

2004 Spring Barley Variety Release and Recommendation Motions

submitted by Dr. Tom Blake and Patrick Hensleigh
motion supported by data in tables 1-9

1. A motion that "Eslick" be recommended as a feed barley in districts 1-6 under dryland and irrigated conditions effective February 2004.

"Eslick" is a two rowed rough awned feed barley that was tested as MT960228 from 1996-2003 in Montana trials. The initial cross was made 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 intrastate trials from 1998-2003, and the dryland off station trials from 1999-2003.

Eslick is a high yielding feed barley that has performed well under dryland and irrigated conditions in Montana trials from 1996-2003. Yields have been similar to Baronesse and Haxby and higher than Gallatin and Valier over 63 Montana intrastate trials from 1998 to 2003. Test weights of Eslick are higher than Harrington, similar to Baronesse, but lower than Haxby and Gallatin. Eslick is similar to Harrington in heading date and plant height. It is later in heading date and is shorter than Gallatin.

Approximately 140 bushels of Breeders seed was produced at the Post Farm in 2003.

Table 1. 1998-2003 SPRING BARLEY INTRASTATE OVERALL SUMMARY

All Locations

Variety	# locs	Yield (bu/ac)	# locs	Test Wt (lb/bu)	# locs	Plump (%)	# locs	Heading Date	# locs	Plant Ht. inches	# locs	Protein %
MT960228	63	97.0	62	50.4	62	70.8	60	178.4	63	29.5	60	13.3
Gallatin	63	90.0	62	50.8	62	68.1	60	175.7	63	30.9	60	13.9
Valier	63	92.7	62	50.8	62	67.5	60	179.0	63	30.1	59	14.3
Haxby	63	95.4	62	52.4	62	74.1	60	176.8	63	30.4	60	13.6
Baronesse	63	96.1	62	50.0	62	71.4	60	179.0	63	28.2	60	13.8
Harrington	63	86.8	62	48.6	62	70.2	60	178.4	63	29.7	60	14.0
MT960099	63	97.6	62	49.7	62	57.9	60	179.6	63	26.9	60	13.8
SiteMean	63	91.4	62	50.0	62	72.3	60	176.8	63	29.5	59	13.9

Irrigated Locations

Variety	# locs	Yield (bu/ac)	# locs	Test Wt (lb/bu)	# locs	Plump (%)	# locs	Heading Date	# locs	Plant Ht. inches	# locs	Protein %
MT960228	29	127.0*	29	51.5	29	80.0	28	177.5	29	32.6	27	12.2
Gallatin	29	118.5	29	52.0	29	79.3	28	174.7	29	34.2	27	12.6
Valier	29	121.4	29	51.8	29	80.0	28	177.9	29	33.5	27	13.1
Haxby	29	124.4	29	53.1	29	84.4	28	176.2	29	33.5	27	12.6
Baronesse	29	126.1*	29	51.5	29	83.1	28	178.1	29	31.1	27	12.4
Harrington	29	113.6	29	49.6	29	78.9	28	177.5	29	32.9	27	12.7
MT960099	29	128.7**	29	51.0	29	72.6	28	178.5	29	29.7	27	12.5
SITEMEAN	29	120.0	29	51.2	29	82.4	28	176.5	29	32.5	26	12.8

** indicates entries with highest yield. * indicates entries equal to highest yielding entry.

1998-2003 SPRING BARLEY OVERALL SUMMARY Table 1 (continued).

Dryland Locations

Variety	# locs	Yield (bu/ac)	# locs	Test Wt (lb/bu)	# locs	Plump (%)	# locs	Heading Date	# locs	Plant Ht. inches	# locs	Protein %
MT960228	34	71.7*	33	49.4	33	62.7	32	179.1	34	26.8	34	14.2
Gallatin	34	65.9	33	49.7	33	58.2	32	176.5	34	28.0	34	14.9
Valier	34	68.1	33	49.9	33	56.5	32	180.0	34	27.2	33	15.2
Haxby	34	70.5*	33	51.9	33	65.1	32	177.4	34	27.7	34	14.4
Baronesse	34	71.7**	33	48.8	33	61.2	32	179.7	34	25.7	34	14.9
Harrington	34	63.5	33	47.6	33	62.5	32	179.1	34	27.0	34	15.0
MT960099	34	70.9*	33	48.7	33	44.9	32	180.5	34	24.5	34	14.9
SiteMean	34	66.9	33	49.0	33	63.5	32	177.1	34	27.0	34	14.8

** indicates entries with highest yield. * indicates entries equal to highest yielding entry.

Table 2. 1998- 2003 Spring Barley Dryland Individual Location Summary Yield (bu/ac)

Variety	Havre							Sidney							Moccasin					
	1998	1999	2000	2001	2002	2003	Avg.	1998	1999	2000	2001	2002	2003	Avg.	1998	1999	2001	2002	2003	Avg.
MT960228	74.2	80.6	63.5	28.1	58.6	11.3	53.0*	90.9	97.6	92.5	93.6	54.4	84.2	84.9*	80.6	75.1	73.4	53.6	32.6	61.8*
Gallatin	69.2	63.8	65.5	31.6	54.4	11.6	48.5	87.4	89.1	87.4	83.4	52.4	89.8	81.9	67.8	72.8	71.1	48.1	29.1	56.9
Valier	72.4	71.0	62.4	30.1	53.6	11.8	50.1	99.3	98.9	79.9	98.1	45.4	80.2	83.6*	72.3	67.0	69.7	42.7	24.8	56.1
Haxby	77.0	65.9	66.0	28.9	54.6	11.6	51.2	100.6	93.9	86.7	78.2	51.2	86.5	82.7	79.2	71.1	77.4	56.6	34.8	64.9**
Baronesse	70.4	85.3	62.5	32.2	56.6	14.1	54.2**	93.8	98.5	93.3	95.5	51.2	84.5	86.5*	75.6	77.2	71.7	51.8	31.9	60.7*
Harrington	59.4	71.8	53.5	31.2	53.5	12.4	47.4	72.2	98.5	84.5	83.5	49.5	74.8	76.7	70.2	70.6	62.8	43.3	22.2	53.5
MT60099	70.6	80.6	64.5	30.9	61.0	15.3	54.0*	88.9	100.8	97.4	95.2	57.5	83.6	87.6**	87.1	84.2	67.8	44.4	26.6	60.9*
SiteMean	68.5	69.5	60.8	29.5	44.5	13.2	47.7	87.0	89.4	85.4	84.1	49.4	84.3	79.9	72.7	74.1	69.8	48.1	28.7	58.7
C.V.	5.24	5.46	7.69	11.33	8.46	9.43	9.08	5.94	9.35	6.31	8.16	10.32	7.33	8.66	9.00	7.69	7.59	7.27	12.40	10.48
L.S.D.(0.05)	6.64	6.44	7.93	5.59	7.57	2.11	3.01	8.74	13.51	9.14	11.44	8.59	10.45	4.70	10.57	9.66	8.88	5.92	6.06	4.46

Variety	Huntley						Conrad							Bozeman						
	1999	2000	2001	2002	2003	Avg.	1998	1999	2000	2001	2002	2003	Avg.	1998	1999	2000	2001	2002	2003	Avg.
MT960228	69.0	42.5	45.3	15.4	58.0	46.4*	111.5	98.2	58.8	21.4	91.3	83.0	78.2**	113.5	78.7	132.5	120.5	75.9	74.5	100.0*
Gallatin	68.5	38.6	44.3	18.5	49.1	44.2*	100.5	87.6	50.9	23.9	78.7	78.1	69.0	102.5	82.9	122.7	100.4	57.7	72.3	89.6
Valier	62.7	38.9	49.0	13.6	60.8	45.3*	100.7	95.0	62.9	22.5	78.9	79.8	74.4*	99.9	79.3	123.9	119.4	63.4	72.0	93.7
Haxby	64.9	33.0	47.2	26.6	61.6	46.0*	105.1	90.0	62.8	22.4	76.2	87.2	74.2*	105.2	83.6	133.3	113.1	76.9	84.1	99.2*
Baronesse	67.8	34.4	48.2	23.1	61.7	46.6*	103.9	91.3	57.8	27.9	82.6	88.7	77.7*	108.4	87.5	129.7	117.6	68.3	80.8	98.5*
Harrington	64.2	35.3	39.3	11.6	53.5	41.3	79.8	93.8	53.2	20.4	81.7	80.5	68.5	100.5	79.2	118.7	104.5	52.6	72.1	88.4
MT960099	64.1	54.3	42.8	7.6	49.6	43.2	106.5	96.2	52.3	21.0	88.7	73.0	72.4	117.6	84.6	126.0	126.1	80.1	69.9	100.8**
SiteMean	65.7	39.2	45.4	20.4	55.3	45.2	95.2	90.5	55.2	21.5	78.0	82.7	70.5	101.5	81.3	125.9	112.3	69.8	76.9	94.6
C.V.	7.95	20.40	10.93	21.76	10.99	12.20	6.07	7.71	8.38	15.26	8.41	11.97	11.40	4.83	4.26	4.48	5.97	14.35	5.41	7.64
L.S.D.(0.05)	8.70	13.22	8.40	7.42	10.00	4.00	9.33	11.83	7.78	5.57	11.16	16.83	5.46	7.92	5.84	9.43	11.37	16.23	7.06	4.78

** indicates entries with highest yield. * indicates entries equal to highest yielding entry.

Table 3. 1998- 2003 Spring Barley Irrigated Individual Location Summary Yield (bu/ac)

Variety	Bozeman							Sidney							Kalispell High Moisture						
	1998	1999	2000	2001	2002	2003	Avg.	1998	1999	2000	2001	2002	2003	Avg.	1998	1999	2000	2001	2002	2003	Avg.
MT960228	102.6	96.3	150.1	131.6	100.5	128.0	116.7	96.9	126.4	132.0	60.7	82.9	126.1	104.3*	120.8	160.7	190.7	147.6	139.2	125.0	149.2*
Gallatin	93.3	102.7	137.6	134.6	95.0	119.1	113.6	95.0	118.6	115.4	64.2	85.6	119.4	99.3	101.6	140.6	184.5	181.4	139.9	127.2	147.6*
Valier	108.8	95.6	161.8	139.6	98.9	122.2	122.4*	95.9	113.1	124.2	63.3	80.0	120.3	98.4	112.8	144.7	179.0	173.6	146.4	114.2	141.9
Haxby	96.5	95.3	155.7	131.4	98.3	127.2	117.7	90.5	123.1	130.6	73.2	87.3	128.3	104.8*	113.8	160.0	196.9	181.1	151.3	116.9	151.9*
Baronesse	99.9	106.7	163.1	127.3	98.2	126.2	120.7*	92.1	133.0	133.3	64.2	77.8	137.3	106.7*	121.5	151.9	184.6	173.5	144.1	117.4	151.8*
Harrington	89.2	92.0	139.6	138.4	90.7	120.4	110.4	88.2	100.2	113.6	61.9	71.0	118.8	92.8	96.8	152.0	197.3	178.5	129.6	122.0	144.6*
MT960099	102.8	98.2	161.0	149.1	112.8	132.2	126.2**	103.7	136.2	119.9	73.5	129.5	132.2	107.9**	105.6	155.0	200.2	183.8	159.1	110.4	151.9**
SiteMean	97.9	100.2	149.6	135.2	103.4	123.1	118.2	89.6	115.0	122.7	63.1	77.3	124.0	98.6	111.0	149.3	186.8	174.2	143.3	116.3	146.8
C.V.	6.93	6.92	6.77	5.92	8.56	4.81	8.62	6.67	4.92	5.61	13.35	5.73	4.96	6.08	11.76	5.51	4.98	14.45	7.24	7.72	9.65
LSD(0.05)	10.97	11.61	16.61	13.24	14.96	10.13	6.70	10.00	9.57	11.43	13.94	7.47	10.01	4.03	21.10	14.04	15.03	42.49	17.57	15.27	9.45

Variety	Huntley						Conrad							Overall Ave.
	1999	2000	2001	2002	2003	Avg.	1998	1999	2000	2001	2002	2003	Avg.	
MT960228	125.7	152.4	172.6	163.7	144.5	151.6**	112.5	143.8	111.1	83.0	118.4	133.8	117.4**	127.0*
Gallatin	119.0	132.6	144.7	131.9	122.1	129.7	99.9	121.1	88.4	70.0	117.1	117.8	104.2	118.5
Valier	143.2	124.8	166.7	151.8	124.7	143.7*	5.75	11.55	10.18	6.55	106.0	121.6	104.2	121.4
Haxby	127.5	120.5	163.3	164.6	133.3	140.8	114.5	118.9	88.6	76.9	123.9	126.9	109.5	124.4*
Baronesse	127.1	135.3	158.4	141.6	137.4	140.9	107.8	136.0	104.4	85.9	119.9	124.1	112.6*	126.1*
Harrington	110.8	130.7	131.5	135.9	124.2	126.2	70.3	134.0	80.7	67.7	106.9	118.3	95.9	113.6
MT960099	149.5	156.6	146.4	144.8	130.9	146.4*	103.7	136.2	119.9	73.5	129.5	121.2	113.9*	128.7**
SiteMean	126.2	127.1	152.7	146.5	128.1	136.1	92.5	123.1	92.8	71.7	116.0	121.8	103.0	----
C.V.	8.42	12.21	5.54	10.89	8.33	9.58	8.58	5.75	11.55	10.18	6.55	8.51	8.39	8.84
LSD(0.05)	17.39	25.83	13.95	26.67	17.87	9.63	12.81	12.01	17.94	12.36	12.67	17.55	5.92	3.21

** indicates entries with highest yield. * indicates entries equal to highest yielding entry.

Table 4. 1998- 2003 Spring Barley Dryland Individual Location Summary Test Weight (lb/bu)

Variety	Havre							Sidney							Moccasin					
	1998	1999	2000	2001	2002	2003	Avg.	1998	1999	2000	2001	2002	2003	Avg.	1998	1999	2001	2002	2003	Avg.
MT960228	48.4	50.9	49.3	47.7	49.6	46.3	48.7	50.7	53.4	51.3	47.1	46.4	50.0	49.8	48.8	50.1	47.2	50.9	44.5	48.3
Gallatin	49.6	52.1	49.0	48.0	48.5	47.9	49.2	52.2	54.6	52.5	47.9	47.0	51.1	50.9	49.1	50.8	48.4	49.4	41.9	47.9
Valier	49.5	51.2	49.0	48.5	49.8	46.9	49.2	51.3	52.4	50.7	49.8	48.0	50.4	50.4	47.2	49.2	48.8	50.2	44.4	48.0
Haxby	51.4	52.7	51.9	49.4	50.4	48.9	50.8	52.7	54.9	52.2	50.0	49.7	52.4	52.0	51.7	52.0	50.9	52.0	46.7	50.7
Baronesse	47.2	50.9	47.6	48.1	48.9	46.1	48.1	50.0	54.0	51.5	48.5	48.4	48.2	50.1	45.2	49.2	45.9	49.9	41.3	46.3
Harrington	46.3	49.4	46.8	46.2	48.4	45.4	47.1	48.2	52.0	50.8	47.1	45.5	47.3	48.5	43.0	48.1	44.8	49.8	41.4	45.4
MT960099	46.5	49.2	47.6	47.2	48.8	46.3	47.6	49.0	53.6	51.0	47.3	47.5	49.0	49.6	48.2	49.0	45.2	51.3	43.2	47.4
SiteMean	48.2	51.1	48.7	48.0	40.6	47.0	47.3	50.3	53.4	51.1	48.3	46.8	49.8	49.9	47.2	49.9	47.4	50.4	42.9	47.6

Variety	Huntley					Conrad							Bozeman						
	1999	2001	2002	2003	Avg.	1998	1999	2000	2001	2002	2003	Avg.	1998	1999	2000	2001	2002	2003	Avg.
MT960228	47.9	51.4	38.6	50.8	47.2	52.8	53.6	46.6	52.8	51.9	47.5	50.9	53.9	51.3	55.5	50.8	48.4	44.5	50.7
Gallatin	47.5	51.6	38.6	51.5	47.3	52.5	54.0	48.5	49.4	49.2	46.3	50.0	54.4	52.7	55.8	51.4	49.6	46.2	51.7
Valier	47.9	50.6	40.7	51.8	47.8	52.3	53.9	52.7	51.3	53.1	48.3	51.9	54.7	51.0	55.5	52.1	50.0	44.9	51.4
Haxby	49.4	52.0	43.0	53.9	49.6	55.8	54.7	53.8	53.6	52.8	50.7	53.6	55.2	53.2	57.1	53.1	51.8	50.9	53.5
Baronesse	44.4	50.8	37.8	51.2	46.0	50.0	52.6	48.7	51.3	49.6	48.1	50.1	53.5	51.5	54.4	50.8	48.4	44.6	50.5
Harrington	43.1	51.5	37.4	51.1	45.8	46.2	52.5	45.9	49.8	52.6	46.5	48.9	53.5	50.0	53.2	49.0	47.0	42.5	49.2
MT960099	44.3	50.3	36.1	50.6	45.3	50.7	51.5	51.2	50.5	50.3	46.1	50.1	54.7	50.7	53.8	51.1	49.5	44.5	50.7
SiteMean	46.4	51.0	39.0	51.2	46.9	50.5	53.2	49.4	51.0	50.7	47.1	50.3	53.3	51.3	55.2	51.3	49.4	45.6	51.0

Table 5. 1998- 2003 Spring Barley Irrigated Individual Location Summary Test Weight (lb/bu)

Variety	Bozeman							Sidney							Kalispell High Moisture						
	1998	1999	2000	2001	2002	2003	Avg.	1998	1999	2000	2001	2002	2003	Avg.	1998	1999	2000	2001	2002	2003	Avg.
MT960228	50.4	53.1	52.6	52.1	52.6	51.5	52.0	49.1	51.7	48.7	37.7	46.0	50.8	47.3	52.3	53.6	54.8	52.6	50.8	48.2	52.0
Gallatin	52.2	55.5	54.3	53.0	54.5	54.1	53.9	49.9	51.5	50.7	38.8	46.7	52.0	48.3	52.1	53.9	55.1	53.9	50.2	50.3	52.6
Valier	52.6	53.0	55.9	52.6	53.0	52.2	53.2	50.8	50.7	51.3	37.0	48.1	51.7	48.3	52.0	53.6	54.6	53.3	50.2	48.5	52.0
Haxby	53.0	54.1	55.6	55.0	55.0	53.4	54.4	52.4	52.0	51.3	42.1	49.0	52.8	49.9	53.2	54.6	55.5	53.0	51.3	51.7	53.2
Baronesse	50.8	54.0	54.1	51.9	53.0	52.2	52.7	49.2	50.6	51.7	38.5	48.1	52.0	48.4	52.2	53.3	54.5	51.9	50.2	51.4	52.2
Harrington	48.2	52.8	52.2	50.6	53.4	49.5	51.1	47.5	48.2	49.5	35.1	45.0	49.7	45.8	50.5	53.2	55.2	52.4	45.2	47.3	50.6
MT960099	50.2	53.0	53.5	53.3	54.0	52.2	52.7	49.7	50.5	49.0	39.0	45.9	51.7	47.6	52.1	52.1	54.3	52.5	49.8	46.7	51.2
SITMEAN	50.4	53.9	54.2	53.0	53.5	52.8	53.0	48.9	50.3	49.7	38.6	46.5	51.5	47.6	52.0	53.5	54.7	52.5	49.8	48.9	51.9

Variety	Huntley						Conrad						
	1999	2000	2001	2002	2003	Avg.	1998	1999	2000	2001	2002	2003	Avg.
MT960228	54.1	53.0	48.1	51.5	54.1	52.2	55.3	53.5	55.6	52.1	52.6	53.6	53.8
Gallatin	51.7	52.9	50.4	50.4	54.6	52.0	52.9	50.9	58.6	50.5	52.1	54.6	53.3
Valier	51.6	52.8	50.5	53.0	54.6	52.5	51.1	53.9	56.5	50.4	52.3	53.9	53.0
Haxby	52.0	54.0	51.2	53.7	56.2	53.4	55.8	50.9	58.6	52.9	54.3	54.6	54.5
Baronesse	52.0	53.1	49.6	50.0	53.9	51.7	50.7	50.8	58.5	51.3	51.8	52.1	52.5
Harrington	49.2	51.6	47.6	49.1	52.1	49.9	46.9	49.6	55.8	49.2	51.2	51.6	50.7
MT960099	51.8	52.9	48.5	49.0	53.4	51.1	51.6	52.6	55.4	50.2	51.4	51.7	52.2
SITMEAN	51.1	52.7	49.0	50.7	54.1	51.5	50.6	52.1	55.6	50.7	51.7	53.2	52.3

Table 6. 1998-2003 Spring Barley T-Paired results vs MT960228

All Locations ⁽¹⁾

Yield (bu/ac)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
PI491534	Gallatin	90.0	63	-7.0	-5.5	.000
PI610264	Valier	92.7	63	-4.4	-3.8	.000
MT950186	Haxby	95.4	63	-1.7	-1.4	.172
PI568246	Baronesse	96.1	63	-.9	-1.0	.318
SK 76333	Harrington	86.8	63	-10.3	-7.3	.000
MT960099	Manley/Bar	97.6	63	.6	.4	.661
SITEMEAN	SiteMean	91.4	63	-5.7	-5.6	.000

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 97.1 (N= 63)

Test Weight (lb/bu)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
PI491534	Gallatin	50.8	62	.4	2.2	.034
PI610264	Valier	50.8	62	.4	2.3	.025
MT950186	Haxby	52.4	62	2.0	10.4	.000
PI568246	Baronesse	50.0	62	-.3	-1.7	.095
SK 76333	Harrington	48.6	62	-1.8	-8.0	.000
MT960099	Manley/Bar	49.7	62	-.6	-3.7	.001
SITEMEAN	SiteMean	50.0	62	-.3	-1.6	.106

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 50.4 (N= 62)

Plump Percent (over # 6 screen)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
PI491534	Gallatin	69.2	61	-2.8	-2.4	.020
PI610264	Valier	68.6	61	-3.4	-2.2	.030
MT950186	Haxby	75.3	61	3.4	2.7	.009
PI568246	Baronesse	72.6	61	.6	.5	.619
SK 76333	Harrington	71.3	61	-.7	-.5	.638
MT960099	Manley/Bar	59.8	60	-13.2	-7.5	.000
SITEMEAN	SiteMean	73.5	61	1.5	1.4	.175

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 70.8 (N= 62)

⁽¹⁾ Lattice nursery means.

Table 6(cont). 1998-2003 Spring Barley T-Paired results vs MT960228

All Locations ⁽¹⁾

Heading Date (days from Jan. 1)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
PI491534	Gallatin	175.7	60	-2.7	-9.2	.000
PI610264	Valier	179.0	60	.6	4.6	.000
MT950186	Haxby	176.8	60	-1.5	-7.9	.000
PI568246	Baronesse	179.0	60	.6	3.6	.000
SK 76333	Harrington	178.4	60	.0	.0	.986
MT960099	Manley/Bar	179.6	60	1.2	5.9	.000
SITMEAN	SiteMean	176.8	60	-1.5	-2.8	.007

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 178.4 (N= 60)

Plant Height (inches)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
PI491534	Gallatin	30.9	63	1.4	6.3	.000
PI610264	Valier	30.1	63	.6	2.4	.019
MT950186	Haxby	30.4	63	.9	4.1	.000
PI568246	Baronesse	28.2	63	-1.3	-5.8	.000
SK 76333	Harrington	29.7	63	.2	1.1	.266
MT960099	Manley/Bar	26.9	63	-2.6	-11.5	.000
SITMEAN	SiteMean	29.5	63	.1	.3	.756

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 29.5 (N= 63)

Protein Percent (dry weight basis)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
PI491534	Gallatin	13.9	60	.5	4.5	.000
PI610264	Valier	14.2	59	1.0	7.7	.000
MT950186	Haxby	13.6	60	.3	2.6	.013
PI568246	Baronesse	13.8	60	.4	3.8	.000
SK 76333	Harrington	14.0	60	.7	7.0	.000
MT960099	Manley/Bar	13.8	60	.5	4.6	.000
SITMEAN	SiteMean	13.9	59	.6	7.1	.000

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 13.3 (N= 60)

⁽¹⁾ Lattice nursery means.

Table 7 1998-2003 Spring Barley T-Paired results vs MT960228

Irrigated Locations ⁽¹⁾

Yield (bu/ac)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
PI491534	Gallatin	117.9	29	-8.9	-3.7	.001
PI610264	Valier	121.9	29	-5.0	-2.2	.037
MT950186	Haxby	124.7	29	-2.2	-1.0	.341
PI568246	Baronesse	125.2	29	-1.7	-1.0	.347
SK 76333	Harrington	114.2	29	-12.7	-4.7	.000
MT960099	Manley/Bar	128.7	29	1.9	.7	.478
SITMEAN	SiteMean	120.0	29	-6.9	-3.5	.002

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 126.9 (N= 29)

Test Weight (lb/bu)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
PI491534	Gallatin	52.0	29	.5	1.9	.066
PI610264	Valier	51.8	29	.3	1.1	.266
MT950186	Haxby	53.1	29	1.6	5.6	.000
PI568246	Baronesse	51.5	29	.0	.1	.898
SK 76333	Harrington	49.6	29	-1.8	-4.9	.000
MT960099	Manley/Bar	51.0	29	-.5	-2.1	.041
SITMEAN	SiteMean	51.2	29	-.2	-.9	.391

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 51.5 (N= 29)

Plump Percent (over # 6 screen)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
PI491534	Gallatin	79.3	29	-.7	-.5	.632
PI610264	Valier	80.0	29	-.0	.0	.993
MT950186	Haxby	84.4	29	4.4	2.7	.011
PI568246	Baronesse	83.1	29	3.1	2.1	.050
SK 76333	Harrington	78.9	29	-1.1	-.6	.569
MT960099	Manley/Bar	72.6	29	-7.4	-4.1	.000
SITMEAN	SiteMean	82.4	29	2.4	1.5	.142

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 80.0 (N= 29)

⁽¹⁾ Lattice nursery means.

Table 7(cont). 1998-2003 Spring Barley T-Paired results vs MT960228

Irrigated Locations ⁽¹⁾

Heading Date (days from Jan. 1)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
PI491534	Gallatin	174.7	28	-2.8	-6.5	.000
PI610264	Valier	177.9	28	.4	2.2	.038
MT950186	Haxby	176.2	28	-1.3	-5.7	.000
PI568246	Baronesse	178.1	28	.6	2.3	.031
SK 76333	Harrington	177.5	28	-.0	-.0	.966
MT960099	Manley/Bar	178.5	28	1.0	3.2	.004
SITEMEAN	SiteMean	176.5	28	-1.0	-3.7	.001

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 177.5 (N= 28)

Plant Height (inches)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
PI491534	Gallatin	34.2	29	1.5	4.9	.000
PI610264	Valier	33.4	29	.8	2.0	.054
MT950186	Haxby	33.6	29	.9	2.3	.027
PI568246	Baronesse	31.1	29	-1.5	-4.1	.000
SK 76333	Harrington	32.9	29	.2	.6	.541
MT960099	Manley/Bar	29.7	29	-2.9	-7.6	.000
SITEMEAN	SiteMean	32.5	29	-.1	-.5	.652

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 32.6 (N= 29)

Protein Percent (dry weight basis)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
PI491534	Gallatin	12.6	27	.3	2.4	.023
PI610264	Valier	13.1	27	.9	6.4	.000
MT950186	Haxby	12.6	27	.3	1.8	.076
PI568246	Baronesse	12.4	27	.2	1.3	.216
SK 76333	Harrington	12.7	27	.5	5.1	.000
MT960099	Manley/Bar	12.5	27	.3	2.1	.050
SITEMEAN	SiteMean	12.8	26	.6	6.2	.000

THE MEAN FOR THE REFERENCE VARIETY (MT960228) IS: 12.2 (N= 27)

⁽¹⁾ Lattice nursery means.

Table 8. 1998-2003 Spring Barley Table of Predicted Yield (bu/ac) vs SiteMean

All Intrastate Locations

CHECK VARIETY: SiteMean

	CHECK	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	100.0	110.0	120.0	ACTUAL MEAN	MIN VALUE	MAX VALUE	NO. OBSER	B	R SQU	P VALUE
MT960228	23.8	34.0	44.3	54.6	64.8	75.1	85.4	95.6	105.9	116.2	126.5	97.05	11.32	190.67	63	1.03	.96	.000	
Gallatin	21.5	31.1	40.7	50.3	59.9	69.5	79.1	88.7	98.3	107.9	117.5	90.03	11.57	184.50	63	.96	.98	.000	
Valier	20.4	30.6	40.7	50.8	60.9	71.0	81.2	91.3	101.4	111.5	121.6	92.65	11.82	179.03	63	1.01	.97	.000	
Haxby	22.1	32.4	42.7	52.9	63.2	73.5	83.7	94.0	104.3	114.5	124.8	95.40	11.61	196.90	63	1.03	.98	.000	
Baronesse	24.6	34.6	44.7	54.7	64.7	74.7	84.7	94.7	104.8	114.8	124.8	96.12	14.12	184.57	63	1.00	.98	.000	
Harrington	16.2	26.1	35.9	45.8	55.7	65.6	75.5	85.4	95.3	105.2	115.1	86.76	11.56	197.27	63	.99	.96	.000	

THE MEAN FOR THE CHECK VARIETY(MT960228) IS: 91.4 (N= 63)

**Table 9. 1999-2003 SPRING BARLEY OVERALL SUMMARY
Offstation Dryland Nurseries**

ID	Pedigree	# locs	Yield (bu/ac)	# locs	Test Wt (lb/bu)	# locs	Plump (%)	# locs	Plant Ht. inches	# locs	Protein %
MT960228	Stark/Baronesse	54	47.8	53	48.0	42	42.9	51	24.9	48	15.6
PI491534	Gallatin	54	45.5	53	48.0	42	42.7	51	26.0	48	16.2
PI610264	Valier	54	45.4	53	48.6	42	36.5	51	24.9	48	16.9
MT950186	Haxby	54	48.7	53	50.4	42	48.2	51	25.8	48	15.6
PI568246	Baronesse	54	48.0	53	47.5	42	45.2	51	23.5	48	16.3
SK 76333	Harrington	54	43.0	53	46.6	42	45.5	51	24.8	48	16.6
SITMEAN	SiteMean	54	46.1	53	48.2	42	44.9	51	25.1	48	16.2