has potential as a malting barley and has passed one American Malting Barley Association (AMBA) plant scale evaluation test in 2004. Another AMBA plant Scale evaluation was harvested in 2005 and the results should be available in 2006.

Breeders Seed should be available for planting in 2006.

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Prepared by: Mr. Pat Hensleigh

1999-2005 T-PAIRED RESULTS vs MT970116

All Intrastate Locations

Yield (bu/ac)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	97.3	75	1.2	1.4	.163
PI491534	Gallatin	92.1	75	-4.0	-4.1	.000
MT960228	Eslick	98.4	75	2.3	1.8	.083
PI568246	Baronesse	97.5	75	1.4	1.3	.209
SK 76333	Harrington	88.9	75	-7.2	-6.7	.000
2B914947	Merit	90.6	75	-5.6	-4.6	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 96.1 (N= 75)

Test Weight (lb/bu)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	52.4	74	.7	4.6	.000
PI491534	Gallatin	50.9	74	-.9	-5.5	.000
MT960228	Eslick	50.3	74	-1.5	-8.7	.000
PI568246	Baronesse	50.0	74	-1.7	-10.1	.000
SK 76333	Harrington	48.7	74	-3.1	-16.4	.000
2B914947	Merit	47.9	74	-3.9	-17.6	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 51.8 (N= 74)

Plump Percent (over # 6)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	76.4	73	-5.0	-4.0	.000
PI491534	Gallatin	72.0	73	-9.3	-7.2	.000
MT960228	Eslick	70.5	73	-10.9	-6.6	.000
PI568246	Baronesse	73.6	73	-7.7	-6.1	.000
SK 76333	Harrington	73.3	73	-8.1	-6.8	.000
2B914947	Merit	72.4	73	-8.9	-5.3	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 80.3 (N= 74)

## Heading Date (days from Jan.1)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	176.9	72	.8	3.8	.000
PI491534	Gallatin	175.7	72	-.4	-1.9	.062
MT960228	Eslick	178.6	72	2.5	10.0	.000
PI568246	Baronesse	179.1	72	3.0	11.3	.000
SK 76333	Harrington	178.4	72	2.3	11.9	.000
2B914947	Merit	179.3	72	3.2	12.2	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 176.1 (N= 72)

## Plant Height (inches)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	31.0	74	-2.3	-10.5	.000
PI491534	Gallatin	31.4	74	-1.9	-9.1	.000
MT960228	Eslick	29.6	74	-3.7	-12.6	.000
PI568246	Baronesse	28.7	74	-4.6	-19.5	.000
SK 76333	Harrington	30.3	74	-3.0	-14.2	.000
2B914947	Merit	29.9	74	-3.4	-16.2	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 33.3 (N= 74)

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## Protein Percent (dry weight basis)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	13.7	74	-.2	-2.5	.017
PI491534	Gallatin	13.9	74	.1	.9	.350
MT960228	Eslick	13.5	74	-.3	-3.2	.002
PI568246	Baronesse	13.9	74	.1	.6	.529
SK 76333	Harrington	14.1	74	.3	2.4	.018
2B914947	Merit	14.2	74	.4	3.1	.003

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 13.9 (N= 74)

1999-2005 T-PAIRED RESULTS vs MT970116

Irrigated Intrastate Locations

Yield (bu/ac)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	126.6	35	1.5	1.0	.349
PI491534	Gallatin	120.0	35	-5.1	-3.1	.003
MT960228	Eslick	129.1	35	4.0	1.6	.129
PI568246	Baronesse	126.8	35	1.7	.8	.410
SK 76333	Harrington	116.3	35	-8.8	-4.9	.000
2B914947	Merit	121.5	35	-3.6	-1.7	.100

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 125.1 (N= 35)

Test Weight (lb/bu)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	53.0	35	.4	1.9	.070
PI491534	Gallatin	52.2	35	-.5	-2.4	.023
MT960228	Eslick	51.5	35	-1.2	-4.8	.000
PI568246	Baronesse	51.4	35	-1.2	-5.5	.000
SK 76333	Harrington	49.8	35	-2.9	-10.1	.000
2B914947	Merit	49.3	35	-3.3	-9.6	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 52.7 (N= 35)

Plump Percent (over # 6)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	86.5	35	-2.1	-2.0	.054
PI491534	Gallatin	82.4	35	-6.3	-5.8	.000
MT960228	Eslick	80.9	35	-7.7	-4.2	.000
PI568246	Baronesse	84.4	35	-4.3	-2.9	.007
SK 76333	Harrington	81.4	35	-7.2	-5.2	.000
2B914947	Merit	85.0	35	-3.6	-1.9	.067

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 88.6 (N= 35)

## 1999-2005 T-PAIRED RESULTS vs MT970116

## Irrigated Intrastate Locations

## Heading Date (days from Jan.1)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	176.0	34	.9	2.7	.011
PI491534	Gallatin	174.7	34	-.4	-2.0	.055
MT960228	Eslick	177.3	34	2.2	6.6	.000
PI568246	Baronesse	177.8	34	2.7	7.7	.000
SK 76333	Harrington	177.5	34	2.4	7.9	.000
2B914947	Merit	178.3	34	3.2	8.1	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 175.1 (N= 34)

## Plant Height (inches)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	34.5	35	-1.9	-6.7	.000
PI491534	Gallatin	34.8	35	-1.5	-5.0	.000
MT960228	Eslick	32.8	35	-3.6	-7.5	.000
PI568246	Baronesse	31.8	35	-4.5	-13.8	.000
SK 76333	Harrington	33.7	35	-2.7	-10.0	.000
2B914947	Merit	33.5	35	-2.8	-10.2	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 36.4 (N= 35)

## Protein Percent (dry weight basis)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	12.7	34	-.1	-1.2	.234
PI491534	Gallatin	12.7	34	-.1	-.7	.503
MT960228	Eslick	12.4	34	-.5	-2.9	.006
PI568246	Baronesse	12.6	34	-.2	-1.4	.161
SK 76333	Harrington	12.9	34	.0	.2	.813
2B914947	Merit	12.9	34	.0	.1	.902

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 12.8 (N= 34)

1999-2005 T-PAIRED RESULTS vs MT970116 Dryland Intrastate Locations

Yield (bu/ac)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	71.7	40	1.0	1.1	.278
PI491534	Gallatin	67.7	40	-3.1	-2.7	.010
MT960228	Eslick	71.6	40	.9	.8	.409
PI568246	Baronesse	71.8	40	1.1	1.1	.272
SK 76333	Harrington	64.9	40	-5.8	-4.7	.000
2B914947	Merit	63.5	40	-7.3	-6.1	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 70.8 (N= 40)

Test Weight (lb/bu)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	51.9	39	.9	4.8	.000
PI491534	Gallatin	49.7	39	-1.3	-5.4	.000
MT960228	Eslick	49.3	39	-1.7	-7.7	.000
PI568246	Baronesse	48.8	39	-2.2	-9.3	.000
SK 76333	Harrington	47.7	39	-3.2	-13.1	.000
2B914947	Merit	46.6	39	-4.4	-16.9	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 51.0 (N= 39)

Plump Percent (over # 6)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	67.0	38	-7.7	-3.6	.001
PI491534	Gallatin	62.5	38	-12.1	-5.5	.000
MT960228	Eslick	60.8	38	-13.8	-5.3	.000
PI568246	Baronesse	63.7	38	-10.9	-5.9	.000
SK 76333	Harrington	65.8	38	-8.8	-4.7	.000
2B914947	Merit	60.8	38	-13.8	-5.6	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) IS: 72.8 (N= 39)

1999-2005 T-PAIRED RESULTS vs MT970116 Dryland Intrastate Locations

Heading Date (days from Jan.1)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	177.7	38	.7	2.7	.011
PI491534	Gallatin	176.7	38	-.3	-.9	.357
MT960228	Eslick	179.7	38	2.8	7.6	.000
PI568246	Baronesse	180.3	38	3.3	8.4	.000
SK 76333	Harrington	179.1	38	2.2	9.0	.000
2B914947	Merit	180.1	38	3.2	9.1	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 176.9 (N= 38)

Plant Height (inches)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	27.9	39	-2.6	-8.2	.000
PI491534	Gallatin	28.3	39	-2.3	-8.1	.000
MT960228	Eslick	26.8	39	-3.8	-10.5	.000
PI568246	Baronesse	25.9	39	-4.7	-13.8	.000
SK 76333	Harrington	27.2	39	-3.4	-10.5	.000
2B914947	Merit	26.7	39	-3.8	-13.3	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 30.6 (N= 39)

Protein Percent (dry weight basis)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	14.5	40	-.2	-2.2	.035
PI491534	Gallatin	15.0	40	.3	1.8	.073
MT960228	Eslick	14.5	40	-.2	-1.5	.134
PI568246	Baronesse	15.1	40	.3	2.0	.050
SK 76333	Harrington	15.2	40	.5	3.1	.003
2B914947	Merit	15.4	40	.7	4.1	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) is: 14.7 (N= 40)

**1999-2005 Montana Spring Barley Dryland Summary Yield (bu/ac)**

Variety	Bozeman District 2								Huntley District 3							
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.
MT970116	86.6	129.1	115.6	75.9	77.3	138.0	102.6	103.6	73.7	32.5	35.4	29.4	63.1	51.1	69.5	50.7
Haxby	83.6	133.3	113.1	76.9	84.1	135.6	99.3	103.7	64.9	33.0	47.2	26.6	61.6	53.3	75.2	51.7
Gallatin	82.9	122.7	100.4	57.7	72.3	125.2	92.9	93.5	68.6	38.6	44.3	18.5	49.1	39.8	64.7	46.2
Eslick	78.7	132.5	120.6	75.9	74.5	133.3	94.8	101.5	69.0	42.5	45.3	15.4	58.0	51.1	67.3	49.8
Baronesse	87.5	129.7	117.6	68.3	80.8	134.0	88.3	100.9	67.8	34.4	48.2	23.1	61.7	48.0	65.3	49.8
Harrington	79.2	118.7	104.5	52.6	72.1	124.8	78.0	90.0	64.2	35.3	39.3	11.6	53.5	37.2	62.3	43.3
Merit	67.4	112.7	110.7	64.9	61.9	119.1	86.0	89.0	53.8	41.6	44.4	8.7	55.4	42.4	59.4	43.7

Variety	Moccasin District 4							Havre District 5							Conrad District 5							
	1999	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.
MT970116	77.3	69.9	48.6	33.0	71.9	46.0	57.8	70.1	66.7	26.4	59.8	11.9	77.9	52.1	92.1	54.6	21.9	73.1	98.0	83.8	88.4	73.1
Haxby	71.1	77.4	56.6	34.8	77.7	50.0	61.3	65.9	66.0	28.9	54.6	11.6	84.2	51.9	90.1	62.8	22.4	76.2	87.2	91.0	94.5	74.9
Gallatin	72.9	71.1	48.1	29.1	70.9	49.7	57.0	63.8	65.5	31.6	54.4	11.6	82.9	51.6	87.6	50.9	23.9	78.7	78.1	94.8	90.4	72.0
Eslick	75.1	73.4	53.6	32.6	74.9	49.3	59.8	80.6	63.5	28.1	58.6	11.3	79.3	53.6	98.2	58.8	21.4	91.3	83.0	87.2	85.5	75.0
Baronesse	77.2	71.7	51.8	32.0	72.4	56.2	60.2	85.3	62.5	32.2	56.6	14.1	83.2	55.7	91.3	57.8	27.9	82.6	88.7	90.5	88.0	75.2
Harrington	70.6	62.8	43.3	22.2	63.3	46.1	51.4	71.8	53.5	31.2	53.6	12.4	70.8	48.9	93.8	53.2	20.4	81.7	80.5	80.0	88.2	71.1
Merit	72.2	60.3	41.6	24.7	63.6	47.2	51.6	71.9	54.9	28.5	47.8	12.0	63.9	46.5	91.9	45.5	16.9	72.2	81.6	79.0	83.8	67.3

Variety	Sidney District 6								Dryland Overall Avg.
	1999	2000	2001	2002	2003	2004	2005	Avg.	
MT970116	91.5	82.7	93.7	51.9	87.0	101.0	71.4	82.7	96.1
Haxby	93.9	86.7	78.2	51.2	86.5	110.5	72.1	82.7	97.4
Gallatin	89.1	87.4	83.4	52.4	89.8	96.1	74.7	81.8	92.1
Eslick	97.6	92.5	93.6	54.4	84.2	99.0	78.5	85.7	98.5
Baronesse	98.5	93.3	95.5	51.2	84.5	103.1	70.3	85.2	97.5
Harrington	98.5	84.6	83.5	49.5	74.8	102.5	70.9	80.6	88.9
Merit	90.1	80.1	82.9	51.1	78.2	92.6	75.9	78.7	90.6



**1999-2005 Montana Spring Barley Dryland Summary Test Weight (lb/bu)**

Variety	Bozeman District 2								Huntley District 3							
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2001	2002	2003	2004	2005	Avg.	
MT970116	52.6	55.8	52.3	51.1	47.5	55.6	52.2	52.4	48.1	52.5	40.8	52.8	54.7	47.1	49.3	
Haxby	53.3	57.1	53.2	51.8	50.9	55.2	52.8	53.4	49.4	52.0	43.0	53.9	54.0	48.9	50.2	
Gallatin	52.7	55.8	51.4	49.6	46.2	56.0	52.1	52.0	47.5	51.6	38.6	51.6	52.1	46.6	48.0	
Eslick	51.3	55.5	50.8	48.4	44.5	52.9	49.8	50.4	47.9	51.4	38.6	50.8	54.4	44.1	47.9	
Baronesse	51.5	54.4	50.8	48.4	44.7	53.9	48.7	50.3	44.4	50.8	37.8	51.2	53.8	43.6	46.9	
Harrington	50.0	53.2	49.1	47.0	42.5	52.7	46.7	48.7	43.1	51.5	37.4	51.1	51.8	43.3	46.4	
Merit	48.0	51.8	48.6	47.0	39.9	52.6	46.2	47.7	43.1	50.3	36.4	48.6	50.9	42.1	45.2	

Variety	Moccasin District 4							Havre District 5						
	1999	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2005	Avg.
MT970116	51.3	49.1	48.1	46.3	52.4	51.9	49.9	51.9	50.8	49.7	50.5	48.6	50.1	50.3
Haxby	52.0	50.9	52.0	46.7	51.8	53.2	51.1	52.7	51.9	49.4	50.4	48.9	51.1	50.7
Gallatin	50.8	48.4	49.4	41.9	49.1	51.1	48.4	52.1	49.0	48.1	48.5	47.9	48.9	49.1
Eslick	50.1	47.2	50.9	44.5	47.7	46.8	47.9	50.9	49.3	47.7	49.6	46.3	47.7	48.6
Baronesse	49.2	45.9	49.9	41.3	47.0	47.2	46.7	50.9	47.6	48.1	48.9	46.1	46.1	47.9
Harrington	48.1	44.8	49.8	41.4	45.9	47.5	46.2	49.4	46.8	46.2	48.4	45.4	45.4	46.9
Merit	48.1	44.0	47.8	40.1	44.8	47.4	45.3	48.7	46.8	46.6	47.3	44.5	41.9	46.0

Variety	Conrad District 5								Sidney District 6								Dryland Overall Avg.
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.	
MT970116	54.5	50.6	53.8	53.5	51.5	53.5	50.2	52.5	54.7	53.0	48.7	48.2	51.5	51.4	49.7	51.0	51.0
Haxby	54.7	53.8	53.6	52.8	50.7	55.2	53.1	53.4	54.9	52.2	50.0	49.7	52.4	53.2	50.9	51.9	51.9
Gallatin	54.0	48.5	49.4	49.2	46.3	52.7	48.6	49.8	54.6	52.5	47.9	47.0	51.1	51.6	49.5	50.6	49.7
Eslick	53.6	46.6	52.8	51.9	47.5	52.8	49.1	50.6	53.4	51.3	47.1	46.4	50.1	50.6	49.6	49.8	49.3
Baronesse	52.6	48.7	51.3	49.6	48.1	51.8	49.3	50.2	54.0	51.5	48.5	48.4	48.2	50.0	48.9	49.9	48.8
Harrington	52.5	45.9	49.8	52.6	46.5	52.0	45.9	49.3	52.0	50.8	47.1	45.6	47.3	50.0	45.7	48.4	47.7
Merit	48.3	48.9	48.5	47.3	45.1	48.6	45.2	47.4	51.3	50.5	45.7	44.7	46.7	47.7	45.7	47.5	46.6

**1999-2005 Montana Spring Barley Dryland Summary Plump Percent (over # 6 screen)**

Variety	Bozeman District 2								Huntley District 3							
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.
MT970116	69.4	72.3	65.8	68.8	41.3	80.7	60.8	65.6	21.3	89.6	96.2	0.7	60.6	97.4	44.2	58.6
Haxby	55.6	72.1	69.2	67.7	34.6	85.5	47.6	61.8	11.2	70.4	91.7	0.9	31.7	92.5	40.7	48.4
Gallatin	49.5	69.2	54.2	52.6	22.9	83.2	45.8	53.9	19.9	65.8	85.8	0.1	42.9	81.5	53.5	49.9
Eslick	50.2	63.1	56.3	65.8	13.8	54.0	20.0	46.2	12.0	72.1	90.2	0.8	33.0	92.9	20.5	45.9
Baronesse	54.6	58.8	54.3	66.8	20.1	72.4	33.8	51.5	6.6	73.4	91.0	0.2	40.4	95.3	21.5	46.9
Harrington	42.9	51.7	67.2	61.6	33.1	67.1	27.6	50.1	17.5	80.4	94.5	0.9	55.6	81.6	45.5	53.7
Merit	42.6	41.3	69.7	64.0	14.0	72.4	33.1	48.1	12.2	50.7	88.7	0.2	57.0	81.8	48.7	48.5

Variety	Moccasin District 4						Havre District 5						
	1999	2001	2002	2004	2005	Avg.	1999	2000	2001	2002	2003	2005	Avg.
MT970116	91.2	29.2	74.4	59.0	56.6	62.1	94.1	54.1	62.5	92.7	54.2	74.6	72.0
Haxby	87.6	35.2	64.7	25.0	61.0	54.7	95.6	28.8	89.4	83.5	42.5	67.9	68.0
Gallatin	81.3	15.2	60.0	20.3	42.4	43.8	90.0	23.1	82.7	79.6	36.9	65.9	63.0
Eslick	81.4	17.5	86.7	54.4	4.1	48.8	92.8	37.1	72.3	87.7	24.4	23.1	56.2
Baronesse	82.7	19.8	76.8	29.2	44.3	50.6	94.3	31.4	85.9	86.0	38.2	49.4	64.2
Harrington	74.6	25.8	64.4	61.9	55.4	56.4	85.6	26.1	86.9	88.7	33.5	48.3	61.5
Merit	79.5	16.2	25.4	37.0	27.9	37.2	90.5	23.4	84.6	84.1	31.0	24.0	56.3

Variety	Conrad District 5								Sidney District 6								Dryland Overall Avg.
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.	
MT970116	94.0	75.0	87.0	97.0	80.0	98.0	89.8	88.7	93.0	91.0	91.0	71.0	72.0	93.0	94.0	86.4	72.8
Haxby	96.0	43.0	78.0	93.0	35.0	91.0	93.2	75.6	95.0	91.0	86.0	51.0	63.0	90.0	89.0	80.7	65.3
Gallatin	93.0	40.0	67.0	79.0	25.0	91.0	80.8	68.0	95.0	86.0	76.0	80.0	60.0	88.0	91.0	82.3	60.9
Eslick	94.0	41.0	65.0	94.0	45.0	93.0	83.2	73.6	94.0	95.0	84.0	78.0	71.0	88.0	61.0	81.6	59.3
Baronesse	92.0	44.0	76.0	86.0	70.0	93.0	82.8	77.7	95.0	94.0	82.0	75.0	36.0	81.0	88.0	78.7	62.1
Harrington	88.0	51.0	75.0	97.0	54.0	91.0	69.7	75.1	94.0	93.0	83.0	70.0	78.0	89.0	91.0	85.4	64.2
Merit	84.0	67.0	65.0	83.0	72.0	94.0	63.5	75.5	94.0	89.0	80.0	73.0	73.0	84.0	91.0	83.4	59.3

**1999-2005 Montana Spring Barley Dryland Summary Heading Date (days from January 1)**

Variety	Bozeman District 2								Huntley District 3							
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2003	2004	2005	Avg.	
MT970116	174.7	169.0	175.7	182.0	181.7	177.0	184.4	177.8	169.0	168.7	160.7	177.0	172.7	172.0	170.0	
Haxby	176.8	170.4	175.3	182.7	181.7	179.0	184.7	178.7	170.3	167.0	167.3	178.3	175.2	172.1	171.7	
Gallatin	174.9	168.9	174.6	182.1	181.7	177.3	184.0	177.6	165.8	167.5	165.0	176.7	168.5	172.5	169.3	
Eslick	177.7	171.3	176.6	183.6	182.7	180.0	185.9	179.7	173.9	167.9	168.7	178.4	176.0	182.5	174.5	
Baronesse	176.4	170.0	177.0	183.4	183.0	181.0	187.8	179.8	174.9	169.0	167.7	179.7	180.6	181.1	175.5	
Harrington	177.1	170.9	177.0	183.6	183.0	180.3	185.9	179.7	174.0	167.7	166.7	179.0	171.3	174.9	172.3	
Merit	177.3	171.3	177.0	184.0	183.0	181.0	188.8	180.3	176.1	171.7	168.7	179.1	172.6	181.3	174.9	

Variety	Moccasin District 4							Havre District 5						
	1999	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2005	Avg.
MT970116	179.0	187.0	181.1	178.9	180.9	176.8	180.6	175.5	189.1	176.8	192.9	186.2	179.5	183.3
Haxby	180.4	186.0	180.8	178.8	182.3	178.5	181.1	177.5	185.6	175.5	194.4	186.2	178.0	182.9
Gallatin	178.1	186.0	180.4	179.2	181.3	176.3	180.2	176.5	182.8	176.2	193.1	185.1	178.3	182.0
Eslick	181.9	188.0	184.6	183.0	183.0	180.7	183.5	178.0	192.7	178.2	192.8	189.9	188.5	186.7
Baronesse	183.4	188.0	188.6	185.2	183.7	180.3	184.9	178.0	195.5	180.1	193.6	188.6	188.2	187.3
Harrington	182.0	188.0	184.0	183.2	184.0	180.3	183.6	175.5	192.5	178.4	192.2	189.4	181.4	184.9
Merit	183.7	188.0	187.0	184.5	183.8	183.0	185.0	178.5	191.5	177.9	193.2	185.7	182.5	184.9

Variety	Conrad District 5							Sidney District 6							Dryland Overall Avg.	
	1999	2000	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005		Avg.
MT970116	179.0	174.0	185.0	180.0	182.0	180.0	180.0	169.4	163.9	174.7	180.1	167.3	170.2	170.3	170.8	176.9
Haxby	179.0	177.0	186.0	180.0	182.0	182.0	181.0	169.6	164.9	174.3	180.2	168.3	171.4	171.3	171.4	177.7
Gallatin	178.0	178.0	186.0	180.0	182.0	180.0	180.7	168.8	164.6	177.0	178.9	167.7	169.0	171.1	171.0	176.7
Eslick	180.0	178.0	187.0	183.0	184.0	183.0	182.5	170.7	165.5	176.0	180.9	169.4	172.3	174.2	172.7	179.7
Baronesse	180.0	179.0	186.0	183.0	183.0	182.0	182.2	170.0	166.3	176.0	182.0	170.1	174.0	173.8	173.2	180.3
Harrington	181.0	178.0	187.0	183.0	184.0	183.0	182.7	170.6	166.0	177.4	180.7	169.3	172.3	172.9	172.7	179.1
Merit	180.0	179.0	187.0	183.0	184.0	184.0	182.8	171.9	167.6	178.1	181.4	169.7	174.0	174.8	173.9	180.1

**1999-2005 Montana Spring Barley Dryland Summary Plant Height (inches)**

Variety	Bozeman District 2								Huntley District 3							
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.
MT970116	34.7	39.9	31.8	34.6	29.7	36.2	36.8	34.8	33.5	29.2	19.5	25.6	29.8	21.7	41.7	28.7
Haxby	32.1	37.2	28.1	33.3	26.4	33.9	34.8	32.2	29.3	27.0	18.9	22.0	27.4	19.6	36.4	25.8
Gallatin	30.7	35.6	28.7	35.3	28.0	33.0	35.3	32.4	30.8	26.7	18.6	21.6	26.0	19.2	35.8	25.5
Eslick	30.8	36.2	28.2	33.7	27.6	32.3	31.5	31.5	27.9	26.3	17.1	21.8	25.4	18.4	34.7	24.5
Baronesse	29.7	34.2	25.6	33.0	24.9	31.7	32.0	30.1	28.8	23.4	17.0	20.7	23.4	15.6	35.1	23.4
Harrington	31.9	38.2	28.3	35.2	25.9	32.2	32.9	32.1	30.3	25.0	19.0	21.1	25.8	18.4	32.9	24.6
Merit	30.6	35.5	29.5	32.5	25.4	32.3	31.4	31.0	29.2	23.8	16.7	18.4	25.1	18.4	35.9	23.9

Variety	Moccasin District 4						Havre District 5						
	1999	2001	2002	2003	2005	Avg.	1999	2000	2001	2002	2003	2005	Avg.
MT970116	30.6	32.4	25.9	26.6	35.9	30.3	33.3	30.1	18.6	24.2	19.4	35.2	26.8
Haxby	28.3	30.7	24.7	25.2	32.2	28.2	30.7	26.5	18.4	21.4	19.4	32.9	24.9
Gallatin	27.4	30.3	25.2	25.7	31.5	28.0	30.5	26.7	17.3	22.1	18.3	32.9	24.6
Eslick	27.5	29.8	24.8	24.5	26.2	26.6	30.1	26.6	17.4	22.4	19.5	29.0	24.2
Baronesse	24.8	29.1	23.4	23.2	29.6	26.0	27.7	26.1	16.9	21.3	19.7	28.1	23.3
Harrington	26.4	30.4	22.7	23.5	28.5	26.3	32.1	25.8	17.1	22.1	19.5	30.9	24.6
Merit	27.7	29.9	21.8	22.4	28.0	26.0	29.8	24.5	16.6	21.3	19.5	29.7	23.6

Variety	Conrad District 5								Sidney District 6								Dryland Overall Avg.
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.	
MT970116	34.0	34.0	14.0	33.0	37.0	40.0	36.0	32.6	30.0	28.7	30.3	26.2	32.5	31.6	28.0	29.6	30.6
Haxby	32.0	29.0	18.0	26.0	35.0	32.0	32.0	29.1	28.6	25.6	24.9	24.2	29.2	30.5	25.8	27.0	27.9
Gallatin	32.0	30.0	17.0	29.0	34.0	35.0	35.0	30.3	28.4	26.0	30.3	26.0	29.9	29.6	28.7	28.4	28.3
Eslick	28.0	27.0	16.0	29.0	36.0	33.0	30.0	28.4	25.5	25.0	25.8	21.3	26.4	28.7	23.3	25.1	26.8
Baronesse	29.0	26.0	16.0	26.0	30.0	31.0	31.0	27.0	25.3	23.2	25.3	23.3	26.9	27.3	23.2	24.9	25.9
Harrington	29.0	28.0	15.0	29.0	36.0	36.0	31.0	29.1	27.0	24.2	25.0	21.6	27.0	29.8	25.6	25.7	27.2
Merit	32.0	27.0	14.0	28.0	34.0	33.0	34.0	28.9	27.7	24.1	27.6	22.7	29.2	28.5	25.6	26.5	26.7

**1999-2005 Montana Spring Barley Dryland Summary Protein Percent (dry wt)**

Variety	Bozeman District 2								Huntley District 3							
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.
MT970116	14.4	14.5	11.8	15.5	17.2	14.3	14.6	14.6	16.3	16.6	16.0	18.5	17.9	11.2	16.2	16.1
Haxby	14.4	13.9	11.2	15.5	16.3	12.9	15.5	14.2	16.1	15.4	15.8	18.4	19.4	10.9	14.9	15.8
Gallatin	15.8	14.3	13.1	16.3	16.6	13.7	15.4	15.0	17.3	16.1	13.3	18.5	19.4	10.6	16.7	16.0
Eslick	14.7	13.9	11.5	14.9	17.1	14.2	16.2	14.6	16.0	16.0	15.4	17.7	17.4	11.9	16.3	15.8
Baronesse	14.7	14.8	12.1	16.2	16.9	13.2	16.1	14.8	17.4	18.5	16.5	19.0	19.8	12.4	17.5	17.3
Harrington	15.8	14.7	12.6	16.8	17.6	14.2	16.0	15.4	17.4	16.7	14.3	18.8	18.5	12.5	15.9	16.3
Merit	16.4	15.9	12.4	16.4	18.4	13.8	16.5	15.7	18.9	17.4	14.5	18.1	18.8	12.0	17.2	16.7

Variety	Moccasin District 4							Havre District 5						
	1999	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2005	Avg.
MT970116	13.3	17.2	14.9	18.9	15.1	15.9	15.9	12.4	16.4	17.6	15.8	18.0	16.0	16.0
Haxby	13.0	17.0	14.9	18.4	15.6	14.9	15.6	12.6	14.9	17.4	16.3	18.0	15.8	15.8
Gallatin	13.2	18.6	14.3	19.7	15.8	15.8	16.2	13.7	16.5	17.2	16.6	19.2	16.4	16.6
Eslick	13.1	15.7	14.4	18.0	16.8	16.0	15.7	11.1	15.6	17.1	15.9	18.1	16.9	15.8
Baronesse	13.5	15.3	15.0	20.3	18.1	14.7	16.1	10.8	16.6	18.8	16.3	18.5	16.7	16.3
Harrington	14.1	17.8	14.5	21.5	18.0	16.1	17.0	12.8	15.7	17.8	16.6	19.2	17.0	16.5
Merit	13.8	17.5	14.8	21.3	19.0	15.7	17.0	11.6	17.9	18.8	16.3	18.9	18.8	17.0

Variety	Conrad District 5								Sidney District 6								Dryland Overall Avg.
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.	
MT970116	11.8	13.4	15.7	12.1	15.5	11.6	12.5	13.2	10.2	12.6	13.8	13.0	13.4	14.0	12.6	12.8	14.7
Haxby	11.7	14.0	15.3	12.6	16.0	10.9	12.0	13.2	10.5	12.3	14.6	12.8	12.7	12.9	12.1	12.5	14.5
Gallatin	11.9	15.2	15.6	12.8	16.5	12.4	12.9	13.9	10.2	11.9	13.9	12.6	12.9	13.2	12.5	12.5	15.0
Eslick	12.4	13.4	16.1	12.3	16.2	11.4	11.6	13.3	9.8	11.6	13.4	13.5	12.0	12.7	13.4	12.3	15.0
Baronesse	11.5	15.5	14.6	12.5	16.1	11.8	12.5	13.5	9.8	11.5	13.4	13.7	14.5	13.4	11.8	12.6	15.1
Harrington	11.2	14.5	16.5	12.7	16.3	12.1	13.3	13.8	9.9	11.5	14.0	14.1	13.0	13.2	11.7	12.5	15.2
Merit	11.7	14.7	16.5	13.8	15.7	11.7	12.1	13.7	10.2	13.0	13.9	12.5	12.8	14.6	12.5	12.8	15.4

### 1999-2005 Montana Spring Barley Irrigated Summary Yield (bu/ac)

Variety	Kalispell High Moisture District 1								Bozeman District 2							
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.
MT970116	151.2	185.6	202.6	145.5	122.8	142.5	134.9	155.0	102.3	156.4	143.3	102.1	121.3	138.7	119.1	126.2
Haxby	160.0	196.9	181.1	151.3	116.9	125.6	128.5	151.5	95.3	155.7	131.4	98.4	127.2	144.8	120.5	124.7
Gallatin	140.6	184.5	181.4	139.9	127.2	127.2	130.4	147.3	102.7	137.6	134.6	95.0	119.1	134.8	112.0	119.4
Eslick	160.7	190.7	147.6	139.2	125.0	139.5	147.6	150.0	96.3	150.1	131.6	100.5	128.0	148.2	115.5	124.3
Baronesse	151.9	184.6	173.5	144.1	117.4	132.2	142.7	149.5	106.7	163.1	127.3	98.2	126.2	136.1	118.0	125.1
Harrington	152.0	197.3	178.5	129.6	122.0	132.5	127.2	148.5	92.0	139.6	138.4	90.7	120.4	125.6	99.4	115.2
Merit	141.4	181.5	186.8	120.0	108.9	127.8	148.1	144.9	95.1	140.0	146.6	105.7	114.8	134.4	108.2	120.7

Variety	Huntley District 3								Conrad District 5							
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.
MT970116	123.5	117.5	173.9	154.8	120.9	136.5	89.9	131.0	127.4	82.5	65.5	127.0	122.5	92.4	105.9	103.3
Haxby	127.5	120.5	163.3	164.6	133.3	138.0	85.2	133.2	118.9	88.6	76.9	123.9	126.9	105.9	115.4	108.1
Gallatin	119.1	132.6	144.7	131.9	122.1	128.1	94.3	124.7	121.1	88.4	70.0	117.1	117.8	95.9	106.6	102.4
Eslick	125.7	152.4	172.6	163.7	144.5	157.4	98.8	145.0	143.8	111.1	83.0	118.4	133.8	102.6	118.6	115.9
Baronesse	127.1	135.3	158.4	141.6	137.4	153.7	94.0	135.4	136.0	104.4	85.9	119.9	124.1	123.5	100.5	113.5
Harrington	110.9	130.7	131.5	135.9	124.2	129.0	85.8	121.1	134.0	80.7	67.7	106.9	118.3	90.5	96.8	99.3
Merit	127.6	129.4	138.2	154.8	125.5	132.9	101.6	130.0	120.8	88.3	73.2	118.1	132.6	124.0	109.8	109.5

Variety	Sidney District 6								Overall Irrigated Avg.	All Locations Avg.
	1999	2000	2001	2002	2003	2004	2005	Avg.		
MT970116	119.9	125.6	73.1	81.0	137.1	132.2	102.2	110.2	125.1	95.9
Haxby	123.1	130.6	73.2	87.4	128.3	150.5	115.9	115.6	126.6	97.6
Gallatin	118.6	115.4	64.3	85.6	119.4	143.3	98.2	106.4	120.0	92.6
Eslick	126.4	132.0	60.7	82.9	126.1	139.6	105.0	110.4	129.1	98.4
Baronesse	133.0	133.3	64.2	77.8	137.3	135.4	95.2	110.9	126.8	98.5
Harrington	100.2	113.6	61.9	71.0	118.8	126.2	92.3	97.7	116.3	88.5
Merit	112.7	113.5	53.2	77.1	121.6	138.5	99.9	102.4	121.5	89.6

**1999-2005 Montana Spring Barley Irrigated Summary Test Weight (lb/bu)**

Variety	Kalispell High Moisture District 1								Bozeman District 2							
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.
MT970116	54.3	56.2	53.3	51.6	51.9	53.2	52.2	53.2	55.0	55.2	55.0	54.9	53.9	55.2	53.3	54.6
Haxby	54.6	55.5	53.1	51.3	51.7	52.8	52.0	53.0	54.1	55.7	55.0	55.1	53.4	55.8	53.3	54.6
Gallatin	53.9	55.1	53.9	50.2	50.3	52.4	50.9	52.4	55.5	54.3	53.0	54.5	54.1	54.8	51.9	54.0
Eslick	53.6	54.8	52.6	50.8	48.2	52.4	49.5	51.7	53.1	52.7	52.1	52.6	51.6	53.4	50.4	52.2
Baronesse	53.3	54.5	51.9	50.2	51.4	52.1	50.1	51.9	54.0	54.2	51.9	53.1	52.3	52.1	50.5	52.6
Harrington	53.2	55.2	52.4	45.2	47.3	49.8	49.2	50.3	52.8	52.3	50.7	53.4	49.6	51.9	47.1	51.1
Merit	52.7	53.7	52.1	49.1	44.7	50.6	51.3	50.6	53.4	52.1	52.1	52.3	49.2	48.3	45.5	50.4

Variety	Huntley District 3								Conrad District 5							
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.
MT970116	52.1	53.8	50.4	50.8	54.3	54.0	51.1	52.3	54.5	55.7	51.2	52.3	54.1	55.5	54.0	53.9
Haxby	52.0	54.0	51.2	53.7	56.2	54.8	49.8	53.1	50.9	58.6	52.9	54.3	54.6	55.7	54.4	54.5
Gallatin	51.7	52.9	50.4	50.4	54.6	52.9	50.1	51.8	50.9	58.6	50.5	52.1	54.6	55.5	54.5	53.8
Eslick	54.1	53.0	48.1	51.5	54.2	53.1	49.7	52.0	53.5	55.6	52.1	52.6	53.6	53.4	53.8	53.5
Baronesse	52.0	53.1	49.6	50.0	53.9	52.7	49.1	51.5	50.8	58.5	51.3	51.8	52.1	52.9	51.6	52.7
Harrington	49.2	51.6	47.6	49.1	52.1	52.4	46.0	49.7	49.6	55.8	49.2	51.2	51.6	53.0	51.4	51.7
Merit	50.0	51.2	46.9	49.7	52.6	51.8	47.6	50.0	46.8	53.9	47.3	50.4	53.0	50.3	49.9	50.2

Variety	Sidney District 6								Overall Irrigated	All Locations
	1999	2000	2001	2002	2003	2004	2005	Avg.	Avg.	Avg.
MT970116	50.2	50.8	42.4	47.5	53.0	50.7	49.4	49.2	52.6	51.8
Haxby	52.0	51.3	42.1	49.0	52.8	52.9	50.3	50.1	53.0	52.4
Gallatin	51.5	50.7	38.8	46.7	52.0	52.2	49.3	48.7	52.1	50.9
Eslick	51.7	48.7	37.7	46.0	50.8	51.5	49.1	47.9	51.4	50.3
Baronesse	50.7	51.7	38.5	48.1	52.0	49.6	48.2	48.4	51.3	50.0
Harrington	48.2	49.5	35.1	45.0	49.7	49.2	45.6	46.0	49.6	48.7
Merit	47.5	48.2	34.0	45.7	49.2	48.4	46.0	45.5	49.2	47.9

**1999-2005 Montana Spring Barley Irrigated Summary Plump Percent (over # 6)**

Variety	Kalispell High Moisture District 1								Bozeman District 2							
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.
MT970116	94.0	98.6	94.7	90.8	88.1	93.6	95.5	93.6	83.1	79.3	82.6	97.4	85.6	91.5	74.9	84.9
Haxby	94.0	95.3	89.5	88.0	62.7	92.2	97.1	88.4	66.2	73.2	76.4	98.3	87.8	89.5	72.4	80.5
Gallatin	94.0	93.9	92.0	81.4	81.8	90.0	92.9	89.4	76.8	63.0	54.0	95.1	82.9	76.2	60.3	72.6
Eslick	95.0	97.7	88.3	90.4	71.3	96.8	90.8	90.0	63.5	59.2	56.1	92.5	69.9	78.1	35.6	65.0
Baronesse	95.0	97.0	92.4	91.8	80.3	92.2	96.8	92.2	71.4	73.9	53.7	91.1	81.9	67.1	78.5	73.9
Harrington	93.0	97.0	86.9	65.6	70.1	84.7	93.5	84.4	73.2	60.2	64.6	92.7	66.9	77.6	51.8	69.5
Merit	95.0	97.4	93.9	92.4	63.1	94.9	95.5	90.3	77.6	75.5	82.1	96.3	66.4	61.0	36.2	70.7

Variety	Huntley District 3								Conrad District 5							
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.
MT970116	90.4	92.9	90.7	89.0	92.7	98.0	87.7	91.6	97.0	87.0	94.0	96.0	97.0	99.0	97.0	95.3
Haxby	92.7	87.6	88.0	85.9	93.8	98.1	80.2	89.5	93.0	85.0	95.0	98.0	96.0	99.0	99.0	95.0
Gallatin	84.1	87.0	88.5	72.0	89.5	94.6	81.1	85.3	87.0	88.0	95.0	95.0	94.0	98.0	94.0	93.0
Eslick	86.1	88.3	84.5	81.4	89.8	95.7	69.8	85.1	95.0	92.0	93.0	96.0	91.0	99.0	97.0	94.7
Baronesse	87.3	93.9	85.6	73.5	90.2	95.6	67.6	84.8	98.0	90.0	93.0	99.0	94.0	95.0	84.0	93.3
Harrington	78.2	92.2	82.3	76.8	84.8	94.3	71.1	82.8	94.0	88.0	94.0	97.0	95.0	98.0	90.0	93.7
Merit	90.6	94.3	85.3	87.2	93.8	98.0	70.9	88.6	95.0	91.0	96.0	99.0	99.0	91.0	87.0	94.0

Variety	Sidney District 6								Overall Irrigated Avg.	All Locations Avg.
	1999	2000	2001	2002	2003	2004	2005	Avg.		
MT970116	72.0	84.0	32.0	72.0	94.0	96.0	94.0	77.7	88.6	80.3
Haxby	77.0	83.0	38.0	83.0	92.0	96.0	86.0	79.3	86.5	75.4
Gallatin	74.0	76.0	17.0	69.0	86.0	90.0	89.0	71.6	82.4	71.1
Eslick	90.0	72.0	24.0	58.0	83.0	96.0	66.0	69.9	80.9	69.5
Baronesse	86.0	88.0	31.0	83.0	85.0	91.0	79.0	77.6	84.4	72.6
Harrington	73.0	82.0	26.0	86.0	91.0	95.0	82.0	76.4	81.4	72.3
Merit	83.0	81.0	55.0	79.0	93.0	92.0	88.0	81.6	85.0	71.5



**1999-2005 Montana Spring Barley Irrigated Summary Heading Date (days from January 1)**

Variety	Kalispell High Moisture District 1								Bozeman District 2							
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.
MT970116	175.1	171.7	176.3	177.0	171.8	167.5	172.8	173.2	182.9	174.3	176.7	183.6	182.6	180.4	186.9	181.1
Haxby	179.2	173.0	176.7	183.7	172.7	168.3	174.9	175.5	185.6	176.0	177.0	183.0	182.4	182.2	186.6	181.8
Gallatin	175.7	173.3	177.0	179.0	170.3	168.3	174.0	174.0	184.5	174.3	177.0	182.6	182.4	181.2	186.3	181.2
Eslick	178.8	172.3	178.0	184.7	173.5	170.2	174.8	176.0	187.3	176.0	177.0	184.6	183.4	182.9	189.3	182.9
Baronesse	178.0	175.7	180.0	187.0	175.5	171.8	174.3	177.5	187.6	176.7	178.0	184.6	183.4	183.3	189.2	183.2
Harrington	177.1	172.7	177.7	182.7	175.2	171.1	175.4	176.0	185.7	176.3	177.0	185.2	183.4	183.0	188.9	182.8
Merit	177.4	176.3	178.4	185.0	175.7	172.1	181.9	178.1	187.0	176.0	177.3	185.3	183.7	185.0	190.0	183.5

Variety	Huntley District 3								Conrad District 5						
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2001	2002	2003	2004	2005	Avg.
MT970116	168.0	160.0	166.9	171.8	168.7	162.3	169.0	166.7	179.0	179.0	185.0	180.0	181.0	180.0	180.7
Haxby	169.0	157.6	164.8	171.4	174.0	163.1	169.3	167.0	179.0	178.0	186.0	181.0	183.0	182.0	181.5
Gallatin	165.7	157.6	166.7	169.8	166.0	163.7	169.3	165.6	178.0	177.0	183.0	179.0	181.0	180.0	179.7
Eslick	170.0	160.0	166.8	172.2	177.0	163.7	174.7	169.2	179.0	181.0	186.0	183.0	183.0	183.0	182.5
Baronesse	171.7	160.7	171.5	172.3	176.0	165.0	172.7	170.0	180.0	179.0	185.0	182.0	183.0	182.0	181.8
Harrington	171.3	159.7	173.4	171.9	171.3	171.0	172.3	170.1	180.0	180.0	185.0	182.0	183.0	183.0	182.2
Merit	168.0	161.6	173.4	172.8	174.7	165.0	176.0	170.2	180.0	179.0	186.0	182.0	185.0	186.0	183.0

Variety	Sidney District 6								Overall Irrigated Avg.	All Locations Avg.
	1999	2000	2001	2002	2003	2004	2005	Avg.		
MT970116	170.0	164.0	180.6	186.0	174.1	176.8	172.8	174.9	175.1	176.1
Haxby	171.7	164.3	179.7	186.2	174.2	176.0	172.6	174.9	176.0	176.9
Gallatin	168.7	163.7	180.2	185.1	172.3	174.3	172.5	173.8	174.7	175.7
Eslick	173.0	166.3	181.3	188.4	175.7	177.2	175.2	176.7	177.3	178.6
Baronesse	174.0	166.4	182.1	187.2	176.1	180.9	174.2	177.3	177.8	179.1
Harrington	172.0	166.3	182.7	188.3	176.9	179.7	175.4	177.3	177.5	178.4
Merit	172.0	166.6	182.0	187.8	176.1	181.1	176.4	177.4	178.3	179.3

**1999-2005 Montana Spring Barley Irrigated Summary Plant Height (inches)**

Variety	Kalispell High Moisture District 1								Bozeman District 2							
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.
MT970116	41.6	34.6	35.6	31.7	35.0	38.6	38.7	36.5	36.1	42.1	31.4	38.0	34.1	41.7	38.9	37.5
Haxby	43.0	34.5	31.0	32.7	34.0	35.0	35.6	35.1	34.0	37.7	28.7	34.5	30.6	38.7	35.1	34.2
Gallatin	42.2	35.0	33.4	31.6	34.8	36.7	35.2	35.5	34.5	38.6	28.6	35.3	31.9	37.9	34.3	34.4
Eslick	38.0	32.2	30.8	31.3	33.1	36.3	29.6	33.0	33.8	37.1	28.1	33.4	31.4	36.3	31.4	33.1
Baronesse	40.3	29.6	31.7	29.1	33.3	33.6	31.2	32.7	29.6	35.6	26.7	32.6	29.4	36.6	30.3	31.5
Harrington	41.6	34.7	33.3	29.0	32.6	36.7	33.8	34.5	34.6	40.0	28.2	34.5	30.6	38.3	34.6	34.4
Merit	41.5	33.1	33.8	29.6	31.8	35.1	36.7	34.5	33.0	37.7	29.8	33.8	30.7	40.0	33.5	34.1

Variety	Huntley District 3								Conrad District 5							
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.
MT970116	40.5	33.5	34.7	40.3	34.2	41.2	45.8	38.6	38.0	33.0	28.0	34.0	34.0	39.0	38.0	34.9
Haxby	39.5	31.7	33.5	40.3	34.6	39.0	44.2	37.5	39.0	30.0	24.0	34.0	30.0	36.0	36.0	32.7
Gallatin	37.9	30.1	34.0	36.8	35.5	38.5	44.8	36.8	34.0	31.0	29.0	34.0	37.0	38.0	36.0	34.1
Eslick	39.0	32.5	32.3	35.8	35.8	38.5	42.0	36.6	35.0	27.0	27.0	30.0	33.0	29.0	28.0	29.9
Baronesse	35.6	25.4	30.7	33.7	33.6	37.2	43.0	34.2	32.0	28.0	24.0	30.0	34.0	36.0	32.0	30.9
Harrington	39.5	29.8	32.3	38.3	37.4	38.7	42.8	37.0	34.0	30.0	24.0	32.0	30.0	35.0	34.0	31.3
Merit	35.9	29.0	31.7	36.4	34.3	35.6	41.9	35.0	36.0	29.0	23.0	31.0	36.0	36.0	35.0	32.3

Variety	Sidney District 6								Overall Irrigated Avg.	All Locations Avg.
	1999	2000	2001	2002	2003	2004	2005	Avg.		
MT970116	35.1	35.3	32.4	26.1	40.7	35.0	35.6	34.3	36.4	33.3
Haxby	32.5	32.6	30.1	25.9	39.8	35.0	33.5	32.8	34.5	31.0
Gallatin	35.5	34.2	29.8	27.4	38.2	34.9	32.8	33.3	34.8	31.4
Eslick	31.5	31.6	28.1	27.4	37.9	35.6	28.4	31.5	32.8	29.6
Baronesse	30.2	29.5	27.9	23.6	35.7	31.5	30.1	29.8	31.8	28.7
Harrington	32.5	31.9	27.5	25.0	37.7	32.4	32.0	31.3	33.7	30.3
Merit	33.5	32.0	29.5	25.2	35.7	32.5	33.8	31.7	33.5	30.0

**1999-2005 Montana Spring Barley Irrigated Summary Protein Percent (dry weight)**

Variety	Kalispell High Moisture District 1							Bozeman District 2							
	1999	2000	2001	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.
MT970116	14.0	14.8	12.5	14.2	14.2	12.5	13.7	13.7	11.9	11.7	14.3	11.0	11.8	14.1	12.6
Haxby	13.8	13.9	13.1	15.6	14.0	12.3	13.8	14.9	12.3	11.4	13.7	10.5	12.1	14.3	12.7
Gallatin	14.3	13.9	13.0	14.7	14.5	13.1	13.9	13.9	12.0	12.9	14.7	11.2	12.2	14.5	13.0
Eslick	13.6	13.8	12.1	14.4	13.3	12.3	13.3	14.0	12.1	11.9	14.1	12.0	12.7	14.3	13.0
Baronesse	14.2	13.6	13.2	14.2	14.2	13.1	13.8	14.9	11.7	13.1	14.9	11.5	12.7	14.6	13.3
Harrington	13.9	14.0	12.7	15.5	14.7	12.1	13.8	14.9	12.0	12.1	14.4	12.8	12.4	14.4	13.3
Merit	14.1	14.7	13.1	15.6	15.0	12.8	14.2	14.5	11.8	12.6	14.3	12.5	12.5	15.2	13.3

Variety	Huntley District 3								Conrad District 5							
	1999	2000	2001	2002	2003	2004	2005	Avg.	1999	2000	2001	2002	2003	2004	2005	Avg.
MT970116	13.5	10.2	13.0	13.3	13.0	11.0	14.8	12.7	12.8	9.2	11.8	13.3	13.8	13.1	12.7	12.4
Haxby	13.2	11.4	12.6	12.6	12.4	10.5	13.8	12.3	11.8	8.7	12.0	13.3	13.1	12.5	12.3	12.0
Gallatin	14.2	12.0	11.9	13.2	12.2	11.1	13.5	12.6	13.1	9.3	9.4	13.0	12.1	12.9	12.3	11.7
Eslick	13.3	10.3	12.4	12.8	11.7	10.5	12.4	11.9	10.7	10.9	9.1	12.4	11.4	12.4	11.3	11.2
Baronesse	13.6	9.1	11.4	13.5	11.8	10.4	13.2	11.9	11.4	9.9	9.9	13.1	12.4	12.2	12.1	11.6
Harrington	14.0	10.6	11.4	13.0	13.4	11.1	15.1	12.7	11.8	10.4	9.3	13.2	12.4	12.4	12.0	11.6
Merit	13.0	10.3	12.5	13.2	12.9	10.2	12.9	12.1	12.2	11.5	9.3	13.3	13.5	11.5	11.8	11.9

Variety	Sidney District 6								Overall Irrigated Avg.	All Locations Avg.
	1999	2000	2001	2002	2003	2004	2005	Avg.		
MT970116	11.7	14.0	15.1	14.0	11.6	11.6	12.6	12.9	12.8	13.9
Haxby	11.2	13.8	14.9	14.4	11.8	11.4	13.0	12.9	12.7	13.7
Gallatin	10.9	13.5	14.9	13.6	11.0	11.7	12.7	12.6	12.7	13.9
Eslick	10.7	13.7	14.5	13.8	11.6	11.3	12.8	12.6	12.4	13.5
Baronesse	10.7	12.5	14.7	14.1	10.7	12.8	13.4	12.7	12.6	13.9
Harrington	11.0	14.2	14.9	13.9	11.4	12.1	14.4	13.1	12.9	14.1
Merit	11.4	14.6	15.0	14.4	10.9	11.0	13.3	12.9	12.9	14.2

## 2001 -2005 Montana Spring Barley Dryland Offstation Nursery Summary

Variety	# locs	Yield bu/ac	# locs	Test Weight lb/bu	# locs	Plump %	# locs	Protein %
MT970116	35	48.6	35	49.5	29	53.4	31	15.7
Haxby	35	50.0	35	50.2	29	48.6	31	15.5
Eslick	35	48.2	35	47.8	29	45.4	31	15.5
Baronesse	35	48.8	35	47.0	29	44.0	31	16.3
Harrington	35	43.7	35	46.3	29	45.9	31	16.3

### 2001-2005 T-PAIRED RESULTS vs MT970116 All Dryland Offstation Locations

#### Yield (bu/ac)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	50.0	35	1.4	1.5	.155
MT960228	Eslick	48.2	35	-.4	-.5	.632
PI568246	Baronesse	48.8	35	.2	.2	.857
SK 76333	Harrington	43.7	35	-4.9	-4.3	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) IS: 48.6 (N= 35)

#### Test Weight (lb/bu)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	50.2	35	.7	2.6	.013
MT960228	Eslick	47.8	35	-1.8	-8.0	.000
PI568246	Baronesse	47.0	35	-2.5	-9.1	.000
SK 76333	Harrington	46.3	35	-3.2	-12.3	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) IS: 49.5 (N= 35)

2001-2005 T-PAIRED RESULTS vs MT970116 All Dryland Offstation Locations

Plump Percent (over # 6)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	48.6	29	-4.9	-1.4	.168
MT960228	Eslick	45.4	29	-8.0	-2.5	.019
PI568246	Baronesse	44.0	29	-9.5	-3.0	.006
SK 76333	Harrington	45.9	29	-7.6	-3.0	.006

THE MEAN FOR THE REFERENCE VARIETY (MT970116) IS: 53.4 (N= 29)

Protein Percent (dry weight basis)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
MT950186	Haxby	15.5	31	-.2	-1.1	.260
MT960228	Eslick	15.5	31	-.2	-1.3	.209
PI568246	Baronesse	16.3	31	.6	1.6	.114
SK 76333	Harrington	16.3	31	.6	3.6	.000

THE MEAN FOR THE REFERENCE VARIETY (MT970116) IS: 15.7 (N= 31)