

PROJECT TITLE: Statewide Barley Performance

YEAR: 2006

LOCATIONS:

Bozeman - irrigated and dryland
Conrad - irrigated and dryland
Havre - dryland
Huntley - irrigated and dryland
Kalispell - irrigated
Moccasin - dryland
Sidney - irrigated and dryland

PERSONNEL:

Bozeman: Tom Blake (Project Leader) & Stan Bates
Conrad: Greg Kushnak
Havre: Gregg Carlson
Huntley: Ken Kephart
Kalispell: Bob Stougaard
Moccasin: Dave Wichman
Sidney: Joyce Eckhoff

RESULTS:

The statewide (Intrastate) Barley Variety Nursery was grown at the seven locations listed above, with some locations having both irrigated and dryland nurseries. Tables 1 and 8 summarize statewide averages for all traits. Specific performance traits at each location can be found in Tables 2-7 for dryland and Tables 9-14 for irrigated.

In the **dryland trials**, the 2-row feed variety 'Haxby' was among the highest for test weight, and was among the highest for yield (Table 1). The 2-row experimental malt-barley lines MT910189 and MT970116 had substantially higher yield, test weight and plump than 'Harrington', and were three days earlier to head. Malt status of MT910189 and MT970116 is pending the final round of plant-scale tests, and if approved, the two lines would increase the success rate of **dryland malt** production.

In the **irrigated** trials, 'Calgary', 'Eslick', and 'Baronesse' were the highest yielding 2-row feed varieties (Table 8). Calgary had the shortest and strongest straw. The 2-row malt variety 'Conrad' had the highest yield among the malt varieties.

Future Plans: MAES will continue to evaluate barley lines and varieties in Intrastate Trials.

Table 1. 2006 Montana Dryland Intrastate Barley – All Traits

Variety ID	Yield bu/a	TW lb/bu	Plump %	Prot %	Head date	Height in.
YU501385	87.3	51.7	54.8	12.0	171.5	28.1
MT040226	87.1	53.9	64.5	11.8	170.9	28.4
MT020155	85.6	51.2	69.0	12.1	167.0	29.3
MT970229	85.1	52.1	70.8	12.7	172.5	28.3
Haxby	84.6	53.5	59.9	12.5	170.5	28.9
MT020064	84.6	52.1	78.3	12.8	171.6	29.5
MT030079	84.5	52.7	56.1	12.3	171.9	28.6
MT000040	84.2	52.0	65.6	12.9	171.9	28.3
MT040024	84.1	51.5	42.7	11.9	171.0	27.1
MT040058	84.0	52.4	64.0	11.9	171.4	27.6
MT040073	84.0	53.0	63.6	12.4	172.4	27.8
Boulder	84.0	53.1	72.4	12.9	171.5	27.7
MT040013	83.8	50.6	57.7	12.1	173.1	28.7
MT010162	83.6	50.5	59.2	12.7	173.7	28.3
Eslick	83.3	50.7	54.2	12.0	172.2	27.5
MT040204	83.0	49.7	48.1	12.2	175.1	26.8
MT030137	82.9	52.5	70.2	12.4	171.7	27.4
MT040136	82.8	54.2	70.0	12.3	171.9	27.6
Xena	82.7	49.6	42.1	12.3	172.7	27.9
MT040216	82.4	53.0	58.8	12.5	173.5	26.3
MT020162	82.4	50.8	59.2	12.8	173.0	28.9
MT030063	82.4	52.6	71.4	12.1	174.2	30.6
MT040181	81.7	51.1	53.5	12.4	174.3	26.0
MT040231	81.6	52.1	57.1	12.6	172.2	28.0
MT020204	81.6	51.1	59.1	13.0	170.7	28.7
MT040021	81.5	51.3	64.1	12.5	171.3	27.5
MT010160	81.3	50.6	60.1	12.7	172.5	29.1
Conrad	81.0	49.6	65.7	13.0	175.0	26.2
MT970116-5	80.9	53.2	72.2	12.5	169.8	31.8
MT020167	80.8	50.9	69.6	12.6	172.6	28.1
MT010081	80.8	51.3	65.3	13.0	171.1	29.0
MT040104	80.7	51.7	68.7	12.7	173.4	27.0
MT970116-6	80.5	52.7	71.9	12.6	169.7	30.0
MT030042	80.4	51.7	60.7	11.8	171.6	27.2
MT000047	80.2	51.0	63.8	12.7	170.7	28.8
MT030144	80.1	51.4	62.4	12.6	172.1	27.8
Baronesse	80.1	50.1	61.1	12.7	173.8	26.0
MT010080	80.0	51.3	64.7	12.8	170.4	29.7
MT040209	79.9	51.0	58.8	12.6	173.4	26.9
MT020205	79.9	51.7	65.6	12.6	170.7	29.0

Continued

Table 1 cont.	Yield	TW	Plump	Prot	Head	Height
MT040223	79.8	52.6	71.3	12.5	172.8	28.8
MT000138	79.7	52.5	76.8	12.9	169.0	31.4
MT010158	79.6	51.4	63.7	13.1	171.9	27.5
MT970116 C	79.4	52.4	67.8	12.4	170.3	29.1
MT040093	79.3	51.4	68.4	12.8	173.8	27.5
MT040105	78.7	50.2	63.6	13.0	176.0	27.1
MT040106	78.5	50.7	75.2	12.5	174.8	26.4
MT040110	78.5	50.8	66.4	13.0	176.0	27.2
MT040130	78.0	50.0	51.1	13.1	173.9	27.3
MT000125	77.9	50.5	65.5	12.4	172.8	29.5
MT910189 H	77.8	51.5	67.0	12.3	170.2	27.4
MT040134	77.7	49.9	56.0	12.7	175.1	26.6
MT960101 G	77.3	49.6	46.0	12.8	175.3	26.4
MT040114	77.1	50.4	59.4	12.4	174.2	27.4
Metcalfe	76.9	50.4	65.4	13.2	170.5	29.3
Tradition	76.9	51.0	67.6	12.0	168.0	30.6
MT960101-30	76.2	49.4	45.1	12.9	176.8	26.1
MT040107	76.1	51.0	54.9	12.5	176.8	27.0
MT040129	75.9	49.8	52.3	13.0	175.3	28.0
MT040220	75.9	49.2	51.4	13.0	175.0	26.9
2B992316	75.8	48.5	58.9	12.6	173.5	27.7
Harrington	75.7	49.0	61.2	12.6	173.0	27.1
2B992657	72.9	46.3	51.9	12.8	172.0	27.7
MT960101-21	72.4	49.4	41.7	13.0	177.2	26.5
Means	80.4	51.2	61.7	12.6	172.6	28.3
C.V.	5.8	1.6	15.4	3.6	1.1	4.8
LSD	6.1	1.0	10.8	0.5	2.3	1.7

Locations: Bozeman, Conrad, Havre, Huntley, Moccasin, and Sidney.

Table 2. 2006 Montana Dryland Intrastate Barley – Yield (bu/a)

Variety ID	Bozeman	Conrad	Havre	Huntley	Moccasin	Sidney	Mean
YU501385	132.5	114.2	58.7	62.2	63.8	92.6	87.3
MT040226	127.6	102.8	61.5	67.4	67.0	96.6	87.1
MT020155	128.3	104.5	61.8	67.9	62.4	88.8	85.6
MT970229	121.1	106.7	68.6	64.5	63.1	86.4	85.1
Haxby	124.9	111.7	59.1	62.6	65.1	84.5	84.6
MT020064	123.3	111.5	64.2	68.5	61.3	79.1	84.6
MT030079	119.0	104.4	63.3	64.4	65.6	90.6	84.5
MT000040	125.5	104.9	63.7	68.4	59.4	83.3	84.2
MT040024	116.9	105.5	66.1	64.9	61.7	89.4	84.1
MT040058	124.5	105.1	65.5	59.4	60.6	89.2	84.0
MT040073	116.3	103.4	68.3	62.7	62.8	90.6	84.0
Boulder	129.1	101.2	62.2	70.4	64.2	76.7	84.0
MT040013	116.7	111.2	66.1	69.1	56.6	83.2	83.8
MT010162	128.8	108.5	64.1	59.6	65.6	75.1	83.6
Eslick	120.5	110.0	64.2	64.1	56.9	83.9	83.3
MT040204	114.0	116.1	53.8	67.8	58.5	88.0	83.0
MT030137	119.1	106.9	61.6	73.8	59.0	77.0	82.9
MT040136	123.4	102.4	60.8	56.1	67.8	86.2	82.8
Xena	114.5	112.6	65.2	58.3	59.0	86.6	82.7
MT040216	119.7	107.9	58.4	58.6	67.3	82.5	82.4
MT020162	123.0	104.7	66.2	60.2	64.0	76.3	82.4
MT030063	125.8	99.1	51.5	63.6	71.0	83.2	82.4
MT040181	121.1	109.9	56.8	63.5	55.5	83.2	81.7
MT040231	117.7	97.2	60.5	63.2	66.2	84.8	81.6
MT020204	124.6	97.0	56.2	64.9	62.7	84.2	81.6
MT040021	118.8	105.6	67.7	61.1	59.6	76.3	81.5
MT010160	119.0	105.4	60.2	62.2	58.6	82.4	81.3
Conrad	115.4	113.9	54.5	64.4	57.6	80.5	81.0
MT970116-5	125.0	94.5	70.0	55.8	60.5	79.5	80.9
MT020167	108.4	107.6	64.8	61.3	60.8	82.1	80.8
MT010081	116.7	100.2	63.5	66.4	58.5	79.6	80.8
MT040104	120.8	97.3	59.9	60.7	62.6	83.1	80.7
MT970116-6	120.3	97.2	61.9	56.6	63.1	84.2	80.5
MT030042	116.0	105.5	53.8	62.4	63.0	82.0	80.4
MT000047	118.8	103.7	58.6	68.5	56.2	75.5	80.2
MT030144	116.4	99.1	65.8	59.9	60.7	79.0	80.1
Baronesse	117.2	113.7	50.1	67.3	52.9	79.6	80.1
MT010080	119.2	94.9	55.6	66.9	61.7	81.4	80.0
MT040209	114.5	115.7	52.6	58.6	59.0	79.3	79.9
MT020205	121.3	93.3	56.2	69.2	61.1	78.4	79.9

Continued

Table 2 cont.	Bozeman	Conrad	Havre	Huntley	Moccasin	Sidney	Mean
MT040223	117.5	93.2	66.3	55.7	61.0	85.3	79.8
MT000138	115.7	99.5	56.4	69.5	58.0	79.3	79.7
MT010158	118.3	98.2	63.8	61.8	59.2	76.1	79.6
MT970116	118.7	99.4	62.4	55.8	61.6	78.6	79.4
MT040093	124.5	92.8	55.6	63.9	60.2	78.9	79.3
MT040105	109.6	107.1	62.8	56.4	60.2	75.8	78.7
MT040106	112.3	101.9	64.4	55.5	59.2	77.9	78.5
MT040110	113.7	108.1	56.2	56.1	55.8	81.3	78.5
MT040130	106.5	109.2	58.6	59.6	55.6	78.3	78.0
MT000125	113.5	98.6	62.2	54.5	57.7	81.1	77.9
MT910189	112.1	104.1	51.8	55.4	60.7	82.4	77.8
MT040134	111.6	109.0	58.9	53.8	54.8	78.1	77.7
MT960101	107.2	110.3	54.1	60.5	56.9	75.0	77.3
MT040114	114.2	112.6	48.6	56.0	58.6	72.8	77.1
Metcalfe	115.8	97.2	51.3	59.1	59.6	78.4	76.9
Tradition	120.5	81.9	66.4	60.9	54.4	77.1	76.9
MT960101-30	107.6	103.2	62.0	58.7	57.6	68.0	76.2
MT040107	101.8	107.5	68.8	50.0	59.6	68.8	76.1
MT040129	108.1	108.5	53.2	58.3	56.1	71.5	75.9
MT040220	108.3	104.1	53.4	61.1	56.1	72.2	75.9
2B992316	106.0	104.8	51.8	56.4	57.0	78.5	75.8
Harrington	102.4	102.1	64.0	52.4	55.2	78.0	75.7
2B992657	105.6	102.4	51.4	56.7	52.9	68.7	72.9
MT960101-21	101.4	103.1	54.8	53.4	51.2	70.6	72.4
Means	117.2	104.1	60.0	61.4	60.0	79.5	80.4
C.V.	4.6	6.6	14.5	6.8	7.7	6.9	
LSD	9.3	11.8	14.4	7.3	7.9	9.6	

Table 3. 2006 Montana Dryland Intrastate Barley – Test Weight
Lbs/bu

Variety ID	Bozeman	Conrad	Havre	Huntley	Moccasin	Sidney	Mean
YU501385	54.0	55.9	47.9	50.7	51.3	50.3	51.7
MT040226	55.4	58.1	50.4	52.2	55.0	52.4	53.9
MT020155	53.8	56.4	45.5	49.7	52.2	49.3	51.2
MT970229	54.6	55.9	48.5	50.6	53.2	50.0	52.1
Haxby	54.4	57.4	49.3	53.8	54.3	51.8	53.5
MT020064	53.6	55.9	47.5	51.6	53.7	50.3	52.1
MT030079	53.4	57.5	48.4	51.3	54.8	51.1	52.7
MT000040	54.3	56.4	47.6	50.9	52.7	50.1	52.0
MT040024	52.7	56.4	47.6	50.5	53.4	48.7	51.5
MT040058	53.8	56.5	49.0	51.2	52.7	51.0	52.4
MT040073	53.6	57.0	49.5	50.6	54.9	52.4	53.0
Boulder	55.2	57.0	49.2	51.3	53.4	52.4	53.1
MT040013	51.6	55.4	45.9	49.3	52.1	49.1	50.6
MT010162	53.7	54.7	45.0	47.6	53.7	48.5	50.5
Eslick	51.9	56.3	45.9	49.5	51.5	49.0	50.7
MT040204	50.0	55.4	44.5	47.7	51.7	48.8	49.7
MT030137	53.3	56.8	48.4	52.0	53.6	50.8	52.5
MT040136	55.0	58.3	50.7	52.4	54.6	54.5	54.2
Xena	50.3	54.2	45.6	48.8	51.0	47.4	49.6
MT040216	54.2	58.0	48.5	52.4	53.6	51.5	53.0
MT020162	53.3	54.6	45.9	48.6	52.5	49.7	50.8
MT030063	54.4	57.0	48.2	50.6	55.1	50.0	52.6
MT040181	52.7	56.8	46.9	48.5	52.2	49.3	51.1
MT040231	52.9	57.0	47.8	50.8	54.1	50.3	52.1
MT020204	53.4	57.5	46.4	48.9	51.3	49.1	51.1
MT040021	52.5	55.9	47.1	50.3	52.6	49.6	51.3
MT010160	53.2	54.6	44.9	49.6	52.5	49.0	50.6
Conrad	50.9	54.1	45.6	47.9	52.0	47.3	49.6
MT970116-5	54.0	56.8	50.0	52.1	55.0	51.5	53.2
MT020167	51.9	55.2	47.5	49.8	52.0	49.2	50.9
MT010081	53.4	55.6	46.2	50.9	52.6	49.3	51.3
MT040104	52.9	56.3	47.6	48.9	53.6	51.1	51.7
MT970116-6	54.0	56.3	49.9	50.7	54.5	50.7	52.7
MT030042	52.1	57.6	47.2	50.7	52.8	49.6	51.7
MT000047	52.9	55.7	46.6	49.1	53.0	48.4	51.0
MT030144	53.7	55.3	47.7	49.3	52.5	49.6	51.4
Baronesse	51.8	54.6	44.5	48.9	52.9	47.8	50.1
MT010080	53.1	55.1	45.8	50.2	53.3	50.3	51.3
MT040209	51.9	55.3	47.2	50.3	53.2	48.3	51.0
MT020205	53.4	56.2	46.5	49.6	53.9	50.5	51.7

Continued

Table 3 cont.	Bozeman	Conrad	Havre	Huntley	Moccasin	Sidney	Mean
MT040223	53.4	56.8	49.7	51.3	54.4	50.1	52.6
MT000138	54.6	56.7	48.6	51.1	53.7	50.5	52.5
MT010158	54.0	55.7	47.0	49.5	51.8	50.0	51.4
MT970116	53.6	56.1	49.2	50.7	54.0	50.8	52.4
MT040093	53.7	55.4	45.7	49.7	53.6	50.2	51.4
MT040105	51.5	54.7	47.2	46.6	52.2	48.7	50.2
MT040106	52.2	55.1	46.9	48.5	53.7	47.7	50.7
MT040110	52.2	55.3	46.7	48.5	54.2	48.1	50.8
MT040130	51.5	55.8	45.2	47.9	51.5	48.4	50.0
MT000125	52.9	54.1	46.5	47.8	53.1	48.9	50.5
MT910189	53.6	55.4	47.7	49.4	52.9	50.0	51.5
MT040134	51.9	55.3	46.5	46.2	51.7	47.5	49.9
MT960101	50.8	55.5	44.8	46.9	51.7	48.2	49.6
MT040114	52.6	54.5	46.4	47.3	53.3	48.4	50.4
Metcalfe	52.1	54.4	45.7	48.1	52.6	49.7	50.4
Tradition	52.6	53.9	46.2	50.0	53.5	49.9	51.0
MT960101-30	50.6	54.5	45.4	47.3	51.7	46.7	49.4
MT040107	51.6	58.0	45.9	47.8	53.3	49.1	51.0
MT040129	50.7	56.4	44.9	47.3	52.0	47.4	49.8
MT040220	50.3	55.3	43.9	47.8	51.3	46.9	49.2
2B992316	50.5	53.8	43.3	45.2	50.9	47.1	48.5
Harrington	50.5	53.7	44.6	47.3	49.9	48.1	49.0
2B992657	48.1	49.6	40.1	45.1	48.6	46.0	46.3
MT960101-21	50.3	54.6	45.1	46.5	52.0	47.7	49.4
Means	52.7	55.7	46.8	49.4	52.9	49.5	51.2
C.V.	0.9			1.7	2.9	1.8	
LSD	0.8			1.5	2.7	1.5	

Table 4. 2006 Montana Dryland Intrastate Barley – Plump percent

Variety ID	Bozeman	Conrad	Havre	Huntley	Moccasin	Sidney	Mean
YU501385	77.3	93	17.1	53.5	31.9	56	54.8
MT040226	78.3	93	27.2	75.1	26.5	87	64.5
MT020155	79.6	95	32.9	83.4	41.9	81	69.0
MT970229	86.8	97	34.2	76.1	49.6	81	70.8
Haxby	73.0	94	16.5	63.3	33.4	79	59.9
MT020064	92.3	99	44.6	86.3	57.4	90	78.3
MT030079	63.0	96	16.9	62.3	21.2	77	56.1
MT000040	81.2	96	31.8	67.9	31.8	85	65.6
MT040024	52.6	78	9.8	41.1	35.0	40	42.7
MT040058	78.2	95	35.8	64.9	26.0	84	64.0
MT040073	73.8	93	26.9	61.5	45.7	81	63.6
Boulder	89.9	97	38.5	83.9	31.8	93	72.4
MT040013	65.2	95	19.8	60.2	26.0	80	57.7
MT010162	82.4	93	12.6	44.8	50.2	72	59.2
Eslick	64.3	92	21.4	53.9	12.4	81	54.2
MT040204	54.0	86	13.6	58.2	21.6	55	48.1
MT030137	77.7	96	35.0	80.8	48.6	83	70.2
MT040136	75.4	96	42.0	71.8	47.5	87	70.0
Xena	45.4	86	8.6	48.9	8.6	55	42.1
MT040216	70.8	95	20.6	67.8	26.5	72	58.8
MT020162	78.5	95	20.7	55.2	22.5	83	59.2
MT030063	87.2	96	25.1	70.1	64.1	86	71.4
MT040181	66.1	89	23.3	48.2	30.6	64	53.5
MT040231	68.3	95	19.5	64.1	46.9	49	57.1
MT020204	78.2	95	26.8	53.9	25.4	75	59.1
MT040021	76.0	95	26.6	77.3	30.6	79	64.1
MT010160	79.3	96	19.2	63.0	35.1	68	60.1
Conrad	80.6	96	24.8	68.8	42.8	81	65.7
MT970116-5	80.4	95	41.1	86.1	42.8	88	72.2
MT020167	76.1	97	51.6	76.7	31.2	85	69.6
MT010081	83.2	96	24.6	78.1	18.0	92	65.3
MT040104	78.7	97	35.2	64.0	53.1	84	68.7
MT970116-6	81.9	97	42.3	77.1	49.0	84	71.9
MT030042	63.0	95	20.5	64.2	44.3	77	60.7
MT000047	75.9	95	19.8	69.3	44.5	78	63.8
MT030144	84.3	95	28.1	58.0	23.8	85	62.4
Baronesse	70.4	94	17.3	69.8	36.4	79	61.1
MT010080	82.2	97	23.6	71.1	29.3	85	64.7
MT040209	69.7	95	19.3	59.1	34.8	75	58.8
MT020205	82.5	96	32.6	68.0	33.5	81	65.6

Continued

Table 4 cont.	Bozeman	Conrad	Havre	Huntley	Moccasin	Sidney	Mean
MT040223	76.4	95	41.3	73.1	60.0	82	71.3
MT000138	90.5	99	52.1	83.2	49.7	86	76.8
MT010158	89.5	97	28.7	66.9	27.3	73	63.7
MT970116	73.7	95	42.6	72.8	39.6	83	67.8
MT040093	83.7	93	30.1	75.9	37.9	90	68.4
MT040105	75.8	96	38.7	65.0	33.1	73	63.6
MT040106	79.0	97	49.3	82.2	55.8	88	75.2
MT040110	72.1	95	32.1	57.4	60.8	81	66.4
MT040130	64.7	89	16.9	52.0	15.2	69	51.1
MT000125	76.8	98	27.6	72.8	39.0	79	65.5
MT910189	85.3	96	33.2	76.0	30.6	81	67.0
MT040134	69.4	95	25.1	38.6	41.1	67	56.0
MT960101	52.6	83	12.5	36.4	23.7	68	46.0
MT040114	77.8	95	16.3	48.1	37.9	81	59.4
Metcalfe	77.8	94	18.0	70.0	51.8	81	65.4
Tradition	89.7	89	30.5	72.5	32.1	92	67.6
MT960101-30	51.3	88	9.8	36.1	33.1	52	45.1
MT040107	57.3	95	21.0	46.1	43.9	66	54.9
MT040129	59.4	91	8.8	46.7	37.7	70	52.3
MT040220	56.9	96	12.4	49.6	30.7	63	51.4
2B992316	72.9	87	23.9	53.1	38.7	78	58.9
Harrington	73.5	96	22.3	67.0	30.4	78	61.2
2B992657	66.3	84	19.3	65.9	13.8	62	51.9
MT960101-21	47.0	90	13.2	21.6	35.2	43	41.7
Means	73.8	93.8	26.2	63.7	36.1	76.3	61.7
C.V.	5.2			13.8	47.1		
LSD	6.6			15.1	27.5		

Table 5. 2006 Montana Dryland Intrastate Barley – Protein percent

Variety ID	Bozeman	Conrad	Havre	Huntley	Moccasin	Sidney	Mean
YU501385	11.9	9.6	14.0	12.2	12.0	12.3	12.0
MT040226	12.3	9.9	13.8	11.7	10.8	12.2	11.8
MT020155	11.9	10.1	14.7	12.2	11.5	12.5	12.1
MT970229	12.8	10.5	15.3	13.6	11.3	12.9	12.7
Haxby	12.0	10.0	16.6	12.4	11.3	12.5	12.5
MT020064	12.5	11.1	16.4	12.8	11.3	12.9	12.8
MT030079	11.9	10.3	15.0	12.4	12.1	11.9	12.3
MT000040	12.5	10.7	16.1	12.8	12.4	13.1	12.9
MT040024	11.9	9.5	15.0	12.1	10.9	12.0	11.9
MT040058	12.2	9.7	13.8	11.8	11.6	12.1	11.9
MT040073	12.5	10.1	15.7	12.6	10.9	12.8	12.4
Boulder	13.3	11.4	16.0	12.9	11.3	12.7	12.9
MT040013	12.3	9.5	15.0	12.1	12.1	11.5	12.1
MT010162	12.4	9.3	17.0	13.1	11.7	12.5	12.7
Eslick	11.9	8.7	14.9	12.2	12.1	12.1	12.0
MT040204	12.2	9.2	15.1	12.5	11.8	12.2	12.2
MT030137	13.0	10.4	15.2	12.4	11.0	12.6	12.4
MT040136	12.2	10.1	15.0	12.9	11.2	12.6	12.3
Xena	12.3	9.4	15.5	12.2	11.7	12.6	12.3
MT040216	12.4	10.2	15.3	12.4	12.0	12.5	12.5
MT020162	12.5	10.3	16.1	13.0	12.4	12.6	12.8
MT030063	12.2	9.5	15.4	12.0	11.3	12.4	12.1
MT040181	12.5	9.3	15.4	13.2	11.8	12.4	12.4
MT040231	12.6	9.9	15.7	12.3	12.0	13.1	12.6
MT020204	12.9	9.8	16.7	13.0	12.5	13.1	13.0
MT040021	12.8	9.9	14.8	12.8	12.2	12.5	12.5
MT010160	12.6	10.2	16.1	12.8	11.5	13.2	12.7
Conrad	12.8	9.8	16.4	14.1	11.5	13.5	13.0
MT970116-5	12.6	9.9	15.6	13.0	11.9	12.2	12.5
MT020167	12.8	10.3	14.5	12.5	12.6	12.9	12.6
MT010081	12.5	10.2	16.8	13.2	12.7	13.0	13.0
MT040104	13.2	9.8	15.3	13.6	11.5	12.5	12.7
MT970116-6	12.4	10.3	15.6	12.6	11.8	12.7	12.6
MT030042	11.8	8.9	15.1	11.9	11.1	11.8	11.8
MT000047	12.9	10.3	15.7	13.5	11.2	12.9	12.7
MT030144	12.4	10.5	15.6	13.0	11.9	12.2	12.6
Baronesse	12.7	10.1	16.6	12.9	11.1	13.0	12.7
MT010080	13.1	10.1	16.3	12.6	12.0	12.7	12.8
MT040209	12.2	9.7	16.5	13.2	11.7	12.4	12.6
MT020205	12.6	11.0	15.8	12.4	11.3	12.6	12.6

Continued

Table 5 cont.	Bozeman	Conrad	Havre	Huntley	Moccasin	Sidney	Mean
MT040223	12.8	10.0	15.4	12.6	11.2	12.9	12.5
MT000138	12.6	11.1	15.5	13.2	11.9	13.4	12.9
MT010158	12.5	10.6	16.7	13.5	12.2	13.1	13.1
MT970116	12.7	10.0	14.9	13.0	11.7	12.4	12.4
MT040093	13.0	10.3	15.7	12.8	12.0	12.9	12.8
MT040105	13.0	10.9	15.9	13.2	12.6	12.4	13.0
MT040106	13.0	9.7	15.2	12.9	11.3	13.1	12.5
MT040110	13.4	10.3	15.7	13.8	11.2	13.4	13.0
MT040130	12.9	10.5	16.0	13.5	12.7	12.8	13.1
MT000125	12.0	9.9	14.9	13.3	11.9	12.4	12.4
MT910189	12.2	9.6	15.4	12.7	11.7	12.0	12.3
MT040134	12.7	10.1	15.2	13.4	11.8	12.7	12.7
MT960101	13.1	9.4	16.7	13.1	11.1	13.0	12.8
MT040114	12.3	9.2	15.9	13.2	11.3	12.5	12.4
Metcalfe	12.7	10.5	18.1	13.2	11.4	13.0	13.2
Tradition	12.0	10.1	14.5	12.2	11.0	12.2	12.0
MT960101-30	13.0	9.1	16.9	13.4	12.1	12.8	12.9
MT040107	13.0	9.4	15.6	13.2	11.8	12.3	12.5
MT040129	13.3	8.8	17.2	13.1	12.0	13.5	13.0
MT040220	13.3	9.9	16.5	12.7	12.2	13.3	13.0
2B992316	12.6	9.4	15.9	13.9	11.5	12.5	12.6
Harrington	12.5	9.9	15.9	13.1	12.0	12.1	12.6
2B992657	13.1	9.4	15.8	12.4	12.6	13.5	12.8
MT960101-21	13.1	10.3	15.7	13.7	11.7	13.2	13.0
Means	12.6	10.0	15.7	12.8	11.7	12.7	12.6
C.V.	2.5				5.6	3.4	
LSD	0.6				1.1	0.8	

Table 6. 2006 Montana Dryland Intrastate Barley – Head Date
Days from January 1

Variety ID	Bozeman	Conrad	Havre	Huntley	Moccasin	Sidney	Mean
YU501385	173.7	179	166.2	174.4	170.4	165.3	171.5
MT040226	175.4	179	167.7	168.7	169.2	165.3	170.9
MT020155	169.4	172	165.4	167.2	165.1	163.1	167.0
MT970229	174.6	179	167.4	175.4	173.0	165.5	172.5
Haxby	173.4	175	166.9	174.6	169.3	164.0	170.5
MT020064	174.0	178	168.2	174.3	170.3	164.8	171.6
MT030079	173.7	177	167.7	174.6	171.9	166.1	171.9
MT000040	173.7	178	167.8	175.3	170.3	166.4	171.9
MT040024	174.2	177	165.5	174.3	170.1	164.8	171.0
MT040058	174.2	175	168.9	175.4	170.9	164.0	171.4
MT040073	174.2	178	170.1	175.8	171.4	165.1	172.4
Boulder	173.9	177	167.5	176.0	169.7	164.8	171.5
MT040013	175.5	179	170.4	174.5	172.8	166.5	173.1
MT010162	174.9	179	169.3	179.0	171.9	168.1	173.7
Eslick	174.0	177	168.9	175.2	173.0	165.4	172.2
MT040204	176.8	179	172.1	180.2	174.6	167.7	175.1
MT030137	174.0	177	168.5	175.3	169.8	165.7	171.7
MT040136	173.9	178	168.6	175.7	170.2	165.3	171.9
Xena	176.1	178	167.3	175.7	173.0	166.0	172.7
MT040216	175.8	178	172.4	175.6	172.7	166.4	173.5
MT020162	174.8	179	168.6	176.0	172.9	166.4	173.0
MT030063	175.4	177	174.1	180.1	172.0	166.4	174.2
MT040181	175.5	178	172.4	180.5	172.5	166.9	174.3
MT040231	177.2	177	166.6	175.7	170.6	166.4	172.2
MT020204	173.6	177	165.6	174.3	169.6	164.1	170.7
MT040021	173.8	177	167.2	174.1	170.8	164.6	171.3
MT010160	175.7	178	171.4	173.8	171.7	164.6	172.5
Conrad	175.9	178	174.3	181.3	173.0	167.2	175.0
MT970116-5	172.8	177	163.7	172.6	168.3	164.3	169.8
MT020167	173.6	177	170.6	177.3	172.8	164.2	172.6
MT010081	174.0	177	165.2	175.0	169.9	165.4	171.1
MT040104	174.5	177	172.6	181.6	169.8	165.2	173.4
MT970116-6	172.6	175	167.0	171.3	168.4	164.2	169.7
MT030042	173.6	178	169.7	173.7	169.9	164.8	171.6
MT000047	173.3	177	166.0	172.7	170.1	164.8	170.7
MT030144	175.4	178	166.2	176.0	172.0	164.9	172.1
Baronesse	175.2	178	172.4	175.1	174.2	168.1	173.8
MT010080	174.0	177	166.8	169.6	169.9	165.0	170.4
MT040209	174.4	178	171.7	176.7	173.5	166.1	173.4
MT020205	173.2	177	166.5	173.6	169.2	164.4	170.7

Continued

Table 6 cont.	Bozeman	Conrad	Havre	Huntley	Moccasin	Sidney	Mean
MT040223	174.7	178	169.2	176.3	171.7	166.9	172.8
MT000138	173.2	175	165.5	168.0	168.2	164.1	169.0
MT010158	175.6	177	166.9	175.3	169.9	166.8	171.9
MT970116	174.0	177	165.7	173.5	168.2	163.3	170.3
MT040093	174.0	179	170.6	180.3	171.6	167.1	173.8
MT040105	175.8	179	178.7	180.8	176.2	165.7	176.0
MT040106	175.0	179	174.8	180.8	173.1	166.3	174.8
MT040110	176.3	179	175.6	182.6	175.2	167.1	176.0
MT040130	176.7	178	171.1	175.9	174.1	167.4	173.9
MT000125	174.6	178	170.1	175.0	171.7	167.2	172.8
MT910189	173.0	173	166.6	175.0	169.5	164.1	170.2
MT040134	175.7	180	170.9	181.4	174.4	167.9	175.1
MT960101	176.4	179	172.3	181.4	175.2	167.5	175.3
MT040114	176.7	179	169.7	180.7	172.9	165.9	174.2
Metcalfe	173.6	175	167.4	174.0	169.4	163.9	170.5
Tradition	170.2	176	163.9	166.0	168.2	163.8	168.0
MT960101-30	176.7	180	178.4	181.8	175.6	168.5	176.8
MT040107	176.6	180	178.9	182.3	175.5	167.7	176.8
MT040129	175.8	179	174.2	179.9	174.9	168.1	175.3
MT040220	177.0	180	172.4	178.7	174.9	167.1	175.0
2B992316	175.4	178	170.6	178.6	172.2	165.9	173.5
Harrington	176.1	178	168.2	176.2	172.8	166.7	173.0
2B992657	174.6	179	168.8	172.2	171.9	165.7	172.0
MT960101-21	177.0	180	177.8	182.3	176.9	169.1	177.2
Means	174.7	177.7	169.6	176.1	171.6	165.8	172.6
C.V.	0.5			0.5	0.39	0.6	
LSD	1.4			1.3	1.08	1.8	

Table 7. 2006 Montana Dryland Intrastate Barley – Height (inches)

Variety ID	Bozeman	Conrad	Havre	Huntley	Moccasin	Sidney	Mean
YU501385	29.9	32	25.3	26.1	29.4	26.3	28.1
MT040226	29.8	31	25.9	26.7	29.7	27.6	28.4
MT020155	31.8	36	24.9	26.4	29.7	26.8	29.3
MT970229	29.4	32	25.8	26.9	30.4	25.2	28.3
Haxby	29.4	34	27.9	25.3	30.3	26.6	28.9
MT020064	32.0	36	26.7	25.7	32.4	24.1	29.5
MT030079	30.7	34	27.0	24.4	28.9	26.6	28.6
MT000040	29.6	32	26.1	25.5	30.8	25.9	28.3
MT040024	29.1	30	24.8	26.0	27.0	25.5	27.1
MT040058	29.5	32	27.3	24.1	29.8	22.6	27.6
MT040073	29.6	32	26.3	26.2	27.8	25.0	27.8
Boulder	30.2	33	25.3	25.8	29.4	22.4	27.7
MT040013	30.5	36	26.6	25.0	27.7	26.3	28.7
MT010162	31.2	34	23.1	24.7	31.7	25.4	28.3
Eslick	28.7	33	23.5	26.1	29.2	24.5	27.5
MT040204	27.9	32	24.1	24.1	27.1	25.4	26.8
MT030137	27.7	31	24.5	26.4	30.0	24.9	27.4
MT040136	28.4	33	25.7	25.4	28.6	24.7	27.6
Xena	30.0	31	25.8	25.0	29.9	25.6	27.9
MT040216	27.9	30	23.8	23.6	28.7	23.5	26.3
MT020162	30.7	34	25.4	24.6	32.9	25.9	28.9
MT030063	31.1	34	27.5	27.3	35.7	28.0	30.6
MT040181	28.5	30	21.8	22.0	29.2	24.6	26.0
MT040231	28.5	32	25.4	26.0	31.6	24.6	28.0
MT020204	31.2	32	28.1	25.8	30.3	25.1	28.7
MT040021	29.1	35	22.4	24.1	29.5	25.1	27.5
MT010160	29.4	33	26.3	28.0	32.0	26.2	29.1
Conrad	27.1	30	24.0	24.1	27.7	24.4	26.2
MT970116-5	34.2	36	26.4	29.8	34.9	29.5	31.8
MT020167	28.6	34	25.0	25.7	30.7	24.6	28.1
MT010081	29.9	33	26.9	26.1	31.5	26.4	29.0
MT040104	30.4	30	23.1	25.1	29.3	24.2	27.0
MT970116-6	33.4	33	26.1	25.7	32.0	29.7	30.0
MT030042	29.4	31	24.2	23.5	29.8	25.5	27.2
MT000047	32.5	32	25.3	26.6	30.4	25.8	28.8
MT030144	30.3	32	25.6	24.6	30.3	23.9	27.8
Baronesse	29.0	31	22.5	24.0	27.0	22.3	26.0
MT010080	32.2	34	26.3	26.4	32.5	26.9	29.7
MT040209	28.0	30	25.3	27.1	28.6	22.5	26.9
MT020205	31.5	32	26.7	25.7	32.4	25.9	29.0

Continued

Table 7 cont.	Bozeman	Conrad	Havre	Huntley	Moccasin	Sidney	Mean
MT040223	29.4	32	27.6	26.9	30.0	26.6	28.8
MT000138	33.3	36	28.6	27.1	34.1	29.1	31.4
MT010158	29.8	31	26.0	25.0	28.9	24.3	27.5
MT970116	33.0	33	25.5	26.7	31.0	25.4	29.1
MT040093	30.6	30	25.3	24.5	30.0	24.4	27.5
MT040105	27.3	31	25.8	24.3	29.8	24.5	27.1
MT040106	28.6	31	22.5	23.2	28.6	24.5	26.4
MT040110	28.7	33	25.9	24.3	27.7	23.7	27.2
MT040130	27.5	32	24.2	24.5	31.2	24.3	27.3
MT000125	31.0	33	25.1	28.4	31.9	27.7	29.5
MT910189	30.3	29	24.6	25.4	29.6	25.3	27.4
MT040134	27.9	29	24.7	25.3	29.1	23.9	26.6
MT960101	27.6	31	22.7	24.1	30.0	22.9	26.4
MT040114	28.7	33	24.3	24.3	29.2	24.8	27.4
Metcalfe	32.4	34	26.6	24.6	31.6	26.8	29.3
Tradition	33.9	35	26.0	29.9	32.4	26.6	30.6
MT960101-30	28.1	30	24.3	24.9	27.3	22.0	26.1
MT040107	29.1	31	25.8	23.7	28.9	23.7	27.0
MT040129	28.9	32	26.1	26.0	29.8	25.3	28.0
MT040220	28.0	30	24.1	24.0	30.6	25.0	26.9
2B992316	28.6	33	25.7	23.5	30.6	25.0	27.7
Harrington	29.0	32	25.7	23.5	27.9	24.5	27.1
2B992657	30.1	33	26.1	25.1	29.0	23.0	27.7
MT960101-21	27.1	30	24.9	23.6	29.5	23.7	26.5
Means	29.8	32.3	25.4	25.4	31.5	25.2	28.3
C.V.	4.5			10.7	63.1	6.1	
LSD	2.2			2.4	32.1	2.6	

Table 8. 2006 Montana Irrigated Intrastate Barley – All Traits

Variety ID	Yield bu/a	TW lb/bu	Plump %	Prot %	Head date	Height in.
MT040114	119.1	52.3	89.4	11.9	176.8	33.0
YU501385	118.3	53.4	89.6	11.4	174.4	33.2
MT020155	116.9	52.0	87.0	12.1	170.4	34.6
Calgary	116.7	51.8	88.4	12.0	175.4	27.7
MT000047	116.3	52.2	87.5	12.6	173.5	34.4
Baronesse	115.7	52.0	84.3	12.0	175.7	31.9
MT040226	115.3	54.4	81.4	11.8	173.3	34.8
MT030079	115.1	53.3	87.3	11.8	174.8	32.7
MT960101 G	114.7	51.6	80.8	11.9	177.4	32.2
Eslick	114.3	52.1	85.2	11.6	174.7	33.3
MT040209	114.0	52.0	81.7	11.9	175.7	31.7
Haxby	113.7	53.6	86.9	11.8	172.8	33.8
MT020162	113.6	52.6	88.9	12.2	175.8	35.3
MT040013	113.2	52.3	83.1	11.6	175.8	34.9
MT040181	113.1	52.1	83.7	12.0	175.5	31.2
2B992657	113.0	48.6	77.3	11.7	174.6	33.7
MT040024	112.7	52.1	78.0	11.8	173.8	31.4
MT020205	112.7	52.3	86.5	12.5	172.3	34.4
MT020204	112.5	52.4	86.0	12.3	172.9	33.6
MT040216	112.1	53.8	88.2	12.2	174.4	31.2
MT040130	112.1	52.4	84.2	11.7	175.6	31.6
MT970229	112.1	52.0	83.5	12.1	175.3	33.9
MT030137	112.0	52.3	85.1	12.6	173.2	31.6
MT040058	111.9	53.2	87.8	11.7	173.8	32.0
Boulder	111.8	53.9	89.1	12.4	174.4	33.2
MT040073	111.6	53.6	86.8	12.0	174.0	32.5
MT030063	111.5	53.0	89.3	12.0	175.8	36.5
Xena	111.5	51.4	80.1	11.9	174.9	34.6
MT040021	111.4	51.0	86.3	12.0	174.0	32.7
MT040231	111.0	52.8	85.5	12.3	174.0	34.0
Conrad	111.0	51.6	85.1	13.0	175.9	31.3
MT010080	110.6	52.1	86.8	12.7	173.0	35.5
MT000138	110.6	53.3	90.7	12.8	172.7	35.7
MT040106	110.4	51.5	89.2	12.1	177.2	31.2
MT040104	110.2	52.6	89.9	12.3	174.5	33.2
MT010162	109.8	52.5	86.1	12.2	176.7	33.9
MT970116-6	109.5	52.9	87.8	11.9	173.0	36.3
MT960101-30	109.3	51.0	78.0	12.0	177.8	32.0
MT040129	109.0	51.9	84.1	11.8	177.3	31.8
MT020064	108.9	53.1	91.8	12.6	173.6	33.4

Continued

Table 8 cont.	Yield	TW	Plump	Prot	Head	Height
MT040105	108.4	52.6	89.8	11.3	179.0	30.8
MT010081	108.4	52.1	87.0	12.5	173.5	34.2
MT970116 C	108.4	52.7	88.5	12.0	173.0	35.4
MT040134	107.9	52.0	77.4	12.1	176.8	32.2
MT960101-21	107.6	51.5	79.4	11.7	178.3	31.2
MT040204	107.5	51.2	82.1	11.8	177.7	32.9
MT040136	107.4	53.5	87.4	12.2	174.0	31.8
MT020167	107.0	50.9	90.2	12.5	174.8	33.5
MT010160	106.7	51.9	86.0	12.1	175.0	35.0
MT040110	106.6	52.3	85.8	12.1	178.1	32.0
MT030144	106.2	52.7	87.3	12.2	173.9	32.2
MT010158	106.1	51.9	87.1	12.2	174.5	32.8
Tradition	106.0	51.2	87.1	12.1	171.6	36.0
MT040093	105.7	52.2	86.2	12.9	175.3	33.1
MT970116-5	105.0	52.5	85.0	12.0	173.0	36.0
MT000125	104.9	52.2	90.4	12.1	175.0	34.2
MT040220	104.7	52.0	83.8	11.6	177.2	32.0
MT030042	104.6	52.8	84.3	11.7	174.0	31.1
MT040107	104.4	52.3	85.8	11.6	178.8	30.7
MT910189 H	104.2	51.7	88.6	12.5	172.9	32.9
2B992316	103.0	49.8	78.8	12.4	175.3	32.2
MT000040	102.0	53.0	85.6	12.4	173.8	32.4
Harrington	100.0	50.5	85.3	12.1	176.1	33.1
Metcalfe	99.2	51.1	86.3	12.3	174.1	34.0
Mean	110.0	52.2	85.7	12.1	174.9	33.1
C.V.	7.4	1.9	6.6	4.2	0.9	3.2
LSD	10.2	1.3	6.1	0.6	2.1	1.3

Locations: Bozeman, Conrad, Huntley, Kalispell, and Sidney.

Table 9. 2006 Montana Irrigated Intrastate Barley - Yield
Bu/a

<u>Variety ID</u>	<u>Bozeman</u>	<u>Conrad</u>	<u>Huntley</u>	<u>Kalispell</u>	<u>Sidney</u>	<u>Mean</u>
MT040114	129.6	128.6	105.2	144.9	87.2	119.1
YU501385	132.2	125.3	104.2	118.1	111.8	118.3
MT020155	129.0	118.2	105.5	114.4	117.6	116.9
Calgary	118.4	125.3	94.9	144.7	100.4	116.7
MT000047	129.0	125.4	104.7	117.0	105.3	116.3
Baronesse	124.8	116.9	111.8	116.8	108.1	115.7
MT040226	127.8	123.3	104.3	112.5	108.7	115.3
MT030079	131.8	128.6	103.4	117.9	93.8	115.1
MT960101	113.9	123.3	108.5	131.7	96.1	114.7
Eslick	139.4	110.1	112.9	105.2	104.0	114.3
MT040209	122.1	126.4	97.7	107.6	116.0	114.0
Haxby	128.0	119.2	104.5	116.8	100.1	113.7
MT020162	127.2	118.8	106.6	111.5	103.7	113.6
MT040013	131.9	105.4	113.4	116.8	98.6	113.2
MT040181	128.3	121.8	103.4	110.8	101.1	113.1
2B992657	115.6	107.3	110.3	143.2	88.8	113.0
MT040024	127.6	129.0	103.2	119.5	84.3	112.7
MT020205	126.2	116.6	101.7	115.3	103.7	112.7
MT020204	124.3	117.8	105.7	108.9	105.9	112.5
MT040216	121.9	118.5	95.6	123.0	101.4	112.1
MT040130	115.4	115.1	103.2	126.0	100.7	112.1
MT970229	115.8	125.4	99.2	111.6	108.4	112.1
MT030137	125.4	111.1	115.8	110.0	97.4	112.0
MT040058	127.1	108.0	104.9	116.2	103.5	111.9
Boulder	129.0	114.0	105.8	100.2	110.2	111.8
MT040073	126.6	106.9	102.7	116.7	104.9	111.6
MT030063	124.7	113.0	104.3	115.2	100.5	111.5
Xena	124.7	102.7	109.6	132.8	87.7	111.5
MT040021	124.4	118.6	99.8	122.8	91.4	111.4
MT040231	128.0	115.0	103.8	114.9	93.4	111.0
Conrad	121.7	107.8	106.6	105.3	113.7	111.0
MT010080	119.8	105.2	103.2	118.5	106.5	110.6
MT000138	120.0	113.9	100.2	117.3	101.6	110.6
MT040106	118.8	101.4	104.2	142.0	85.5	110.4
MT040104	116.2	98.4	105.5	132.7	98.2	110.2
MT010162	120.5	104.5	107.6	113.4	103.1	109.8
MT970116-6	126.7	113.4	99.9	109.9	97.7	109.5
MT960101-30	114.2	123.0	109.2	120.3	79.6	109.3
MT040129	114.4	113.6	103.7	118.0	95.5	109.0
MT020064	124.6	117.0	105.5	105.6	92.1	108.9

Continued

Table 9 cont.	Bozeman	Conrad	Huntley	Kalispell	Sidney	Mean
MT040105	115.2	117.5	96.5	128.5	84.4	108.4
MT010081	123.3	104.5	106.0	99.6	108.7	108.4
MT970116	121.2	108.0	101.2	114.7	97.0	108.4
MT040134	115.2	112.7	99.8	117.7	93.9	107.9
MT960101-21	111.8	113.0	99.2	124.8	89.1	107.6
MT040204	132.1	97.4	102.0	101.8	104.0	107.5
MT040136	121.6	108.4	97.9	106.8	102.2	107.4
MT020167	115.2	110.6	98.7	116.5	94.0	107.0
MT010160	114.9	118.5	100.3	96.2	103.5	106.7
MT040110	119.9	102.3	102.8	117.2	90.8	106.6
MT030144	123.3	109.0	104.3	101.1	93.2	106.2
MT010158	117.0	109.3	100.6	108.1	95.5	106.1
Tradition	117.0	106.8	81.8	110.9	113.6	106.0
MT040093	121.4	96.3	106.4	103.5	101.0	105.7
MT970116-5	120.3	112.5	98.9	103.3	89.9	105.0
MT000125	116.2	108.7	95.8	116.9	86.8	104.9
MT040220	114.3	111.8	101.4	104.8	91.5	104.7
MT030042	115.7	107.9	102.1	103.9	93.6	104.6
MT040107	112.0	115.8	103.2	108.1	82.8	104.4
MT910189	126.8	94.2	96.3	114.8	89.0	104.2
2B992316	116.3	111.9	98.8	90.9	96.9	103.0
MT000040	122.2	104.7	97.2	91.8	94.1	102.0
Harrington	115.5	91.7	98.5	97.0	97.2	100.0
Metcalfe	116.9	100.8	96.7	96.6	84.8	99.2
Mean	122.1	112.6	102.8	114.4	98.2	110.0
C.V.	4.1	6.7	5.5	10.3	7.8	
LSD	8.7	12.9	9.7	19.0	12.3	

Table 10. 2006 Montana Irrigated Intrastate Barley -
 Test Weight
 Lbs/bu

<u>Variety ID</u>	<u>Bozeman</u>	<u>Conrad</u>	<u>Huntley</u>	<u>Kalispell</u>	<u>Sidney</u>	<u>Mean</u>
MT040114	54.2	54.3	54.4	52.4	46.1	52.3
YU501385	55.1	56.0	53.9	53.0	49.1	53.4
MT020155	54.0	53.9	53.3	51.4	47.2	52.0
Calgary	53.7	54.4	54.2	50.4	46.5	51.8
MT000047	54.7	54.4	53.9	50.9	47.2	52.2
Baronesse	53.6	53.8	53.7	51.3	47.7	52.0
MT040226	56.3	58.0	56.1	52.5	49.2	54.4
MT030079	55.1	56.9	54.7	51.5	48.5	53.3
MT960101	53.2	53.7	54.0	50.0	46.9	51.6
Eslick	53.9	54.1	54.1	51.3	47.1	52.1
MT040209	53.3	54.4	54.2	50.8	47.2	52.0
Haxby	55.6	56.5	55.2	52.1	48.4	53.6
MT020162	54.6	55.4	54.0	51.0	47.9	52.6
MT040013	53.6	53.9	54.5	51.3	48.1	52.3
MT040181	54.2	54.4	54.5	50.2	47.1	52.1
2B992657	49.8	50.3	52.1	48.4	42.4	48.6
MT040024	54.1	55.1	54.0	51.5	46.1	52.1
MT020205	54.5	54.8	53.5	50.1	48.6	52.3
MT020204	54.8	55.3	54.4	49.6	47.8	52.4
MT040216	55.5	56.7	54.9	51.6	50.1	53.8
MT040130	53.9	54.5	54.2	51.6	47.7	52.4
MT970229	55.8	55.1	54.4	44.9	50.0	52.0
MT030137	54.1	55.1	54.5	50.3	47.5	52.3
MT040058	55.3	55.3	55.4	51.2	48.8	53.2
Boulder	55.9	57.2	54.3	51.5	50.6	53.9
MT040073	55.2	55.7	55.3	52.3	49.5	53.6
MT030063	55.1	55.6	54.4	50.8	49.1	53.0
Xena	53.0	54.4	53.8	51.1	44.9	51.4
MT040021	54.1	54.6	54.0	44.6	47.6	51.0
MT040231	54.7	55.4	54.6	50.9	48.2	52.8
Conrad	53.2	52.3	53.2	51.0	48.4	51.6
MT010080	54.7	54.6	53.7	49.9	47.4	52.1
MT000138	55.6	55.9	53.9	51.9	49.1	53.3
MT040106	54.3	52.9	53.5	51.1	45.9	51.5
MT040104	55.2	54.4	54.2	50.5	49.0	52.6
MT010162	54.4	54.8	53.8	51.1	48.5	52.5
MT970116-6	55.3	55.1	54.0	52.1	47.9	52.9
MT960101-30	53.1	52.8	53.7	50.8	44.3	51.0
MT040129	53.5	53.9	54.4	51.0	46.8	51.9
MT020064	55.4	54.8	54.7	51.7	49.0	53.1

Continued

Table 10 cont.	Bozeman	Conrad	Huntley	Kalispell	Sidney	Mean
MT040105	53.4	55.3	53.8	53.1	47.5	52.6
MT010081	54.9	54.0	53.9	50.2	47.6	52.1
MT970116	55.3	55.8	54.3	50.6	47.4	52.7
MT040134	53.7	54.1	54.0	51.1	46.8	52.0
MT960101-21	52.9	54.0	53.9	51.0	45.8	51.5
MT040204	53.4	53.2	53.9	50.3	45.4	51.2
MT040136	55.5	56.3	55.5	49.4	50.7	53.5
MT020167	54.2	54.1	54.0	44.5	47.7	50.9
MT010160	54.5	54.0	53.8	50.8	46.3	51.9
MT040110	54.4	52.6	54.9	52.2	47.3	52.3
MT030144	54.1	56.0	54.3	51.6	47.5	52.7
MT010158	54.8	54.8	53.5	49.8	46.4	51.9
Tradition	52.3	53.2	51.9	51.4	47.2	51.2
MT040093	54.9	54.4	55.3	49.7	46.8	52.2
MT970116-5	55.6	54.4	54.4	50.6	47.4	52.5
MT000125	54.4	54.7	54.0	50.8	47.0	52.2
MT040220	53.8	55.1	54.0	50.4	46.7	52.0
MT030042	55.2	55.1	54.6	51.3	47.5	52.8
MT040107	54.0	54.4	54.3	51.7	47.1	52.3
MT910189	54.6	53.2	54.3	51.1	45.3	51.7
2B992316	50.9	52.9	52.1	50.4	43.0	49.8
MT000040	55.3	55.6	54.6	52.1	47.5	53.0
Harrington	52.4	52.0	53.2	50.8	43.9	50.5
Metcalfe	52.7	53.9	53.2	49.6	45.8	51.1
Mean	54.3	54.6	54.1	50.7	47.4	52.2
C.V.	0.7		0.5		2.4	
LSD	0.6		0.5		1.8	

Table 11. 2006 Montana Irrigated Intrastate Barley - Plump Percent

<u>Variety ID</u>	<u>Bozeman</u>	<u>Conrad</u>	<u>Huntley</u>	<u>Kalispell</u>	<u>Sidney</u>	<u>Mean</u>
MT040114	86.6	95	96.3	93.0	76.3	89.4
YU501385	88.4	96	90.0	96.4	77.3	89.6
MT020155	89.6	90	94.0	84.8	76.7	87.0
Calgary	90.7	88	94.7	88.8	79.7	88.4
MT000047	90.3	94	92.8	87.2	73.3	87.5
Baronesse	84.9	86	95.3	81.5	74.0	84.3
MT040226	87.4	96	62.4	82.9	78.3	81.4
MT030079	85.9	94	93.1	91.4	72.3	87.3
MT960101	74.6	90	87.8	79.7	71.7	80.8
Eslick	85.2	86	95.3	88.1	71.3	85.2
MT040209	79.7	86	92.0	82.7	68.3	81.7
Haxby	88.7	91	95.3	91.3	68.3	86.9
MT020162	90.0	95	93.8	89.2	76.7	88.9
MT040013	83.4	87	94.5	86.6	64.0	83.1
MT040181	83.4	90	92.5	80.6	72.0	83.7
2B992657	69.2	76	93.0	76.8	71.7	77.3
MT040024	73.2	93	83.9	82.8	57.0	78.0
MT020205	92.3	95	94.9	82.2	68.3	86.5
MT020204	91.1	88	93.4	80.5	77.0	86.0
MT040216	89.6	91	96.2	90.5	74.0	88.2
MT040130	83.3	88	91.8	88.1	69.7	84.2
MT970229	96.8	93	64.9	88.0	75.0	83.5
MT030137	88.6	90	93.5	86.3	67.3	85.1
MT040058	89.4	94	95.0	87.8	73.0	87.8
Boulder	95.7	94	97.2	83.7	74.7	89.1
MT040073	89.5	89	95.5	90.3	69.7	86.8
MT030063	94.3	96	94.8	83.1	78.3	89.3
Xena	73.2	85	92.1	83.2	67.0	80.1
MT040021	90.5	92	94.5	85.6	69.0	86.3
MT040231	87.5	90	94.9	83.8	71.3	85.5
Conrad	90.5	89	96.8	76.2	73.0	85.1
MT010080	93.9	91	92.6	77.2	79.3	86.8
MT000138	96.7	95	97.1	85.6	79.3	90.7
MT040106	92.5	88	97.1	91.0	77.3	89.2
MT040104	94.8	90	94.8	85.9	84.0	89.9
MT010162	89.5	87	92.2	84.9	76.7	86.1
MT970116-6	91.4	90	97.6	86.3	73.7	87.8
MT960101-30	69.8	84	84.3	86.9	65.0	78.0
MT040129	81.3	88	92.0	86.3	73.0	84.1
MT020064	96.7	97	97.0	87.9	80.7	91.8

Continued

Table 11 cont.	Bozeman	Conrad	Huntley	Kalispell	Sidney	Mean
MT040105	87.8	94	95.4	95.9	76.0	89.8
MT010081	92.2	87	93.5	85.2	77.0	87.0
MT970116	91.0	91	96.7	86.9	76.7	88.5
MT040134	81.0	82	92.1	79.5	52.3	77.4
MT960101-21	69.5	85	83.4	90.7	68.3	79.4
MT040204	77.1	86	93.9	78.1	75.7	82.1
MT040136	93.2	93	96.8	72.5	81.3	87.4
MT020167	89.7	94	96.7	89.6	81.0	90.2
MT010160	91.1	89	94.8	81.7	73.3	86.0
MT040110	84.9	77	94.3	92.3	80.7	85.8
MT030144	90.6	91	95.1	87.7	72.0	87.3
MT010158	94.8	95	93.2	83.0	69.7	87.1
Tradition	97.6	88	95.9	82.5	71.3	87.1
MT040093	92.4	89	97.3	84.0	68.3	86.2
MT970116-5	91.2	86	96.8	81.7	69.3	85.0
MT000125	91.4	96	95.1	90.2	79.3	90.4
MT040220	79.4	87	89.5	85.3	77.7	83.8
MT030042	85.7	87	92.6	84.5	71.7	84.3
MT040107	81.7	91	91.7	92.6	72.0	85.8
MT910189	94.5	91	96.3	87.2	74.0	88.6
2B992316	75.8	85	91.0	75.3	67.0	78.8
MT000040	89.1	92	94.4	91.6	60.7	85.6
Harrington	86.9	78	95.3	89.7	76.7	85.3
Metcalfe	86.0	93	95.2	85.6	71.7	86.3
Mean	87.3	89.8	92.9	85.6	73.0	85.7
C.V.	2.2		10.7			
LSD	3.3		ns			

Table 12. 2006 Montana Irrigated Intrastate Barley -
Protein
Percent

<u>Variety ID</u>	<u>Bozeman</u>	<u>Conrad</u>	<u>Huntley</u>	<u>Kalispell</u>	<u>Sidney</u>	<u>Mean</u>
MT040114	9.7	12.7	10.8	13.6	12.9	11.9
YU501385	9.1	11.7	10.3	13.6	12.4	11.4
MT020155	9.9	13.3	11.1	14.1	12.2	12.1
Calgary	9.6	12.4	10.1	14.4	13.5	12.0
MT000047	10.5	13.3	11.8	14.8	12.7	12.6
Baronesse	9.6	11.8	11.3	15.0	12.5	12.0
MT040226	9.4	12.1	10.7	14.3	12.7	11.8
MT030079	9.4	12.4	10.2	14.1	12.8	11.8
MT960101	9.5	12.5	10.4	15.0	12.2	11.9
Eslick	9.5	11.9	10.5	14.2	12.0	11.6
MT040209	10.2	11.9	11.0	14.3	12.3	11.9
Haxby	9.2	12.6	10.7	14.2	12.2	11.8
MT020162	10.0	13.1	11.2	14.6	12.1	12.2
MT040013	9.2	11.3	10.6	14.2	12.7	11.6
MT040181	9.8	12.6	10.0	15.0	12.7	12.0
2B992657	9.8	11.4	10.5	14.8	12.2	11.7
MT040024	9.4	12.3	9.7	14.9	12.5	11.8
MT020205	9.9	13.8	11.2	16.0	11.9	12.5
MT020204	10.1	13.2	11.1	15.2	12.0	12.3
MT040216	9.3	13.0	10.5	14.8	13.5	12.2
MT040130	9.5	12.7	10.8	13.5	11.9	11.7
MT970229	9.9	12.5	11.0	15.0	12.1	12.1
MT030137	10.2	13.5	12.2	15.1	11.8	12.6
MT040058	9.8	12.4	10.1	14.4	12.0	11.7
Boulder	10.4	13.6	10.8	14.5	12.7	12.4
MT040073	9.8	13.7	10.8	14.3	11.5	12.0
MT030063	9.7	12.6	10.7	15.0	12.2	12.0
Xena	9.3	12.6	10.1	14.6	12.9	11.9
MT040021	9.8	13.3	9.8	15.0	12.3	12.0
MT040231	9.9	13.6	10.1	15.4	12.3	12.3
Conrad	9.9	13.7	11.5	16.2	13.6	13.0
MT010080	10.6	13.1	11.8	15.3	12.7	12.7
MT000138	10.5	13.4	12.2	15.4	12.4	12.8
MT040106	10.0	13.6	11.1	13.8	11.8	12.1
MT040104	10.2	12.9	11.4	14.7	12.1	12.3
MT010162	9.6	12.4	11.4	15.4	12.4	12.2
MT970116-6	9.8	12.8	10.9	14.1	11.9	11.9
MT960101-30	9.4	12.5	10.9	14.1	13.0	12.0
MT040129	9.9	12.7	10.8	14.6	11.1	11.8
MT020064	10.2	13.2	11.8	14.8	13.0	12.6

Continued

Table 12 cont.	Bozeman	Conrad	Huntley	Kalispell	Sidney	Mean
MT040105	10.2	11.4	10.3	13.8	10.8	11.3
MT010081	10.3	14.3	11.6	14.5	11.7	12.5
MT970116	9.6	12.3	11.2	14.2	12.7	12.0
MT040134	9.4	12.6	10.6	15.2	12.8	12.1
MT960101-21	9.6	12.4	10.5	14.5	11.4	11.7
MT040204	9.2	12.1	10.1	15.2	12.6	11.8
MT040136	9.7	12.9	11.0	15.7	11.9	12.2
MT020167	9.8	13.2	11.1	15.6	13.0	12.5
MT010160	9.5	13.0	11.3	14.5	12.2	12.1
MT040110	10.4	13.4	10.4	14.3	11.9	12.1
MT030144	9.8	12.9	11.4	15.2	11.5	12.2
MT010158	10.0	12.5	11.6	14.5	12.6	12.2
Tradition	9.6	12.2	12.0	14.5	12.4	12.1
MT040093	10.4	13.5	12.3	15.0	13.4	12.9
MT970116-5	9.8	12.6	10.9	14.8	12.1	12.0
MT000125	10.1	12.2	11.1	14.3	12.8	12.1
MT040220	9.7	12.0	9.8	14.4	12.3	11.6
MT030042	8.8	12.2	9.9	15.0	12.4	11.7
MT040107	10.3	11.9	10.7	13.8	11.3	11.6
MT910189	10.4	12.5	11.7	14.9	13.2	12.5
2B992316	9.7	12.7	10.5	15.8	13.2	12.4
MT000040	9.8	13.5	11.5	15.1	12.3	12.4
Harrington	9.9	12.9	11.3	13.5	12.9	12.1
Metcalfe	10.1	12.6	10.8	14.8	13.2	12.3
Mean	9.8	12.7	10.9	14.7	12.4	12.1
C.V.	3.7				4.6	
LSD	0.6				0.9	

Table 13. 2006 Montana Irrigated Intrastate Barley
Head Date
Days from January 1

<u>Variety ID</u>	<u>Conrad</u>	<u>Huntley</u>	<u>Kalispell</u>	<u>Sidney</u>	<u>Mean</u>
MT040114	178	175.1	178.0	176.0	176.8
YU501385	176	171.3	176.7	173.7	174.4
MT020155	172	165.6	173.3	170.7	170.4
Calgary	178	171.0	178.0	174.7	175.4
MT000047	176	167.4	177.0	173.7	173.5
Baronesse	178	171.3	178.3	175.3	175.7
MT040226	175	166.0	177.3	175.0	173.3
MT030079	178	169.0	178.0	174.3	174.8
MT960101	179	174.4	180.0	176.0	177.4
Eslick	177	168.6	178.0	175.0	174.7
MT040209	178	171.6	178.7	174.7	175.7
Haxby	175	166.4	177.3	172.3	172.8
MT020162	177	173.0	178.3	175.0	175.8
MT040013	180	168.7	179.0	175.3	175.8
MT040181	178	170.3	178.7	175.0	175.5
2B992657	178	166.6	178.3	175.7	174.6
MT040024	177	166.7	177.0	174.7	173.8
MT020205	175	165.6	176.3	172.3	172.3
MT020204	175	166.4	176.7	173.3	172.9
MT040216	177	167.3	179.0	174.3	174.4
MT040130	178	170.4	178.0	176.0	175.6
MT970229	178	169.0	179.0	175.0	175.3
MT030137	176	167.1	176.0	173.7	173.2
MT040058	177	167.6	177.0	173.7	173.8
Boulder	175	170.1	178.0	174.3	174.4
MT040073	177	167.4	177.7	174.0	174.0
MT030063	178	170.3	179.7	175.3	175.8
Xena	177	168.7	178.3	175.7	174.9
MT040021	175	168.7	177.3	175.0	174.0
MT040231	177	166.7	177.0	175.3	174.0
Conrad	179	172.0	178.0	174.7	175.9
MT010080	176	166.3	176.0	173.7	173.0
MT000138	175	166.7	176.3	172.7	172.7
MT040106	179	176.0	178.3	175.7	177.2
MT040104	175	171.0	177.0	175.0	174.5
MT010162	179	172.9	178.3	176.7	176.7
MT970116-6	174	167.0	177.0	174.0	173.0
MT960101-30	179	175.7	180.0	176.7	177.8
MT040129	178	175.0	180.0	176.0	177.3
MT020064	177	166.7	176.3	174.3	173.6

Continued

Table 13 cont.	Conrad	Huntley	Kalispell	Sidney	Mean
MT040105	180	180.0	179.7	176.3	179.0
MT010081	177	167.3	177.0	172.7	173.5
MT970116	175	166.0	177.3	173.7	173.0
MT040134	180	172.0	179.3	176.0	176.8
MT960101-21	181	175.4	180.3	176.7	178.3
MT040204	180	174.3	180.0	176.7	177.7
MT040136	177	166.8	178.0	174.0	174.0
MT020167	178	169.3	177.3	174.7	174.8
MT010160	178	167.7	178.3	176.0	175.0
MT040110	179	177.0	179.3	177.0	178.1
MT030144	176	167.6	177.0	175.0	173.9
MT010158	178	167.8	177.3	175.0	174.5
Tradition	175	164.9	175.0	171.3	171.6
MT040093	175	173.0	178.0	175.3	175.3
MT970116-5	175	166.0	177.0	174.0	173.0
MT000125	179	169.4	177.3	174.3	175.0
MT040220	178	175.6	179.3	176.0	177.2
MT030042	178	167.0	177.3	173.7	174.0
MT040107	180	179.6	178.7	177.0	178.8
MT910189	175	166.9	176.7	173.0	172.9
2B992316	178	169.4	178.0	175.7	175.3
MT000040	176	167.7	178.0	173.7	173.8
Harrington	177	172.7	179.3	175.3	176.1
Metcalfe	178	167.4	177.0	174.0	174.1
Mean	177.2	169.8	177.8	174.7	174.9
C.V.		0.7	0.4	1.1	
LSD		1.9	1.2	1.0	

Table 14. 2006 Montana Irrigated Intrastate Barley - Height inches

<u>Variety ID</u>	<u>Bozeman</u>	<u>Conrad</u>	<u>Huntley</u>	<u>Kalispell</u>	<u>Sidney</u>	<u>Mean</u>
MT040114	33.3	31	30.6	39.8	30.5	33.0
YU501385	32.2	31	29.5	42.1	31.2	33.2
MT020155	33.0	35	31.4	43.3	30.3	34.6
Calgary	26.5	28	25.3	35.0	23.6	27.7
MT000047	33.8	33	31.8	42.0	31.4	34.4
Baronesse	31.9	30	28.8	38.8	29.9	31.9
MT040226	34.2	30	32.5	44.7	32.8	34.8
MT030079	31.8	32	29.3	41.3	29.1	32.7
MT960101	32.5	32	29.2	39.2	28.0	32.2
Eslick	33.3	31	30.8	40.8	30.4	33.3
MT040209	31.2	31	28.3	39.7	28.4	31.7
Haxby	32.1	32	30.9	43.2	30.6	33.8
MT020162	34.4	34	32.3	43.4	32.6	35.3
MT040013	34.9	35	31.6	42.3	30.7	34.9
MT040181	30.6	30	28.9	38.5	28.2	31.2
2B992657	33.3	31	30.8	40.7	32.9	33.7
MT040024	30.2	30	28.3	39.5	29.0	31.4
MT020205	32.4	35	31.8	42.5	30.2	34.4
MT020204	33.0	32	31.8	41.2	30.2	33.6
MT040216	29.6	32	27.7	38.5	28.4	31.2
MT040130	31.8	29	28.9	40.6	27.8	31.6
MT970229	32.6	33	32.3	41.9	29.9	33.9
MT030137	31.2	30	29.2	39.9	27.6	31.6
MT040058	31.1	32	28.0	40.7	28.0	32.0
Boulder	33.2	31	28.7	42.0	30.8	33.2
MT040073	30.9	31	30.0	40.7	29.7	32.5
MT030063	34.6	37	32.9	45.0	33.0	36.5
Xena	33.4	33	31.0	43.1	32.4	34.6
MT040021	34.2	31	28.9	40.8	28.7	32.7
MT040231	34.0	35	30.6	41.9	28.3	34.0
Conrad	30.7	28	28.6	38.8	30.4	31.3
MT010080	35.7	32	34.4	42.7	32.9	35.5
MT000138	35.3	36	33.6	42.8	30.9	35.7
MT040106	30.8	31	28.6	37.7	28.1	31.2
MT040104	33.1	31	31.7	40.9	29.0	33.2
MT010162	32.3	31	31.1	44.1	31.0	33.9
MT970116-6	37.2	35	33.1	43.6	32.8	36.3
MT960101-30	31.6	30	28.2	40.6	29.5	32.0
MT040129	31.7	29	28.7	40.2	29.4	31.8
MT020064	33.0	31	32.0	41.5	29.5	33.4

Continued

Table 14 cont.	Bozeman	Conrad	Huntley	Kalispell	Sidney	Mean
MT040105	31.8	30	26.2	39.3	26.9	30.8
MT010081	34.8	32	30.7	42.5	31.1	34.2
MT970116	35.6	33	32.7	43.2	32.6	35.4
MT040134	32.5	31	29.1	40.0	28.5	32.2
MT960101-21	31.0	30	28.3	38.9	27.7	31.2
MT040204	32.3	30	29.0	40.9	32.2	32.9
MT040136	31.3	31	29.6	40.4	26.6	31.8
MT020167	33.8	31	31.2	41.3	30.1	33.5
MT010160	33.9	34	32.1	42.2	32.6	35.0
MT040110	32.3	31	29.1	39.4	28.1	32.0
MT030144	32.1	32	29.1	39.3	28.8	32.2
MT010158	31.7	31	31.4	42.9	27.0	32.8
Tradition	33.7	36	32.7	44.5	33.1	36.0
MT040093	32.6	32	30.4	40.6	29.9	33.1
MT970116-5	37.6	35	32.8	42.5	32.3	36.0
MT000125	33.7	33	32.5	42.4	29.4	34.2
MT040220	33.6	28	29.1	39.9	29.2	32.0
MT030042	31.2	30	29.6	37.2	27.4	31.1
MT040107	30.3	29	27.8	39.0	27.4	30.7
MT910189	33.9	32	29.9	40.4	28.5	32.9
2B992316	31.7	30	29.4	38.9	30.8	32.2
MT000040	32.0	30	30.8	40.0	29.3	32.4
Harrington	32.9	31	29.7	41.0	31.1	33.1
Metcalfe	32.9	32	32.2	42.5	30.4	34.0
Mean	32.7	31.6	30.3	41.0	29.8	33.1
C.V.	3.8		4.0	2.6	4.9	
LSD	2.1		2.0	2.1	2.5	