

PROJECT TITLE:

Statewide Barley Performance

YEAR: 1994

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) & Pat Hensleigh  
 Conrad: Greg Kushnak  
 Havre: Gregg Carlson  
 Huntley: Gil Stallknecht  
 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.

Yield data are summarized for each location in Tables 1 and 7 for dryland and irrigated, respectively. Data for other traits are presented in Tables 2 and 8 (test weight), Tables 3 and 9 (plump), Tables 4 and 10 (head date), Tables 5 and 11 (height), and Tables 6 and 12 (protein). Good soil moisture carryover and early season rainfall contributed to fairly good dryland yields at most locations, in spite of drought conditions later in the season.

Varieties with above average dryland yield and test weight (statewide) included Stark, Bowman, Lewis, Chinook, BA1215, and Gallatin. The high ranking of Bowman was likely due to the dry conditions during the second half of the growing season, as this variety's adaptation is rather specific to dry conditions. Chinook is a new release from MSU, and is agronomically superior to Harrington with similar malt quality. Above average yielders on irrigated included BA1215, Baronesse, Gallatin, IdaGold, and Stark.

Table 1. 1994 SPRING BARLEY DRYLAND INTRASTATE SUMMARY

## YIELD (bu/ac)

ID	Pedigree	Havre	Sidney	Moccasin	Huntley	Conrad	Bozeman	Mean	BYX	RSQ
21140523	Chinook	65.2	51.7	52.4	53.4	87.9	115.3	71.0	1.01	0.99
2B894311	BA 2B89-4311	57.7	37.8	43.9	40.0	87.7	107.6	62.5	1.12	0.97
8638477	Baronesse * Arena	61.6	35.5	48.8	48.6	88.5	109.3	65.4	1.07	0.94
90014-DH	WPB 90014-DH	58.4	41.6	41.2	37.0	82.8	107.8	61.5	1.11	0.99
BA 1202	BA 1202	53.9	35.5	43.7	44.3	76.9	106.1	60.1	1.04	0.98
BA 1215	2B82-8529 (BA 8529)	64.8	60.7	53.7	54.9	82.8	105.0	70.3	0.78	0.98
BZ489-29	Merlin	57.7	28.2	42.6	45.3	71.8	104.0	58.3	1.02	0.93
CI 15229	Steptoe	67.9	61.5	50.3	51.2	87.8	116.0	72.5	0.99	0.98
CI 15514	Hector	67.6	55.5	48.3	49.2	84.4	109.4	69.1	0.94	0.99
CI 15856	Lewis	68.4	54.3	49.6	54.4	86.4	119.2	72.0	1.05	0.99
H1851195	MT41918/TR450 (MT851	69.2	59.2	52.9	56.0	85.8	120.7	74.0	1.01	0.99
H2860224	Lewis/Apex (MT860224	61.1	46.9	47.6	45.4	81.8	103.8	64.4	0.93	0.99
H3851032	Harrington/Clark(MT8	61.7	45.4	50.9	49.7	91.0	100.5	66.5	0.89	0.93
H3860224	Lewis/Apex (MT860224	60.0	51.7	41.9	50.0	78.1	111.1	65.5	1.00	0.99
H5860219	Lewis/Apex (MT860219	58.6	51.0	50.7	43.8	75.1	104.4	63.9	0.88	0.98
H5870120	Lindy/Martin (MT8701	71.0	56.7	50.7	53.7	76.2	115.8	70.7	0.94	0.96
H6860756	Gallatin/Bellona (MT	60.9	35.2	46.6	45.5	79.4	119.1	64.4	1.20	0.97
MT 81161	Lewis/Kgs/Smt	69.4	57.2	48.0	51.0	85.2	109.0	69.9	0.92	0.98
MT140523	Hector/Klages	69.2	56.7	52.2	53.5	85.8	114.8	72.0	0.97	1.00
MT851032	Harrington/Clark	62.0	46.1	48.2	45.4	91.0	114.2	67.8	1.12	0.99
MT851195	MT41918/TR450	65.9	60.1	51.1	53.5	88.5	109.8	71.5	0.90	0.98
MT860756	Gallatin/Bellona	65.3	44.5	47.9	49.7	85.7	112.5	67.6	1.05	0.99
MT861596	Lewis/MT 41549	66.0	50.8	51.8	55.5	84.0	115.7	70.6	1.00	1.00
MT886610	MT 81149/Lewis	63.1	66.2	50.5	45.0	81.3	112.0	69.7	0.92	0.92
MT889106	Apex/Lewis	71.5	58.6	54.1	62.0	83.4	122.0	75.3	0.98	0.97
MT890008	Fleet/Bowman	65.5	32.9	43.5	41.3	104.0	118.7	67.6	1.36	0.93
MT890018	Gallatin/Apex	62.1	52.1	53.7	52.6	81.6	107.0	68.2	0.87	1.00
MT890070	MT47219/Bowman	71.1	62.5	53.2	54.9	88.6	124.5	75.8	1.06	0.98
MT890128	Steptoe/Robust	70.0	60.2	46.2	47.1	75.8	106.3	67.6	0.85	0.93
MTSU 247	Shonkin	55.1	36.0	38.0	35.8	72.4	89.8	54.5	0.88	0.98
ND 9866	Stark	65.8	60.6	53.3	61.7	86.2	119.7	74.5	0.96	0.97
NS 78054	Baronesse	68.8	46.2	53.0	57.3	92.3	121.8	73.2	1.12	0.98
PI483237	Bowman	68.2	52.7	54.0	61.2	86.5	119.7	73.7	1.00	0.98
PI491534	Gallatin	65.2	47.6	47.9	54.9	93.0	109.9	69.7	1.00	0.96
SK 76333	Harrington	58.6	41.6	48.6	45.5	84.1	109.5	64.7	1.05	0.99
WPB94 4	Sissy	59.5	40.4	41.2	38.2	83.3	105.0	61.3	1.07	0.98
*****	SITE MEAN *****	65.4	52.4	49.8	51.0	84.8	113.5	69.5	1.00	1.00
C.V.	S/MEAN * 100	4.58	8.42	8.69	6.58	9.77	6.55	—	—	—
LSD (.05)	LSD (.05)	5.19	7.69	7.49	5.83	14.40	12.01	—	—	—

Table 2. 1994 SPRING BARLEY DRYLAND INTRASTATE SUMMARY  
TEST WEIGHT (lb/bu)

ID	Pedigree	Havre	Sidney	Moccasin	Huntley	Conrad	Bozeman	Mean	BYX	RSQ
21140523	Chinook	46.1	53.4	50.2	42.7	51.2	53.0	49.4	1.07	0.99
2B894311	BA 2B89-4311	42.2	52.0	50.8	42.1	50.5	53.5	48.5	1.25	0.95
86384777	Baronesse * Arena	45.0	51.8	51.2	44.4	52.1	53.4	49.6	0.95	0.92
90014-DH	WPB 90014-DH	41.4	49.9	49.3	40.8	43.7	50.2	45.9	1.00	0.80
BA 1202	BA 1202	41.7	51.1	48.0	41.3	47.1	51.5	46.8	1.11	0.96
BA 1215	2B82-8529 (BA 8529)	46.6	53.3	52.0	46.3	50.2	53.5	50.3	0.79	0.94
BZ489-29	Merlin	42.5	59.6	59.0	46.3	50.7	57.3	52.6	1.55	0.72
CI 15229	Steptoe	40.6	45.9	42.4	39.1	46.8	46.8	43.6	0.77	0.83
CI 15514	Hector	45.6	53.8	51.0	42.6	52.1	53.4	49.8	1.15	0.98
CI 15856	Lewis	47.9	53.8	51.1	43.4	52.8	53.7	50.4	1.01	0.94
H1851195	MT41918/TR450 (MT851	46.4	52.4	49.9	43.5	50.9	53.7	49.5	0.97	0.98
H2860224	Lewis/Apex (MT860224	43.6	53.6	49.5	42.7	48.0	52.4	48.3	1.10	0.95
H3851032	Harrington/Clark(MT8	45.1	52.8	50.6	42.1	51.1	53.0	49.1	1.13	0.99
H3860224	Lewis/Apex (MT860224	44.9	54.3	50.3	44.2	48.5	53.4	49.3	1.02	0.92
H5860219	Lewis/Apex (MT860219	43.0	53.5	50.5	42.5	49.9	52.5	48.7	1.19	0.97
H5870120	Lindy/Martin (MT8701	41.2	46.1	42.2	38.2	45.4	46.6	43.3	0.80	0.90
H6860756	Gallatin/Bellona (MT	44.9	52.9	51.0	43.2	50.3	54.0	49.4	1.10	0.99
MT 81161	Lewis/Kgs/Smt	46.4	51.9	46.2	41.4	50.6	51.2	47.8	0.99	0.88
MT140523	Hector/Klages	45.4	54.0	50.2	44.2	51.6	53.5	49.8	1.04	0.98
MT851032	Harrington/Clark	44.9	53.2	50.0	43.5	51.1	53.5	49.4	1.07	0.99
MT851195	MT41918/TR450	45.4	52.3	49.5	43.2	49.9	53.8	49.0	1.02	0.99
MT860756	Gallatin/Bellona	45.2	53.3	51.3	43.0	51.7	53.5	49.7	1.12	0.98
MT861596	Lewis/MT 41549	47.0	54.2	52.6	46.3	52.0	55.1	51.2	0.93	0.98
MT886610	MT 81143/Lewis	44.8	54.1	50.5	42.8	50.9	52.8	49.3	1.14	0.99
MT889106	Apex/Lewis	50.8	53.1	51.7	47.5	51.9	55.1	51.7	0.60	0.86
MT890008	Fleet/Bowman	44.0	49.1	50.6	44.2	50.7	52.9	48.6	0.84	0.81
MT890018	Gallatin/Apex	46.4	53.9	50.3	44.9	52.1	54.4	50.3	0.99	0.98
MT890070	MT47219/Bowman	49.9	53.1	50.8	46.5	53.1	54.5	51.3	0.69	0.88
MT890128	Steptoe/Robust	41.5	48.1	42.6	38.6	47.6	47.7	44.3	0.94	0.85
MTSU 247	Shonkin	42.0	60.3	57.7	43.2	50.4	55.5	51.5	1.74	0.80
ND 9866	Stark	49.6	54.3	52.0	46.8	52.8	54.4	51.6	0.74	0.98
NS 78054	Baronesse	45.4	53.5	51.5	45.9	50.0	53.5	50.0	0.88	0.93
PI483237	Bowman	50.5	53.4	51.8	47.9	52.3	55.0	51.8	0.59	0.92
PI491534	Gallatin	46.6	53.0	51.2	46.3	52.4	54.8	50.7	0.86	0.94
SK 76333	Harrington	42.6	52.8	48.9	41.0	50.1	51.9	47.9	1.24	0.98
WPB94 4	Sissy	45.4	51.4	51.4	43.0	49.7	52.4	48.9	0.94	0.95
*****	SITE MEAN *****	45.6	52.9	50.1	43.4	50.4	53.1	49.2	1.00	1.00
C.V.	S/MEAN * 100	1.96	1.27	1.29	---	---	1.19	---	---	---
LSD(.05)	LSD(.05)	1.50	1.14	1.12	---	---	1.27	---	---	---

Table 3. 1994 SPRING BARLEY DRYLAND INTRASTATE SUMMARY  
PLUMP PERCENT

ID	Pedigree	Havre	Sidney	Moccasin	Huntley	Conrad	Bozeman	Mean	BYX	RSQ
21140523	Chinook	27.6	87.6	18.9	3.8	91.0	56.1	47.5	1.26	0.98
2B894311	BA 2B89-4311	16.3	88.1	36.7	13.7	89.0	63.6	51.2	1.11	0.88
8638477	Baronesse * Arena	30.2	87.3	36.5	23.8	93.0	62.1	55.5	1.00	0.93
90014-DH	WPB 90014-DH	12.3	84.1	17.4	5.5	24.0	33.9	29.5	0.74	0.56
BA 1202	BA 1202	15.6	88.7	16.9	7.3	75.0	58.4	43.7	1.18	0.95
BA 1215	2B82-8529 (BA 8529)	22.9	90.1	20.3	15.1	76.0	39.4	44.1	1.03	0.89
BZ489-29	Merlin	18.2	75.8	18.3	5.4	53.0	23.4	32.4	0.84	0.83
CI 15229	Steptoe	53.7	81.6	30.8	17.8	85.0	57.2	54.4	0.91	0.96
CI 15514	Hector	25.6	82.8	24.3	11.1	91.0	61.4	49.4	1.14	0.96
CI 15856	Lewis	48.3	83.6	26.1	8.5	92.0	62.0	53.4	1.11	0.97
H1851195	MT41918/TR450 (MT851	59.6	86.7	22.8	8.6	92.0	72.5	57.0	1.14	0.92
H2860224	Lewis/Apex (MT860224	43.1	89.2	18.5	14.9	67.0	62.0	49.1	0.98	0.94
H3851032	Harrington/Clark(MT8	42.3	91.4	48.7	7.2	94.0	64.0	57.9	1.09	0.92
H3860224	Lewis/Apex (MT860224	31.6	88.8	47.1	19.1	77.0	72.6	56.0	0.90	0.88
H5860219	Lewis/Apex (MT860219	25.7	88.2	48.8	14.7	81.0	53.2	51.9	0.92	0.83
H5870120	Lindy/Martin (MT8701	56.0	84.4	17.6	16.4	74.0	50.5	49.8	0.92	0.88
H6860756	Gallatin/Bellona (MT	41.0	86.6	37.7	20.3	86.0	74.8	57.7	0.97	0.97
MT 81161	Lewis/Kgs/Smt	42.9	84.8	9.6	12.8	90.0	58.7	49.8	1.17	0.95
MT140523	Hector/Klages	31.8	86.3	23.8	18.0	91.0	65.8	52.8	1.11	0.97
MT851032	Harrington/Clark	33.8	87.4	40.6	5.6	88.0	63.3	53.1	1.10	0.95
MT851195	MT41918/TR450	36.9	86.1	24.5	9.4	81.0	72.4	51.7	1.11	0.98
MT860756	Gallatin/Bellona	43.5	89.1	36.2	17.4	92.0	70.0	58.0	1.05	0.99
MT861596	Lewis/MT 41549	26.6	83.6	27.0	7.9	85.0	65.5	49.3	1.13	0.97
MT886610	MT 81143/Lewis	25.1	87.8	23.2	8.7	84.0	55.6	47.4	1.15	0.98
MT889106	Apex/Lewis	91.1	90.7	56.5	67.4	96.0	94.0	82.6	0.45	0.62
MT890008	Fleet/Bowman	29.1	83.9	32.6	19.5	95.0	67.0	54.5	1.06	0.93
MT890018	Gallatin/Apex	43.0	87.7	41.2	14.2	84.0	71.3	56.9	0.98	0.96
MT890070	MT47219/Bowman	89.3	90.3	53.1	57.4	98.0	91.0	79.8	0.57	0.72
MT890128	Steptoe/Robust	42.5	80.4	8.5	12.8	80.0	38.0	43.7	1.02	0.88
MTSU 247	Shonkin	4.4	63.1	1.4	0.6	60.0	13.1	23.8	0.94	0.84
ND 9866	Stark	71.4	87.5	47.3	35.1	95.0	73.7	68.3	0.76	0.91
NS 78054	Baronesse	35.2	91.3	31.4	37.7	72.0	67.3	55.8	0.79	0.86
PI483237	Bowman	90.8	90.5	72.2	71.7	98.0	90.0	85.5	0.32	0.72
PI491534	Gallatin	19.6	86.0	40.0	21.0	93.0	67.3	54.5	1.04	0.86
SK 76333	Harrington	31.9	87.0	13.0	6.2	84.0	57.4	46.6	1.21	0.99
WPB94 4	Sissy	34.4	86.0	10.7	15.8	92.0	54.8	48.9	1.18	0.95
*****	SITE MEAN *****	41.6	86.6	29.4	16.5	82.9	62.9	53.3	1.00	1.00

Table 4.

1994 SPRING BARLEY DRYLAND INTRASTATE SUMMARY

HEADING DATE (Days from Jan. 1)

ID	Pedigree	Havre	Sidney	Moccasin	Huntley	Conrad	Bozeman	Mean	BYX	RSQ
21140523	Chinook	180.9	165.4	175.2	168.0	178.0	171.0	173.1	0.89	0.99
2B894311	BA 2B89-4311	184.6	166.3	175.8	168.0	182.0	172.7	174.9	1.11	1.00
8638477	Baronesse * Arena	186.5	166.0	175.7	163.5	180.0	172.7	174.1	1.26	0.95
90014-DH	WPB 90014-DH	191.6	170.4	178.2	172.5	182.0	173.7	178.1	1.12	0.90
BA 1202	BA 1202	185.9	167.0	175.2	169.5	181.0	172.0	175.1	1.07	0.98
BA 1215	2B82-8529 (BA 8529)	184.9	165.9	175.5	168.5	179.0	171.7	174.2	1.05	0.98
BZ489-29	Merlin	193.1	170.7	178.6	170.0	182.0	173.0	177.9	1.25	0.89
CI 15229	Steptoe	170.4	161.7	172.0	164.0	176.0	168.3	168.7	0.67	0.72
CI 15514	Hector	178.4	165.2	174.3	167.5	178.0	170.7	172.4	0.82	0.99
CI 15856	Lewis	182.8	165.2	174.6	167.0	180.0	170.7	173.4	1.06	1.00
H1851195	MT41918/TR450 (MT851	177.5	164.7	174.3	166.0	178.0	170.3	171.8	0.84	0.96
H2860224	Lewis/Apex (MT860224	184.8	164.4	173.8	167.5	180.0	170.3	173.5	1.15	0.98
H3851032	Harrington/Clark(MT8	186.2	166.8	175.4	169.5	181.0	171.7	175.1	1.09	0.97
H3860224	Lewis/Apex (MT860224	187.0	165.8	176.1	164.0	181.0	171.7	174.3	1.32	0.97
H5860219	Lewis/Apex (MT860219	187.2	164.4	175.4	167.5	180.0	171.7	174.4	1.24	0.98
H5870120	Lindy/Martin (MT8701	169.7	160.9	171.4	165.0	176.0	165.0	168.0	0.67	0.68
H6860756	Gallatin/Bellona (MT	181.9	166.7	175.1	169.0	178.0	171.7	173.7	0.85	0.99
MT 81161	Lewis/Kgs/Smt	179.2	164.5	174.2	165.5	178.0	170.0	171.9	0.93	0.99
MT140523	Hector/Klages	180.4	164.8	175.3	167.0	178.0	170.7	172.7	0.93	0.99
MT851032	Harrington/Clark	185.2	167.2	175.6	169.5	181.0	171.7	175.0	1.04	0.99
MT851195	MT41918/TR450	181.0	164.3	174.2	166.5	178.0	170.0	172.3	0.98	1.00
MT860756	Gallatin/Bellona	183.3	166.1	174.8	166.5	178.0	171.3	173.3	1.00	0.98
MT861596	Lewis/MT 41549	182.2	166.1	174.7	166.5	179.0	170.7	173.2	0.99	0.99
MT886610	MT 81143/Lewis	181.0	165.1	174.2	168.0	179.0	170.3	172.9	0.94	0.99
MT889106	Apex/Lewis	175.5	161.6	172.1	161.0	176.0	165.0	168.5	1.00	0.95
MT890008	Fleet/Bowman	190.2	169.1	178.1	172.5	182.0	174.7	177.8	1.10	0.94
MT890018	Gallatin/Apex	186.7	166.6	174.4	163.0	179.0	170.3	173.3	1.25	0.93
MT890070	MT47219/Bowman	173.6	161.6	172.3	162.5	176.0	166.0	168.7	0.87	0.90
MT890128	Steptoe/Robust	169.8	160.6	172.8	165.0	176.0	169.7	169.0	0.65	0.62
MTSU 247	Shonkin	180.9	165.2	175.6	168.5	182.0	173.0	174.2	0.98	0.96
ND 9866	Stark	177.6	163.2	172.8	163.0	177.0	168.7	170.4	0.96	0.97
NS 78054	Baronesse	190.8	166.3	176.1	167.5	179.0	173.0	175.4	1.28	0.91
PI483237	Bowman	174.1	161.6	172.2	160.0	176.0	165.0	168.2	0.97	0.90
PI491534	Gallatin	175.0	164.7	173.9	166.5	179.0	170.0	171.5	0.75	0.85
SK 76333	Harrington	186.4	165.2	175.0	169.0	178.0	172.0	174.3	1.08	0.93
WPB94 4	Sissy	185.8	166.1	174.2	170.0	181.0	173.0	175.0	1.06	0.95
*****	SITE MEAN *****	181.6	164.9	174.5	166.6	178.7	170.4	172.8	1.00	1.00

Table 5. 1994 SPRING BARLEY DRYLAND INTRASTATE SUMMARY  
PLANT HEIGHT(inches)

ID	Pedigree	Havre	Sidney	Moccasin	Huntley	Conrad	Bozeman	Mean	BYX	RSQ
21140523	Chinook	27.0	27.2	26.4	30.5	35.0	33.8	30.0	1.16	0.99
2B894311	BA 2B89-4311	24.7	25.3	22.3	30.0	34.0	30.5	27.8	1.28	0.87
8638477	Baronesse * Arena	27.2	25.9	26.3	29.0	31.0	30.7	28.3	0.68	0.97
90014-DH	WPB 90014-DH	20.6	19.9	21.7	24.5	26.0	27.2	23.3	0.90	0.93
BA 1202	BA 1202	25.3	26.1	23.7	28.5	33.0	31.2	28.0	1.09	0.94
BA 1215	2B82-8529 (BA 8529)	26.6	26.3	26.3	28.5	32.0	31.5	28.5	0.81	0.98
BZ489-29	Merlin	18.2	15.8	21.0	27.0	22.0	25.1	21.5	0.86	0.44
CI 15229	Steptoe	26.5	21.1	26.1	29.5	32.0	34.0	28.2	1.30	0.81
CI 15514	Hector	29.3	27.0	27.0	30.0	32.0	33.2	29.8	0.75	0.89
CI 15856	Lewis	26.7	28.4	27.0	31.5	33.0	33.9	30.1	0.94	0.94
H1851195	MT41918/TR450 (MT851	27.9	28.6	27.4	30.5	35.0	32.0	30.2	0.85	0.88
H2860224	Lewis/Apex (MT860224	27.1	26.8	25.8	29.5	33.0	32.6	29.1	0.95	0.98
H3851032	Harrington/Clark(MT8	26.3	27.5	26.8	26.5	32.0	32.8	28.7	0.81	0.77
H3860224	Lewis/Apex (MT860224	26.4	26.2	25.1	27.5	31.0	32.7	28.2	0.90	0.92
H5860219	Lewis/Apex (MT860219	23.5	25.9	24.4	26.5	33.0	32.9	27.7	1.24	0.90
H5870120	Lindy/Martin (MT8701	25.5	21.8	25.6	28.0	30.0	34.1	27.5	1.19	0.80
H6860756	Gallatin/Bellona (MT	25.4	26.6	27.1	29.0	31.0	29.4	28.1	0.59	0.83
MT 81161	Lewis/Kgs/Smt	26.4	25.8	24.3	27.5	34.0	32.0	28.3	1.14	0.92
MT140523	Hector/Klages	25.8	26.8	27.1	31.5	36.0	33.7	30.2	1.28	0.95
MT851032	Harrington/Clark	26.9	27.2	26.7	29.0	36.0	31.8	29.6	1.05	0.84
MT851195	MT41918/TR450	27.1	27.6	24.7	30.5	33.0	32.6	29.3	0.99	0.91
MT860756	Gallatin/Bellona	25.0	25.6	27.6	28.5	35.0	31.2	28.8	1.06	0.81
MT861596	Lewis/MT 41549	27.1	24.6	25.8	29.0	35.0	35.4	29.5	1.42	0.96
MT886610	MT 81143/Lewis	27.8	28.4	25.6	29.0	33.0	33.8	29.6	0.94	0.89
MT889106	Apex/Lewis	28.1	26.8	28.0	30.5	32.0	34.8	30.0	0.88	0.88
MT890008	Fleet/Bowman	25.5	23.4	23.9	25.5	33.0	29.4	26.8	1.04	0.81
MT890018	Gallatin/Apex	23.9	23.0	24.2	28.0	29.0	30.7	26.5	0.96	0.93
MT890070	MT47219/Bowman	27.2	26.9	27.6	31.0	34.0	34.6	30.2	1.09	0.99
MT890128	Steptoe/Robust	25.1	21.4	24.9	26.5	27.0	32.7	26.3	0.92	0.63
MTSU 247	Shonkin	27.8	28.9	26.2	31.0	36.0	30.9	30.1	0.90	0.72
ND 9866	Stark	29.0	28.4	28.3	32.5	31.0	34.5	30.6	0.66	0.71
NS 78054	Baronesse	23.6	23.0	23.2	28.0	30.0	30.2	26.3	1.06	0.98
PI483237	Bowman	27.5	24.9	27.6	32.0	30.0	35.2	29.5	0.94	0.67
PI491534	Gallatin	28.6	27.2	25.7	31.5	35.0	32.5	30.1	1.04	0.89
SK 76333	Harrington	25.6	26.4	25.6	29.0	35.0	31.1	28.8	1.10	0.88
WPB94 4	Sissy	23.4	24.6	24.9	27.0	31.0	29.7	26.8	0.91	0.93
*****	SITE MEAN *****	26.2	25.9	25.8	29.3	32.5	32.4	28.7	1.00	1.00

Table 6. 1994 SPRING BARLEY DRYLAND INTRASTATE SUMMARY  
PROTEIN<sup>(1)</sup>

ID	Pedigree	Havre	Sidney	Moccasin	Huntley	Conrad	Bozeman	Mean	BYX	RSQ
21140523	Chinook	14.5	11.0	12.2	15.8	11.6	12.3	12.9	1.20	0.97
2B894311	BA 2B89-4311	14.9	11.1	12.9	14.8	11.8	11.7	12.9	1.01	0.86
86384777	Baronesse * Arena	13.8	10.4	12.2	14.8	11.5	12.2	12.5	1.03	0.97
90014-DH	WPB 90014-DH	14.5	9.7	12.3	15.1	12.1	11.4	12.5	1.27	0.93
BA 1202	BA 1202	14.3	11.3	13.6	15.3	13.0	12.4	13.3	0.88	0.92
BA 1215	2B82-8529 (BA 8529)	13.8	10.5	11.9	13.9	11.3	12.1	12.2	0.85	0.89
BZ489-29	Merlin	15.3	12.8	13.8	18.7	14.2	12.8	14.6	1.39	0.90
CI 15229	Steptoe	11.7	10.5	10.5	12.9	11.4	10.2	11.2	0.58	0.77
CI 15514	Hector	13.9	11.3	12.4	15.3	11.8	11.8	12.7	1.01	0.97
CI 15856	Lewis	13.8	11.5	12.9	15.7	11.5	12.2	12.9	1.04	0.94
H1851195	MT41918/TR450 (MT851	14.0	10.8	12.9	15.1	12.9	12.2	13.0	0.94	0.93
H2860224	Lewis/Apex (MT860224	13.4	10.8	13.2	16.3	12.9	12.7	13.2	1.11	0.89
H3851032	Harrington/Clark(MT8	13.7	10.9	11.9	15.9	11.6	12.1	12.7	1.19	0.97
H3860224	Lewis/Apex (MT860224	14.0	10.9	13.3	16.2	12.8	11.9	13.2	1.17	0.94
H5860219	Lewis/Apex (MT860219	14.4	10.8	11.2	16.0	12.4	12.4	12.9	1.24	0.90
H5870120	Lindy/Martin (MT8701	11.7	10.3	10.8	12.6	11.0	11.3	11.3	0.50	0.92
H6860756	Gallatin/Bellona (MT	13.8	11.1	11.6	15.1	11.7	11.6	12.5	1.03	0.96
MT 81181	Lewis/Kgs/Smt	12.8	11.0	11.8	15.3	11.6	12.4	12.5	0.94	0.89
MT140523	Hector/Klages	13.9	11.3	12.4	14.9	12.1	11.0	12.6	0.95	0.90
MT851032	Harrington/Clark	13.7	11.0	12.4	15.4	11.4	12.3	12.7	1.05	0.96
MT851195	MT41918/TR450	14.0	10.4	12.6	15.4	12.5	11.7	12.8	1.13	0.96
MT860756	Gallatin/Bellona	13.4	11.1	11.7	14.5	11.4	11.9	12.3	0.86	0.96
MT861596	Lewis/MT 41549	14.4	10.4	13.1	15.9	12.3	11.8	13.0	1.26	0.97
MT886610	MT 81143/Lewis	14.0	10.8	12.6	15.8	11.2	11.9	12.7	1.22	0.97
MT889106	Apex/Lewis	13.0	11.3	11.8	14.0	12.1	10.9	12.2	0.69	0.84
MT890008	Fleet/Bowman	13.0	9.8	11.4	13.9	11.2	11.4	11.8	0.95	0.98
MT890018	Gallatin/Apex	14.0	10.9	12.5	15.8	12.1	12.2	12.9	1.14	1.00
MT890070	MT47219/Bowman	12.6	11.1	11.4	13.7	11.4	12.2	12.1	0.61	0.88
MT890128	Steptoe/Robust	12.1	9.6	12.1	12.4	10.9	10.2	11.2	0.63	0.70
MTSU 247	Shonkin	14.8	12.8	13.9	18.7	13.2	13.7	14.5	1.35	0.89
ND 9866	Stark	12.9	10.3	11.3	13.7	11.5	11.3	11.8	0.81	0.98
NS 78054	Baronesse	14.1	10.4	12.1	14.2	11.7	11.2	12.3	0.97	0.90
PI483237	Bowman	13.0	11.1	11.6	13.9	11.7	11.7	12.2	0.69	0.97
PI491534	Gallatin	14.0	11.0	11.5	14.0	11.4	11.6	12.2	0.85	0.88
SK 76333	Harrington	13.6	10.9	11.4	15.7	12.1	11.6	12.5	1.15	0.94
WP684 4	Sissy	13.5	10.7	13.3	16.1	11.3	12.6	12.9	1.19	0.89
*****	SITE MEAN *****	13.6	10.8	12.2	15.0	11.8	11.9	12.5	1.00	1.00

<sup>(1)</sup> Analyzed using "Infratec 1225 Whole Grain Analyzer" calibrated for two row barley.

## Table 7. 1994 SPRING BARLEY IRRIGATED INTRASTATE SUMMARY

YIELD (bu/ac)

ID	Pedigree	Bozeman	Sidney	Kalispell	Huntley	Conrad	Mean	BYX	RSQ
21140523	Chinook	116.9	101.6	87.6	91.1	68.2	93.1	0.93	0.87
2B894311	BA 2B89-4311	132.3	82.5	86.2	84.8	73.5	91.8	1.25	0.95
8638477	Baronesse/Arena	131.6	76.1	79.0	95.3	81.7	92.7	1.14	0.81
90014-DH	WPB 90014-DH	142.0	86.9	104.4	94.1	91.8	103.8	1.09	0.78
BA 1202	BA 1202	128.2	77.7	100.1	98.2	76.9	96.2	1.01	0.76
BA 1215	2B82-8529 (BA 8529)	124.6	106.5	85.9	93.3	86.4	99.3	0.84	0.86
BU585-82	WPB BU 585-82	137.6	89.7	88.3	74.2	86.7	95.3	1.18	0.76
BZ489-29	Merlin	138.3	69.0	62.5	84.7	78.4	86.6	1.46	0.77
C14	Coors C14	151.2	89.7	90.6	100.7	74.9	101.4	1.59	0.96
C16	Coors C16	125.8	80.3	98.5	103.1	78.0	97.1	0.93	0.75
C93 1	Galena	124.7	73.2	70.9	91.6	91.0	90.3	0.90	0.57
C93 2	IdaGold	131.2	83.9	89.8	101.8	85.0	98.3	1.00	0.84
CI 15229	Steptoe	131.5	113.7	115.8	81.2	82.1	104.9	0.92	0.56
CI 15478	Klages	118.1	88.2	102.3	89.8	79.8	95.6	0.73	0.78
CI 15514	Hector	99.1	95.0	81.8	81.4	74.4	86.3	0.49	0.73
CI 15856	Lewis	114.8	90.8	88.9	97.8	69.2	92.3	0.85	0.88
DA587170	WPB DA 587-170	122.7	80.9	81.6	84.8	67.3	87.5	1.14	0.98
H1851195	MT41918/TR450 (MT851)	132.3	101.1	98.8	90.3	75.2	99.5	1.12	0.94
H2860224	Lewis/Apex (MT860224)	121.7	98.0	91.6	97.8	78.6	97.5	0.85	0.97
H3851032	Harrington/Clark(MT8)	127.2	99.1	76.3	96.4	82.2	96.2	1.01	0.86
H3860224	Lewis/Apex (MT860224)	128.7	106.1	91.4	101.2	79.2	101.3	0.99	0.94
H5851161	MT 41918/MT 41279(MT)	106.2	96.1	92.8	83.7	82.9	92.3	0.47	0.77
H5860219	Lewis/Apex (MT860219)	126.4	87.8	89.0	108.0	83.1	98.8	0.90	0.81
H5870120	Lindy/Martin (MT8701)	142.9	112.9	95.2	90.4	81.6	104.6	1.28	0.91
H6860756	Gallatin/Bellona (MT)	122.6	83.0	89.2	101.9	65.3	92.4	1.09	0.84
MT140523	Hector/Klages	119.3	96.1	83.4	102.0	71.4	94.5	0.94	0.87
MT851195	MT41918/TR450	127.0	94.1	90.8	94.0	82.2	97.6	0.94	0.99
MT860756	Gallatin/Bellona	118.2	97.5	87.2	92.5	72.5	93.6	0.90	0.95
MT861596	Lewis/MT 41549	107.8	91.9	77.0	98.6	71.9	89.4	0.71	0.75
MT886610	MT 81143/Lewis	128.5	99.1	86.5	106.6	75.5	99.2	1.06	0.90
MT889106	Apex/Lewis	128.4	96.1	80.3	89.4	64.5	91.8	1.29	0.97
MT890008	Fleet/Bowman	146.1	85.7	110.5	88.5	97.3	105.6	1.08	0.63
MT890018	Gallatin/Apex	132.4	107.3	86.9	103.5	74.8	101.0	1.16	0.92
MT890070	MT47219/Bowman	128.5	103.8	94.1	78.1	67.0	94.3	1.20	0.83
MT890128	Steptoe/Robust	128.3	112.5	93.9	91.5	83.5	101.9	0.92	0.84
ND 9866	Stark	134.1	106.0	83.5	89.3	77.6	98.1	1.21	0.92
NS 78054	Baronesse	137.7	99.6	92.0	124.5	92.9	109.3	0.96	0.71
PI491534	Gallatin	123.4	101.3	96.5	97.5	87.1	101.1	0.74	0.99
SK 76333	Harrington	120.1	97.9	92.5	92.8	75.9	95.8	0.86	0.96
WPB94 4	Sissy	133.9	77.9	76.8	99.8	77.7	93.2	1.25	0.83
*****	SITE MEAN *****	127.7	96.1	90.8	94.9	79.0	97.7	1.00	1.00
C.V.	S/MEAN * 100	7.15	7.27	14.89	8.83	10.72	----	----	----
LSD (.05)	LSD (.05)	14.15	11.32	23.68	13.54	14.62	----	----	----

**1994 SPRING BARLEY IRRIGATED INTRASTATE SUMMARY TEST WEIGHT (lb/bu)**

ID	Pedigree	Bozeman	Sidney	Kalispell	Huntley	Conrad	Mean	BYX	RSQ
21140523	Chinook	53.2	53.2	53.7	49.8	53.1	52.6	0.62	0.88
2B894311	BA 2B89-4311	54.7	52.9	51.5	46.1	52.8	51.6	1.33	0.95
8638477	Baronesse/Arena	54.9	52.6	50.3	46.5	53.8	51.6	1.29	0.88
90014-DH	WPB 90014-DH	51.6	51.2	50.3	46.0	50.9	50.0	0.93	0.95
BA 1202	BA 1202	52.7	52.7	52.8	47.0	53.1	51.7	1.05	0.94
BA 1215	2B82-8529 (BA 8529)	54.0	54.7	51.8	51.4	54.7	53.3	0.47	0.50
BU585-82	WPB BU 585-82	50.9	49.5	50.3	41.8	50.7	48.6	1.59	0.98
BZ489-29	Merlin	59.4	59.1	54.1	54.9	58.7	57.2	0.64	0.37
C14	Coors C14	55.2	53.5	53.7	50.9	55.7	53.8	0.75	0.91
C16	Coors C16	54.1	52.9	51.0	49.5	54.0	52.3	0.73	0.78
C93 1	Galena	54.5	51.9	50.6	48.7	52.6	51.7	0.79	0.76
C93 2	IdaGold	52.1	51.8	50.2	48.5	50.9	50.7	0.52	0.75
CI 15229	Steptoe	49.0	46.2	50.4	40.8	49.2	47.1	1.47	0.84
CI 15478	Klages	53.8	52.9	52.3	48.5	52.0	51.9	0.79	0.90
CI 15514	Hector	53.6	53.2	53.6	47.6	53.5	52.3	1.07	0.95
CI 15856	Lewis	54.3	53.6	53.9	50.2	54.9	53.4	0.76	0.98
DA587170	WPB DA 587-170	52.1	49.0	50.5	43.2	50.8	49.1	1.43	0.97
H1851195	MT41918/TR450 (MT85)	53.7	51.8	52.4	47.5	53.7	51.8	1.06	0.99
H2860224	Lewis/Apex (MT860224)	54.1	52.8	52.7	47.7	51.5	51.8	0.94	0.84
H3851032	Harrington/Clark(MT8	54.0	53.2	53.3	47.0	53.7	52.2	1.22	0.98
H3860224	Lewis/Apex (MT860224)	54.7	53.1	52.6	49.7	54.1	52.9	0.79	0.96
H5851161	MT 41918/MT 41279(MT	53.0	53.7	53.2	44.2	54.2	51.7	1.68	0.93
H5860219	Lewis/Apex (MT860219)	54.6	53.5	52.5	49.0	53.8	52.7	0.89	0.95
H5870120	Lindy/Martin (MT8701)	50.5	45.8	50.1	43.6	49.7	48.0	1.11	0.75
H6860756	Gallatin/Bellona (MT	54.2	53.5	52.9	49.2	53.0	52.6	0.78	0.93
MT140523	Hector/Klages	53.5	53.3	53.4	50.1	53.5	52.8	0.61	0.96
MT851195	MT41918/TR450	53.7	53.2	53.1	48.0	54.1	52.4	1.03	0.98
MT860756	Gallatin/Bellona	53.9	53.8	53.1	48.5	53.3	52.5	0.92	0.94
MT861596	Lewis/MT 41549	54.2	53.3	53.8	50.2	53.8	53.1	0.67	0.98
MT886610	MT 81143/Lewis	54.1	54.2	53.8	49.7	54.4	53.2	0.81	0.95
MT889106	Apex/Lewis	54.4	51.8	53.9	49.0	53.7	52.6	0.87	0.89
MT890008	Fleet/Bowman	55.0	51.8	52.7	46.7	53.6	51.9	1.30	0.98
MT890018	Gallatin/Apex	54.9	53.7	53.0	50.0	55.5	53.4	0.85	0.91
MT890070	MT47219/Bowman	55.2	52.7	54.1	46.5	53.4	52.4	1.39	0.95
MT890128	Steptoe/Robust	50.6	47.5	51.9	41.4	49.9	48.3	1.59	0.85
ND 9866	Stark	55.7	54.0	54.0	49.0	54.5	53.4	1.06	0.98
NS 78054	Baronesse	54.1	54.3	52.8	49.2	54.7	53.0	0.90	0.91
PI491534	Gallatin	55.4	53.8	52.9	50.7	54.7	53.5	0.72	0.89
SK 76333	Harrington	53.6	52.4	52.9	47.6	54.0	52.1	1.07	0.99
WPB94 4	Sissy	54.4	52.6	50.5	49.9	53.8	52.2	0.65	0.62
*****	SITE MEAN *****	53.9	52.5	52.6	47.8	53.5	52.1	1.00	1.00
C.V.	S/MEAN	1.37	1.62	1.15	----	----	----	----	----
LSD (.05)	LSD (.05)	1.47	1.38	0.98	----	----	----	----	----

Table 9 1994 SPRING BARLEY IRRIGATED INTRASTATE SUMMARY  
PLUMP PERCENT

ID	Pedigree	Bozeman	Sidney	Kalispell	Huntley	Conrad	Mean	BYX	RSQ
21140523	Chinook	70.5	91.7	96.3	73.8	90.0	84.5	1.00	0.84
2B894311	BA 2B89-4311	82.3	92.7	90.0	58.8	86.0	82.0	1.13	0.77
8638477	Baronesse/Arena	89.9	91.7	96.0	70.3	94.0	88.4	0.88	0.80
90014-DH	WPB 90014-DH	55.2	91.3	92.2	69.5	88.0	79.3	1.26	0.67
BA 1202	BA 1202	78.9	94.7	97.7	69.5	97.0	87.5	1.20	0.99
BA 1215	2B82-8529 (BA 8529)	70.8	93.3	94.7	84.0	96.0	87.8	0.74	0.54
BU585-82	WPB BU 585-82	80.6	92.7	97.3	50.7	95.0	83.3	1.74	0.90
BZ489-29	Merlin	54.7	79.3	79.0	51.6	86.0	70.1	1.42	0.90
C14	Coors C14	74.8	85.0	96.5	71.2	93.0	84.1	1.01	0.94
C16	Coors C16	80.8	92.7	93.0	80.5	95.0	88.4	0.64	0.90
C93 1	Galena	78.4	91.0	93.0	78.5	97.0	87.6	0.76	0.87
C93 2	IdaGold	52.1	90.7	93.4	68.7	91.0	79.2	1.40	0.67
CI 15229	Steptoe	79.4	86.0	98.2	50.5	92.0	81.2	1.66	0.90
CI 15478	Klages	69.5	89.7	96.2	56.1	82.0	78.7	1.45	0.91
CI 15514	Hector	74.0	90.0	96.4	69.2	91.0	84.1	1.11	0.98
CI 15856	Lewis	75.5	90.3	95.9	73.7	92.0	85.5	0.94	0.95
DA587170	WPB DA 587-170	74.2	87.0	95.5	55.3	91.0	80.6	1.52	0.98
H1851195	MT41918/TR450 (MT85)	80.3	87.0	98.3	81.9	95.0	88.5	0.66	0.77
H2860224	Lewis/Apex (MT860224)	85.2	92.7	97.9	69.4	97.0	88.4	1.08	0.94
H3851032	Harrington/Clark(MT8	82.3	93.3	96.5	68.0	95.0	87.0	1.12	0.97
H3860224	Lewis/Apex (MT860224)	84.6	91.3	95.5	84.3	97.0	90.6	0.53	0.88
H5851161	MT 41918/MT 41279(MT	69.0	89.0	95.3	57.0	95.0	81.1	1.63	1.00
H5860219	Lewis/Apex (MT860219)	78.8	90.7	96.0	75.3	94.0	87.0	0.87	0.98
H5870120	Lindy/Martin (MT8701	87.8	87.0	97.2	63.4	92.0	85.5	1.09	0.78
H6860756	Gallatin/Bellona (MT	75.8	90.3	98.5	77.2	92.0	86.8	0.87	0.87
MT140523	Hector/Klages	74.4	93.0	95.0	76.3	89.0	85.5	0.83	0.83
MT851195	MT41918/TR450	75.0	88.7	97.0	66.8	93.0	84.1	1.20	0.99
MT860756	Gallatin/Bellona	78.5	94.3	98.0	76.0	93.0	88.0	0.92	0.95
MT861596	Lewis/MT 41549	68.0	91.0	93.2	69.3	87.0	81.7	1.07	0.86
MT886610	MT 81143/Lewis	78.9	91.0	96.4	76.9	92.0	87.0	0.80	0.96
MT889106	Apex/Lewis	92.3	92.3	97.2	84.8	95.0	92.3	0.41	0.85
MT890008	Fleet/Bowman	91.2	89.0	96.2	68.6	95.0	88.0	0.91	0.73
MT890018	Gallatin/Apex	83.2	91.0	97.2	77.4	95.0	88.8	0.78	0.99
MT890070	MT47219/Bowman	94.8	92.0	97.8	77.6	96.0	91.6	0.63	0.67
MT890128	Steptoe/Robust	80.4	82.7	94.3	49.1	88.0	78.9	1.51	0.83
ND 9866	Stark	91.8	91.7	97.1	88.2	96.0	93.0	0.31	0.82
NS 78054	Baronesse	81.3	96.0	94.1	80.9	98.0	90.1	0.73	0.86
PI491534	Gallatin	78.2	89.7	94.0	82.4	96.0	88.0	0.62	0.75
SK 76333	Harrington	80.8	91.7	96.4	72.1	94.0	87.0	0.97	1.00
WPB94 4	Sissy	87.5	94.3	94.7	90.9	97.0	92.9	0.27	0.59
*****	SITE MEAN *****	78.5	90.0	95.4	70.5	93.0	85.5	1.00	1.00

Table 10. 1994 SPRING BARLEY IRRIGATED INTRASTATE SUMMARY  
 HEADING DATE (Days from Jan. 1)

ID	Pedigree	Bozeman	Sidney	Kalispell	Huntley	Mean	BYX	RSQ
21140523	Chinook	171.0	164.6	174.7	163.5	168.4	1.00	0.99
2B894311	BA 2B89-4311	174.0	168.3	178.0	166.0	171.6	1.02	0.98
8638477	Baronesse/Arena	174.0	166.3	175.3	165.5	170.3	0.96	0.99
90014-DH	WPB 90014-DH	174.7	170.3	179.0	166.5	172.6	0.99	0.94
BA 1202	BA 1202	173.7	166.7	176.3	165.5	170.5	1.00	1.00
BA 1215	2882-8529 (BA 8529)	172.7	164.6	175.0	165.0	169.3	1.00	0.99
BU585-82	WPB BU 585-82	174.3	166.3	175.3	165.0	170.2	1.00	0.98
BZ489-29	Merlin	175.7	169.3	178.0	167.0	172.5	0.98	0.99
C14	Coors C14	170.3	162.0	171.7	161.5	166.4	1.01	0.99
C16	Coors C16	174.0	166.3	176.7	164.5	170.4	1.11	0.99
C93 1	Galena	175.0	170.7	179.0	170.0	173.7	0.78	0.96
C93 2	IdaGold	175.0	171.0	180.0	170.0	174.0	0.83	0.93
CI 15229	Step toe	170.0	161.6	173.3	162.0	166.7	1.10	0.98
CI 15478	Klages	174.0	169.3	176.7	167.0	171.7	0.83	0.99
CI 15514	Hector	172.3	164.7	173.3	164.5	168.7	0.90	0.98
CI 15856	Lewis	172.0	165.0	174.0	165.5	169.1	0.85	0.98
DA587170	WPB DA 587-170	173.7	168.3	176.0	164.0	170.5	0.99	0.94
H1861195	MT41918/TR450 (MT851)	171.0	163.3	173.3	161.5	167.3	1.09	1.00
H2860224	Lewis/Apex (MT860224	172.0	165.3	174.7	164.0	169.0	0.98	1.00
H3851032	Harrington/Clark(MT8	173.0	169.0	175.7	166.0	170.9	0.79	0.95
H3860224	Lewis/Apex (MT860224	173.0	166.7	175.3	164.5	169.9	0.97	0.99
H5851161	MT 41918/MT 41279(MT	172.3	165.0	174.7	165.0	169.2	0.95	1.00
H5860219	Lewis/Apex (MT860219	172.3	164.7	175.3	164.0	169.1	1.06	0.99
H5870120	Lindy/Martin (MT8701	170.0	160.7	172.7	160.0	165.8	1.22	0.99
H6860756	Gallatin/Bellona (MT	173.3	166.0	175.7	163.5	169.6	1.10	1.00
MT140523	Hector/Klages	171.3	165.0	174.3	165.0	168.9	0.88	0.98
MT851195	MT41918/TR450	170.7	163.0	173.3	163.0	167.5	1.00	0.99
MT860756	Gallatin/Bellona	172.7	165.3	174.3	162.5	168.7	1.07	0.98
MT861596	Lewis/MT 41549	171.3	164.4	174.7	163.5	168.5	1.03	1.00
MT886610	MT 81143/Lewis	171.3	164.7	173.3	163.5	168.2	0.92	1.00
MT889106	Apex/Lewis	169.0	161.0	170.0	158.5	164.6	1.08	0.98
MT890008	Fleet/Bowman	174.7	170.3	178.0	170.0	173.2	0.71	0.97
MT890018	Gallatin/Apex	171.7	164.0	174.7	163.5	168.5	1.06	1.00
MT890070	MT47219/Bowman	169.3	161.0	170.3	158.5	164.8	1.11	0.98
MT890128	Step toe/Robust	170.0	161.4	172.7	160.0	166.0	1.19	1.00
ND 9866	Stark	170.3	163.3	172.0	159.0	166.2	1.13	0.96
NS 78054	Baronesse	174.0	167.3	175.3	165.0	170.4	0.95	0.99
PI491534	Gallatin	171.7	164.0	175.7	163.0	168.6	1.16	1.00
SK 76333	Harrington	173.7	168.0	175.7	161.0	169.6	1.17	0.88
WPB94 4	Sissy	174.0	165.0	175.3	165.0	169.8	1.05	0.98
*****	SITE MEAN *****	172.1	165.1	174.7	163.9	168.9	1.00	1.00

## 1994 SPRING BARLEY IRRIGATED INTRASTATE SUMMARY

## PLANT HEIGHT (inches)

ID	Pedigree	Bozeman	Sidney	Kalispell	Huntley	Conrad	Mean	BYX	RSQ
21140523	Chinook	33.5	35.6	28.7	30.0	33.0	32.2	2.61	0.93
2B894311	BA 2B89-4311	33.1	33.2	29.8	32.5	33.0	32.3	1.20	0.73
8638477	Baronesse/Arena	30.8	33.1	29.7	31.0	34.0	31.7	1.01	0.35
90014-DH	WPB 90014-DH	26.8	23.1	21.3	31.5	27.0	25.9	0.12	0.00
BA 1202	BA 1202	33.6	32.0	32.9	30.5	34.0	32.6	0.42	0.09
BA 1215	2B82-8529 (BA 8529)	31.2	35.3	30.7	28.0	33.0	31.7	1.75	0.44
BU585-82	WPB BU 585-82	24.3	25.0	22.0	27.5	25.0	24.8	0.38	0.04
BZ489-29	Merlin	26.6	22.9	19.4	28.0	25.0	24.4	1.18	0.13
C14	Coors C14	28.5	29.1	25.2	26.5	25.0	26.8	1.36	0.56
C16	Coors C16	32.3	33.9	31.6	34.0	31.0	32.6	0.21	0.03
C93 1	Galena	29.7	30.6	25.5	25.0	27.0	27.5	2.21	0.85
C93 2	IdaGold	27.9	24.8	23.5	26.0	29.0	26.3	1.12	0.27
CI 15229	Steptoe	34.4	30.6	30.3	26.0	28.0	29.9	1.57	0.26
CI 15478	Klages	31.2	34.4	33.1	30.0	34.0	32.5	0.48	0.07
CI 15514	Hector	31.8	34.7	33.5	31.0	33.0	32.8	0.29	0.04
CI 15856	Lewis	33.6	34.2	28.9	30.0	32.0	31.7	2.22	0.99
DA587170	WPB DA 587-170	27.3	26.7	23.6	25.5	26.0	25.8	1.32	0.90
H1851195	MT41918/TR450 (MT851)	33.5	33.9	32.5	31.5	34.0	33.1	0.75	0.55
H2860224	Lewis/Apex (MT860224)	34.0	31.5	31.0	31.0	31.0	31.7	0.75	0.35
H3851032	Harrington/Clark(MT8	32.4	34.0	30.7	31.5	35.0	32.7	1.22	0.50
H3860224	Lewis/Apex (MT860224)	33.7	31.1	30.3	30.0	31.0	31.2	1.02	0.50
H5851161	MT 41918/MT 41279(MT	31.8	34.8	29.6	32.0	34.0	32.4	1.45	0.55
H5860219	Lewis/Apex (MT860219)	32.5	32.4	27.4	30.5	30.0	30.6	1.84	0.82
H5870120	Lindy/Martin (MT8701)	32.9	28.9	28.5	29.5	27.0	29.4	0.80	0.14
H6860756	Gallatin/Bellona (MT	29.9	34.3	29.8	33.5	33.0	32.1	0.58	0.08
MT140523	Hector/Klages	33.5	33.9	28.4	30.5	33.0	31.9	2.23	0.96
MT851195	MT41918/TR450	33.3	34.3	31.2	32.0	34.0	33.0	1.18	0.83
MT860756	Gallatin/Bellona	30.7	31.2	30.1	29.5	29.0	30.1	0.43	0.25
MT861596	Lewis/MT 41549	33.2	36.7	28.3	31.0	31.0	32.0	2.66	0.76
MT886610	MT 81143/Lewis	34.0	33.7	30.0	31.5	32.0	32.2	1.53	0.94
MT889106	Apex/Lewis	35.4	32.1	31.7	31.0	32.0	32.4	1.02	0.37
MT890008	Fleet/Bowman	29.5	31.4	29.1	31.0	30.0	30.2	0.34	0.13
MT890018	Gallatin/Apex	30.7	29.9	29.2	31.0	30.0	30.2	0.21	0.10
MT890070	MT47219/Bowman	36.8	32.1	34.0	28.5	32.0	32.7	1.01	0.12
MT890128	Steptoe/Robust	31.9	29.3	26.6	30.0	27.0	29.0	1.20	0.32
ND 9866	Stark	35.0	33.1	33.2	35.0	34.0	34.1	0.09	0.01
NS 78054	Baronesse	32.0	30.0	26.4	28.0	27.0	28.7	1.79	0.63
PI491534	Gallatin	34.0	33.5	34.5	31.5	34.0	33.5	0.16	0.02
SK 76333	Harrington	32.0	34.0	30.0	29.5	35.0	32.1	1.72	0.53
WPB94 4	Sissy	30.7	31.3	25.0	28.0	29.0	28.8	2.37	0.94
*****	SITE MEAN *****	32.0	32.1	29.8	30.4	31.3	31.1	1.00	1.00

Table 12 . 1994 SPRING BARLEY IRRIGATED INTRASTATE SUMMARY  
 PROTEIN <sup>(1)</sup>

ID	Pedigree	Bozeman	Sidney	Kalispell	Huntley	Conrad	Mean	BYX	RSQ
21140523	Chinook	13.5	12.6	10.7	12.8	7.8	11.5	1.38	0.99
2B894311	BA 2B89-4311	11.7	11.8	9.4	13.1	7.7	10.7	1.22	0.87
8638477	Baronesse/Arena	12.6	12.1	10.9	12.1	8.2	11.2	1.07	1.00
90014-DH	WPB 90014-DH	11.5	11.2	9.4	12.3	6.8	10.2	1.30	0.96
BA 1202	BA 1202	12.8	12.7	10.7	12.6	8.9	11.5	1.02	0.98
BA 1215	2B82-8529 (BA 8529)	12.3	11.6	11.4	9.9	7.8	10.6	0.87	0.65
BU585-82	WPB BU 585-82	11.9	11.1	10.2	11.4	7.8	10.5	0.97	0.99
BZ489-29	Merlin	13.7	14.4	11.7	14.5	9.7	12.8	1.19	0.92
C14	Coors C14	11.8	11.6	11.5	10.9	8.4	10.8	0.75	0.78
C16	Coors C16	12.6	12.0	11.1	12.5	9.3	11.5	0.82	0.99
C93 1	Galena	13.4	12.1	11.0	12.7	8.0	11.4	1.27	0.99
C93 2	IdaGold	12.7	11.4	10.2	12.3	7.7	10.9	1.20	0.98
CI 15229	Steptoe	10.2	10.8	9.2	11.3	8.6	10.0	0.58	0.74
CI 15478	Klages	13.1	12.4	10.3	10.9	8.1	11.0	1.09	0.86
CI 15514	Hector	13.1	11.9	10.4	12.2	8.2	11.2	1.15	0.98
CI 15856	Lewis	13.1	12.3	10.9	11.7	7.8	11.2	1.21	0.96
DA587170	WPB DA 587-170	11.1	11.1	9.9	11.4	7.4	10.2	0.99	0.98
H1851195	MT41918/TR450 (MT85)	13.3	11.7	11.7	10.9	7.8	11.1	1.07	0.77
H2860224	Lewis/Apex (MT860224)	13.2	12.4	10.3	13.3	8.7	11.6	1.18	0.94
H3851032	Harrington/Clark(MT8	12.4	12.5	10.8	12.9	8.3	11.4	1.13	0.97
H3860224	Lewis/Apex (MT860224)	12.9	11.9	8.9	11.0	8.4	10.6	1.02	0.77
H5851161	MT 41918/MT 41279(MT	12.5	11.4	10.4	12.8	8.9	11.2	0.92	0.91
H5860219	Lewis/Apex (MT860219)	12.8	12.1	10.1	12.7	8.9	11.3	1.01	0.93
H5870120	Lindy/Martin (MT8701)	10.2	10.6	9.5	10.3	8.7	9.9	0.44	0.90
H6860756	Gallatin/Bellona (MT	11.6	12.3	11.1	11.9	9.0	11.2	0.74	0.91
MT140523	Hector/Klages	13.1	12.5	10.4	11.9	7.9	11.2	1.23	0.96
MT851195	MT41918/TR450	13.3	12.2	10.5	12.7	8.0	11.3	1.28	0.99
MT860756	Gallatin/Bellona	12.0	12.0	10.3	12.5	8.9	11.1	0.88	0.94
MT861596	Lewis/MT 41549	12.8	12.2	10.2	12.9	8.6	11.3	1.10	0.95
MT886610	MT 81143/Lewis	12.3	11.8	10.8	12.2	7.7	11.0	1.15	0.99
MT889106	Apex/Lewis	12.2	12.6	12.5	12.8	9.4	11.9	0.77	0.81
MT890008	Fleet/Bowman	12.2	11.2	10.0	12.8	8.0	10.8	1.10	0.92
MT890018	Gallatin/Apex	13.4	12.5	11.2	13.1	8.8	11.8	1.13	1.00
MT890070	MT47219/Bowman	12.2	11.1	12.9	13.3	8.6	11.6	0.88	0.60
MT890128	Steptoe/Robust	10.2	10.8	9.1	10.8	8.1	9.8	0.66	0.86
ND 9866	Stark	12.4	11.4	11.5	12.2	8.9	11.3	0.80	0.91
NS 78054	Baronesse	12.2	11.6	8.9	13.3	7.0	10.6	1.47	0.89
PI491534	Gallatin	11.9	11.3	10.8	10.3	8.3	10.5	0.74	0.79
SK 76333	Harrington	12.8	11.9	10.4	11.6	7.5	10.8	1.22	0.97
WPB94 4	Sissy	12.9	11.9	10.4	11.4	8.2	11.0	1.05	0.94
*****	SITE MEAN *****	12.4	11.9	10.6	12.1	8.3	11.0	1.00	1.00

<sup>(1)</sup> Analyzed using an "Intratec 1225 Whole Grain Analyzer" calibrated for two row barley.