

## MT960228

MT960228 is a two rowed awned feed barley. The initial cross was made in between Stark and Baronesse in 1991. F1 plants were planted and harvested in 1992 and single heads from F2 populations were harvested in 1993. Single seed descent in the ABS Plant Growth Center was utilized in 1993-1994 to advance two generations and F5 head rows were harvested in 1994. F6 two row plots were selected in 1995 based on various agronomic and quality characteristics. MT960228 was entered in the preliminary yield trial in 1996, the early yield trial in 1997, the dryland and irrigated intrastate trials in 1998, and the dryland off station trials from 1999-2002 and the Western Regional Spring and Dryland Nurseries in 2001 and 2002. In 2002, MT960228 was the highest yielding line in the Western Regional dryland trials at nine locations and the fourth highest yielding line in the Western Regional Spring Nursery averaged over fourteen locations in the Western States (data not shown). Over all Montana intrastate locations from 1998 to 2002, MT960228 yielded 98.2 bu/ac Baronesse 97.0, Haxby 96.3 Valier 94.2 bu/ac (table 1). At the Havre, Sidney, Moccasin and Huntley dryland locations, MT960228 and Baronesse yielded 65.8 bu/ac while, Haxby and Valier yielded 64.2 and 62.2 bu/ac respectively (table 2). Under irrigated conditions MT960228 yielded 125.9 bu/ac while Baronesse, Haxby and Valier yielded 124.5, 124.3 and 122.2 bu/ac respectively (table 3). Test weights over all locations were Haxby 52.5 lb/bu, Valier 51.0, MT960228 50.3 and Baronesse 50.2 (tables 1). MT960228 is later in heading date than Gallatin and Haxby but similar to Harrington (table 1 & 9). MT960228 is shorter than Gallatin and similar to Harrington in plant height (tables 1 & 10). MT960228 should be adapted to the dryland and higher moisture areas in Montana and the Northern Great Plains.

Table 1. 1998-2002 SPRING BARLEY MT960228 OVERALL SUMMARY <sup>(1)</sup>

All Locations

ID	Pedigree	#	Yield	#	Test	#	Plump	#	Headin	#	Plant Ht.	#	Protein
		Yrs	(bu/ac)	Yrs	Wt	Yrs	(%)	Yrs	g	Yr	inches	Yr	%
					(lb/bu)				Date	s		s	
PI491534	Gallatin (Check)	52	91.0	51	50.9	52	69.2	49	175.2	52	30.9	50	13.5
MT950186	Haxby	52	96.3	51	52.5	52	75.5	49	176.3	52	30.5	50	13.3
PI610264	Valier	52	94.2	51	51.0	52	69.2	49	178.3	52	30.1	49	13.9
PI568246	Baronesse	52	97.0	51	50.2	52	72.7	49	178.5	52	28.2	50	13.4
SK 76333	Harrington	52	87.4	51	48.7	52	70.6	49	177.8	52	29.7	50	13.6
H3860224	H3860224	42	91.4	42	49.9	42	75.0	40	178.7	42	29.9	40	13.9
MT910189	MT910189	52	91.2	51	50.8	52	77.5	49	174.4	52	29.0	50	13.1
MTLB 13	MTLB 13	41	92.6	40	50.1	41	68.2	39	177.2	41	28.4	40	13.9
MT960099	MT960099	52	100.0	51	49.9	52	59.0	49	178.9	52	27.0	50	13.4
MT960100	MT960100	37	97.8	36	51.2	37	64.5	34	179.0	37	27.5	35	13.8
MT960101	MT960101	52	94.6	51	50.0	52	64.7	49	179.5	52	28.4	50	13.4
MT960222	MT960222	52	94.3	51	50.5	52	74.5	49	178.0	52	30.5	50	13.2
MT960226	MT960226	52	95.6	51	51.0	52	79.2	49	176.6	52	29.9	50	13.1
MT960228	MT960228	52	98.2	51	50.5	52	72.8	49	177.8	52	29.4	50	13.0
SITMEAN	SITMEAN	52	92.4	51	50.3	52	73.7	49	176.8	52	29.6	49	13.6

(1) comparable average.

Table 2. 1998-2002 SPRING BARLEY MT960228 SUMMARY <sup>(1)</sup> Dryland Locations <sup>(2)</sup>

ID	Pedigree	#	Yield	#	Test	#	Plump	#	Headin	#	Plant Ht.	#	Protein
		Yrs	(bu/ac)	Yrs	Wt	Yrs	(%)	Yrs	g	Yr	inches	Yr	%
					(lb/bu)				Date	s		s	
PI491534	Gallatin (Check)	18	61.8	17	49.1	18	60.3	17	174.6	18	27.0	18	14.4
MT950186	Haxby	18	64.2	17	50.9	18	64.5	17	175.6	18	26.4	18	14.3
PI610264	Valier	18	62.2	17	49.0	18	55.9	17	178.7	18	25.5	17	15.0
PI568246	Baronesse	18	65.8	17	48.1	18	61.7	17	178.8	18	24.6	18	14.6
SK 76333	Harrington	18	58.4	17	46.8	18	60.9	17	177.7	18	25.4	18	14.7
H3860224	H3860224	15	62.0	15	48.0	15	64.3	14	178.6	15	25.7	15	14.9
MT910189	MT910189	18	61.3	17	49.4	18	70.6	17	174.6	18	25.5	18	13.9
MTLB 13	MTLB 13	14	62.2	13	48.1	14	53.3	13	178.2	14	24.5	14	14.8
MT960099	MT960099	18	66.5	17	47.7	18	44.7	17	179.4	18	22.8	18	14.6
MT960100	MT960100	11	61.5	10	49.6	11	53.3	10	179.2	11	23.4	11	15.1
MT960101	MT960101	18	63.1	17	48.1	18	54.5	17	180.0	18	24.0	18	14.4
MT960222	MT960222	18	64.2	17	48.7	18	66.3	17	178.1	18	26.4	18	14.4
MT960226	MT960226	18	65.9	17	49.1	18	72.0	17	176.7	18	26.1	18	14.2
MT960228	MT960228	18	65.8	17	48.6	18	65.2	17	177.7	18	25.2	18	14.0
SITMEAN	SITMEAN	18	61.6	17	48.5	18	63.9	17	176.7	18	25.6	18	14.6

(1) comparable average.

(2) Low Moisture locations: Havre, Sidney, Moccasin and Huntley.

Table 3. 1998-2002 SPRING BARLEY MT960228 SUMMARY

Irrigated locations <sup>(3)</sup>

ID	Pedigree	# Yrs	Yield (bu/ac)	# Yrs	Test Wt (lb/bu)	# Yrs	Plump (%)	# Yrs	Heading Date	# Yrs	Plant Ht. inches	# Yrs	Protein %
PI491534	Gallatin (Check)	24	117.3	24	51.8	24	77.7	23	174.8	24	33.9	22	12.7
MT950186	Haxby	24	124.3	24	52.9	24	84.0	23	176.1	24	33.5	22	12.6
PI610264	Valier	24	122.2	24	51.7	24	80.5	23	177.5	24	33.2	22	13.0
ND 9866	Stark	19	117.9	19	52.4	19	87.5	18	172.5	19	34.8	18	13.0
PI568246	Baronesse	24	124.5	24	51.3	24	82.5	23	178.0	24	30.7	22	12.5
SK 76333	Harrington	24	112.8	24	49.5	24	78.3	23	177.4	24	32.7	22	12.6
H3860224	H3860224	19	116.7	19	51.0	19	84.1	19	178.4	19	32.7	17	13.0
MT910189	MT910189	24	117.3	24	51.1	24	81.9	23	173.8	24	31.4	22	12.5
MTLB 13	MTLB 13	19	118.8	19	50.8	19	79.1	18	176.2	19	31.1	18	13.1
MT960099	MT960099	24	129.3	24	50.9	24	71.7	23	178.3	24	29.8	22	12.5
MT960100	MT960100	20	128.6	20	51.8	20	75.8	19	178.6	20	30.6	18	12.7
MT960101	MT960101	24	122.4	24	50.7	24	74.2	23	179.0	24	31.3	22	12.5
MT960222	MT960222	24	121.0	24	51.3	24	82.0	23	177.6	24	33.1	22	12.3
MT960226	MT960226	24	122.4	24	51.9	24	85.1	23	176.0	24	32.5	22	12.2
MT960228	MT960228	24	125.9	24	51.4	24	79.8	23	177.3	24	32.3	22	12.2
SITMEAN	SITMEAN	24	119.5	24	51.1	24	81.6	23	176.4	24	32.3	21	12.8

(3) Irrigated Locations: Kalispell (High moisture), Sidney, Huntley, Conrad and Bozeman.

Table 4. 1998 - 2002 Spring Barley MT960228 Individual Dryland Location Summary

Yield (bu/ac)																		
Variety	Havre						Sidney						Moccasin					
	1998	1999	2000	2001	2002	Ave.	1998	1999	2000	2001	2002	Ave.	1998	1999	2001	2002	Ave.	
Gallatin (Chk)	69.2	63.8	65.5	31.6	52.4	56.5	87.4	89.1	87.4	83.4	52.4	79.9	67.8	72.9	71.1	48.1	65.0	
Haxby	77.0	65.9	66.0	28.9	51.2	57.8	100.6	93.9	86.7	78.2	51.2	82.1	79.2	71.1	77.4	56.6	71.1	
Valier	72.4	71.0	62.4	30.2	45.4	56.3	99.3	98.9	79.9	98.1	45.4	84.3	72.3	67.0	69.7	42.7	62.9	
Baronesse	70.4	85.3	62.5	32.2	51.2	60.3	93.8	98.5	93.3	95.4	51.2	86.5	75.6	77.2	71.7	51.8	69.1	
Harrington	59.4	71.8	53.5	31.2	49.5	53.1	72.2	98.5	84.6	83.5	49.5	77.7	70.2	70.6	62.8	43.3	61.7	
MT910189	72.2	57.8	65.8	29.5	49.7	55.0	88.3	85.2	83.3	78.0	49.7	76.9	81.0	71.9	67.4	44.8	66.3	
MT960099	70.6	80.6	64.5	30.9	57.5	60.8	88.9	100.8	97.4	95.2	57.5	88.0	87.1	84.2	67.8	44.4	70.9	
MT960100	***	***	60.7	28.2	48.5	***	***	***	82.2	89.3	48.5	***	***	***	72.8	44.9	***	
MT960101	68.1	79.2	56.8	26.8	42.2	54.6	86.8	103.1	90.7	89.7	42.2	82.5	79.3	79.6	66.0	48.2	68.3	
MT960222	71.0	78.4	64.1	30.6	45.0	57.8	98.5	89.6	92.7	90.3	45.0	83.2	72.1	80.9	69.1	54.3	69.1	
MT960226	76.0	74.8	61.8	25.7	46.4	56.9	101.4	92.8	87.6	87.8	46.4	83.2	71.1	80.4	77.0	52.9	70.4	
MT960228	74.2	80.6	63.5	28.1	54.4	60.2	90.9	97.6	92.5	93.6	54.4	85.8	80.6	75.1	73.4	53.6	70.7	
SITEMEAN	68.5	69.5	60.8	29.5	49.4	55.5	87.0	89.4	85.4	84.1	49.4	79.1	72.7	74.1	69.8	48.2	66.2	

  

Variety	Huntley					Conrad						Bozeman						Dryland Ave.
	1999	2000	2001	2002	Ave.	1998	1999	2000	2001	2002	Ave.	1998	1999	2000	2001	2002	Ave.	
Gallatin (Chk)	68.6	38.6	44.3	18.5	42.5	100.5	87.6	50.9	23.9	78.7	68.3	102.5	82.9	122.7	100.4	57.7	90.9	68.0
Haxby	64.9	33.0	47.2	26.6	42.9	105.1	90.0	62.8	22.4	76.2	71.3	105.2	83.6	133.3	113.1	76.9	101.7	72.2
Valier	62.7	38.8	49.0	13.6	41.0	100.6	95.0	62.9	22.5	78.9	72.0	99.9	79.3	123.9	119.4	63.4	96.5	70.2
Baronesse	67.8	34.4	48.2	23.1	43.4	103.9	91.3	57.8	27.9	82.6	72.7	108.4	87.5	129.7	117.6	68.3	100.8	72.8
Harrington	64.2	35.3	39.3	11.6	37.6	79.8	93.8	53.2	20.4	81.7	65.8	100.5	79.2	118.7	104.5	52.6	88.8	64.9
MT910189	72.1	48.8	33.7	23.8	44.6	84.3	97.9	61.4	20.4	82.1	69.2	98.3	81.1	120.8	114.9	59.9	94.2	69.6
MT960099	64.1	54.3	42.8	7.6	42.2	106.5	96.2	52.3	21.0	88.7	73.0	117.6	84.6	126.0	126.1	80.1	104.2	73.9
MT960100	***	57.3	47.7	10.7	***	***	***	44.4	21.5	85.0	***	***	***	117.7	117.6	75.6	***	***
MT960101	60.9	63.2	44.0	9.6	44.4	100.3	90.0	47.7	24.6	85.6	69.6	108.9	82.8	128.7	115.8	61.4	97.2	71.1
MT960222	60.5	45.0	50.3	17.3	43.3	94.1	96.5	51.8	20.5	78.9	68.4	114.5	79.3	135.9	107.2	65.3	96.9	70.5
MT960226	72.0	51.7	52.4	28.7	51.2	101.2	104.2	51.1	24.6	82.5	72.7	89.7	87.4	132.8	112.0	61.7	98.5	73.5
MT960228	69.0	42.5	45.3	15.4	43.1	111.5	98.2	58.8	21.4	91.3	76.2	113.5	78.7	132.5	120.6	75.9	101.9	74.6
SITEMEAN	65.7	39.2	45.4	20.4	42.7	95.2	90.5	55.2	21.5	78.0	68.1	101.5	81.3	125.9	112.4	69.8	97.3	69.5

Table 5. 1998 - 2002 Spring Barley MT960228 Individual Irrigated & High Moisture Location Summary

Yield (bu/ac)																	
Variety	Kalispell (1)						Sidney						Huntley				
	1998	1999	2000	2001	2002	Ave.	1998	1999	2000	2001	2002	Ave.	1999	2000	2001	2002	Ave.
Gallatin (Chk)	101.6	140.6	184.5	181.4	139.9	149.6	95.0	118.6	115.4	64.2	85.6	95.8	119.0	132.6	144.6	131.9	132.0
Haxby	113.8	160.0	196.9	181.1	151.3	160.6	90.5	123.1	130.6	73.2	87.4	100.9	127.5	120.5	163.3	164.6	144.0
Valier	112.8	144.7	179.0	173.6	146.4	151.3	95.9	113.1	124.2	63.3	80.0	95.3	143.2	124.8	166.6	151.8	146.6
Baronesse	121.5	151.9	184.6	173.5	144.1	155.1	92.1	133.0	133.3	64.2	77.8	100.1	127.1	135.3	158.4	141.6	140.6
Harrington	96.8	152.0	197.3	178.5	129.6	150.8	88.2	100.2	113.6	61.9	71.0	87.0	110.8	130.7	131.5	135.9	127.2
MT910189	113.0	147.8	192.3	189.1	136.3	155.7	90.7	104.1	108.2	56.8	74.3	86.8	121.8	131.7	164.1	161.8	144.9
MT960099	105.6	155.0	200.2	183.8	159.1	160.8	95.2	131.0	135.8	72.0	81.9	103.2	149.5	156.6	146.4	144.8	149.3
MT960100	***	159.8	193.9	167.7	151.3	***	***	133.6	133.5	51.1	73.5	***	145.3	148.6	174.9	168.7	***
MT960101	118.7	161.0	187.1	187.2	148.4	160.5	89.8	124.2	127.3	55.6	75.8	94.5	121.4	142.0	129.4	142.1	133.8
MT960222	120.8	152.7	179.8	144.7	150.8	149.8	101.0	124.0	131.2	67.0	84.1	101.4	132.8	137.6	153.9	133.3	139.4
MT960226	114.2	148.7	192.7	166.6	151.2	154.7	98.5	120.7	131.9	67.5	74.2	98.6	137.8	123.0	149.0	137.8	136.9
MT960228	120.8	160.7	190.7	147.6	139.2	151.8	96.9	126.4	132.0	60.7	82.9	99.8	125.6	152.4	172.6	163.6	153.6
SITMEAN	111.0	149.4	186.8	174.2	143.3	152.9	89.6	115.0	122.7	63.1	77.4	93.5	126.2	127.1	152.7	146.5	138.1

  

Variety	Conrad						Bozeman						Irrigated Ave.
	1998	1999	2000	2001	2002	Ave.	1998	1999	2000	2001	2002	Ave.	
Gallatin(Chk)	99.9	121.1	88.4	70.0	117.1	99.3	93.3	102.7	137.6	134.6	95.0	112.6	117.3
Haxby	114.6	118.9	88.6	76.9	123.9	104.6	96.4	95.3	155.7	131.4	98.4	115.4	124.3
Valier	100.1	113.8	113.1	74.7	106.0	101.5	108.8	95.6	161.8	139.6	98.9	120.9	122.2
Baronesse	107.8	136.0	104.4	85.9	119.9	110.8	99.9	106.7	163.1	127.3	98.2	119.0	124.5
Harrington	70.3	134.0	80.7	67.7	106.9	91.9	89.2	92.0	139.6	138.4	90.6	110.0	112.8
MT910189	83.7	117.2	85.9	64.3	110.0	92.2	97.3	90.6	143.9	134.1	97.4	112.7	117.4
MT960099	103.7	136.2	119.9	73.5	129.5	112.6	102.8	98.2	161.0	149.0	112.8	124.8	129.3
MT960100	***	123.4	99.8	80.5	120.1	***	***	107.8	157.5	151.7	115.2	***	***
MT960101	89.6	132.3	107.2	72.7	125.0	105.4	96.0	95.6	161.3	142.8	104.2	120.0	122.4
MT960222	98.5	133.1	97.6	81.6	116.4	105.4	95.6	102.7	152.2	121.0	91.8	112.7	121.0
MT960226	103.8	133.8	114.4	71.4	117.7	108.2	87.4	102.4	150.7	140.1	101.6	116.4	122.4
MT960228	112.5	143.8	111.1	83.0	118.4	113.7	102.6	96.3	150.1	131.6	100.5	116.2	125.9
SITMEAN	92.5	123.1	92.8	71.6	116.0	99.2	97.9	100.2	149.6	135.2	103.4	117.3	119.5

(1) Kalispell high moisture

1998-2002 Spring Barley MT960228 T-PAIRED RESULTS All Locations

Table 6. Yield (bu/ac)

ID	NAME	ACTUAL	NO.	MEAN	T-PAIRED	
P-VALUE		MEAN	OBS	DIFF	VALUE	
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PI491534	Gallatin	91.0	52	-7.2	-4.9	.000
MT950186	Haxby	96.3	52	-1.9	-1.4	.171
PI610264	Valier	94.2	52	-4.1	-3.0	.004
PI568246	Baronesse	97.0	52	-1.2	-1.2	.254
SK 76333	Harrington	87.4	52	-10.9	-6.5	.000
H3860224	H3860224	88.7	42	-6.1	-4.2	.000
MT910189	MT910189	91.2	52	-7.1	-4.5	.000
MTLB 13	MTLB 13	93.9	41	-6.9	-5.5	.000
MT960099	MT960099	100.0	52	1.7	1.2	.233
MT960100	MT960100	100.3	37	.1	.1	.946
MT960101	MT960101	94.6	52	-3.7	-2.3	.023
MT960222	MT960222	94.3	52	-4.0	-3.6	.001
MT960226	MT960226	95.6	52	-2.7	-1.9	.068
SITMEAN	SITMEAN	92.4	52	-5.8	-5.0	.000

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 98.3 (N= 52)

Table 7. Test Weight (lb/bu)

ID	NAME	ACTUAL	NO.	MEAN	T-PAIRED	
P-VALUE		MEAN	OBS	DIFF	VALUE	
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PI491534	Gallatin	50.9	51	.3	1.7	.089
MT950186	Haxby	52.5	51	2.0	8.9	.000
PI610264	Valier	51.0	51	.4	1.9	.058
PI568246	Baronesse	50.2	51	-.3	-1.5	.128
SK 76333	Harrington	48.7	51	-1.8	-6.9	.000
H3860224	H3860224	49.5	42	-.8	-3.7	.001
MT910189	MT910189	50.8	51	.3	1.3	.195
MTLB 13	MTLB 13	50.5	40	-.5	-2.7	.011
MT960099	MT960099	49.9	51	-.6	-2.9	.005
MT960100	MT960100	50.8	36	.6	2.2	.033
MT960101	MT960101	50.0	51	-.6	-2.5	.016
MT960222	MT960222	50.5	51	-.0	-.2	.853
MT960226	MT960226	51.0	51	.4	1.9	.067

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 50.5 (N= 51)

Table 8. Plump Percent (over # 6 screen)

ID	NAME	ACTUAL		NO.	MEAN	T-PAIRED
		MEAN	P-VALUE OBS			
PI491534	Gallatin	70.6	--	51	-3.7	-3.2 .002
MT950186	Haxby	76.9		51	2.7	1.8 .070
PI610264	Valier	70.5		51	-3.7	-2.1 .041
PI568246	Baronesse	74.1		51	-.1	-.1 .921
SK 76333	Harrington	71.9		51	-2.3	-1.6 .125
H3860224	H3860224	76.8		41	1.9	1.3 .217
MT910189	MT910189	79.0		51	4.8	3.1 .003
MTLB 13	MTLB 13	70.8		40	-5.6	-3.1 .004
MT960099	MT960099	61.3		50	-14.2	-6.9 .000
MT960100	MT960100	67.3		36	-7.7	-4.1 .000
MT960101	MT960101	66.0		51	-8.3	-5.4 .000
MT960222	MT960222	76.0		51	1.7	1.4 .179
MT960226	MT960226	80.8		51	6.5	4.2 .000

THE MEAN FOR THE REFERENCE VARIETY IS: 72.8 (N= 52)

Table 9. Heading Date (days from Jan. 1)

ID	NAME	ACTUAL		NO.	MEAN	T-PAIRED
		MEAN	P-VALUE OBS			
PI491534	Gallatin	175.2	--	49	-2.5	-8.6 .000
MT950186	Haxby	176.3		49	-1.5	-7.1 .000
PI610264	Valier	178.3		49	.5	3.5 .001
PI568246	Baronesse	178.5		49	.7	3.6 .000
SK 76333	Harrington	177.8		49	.1	.4 .687
H3860224	H3860224	179.8		40	.8	4.2 .000
MT910189	MT910189	174.4		49	-3.4	-13.2 .000
MTLB 13	MTLB 13	177.1		39	-.9	-3.3 .002
MT960099	MT960099	178.9		49	1.2	5.0 .000
MT960100	MT960100	179.2		34	1.5	5.1 .000
MT960101	MT960101	179.5		49	1.7	7.1 .000
MT960222	MT960222	178.0		49	.3	1.3 .214
MT960226	MT960226	176.6		49	-1.2	-5.3 .000
SITMEAN	SITMEAN	176.8		49	-.9	-5.9 .000

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 177.8 (N= 49)

1998-2002 Spring Barley MT960228 T-PAIRED RESULTS All Locations

Table 10. Plant Height (inches)

ID	NAME	ACTUAL	NO.	MEAN	T-PAIRED	
		MEAN		DIFF	VALUE	P-VALUE
						--
PI491534	Gallatin	30.9	52	1.6	6.6	.000
MT950186	Haxby	30.5	52	1.2	4.8	.000
PI610264	Valier	30.1	52	.8	3.2	.002
PI568246	Baronesse	28.2	52	-1.2	-4.8	.000
SK 76333	Harrington	29.7	52	.4	1.7	.098
H3860224	H3860224	29.8	42	.7	2.3	.024
MT910189	MT910189	29.0	52	-.3	-1.5	.153
MTLB 13	MTLB 13	29.4	41	-1.0	-4.0	.000
MT960099	MT960099	27.0	52	-2.3	-9.8	.000
MT960100	MT960100	27.0	37	-1.9	-9.1	.000
MT960101	MT960101	28.4	52	-.9	-4.3	.000
MT960222	MT960222	30.5	52	1.2	4.3	.000
MT960226	MT960226	30.0	52	.6	2.5	.016
SITEMEAN	SITEMEAN	29.6	52	.3	1.5	.137

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 29.3 (N= 52)

Table 11. Protein Percent (dry weight basis)

ID	NAME	ACTUAL	NO.	MEAN	T-PAIRED	
		MEAN		DIFF	VALUE	P-VALUE
						--
PI491534	Gallatin	13.5	50	.5	3.7	.000
MT950186	Haxby	13.3	50	.2	2.1	.043
PI610264	Valier	13.8	49	.8	6.4	.000
PI568246	Baronesse	13.4	50	.4	3.6	.000
SK 76333	Harrington	13.6	50	.6	6.2	.000
H3860224	H3860224	13.9	40	.9	8.0	.000
MT910189	MT910189	13.1	50	.1	.7	.511
MTLB 13	MTLB 13	13.7	40	.8	7.3	.000
MT960099	MT960099	13.4	50	.4	3.9	.000
MT960100	MT960100	14.1	35	.7	6.0	.000
MT960101	MT960101	13.4	50	.4	2.5	.015
MT960222	MT960222	13.2	50	.2	1.9	.070
MT960226	MT960226	13.1	50	.1	1.0	.331
SITEMEAN	SITEMEAN	13.6	49	.6	8.4	.000

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 13.0 (N= 50)



1998-2002 Spring Barley MT960228 T-PAIRED RESULTS Yield (bu/ac)

Table 12. Low Moisture Locations

ID	NAME	ACTUAL	NO.	MEAN	T-PAIRED	
P-VALUE		MEAN	OBS	DIFF	VALUE	
PI491534	Gallatin	61.8	18	-4.0	-3.2	.005
MT950186	Haxby	64.2	18	-1.6	-1.0	.349
PI610264	Valier	62.2	18	-3.7	-2.6	.019
PI568246	Baronesse	65.8	18	-.1	-.1	.948
SK 76333	Harrington	58.4	18	-7.4	-6.1	.000
H3860224	H3860224	61.5	15	-4.2	-3.6	.003
MT910189	MT910189	61.3	18	-4.5	-2.4	.027
MTLB 13	MTLB 13	63.4	14	-4.0	-2.4	.034
MT960099	MT960099	66.5	18	.6	.5	.638
MT960100	MT960100	53.7	11	-2.4	-1.1	.277
MT960101	MT960101	63.1	18	-2.7	-1.5	.147
MT960222	MT960222	64.2	18	-1.7	-1.3	.217
MT960226	MT960226	65.9	18	.1	.1	.949
SITMEAN	SITMEAN	61.6	18	-4.2	-4.5	.000

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 65.8 (N= 18)

1) Low Moisture locations: Havre, Sidney, Moccasin and Huntley.

Table 13. Irrigated Locations

ID	NAME	ACTUAL	NO.	MEAN	T-PAIRED	
P-VALUE		MEAN	OBS	DIFF	VALUE	
PI491534	Gallatin	117.3	24	-8.6	-3.1	.006
MT950186	Haxby	124.3	24	-1.6	-.6	.557
PI610264	Valier	122.2	24	-3.8	-1.4	.169
PI568246	Baronesse	124.5	24	-1.4	-.7	.488
SK 76333	Harrington	112.8	24	-13.1	-4.1	.000
H3860224	H3860224	112.9	19	-7.4	-2.6	.020
MT910189	MT910189	117.4	24	-8.6	-3.0	.007
MTLB 13	MTLB 13	118.4	19	-9.4	-4.2	.001
MT960099	MT960099	129.3	24	3.4	1.2	.248
MT960100	MT960100	132.9	20	3.4	1.4	.182
MT960101	MT960101	122.4	24	-3.5	-1.2	.257
MT960222	MT960222	121.0	24	-4.9	-2.5	.020
MT960226	MT960226	122.4	24	-3.5	-1.4	.171
SITMEAN	SITMEAN	119.5	24	-6.4	-2.8	.010

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 125.9 (N= 24)

(2) Irrigated Locations: Kalispell (High moisture), Sidney, Huntley, Conrad and Bozeman.