

PROJECT TITLE Statewide Barley Performance

YEAR: 2003

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: 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.

Dryland field performance of Haxby (2-row feed) was excellent, with yield and test weight being the highest of all varieties (Table 1). Conlon (2-row malt) had the highest plump and earliest heading date, with yield and test weight substantially higher than for Harrington. Conlon was 8 days earlier to head than Harrington, which may have contributed to its high relative yield performance under the moisture-stress conditions encountered in most of these trials. Eslick (MT960228) had average yield and test weight on dryland.

On irrigated, Eslick (MT960228) was the highest yielding variety, followed by Baronesse and Haxby (Table 8). Calgary had the shortest and stiffest straw. MT960228 was recently named Eslick and released as a recommended feed barley for Montana. The line is currently under evaluation in feeding trials for potential high nutritional value. Haxby and Eslick both have excellent field performance, with Haxby more suited to lower moisture conditions and Eslick for areas of more abundant moisture.

Specific details of field performance traits at each location can be found in Tables 2-7 for dryland and Tables 9-13 for irrigated.

Table 1. 2003 Montana Dryland Intrastate Spring Barley Nursery – Overall Summary.

ID	PEDIGREE	Yield	Test Weight	Plump	Heading	Plant Height	Protein
		bu/ac	lb/bu	%	Date	inches	%
MT981091	MT851195/MT140523	63.5	48.5	46.9	178.9	25.0	17.0
MT981212	MT910150/Stark	62.0	49.5	58.8	178.2	26.7	17.1
MT970116	Klages/Baronesse	61.7	49.6	61.6	178.5	29.2	16.8
MT910189	ND 7293/Bearpaw	61.6	48.7	62.9	179.0	27.1	16.8
MT010177	MT920041/MT890008	61.4	48.2	45.6	178.4	25.7	17.1
MT000138	MT920041/H1851195	61.2	49.3	62.8	177.9	28.1	17.3
MT950186	Haxby	61.0	50.5	41.4	178.9	27.1	16.8
MT981210	MT910150/Stark	60.9	48.5	55.3	180.2	26.9	17.9
MT010155	MT920041/H1851195	60.8	48.9	65.0	178.2	27.5	17.7
MT970229	MT890021/Stark	60.6	49.0	58.7	180.3	26.0	17.4
MT970148	MT861596/ND 11120	60.3	46.4	53.5	179.5	24.7	16.6
PI568246	Baronesse	60.3	46.6	40.9	181.6	24.7	17.7
MT000045	Chinook/MT920161	59.8	49.0	58.1	180.2	26.5	17.4
MT000092	MT890008/Lewis	59.6	47.6	57.9	179.3	27.3	17.0
MT970026	Baronesse/MT860756	59.2	48.6	50.7	179.9	27.5	16.8
MT010198	MT920059/ND 13300	59.1	49.3	69.3	176.5	27.4	17.2
MT010156	MT920041/H1851195	59.1	47.8	58.5	178.3	27.1	17.6
6B952482	(BA6B95-2482) 6B89--2126/	59.1	46.3	43.9	176.4	28.1	17.0
MT010160	MT920041/Harrington	58.8	47.1	48.7	180.1	27.2	17.3
MT000156	MT920059/Baronesse	58.5	47.9	61.1	177.7	26.5	17.9
MT000130	MT910189/MT890070	58.4	49.4	65.4	179.5	28.1	16.1
ND13299	Conlon	58.4	49.7	88.5	172.5	27.6	16.4
MT000153	MT920059/Baronesse	58.4	48.9	48.9	179.0	26.3	17.0
MT981238	ND112311/Lewis	58.4	48.6	49.7	177.5	27.6	17.3
MT000180	MT930029/Baronesse	57.9	48.5	41.6	180.2	25.4	16.5
MT010001	78A10274/Baronesse	57.7	47.9	54.9	179.9	26.5	17.2
MT010081	MT886610/H1851195	57.7	47.3	38.5	180.3	26.9	17.8
MT010097	MT890008/Logan	57.5	46.6	51.3	179.7	26.6	16.4
MT010095	MT890008/Logan	57.5	46.2	31.6	179.9	26.3	17.6
MT000047	Chinook/MT920161	57.5	48.0	48.1	179.2	26.7	17.6
MT981006	Baronesse/H2860224	57.5	46.0	36.7	179.8	26.6	17.9
MT960228	Eslick (Stark/Baronesse)	57.3	47.2	37.4	181.1	26.6	16.5
SiteMean	SITE MEAN *****	56.9	47.3	45.4	180.2	26.3	17.5
MT000040	Chinook/MT920161	56.9	48.8	40.8	180.0	26.5	17.9
MT010080	MT886610/H1851195	56.8	47.6	48.3	178.6	26.8	18.0
MT990106	Apex/H1851195	56.7	47.1	59.4	180.3	25.5	17.9
MT010133	MT910189/Baronesse	56.5	47.1	24.2	182.2	24.4	17.5
B99AL621	B99AL-621	56.4	46.0	28.1	181.8	23.8	17.4
MT010212	MT920073/Baronesse	56.4	45.4	38.0	181.2	26.8	18.1
MT000063	H3860224/MT920041	55.7	47.9	36.7	181.1	26.4	18.2
MT000125	MT910189/Lewis	55.6	48.3	51.1	182.0	26.4	17.0
MT010213	MT920073/Logan	55.6	47.7	46.4	181.6	24.9	18.3

Table 1 continues on next page

Table 1. 2003 Montana Dryland Intrastate Spring Barley Nursery – Overall Summary. (continued)

ID	PEDIGREE	Yield bu/ac	Test Weight lb/bu	Plump %	Heading Date	Plant Height inches	Protein %
MT010093	MT890008/H2860224	55.5	45.1	42.8	184.0	25.0	17.5
BZ594-19	Xena	55.4	46.8	20.1	181.3	26.4	16.6
MT981004	Baronesse/H2860224	55.4	45.4	29.2	180.4	26.8	17.5
MT010158	MT920041/Harrington	55.3	48.1	43.1	179.9	25.6	17.7
MT981030	Baronesse/MT910160	55.2	47.3	25.8	181.8	25.7	17.8
MT010219	MT930029/Baronesse	55.1	46.7	52.1	181.1	27.0	17.7
PI491534	Gallatin	55.0	47.6	37.5	178.4	27.0	17.4
PI610264	Valier	54.9	47.8	32.7	182.3	26.2	18.1
MT981060	Hays	54.4	43.7	27.8	182.2	26.1	17.7
MT000239	Harrington/MT920059	54.0	45.1	36.7	182.6	26.9	18.3
6B932978	Legacy	53.9	44.8	42.1	175.7	28.6	16.7
MT970155	MT886610/MT140523	53.5	47.0	46.9	183.7	25.4	17.8
MT010162	MT920041/Harrington	53.1	45.5	23.6	182.0	24.7	17.9
MT960099	Manley/Baronesse	53.0	46.6	18.2	182.7	23.7	17.7
PI605472	Garnet	53.0	45.5	57.2	182.3	26.0	18.0
MT010205	MT920073/Baronesse	52.8	46.6	45.8	182.9	24.8	18.2
MT010061	Elisa/Baronesse	52.7	46.4	31.6	182.0	24.6	18.2
MT960101	Manley/Baronesse	52.6	46.7	21.3	183.4	23.7	17.6
SK 76333	Harrington	52.6	45.7	50.8	181.1	26.3	17.7
2B914947	Merit	52.3	44.2	49.4	180.8	25.9	17.6
MT010183	MT920053/Baronesse	52.3	46.8	31.2	181.8	26.8	18.7
MT010191	MT920053/Harrington	49.9	45.3	42.5	184.6	24.8	18.5
PI533600	Haybet	48.0	43.3	9.8	178.8	28.4	18.1
C.V.	C.V. (S/Mean) * 100	8.2	2.54	30.80	0.94	4.79	4.11
P-Value		<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
L.S.D.	L.S.D. (.05)	5.3	1.36	17.07	1.94	1.43	1.77

Table 2. 2003 Montana Dryland Intrastate Spring Barley Nursery – Yield Summary (bu/a) by Location.

ID	Pedigree	Havre	Sidney	Moccasin	Huntley	Conrad	Bozeman	Mean	Byx	RSQ
2B914947	Merit	12.0	78.2	24.7	55.4	81.6	61.9	52.3	0.93	0.97
6B932978	Legacy	8.1	78.1	27.3	58.9	76.0	74.9	53.9	0.97	0.98
6B952482	(BA6B95-2482) 6B89--2126/	8.2	91.5	27.5	52.4	89.0	86.0	59.1	1.18	1.00
B99AL621	B99AL-621	12.8	83.3	25.8	59.5	74.2	82.7	56.4	0.99	0.97
BZ594-19	Xena	11.6	84.5	28.0	60.5	71.7	76.1	55.4	0.95	0.97
MT000040	Chinook/MT920161	12.7	84.5	30.7	60.1	71.6	81.8	56.9	0.95	0.96
MT000045	Chinook/MT920161	12.2	92.5	30.8	58.5	84.6	80.1	59.8	1.07	1.00
MT000047	Chinook/MT920161	16.0	85.5	28.3	55.3	84.0	76.1	57.5	0.99	1.00
MT000063	H3860224/MT920041	14.4	78.0	26.2	59.5	83.4	72.8	55.7	0.95	0.99
MT000092	MT890008/Lewis	14.2	88.3	30.2	58.8	87.7	78.2	59.6	1.04	1.00
MT000125	MT910189/Lewis	9.8	86.5	28.6	60.7	75.5	72.4	55.6	0.98	0.97
MT000130	MT910189/MT890070	10.3	87.5	23.7	52.2	92.6	84.1	58.4	1.17	0.99
MT000138	MT920041/H1851195	14.9	87.8	32.3	63.3	84.6	84.2	61.2	1.02	0.99
MT000153	MT920059/Baronesse	11.1	83.5	30.7	52.5	91.7	80.7	58.4	1.07	0.98
MT000156	MT920059/Baronesse	10.1	86.8	32.9	54.5	86.9	80.0	58.5	1.06	1.00
MT000180	MT930029/Baronesse	14.1	91.2	27.6	48.3	85.5	80.5	57.9	1.07	0.98
MT000239	Harrington/MT920059	12.8	82.2	23.8	47.8	90.8	66.8	54.0	1.03	0.96
MT010001	78A10274/Baronesse	13.3	87.9	32.1	46.5	80.5	85.8	57.7	1.03	0.96
MT010061	Elisa/Baronesse	13.2	76.6	23.5	54.9	75.0	72.8	52.7	0.92	0.99
MT010080	MT886610/H1851195	13.9	77.9	30.8	55.5	80.4	82.1	56.8	0.95	0.98
MT010081	MT886610/H1851195	13.9	87.1	28.6	59.4	80.5	76.5	57.7	0.99	0.99
MT010093	MT890008/H2860224	15.0	87.8	27.4	43.5	90.0	69.2	55.5	1.02	0.95
MT010095	MT890008/Logan	17.5	82.6	29.5	54.2	85.8	75.4	57.5	0.95	0.99
MT010097	MT890008/Logan	14.6	83.5	33.5	55.5	81.9	76.1	57.5	0.94	0.99
MT010133	MT910189/Baronesse	13.5	84.1	27.3	55.7	80.3	77.9	56.5	0.99	0.99
MT010155	MT920041/H1851195	14.0	91.5	32.6	58.6	88.9	79.3	60.8	1.06	1.00
MT010156	MT920041/H1851195	12.5	87.1	33.9	63.4	77.0	80.9	59.1	0.97	0.97
MT010158	MT920041/Harrington	18.9	77.1	30.5	53.6	80.5	71.4	55.3	0.85	0.99
MT010160	MT920041/Harrington	15.3	87.5	24.2	62.5	87.2	75.9	58.8	1.05	0.99
MT010162	MT920041/Harrington	18.1	77.9	26.4	57.0	69.2	70.4	53.1	0.82	0.97
MT010177	MT920041/MT890008	13.1	90.8	34.4	54.5	93.5	82.3	61.4	1.09	0.99
MT010183	MT920053/Baronesse	15.9	79.6	27.6	51.6	65.1	73.8	52.3	0.84	0.96
MT010191	MT920053/Harrington	12.8	78.4	22.8	46.1	74.5	64.7	49.9	0.91	0.99
MT010198	MT920059/ND 13300	15.8	84.5	33.0	53.7	88.7	79.0	59.1	0.99	0.99
MT010205	MT920073/Baronesse	17.5	84.6	23.1	54.0	66.0	71.9	52.8	0.88	0.95
MT010212	MT920073/Baronesse	14.3	86.5	28.1	51.3	81.4	76.8	56.4	1.00	1.00
MT010213	MT920073/Logan	17.2	75.3	31.7	52.5	76.4	80.2	55.6	0.87	0.98
MT010219	MT930029/Baronesse	12.3	81.7	27.2	56.4	76.1	76.8	55.1	0.96	0.99
MT910189	ND 7293/Bearpaw	10.5	88.3	32.7	60.3	99.6	78.1	61.6	1.13	0.98
MT950186	Haxby	11.6	86.5	34.8	61.6	87.2	84.1	61.0	1.05	0.99
MT960099	Manley/Baronesse	15.3	83.6	26.6	49.6	73.0	69.9	53.0	0.90	0.98
MT960101	Manley/Baronesse	14.0	83.0	24.2	50.3	74.5	69.4	52.6	0.93	0.99
MT960228	Eslick (Stark/Baronesse)	11.3	84.2	32.6	58.0	83.0	74.5	57.3	0.98	0.99

Table 2 continued on next page

Table 2. 2003 Montana Dryland Intrastate Spring Barley Nursery – Yield Summary (bu/a) by Location.
(continued)

ID	Pedigree	Havre	Sidney	Moccasin	Huntley	Conrad	Bozeman	Mean	Byx	RSQ
MT970026	Baronesse/MT860756	10.0	87.7	29.6	46.8	98.5	82.8	59.2	1.16	0.96
MT970116	Klages/Baronesse	11.9	87.0	33.0	63.1	98.0	77.3	61.7	1.09	0.98
MT970148	MT861596/ND 11120	14.9	84.0	35.2	58.6	87.2	82.1	60.3	0.99	1.00
MT970155	MT886610/MT140523	12.5	76.8	25.7	50.4	74.6	80.8	53.5	0.95	0.98
MT970229	MT890021/Stark	14.1	91.7	31.3	52.3	89.5	84.6	60.6	1.09	0.99
MT981004	Baronesse/H2860224	14.0	86.8	27.1	50.9	75.1	78.7	55.4	0.98	0.98
MT981006	Baronesse/H2860224	13.3	78.9	27.0	64.2	84.7	77.1	57.5	0.99	0.98
MT981030	Baronesse/MT910160	13.7	87.6	28.3	45.1	83.6	73.0	55.2	1.01	0.98
MT981060	Hays	11.5	85.5	20.7	53.0	81.2	74.3	54.4	1.05	0.99
MT981091	MT851195/MT140523	14.2	91.6	32.0	59.9	102.5	80.7	63.5	1.14	0.98
MT981210	MT910150/Stark	15.3	91.5	35.1	63.6	87.1	72.6	60.9	0.99	0.98
MT981212	MT910150/Stark	11.3	81.6	33.1	60.0	102.5	83.2	62.0	1.11	0.95
MT981238	ND112311/Lewis	12.2	87.4	31.8	60.5	79.4	79.3	58.4	1.00	0.99
MT990106	Apex/H1851195	12.8	82.5	33.2	54.7	77.4	79.5	56.7	0.95	0.99
ND13299	Conlon	10.6	79.4	38.7	51.9	89.2	80.8	58.4	0.99	0.96
PI491534	Gallatin	11.6	89.8	29.1	49.1	78.1	72.3	55.0	1.00	0.98
PI533600	Haybet	7.7	77.2	9.5	49.2	70.7	73.7	48.0	1.05	0.97
PI568246	Baronesse	14.1	84.5	32.0	61.7	88.7	80.8	60.3	1.02	0.99
PI605472	Garnet	14.1	86.9	18.7	52.2	76.7	69.6	53.0	1.00	0.97
PI610264	Valier	11.8	80.2	24.8	60.8	79.8	72.0	54.9	0.97	0.98
SK 76333	Harrington	12.4	74.8	22.2	53.5	80.5	72.1	52.6	0.96	0.99
Site Mean	SITE MEAN *****	13.2	84.4	28.7	55.3	82.7	76.9	56.9	1.00	1.00
C.V.	C.V. (S/Mean) * 100	9.43	7.38	12.40	10.99	11.97	5.41	***	***	***
F-Value		8.96	1.51	4.63	2.06	1.91	4.08	***	***	***
L.S.D.	L.S.D. (.05)	2.16	10.63	6.21	10.08	17.22	7.23	***	***	***
Efficiency of	Design Rel to RCB	1.46	1.13	1.76	1.01	1.53	1.52	***	***	***

Table 3. 2003 Montana Dryland Intrastate Spring Barley Nursery – Test Weight Summary (lb/bu) by Location.

ID	Pedigree	Havre	Sidney	Moccasin	Huntley	Conrad	Bozeman	Mean	Byx	RSQ
2B914947	Merit	44.5	46.7	40.1	48.6	45.1	39.9	44.1	1.10	0.87
6B932978	Legacy	45.9	47.3	38.5	46.6	47.1	42.9	44.7	0.98	0.72
6B952482	(BA6B95-2482) 6B89--2126/	45.0	49.5	39.6	51.4	45.8	46.3	46.3	1.32	0.92
B99AL621	B99AL-621	46.7	48.3	41.8	49.6	45.0	43.5	45.8	0.96	0.94
BZ594-19	Xena	46.0	48.7	44.8	50.4	45.8	44.3	46.7	0.74	0.85
MT000040	Chinook/MT920161	49.1	54.0	45.3	52.7	44.9	46.6	48.8	1.08	0.70
MT000045	Chinook/MT920161	48.4	51.9	45.9	52.9	47.5	47.8	49.0	0.88	0.91
MT000047	Chinook/MT920161	47.2	51.4	44.0	53.0	47.3	45.6	48.1	1.14	0.97
MT000063	H3860224/MT920041	47.2	50.5	43.9	53.3	48.0	45.3	48.0	1.13	0.96
MT000092	MT890008/Lewis	46.0	51.5	41.9	51.0	47.8	47.4	47.6	1.11	0.88
MT000125	MT910189/Lewis	48.0	49.9	46.0	52.8	48.0	45.2	48.3	0.85	0.83
MT000130	MT910189/MT890070	48.2	51.6	43.9	52.7	49.9	49.9	49.3	0.96	0.84
MT000138	MT920041/H1851195	50.0	52.4	42.4	53.0	48.1	49.2	49.2	1.19	0.87
MT000153	MT920059/Baronesse	48.1	51.1	43.4	53.0	50.0	48.1	48.9	1.06	0.93
MT000156	MT920059/Baronesse	47.0	50.0	42.5	52.2	48.5	47.4	47.9	1.07	0.94
MT000180	MT930029/Baronesse	48.3	50.8	43.9	51.8	48.5	47.0	48.4	0.94	0.99
MT000239	Harrington/MT920059	43.5	46.8	42.8	49.5	45.8	42.3	45.1	0.84	0.81
MT010001	78A10274/Baronesse	47.9	50.6	42.5	51.1	47.0	47.4	47.8	1.00	0.93
MT010061	Elisa/Baronesse	45.8	47.8	44.0	49.9	46.6	44.5	46.4	0.70	0.91
MT010080	MT886610/H1851195	46.7	50.1	43.0	51.0	48.1	47.0	47.6	0.93	0.95
MT010081	MT886610/H1851195	47.4	49.0	43.6	52.6	45.8	45.8	47.4	1.00	0.90
MT010093	MT890008/H2860224	44.8	46.9	42.7	48.4	45.1	43.3	45.2	0.71	0.96
MT010095	MT890008/Logan	46.3	48.8	41.2	48.3	46.7	45.5	46.1	0.86	0.87
MT010097	MT890008/Logan	45.4	49.2	43.7	50.7	45.6	45.7	46.7	0.84	0.91
MT010133	MT910189/Baronesse	47.3	49.2	44.4	50.7	45.8	45.1	47.1	0.80	0.91
MT010155	MT920041/H1851195	48.0	51.7	44.1	51.5	50.9	47.9	49.0	0.91	0.84
MT010156	MT920041/H1851195	47.8	50.6	43.1	53.1	45.3	47.5	47.9	1.13	0.87
MT010158	MT920041/Harrington	48.9	50.6	43.1	52.7	46.6	46.0	48.0	1.13	0.95
MT010160	MT920041/Harrington	47.4	49.0	42.8	51.7	48.8	43.5	47.2	1.08	0.87
MT010162	MT920041/Harrington	46.0	49.4	43.1	50.0	42.8	42.1	45.6	1.00	0.73
MT010177	MT920041/MT890008	47.0	49.5	43.2	52.4	48.6	48.3	48.2	0.95	0.87
MT010183	MT920053/Baronesse	46.9	49.2	43.2	51.9	44.8	44.7	46.8	1.05	0.90
MT010191	MT920053/Harrington	45.5	47.2	40.6	50.5	46.5	41.2	45.2	1.18	0.88
MT010198	MT920059/ND 13300	49.6	52.7	43.1	53.2	48.9	47.7	49.2	1.22	0.96
MT010205	MT920073/Baronesse	47.5	50.3	44.1	50.9	44.0	43.2	46.6	0.98	0.74
MT010212	MT920073/Baronesse	47.0	48.2	40.6	48.7	44.2	43.0	45.3	1.01	0.88
MT010213	MT920073/Logan	47.0	51.7	41.8	52.5	46.0	46.9	47.6	1.28	0.94
MT010219	MT930029/Baronesse	46.2	48.8	43.1	50.2	46.6	45.8	46.8	0.83	0.99
MT910189	ND 7293/Bearpaw	49.1	50.9	43.3	53.2	48.5	47.5	48.7	1.11	0.97
MT950186	Haxby	48.9	52.4	46.7	53.9	50.7	50.9	50.6	0.79	0.85
MT960099	Manley/Baronesse	46.3	49.0	43.2	50.6	46.1	44.5	46.6	0.92	0.98
MT960101	Manley/Baronesse	47.2	49.3	43.0	50.4	46.6	43.2	46.6	0.98	0.90
MT960228	Eslick (Stark/Baronesse)	46.3	50.1	44.5	50.8	47.5	44.5	47.3	0.87	0.91

Table 3 continued on next page

Table 3. 2003 Montana Dryland Intrastate Spring Barley Nursery – Test Weight Summary (lb/bu) by Location.
(continued)

ID	Pedigree	Havre	Sidney	Moccasin	Huntley	Conrad	Bozeman	Mean	Byx	RSQ
MT970026	Baronesse/MT860756	47.5	51.2	43.2	51.1	51.0	47.6	48.6	0.94	0.78
MT970116	Klages/Baronesse	48.6	51.5	46.3	52.8	51.5	47.5	49.7	0.80	0.84
MT970148	MT861596/ND 11120	47.7	48.2	41.3	51.0	44.9	45.0	46.3	1.07	0.90
MT970155	MT886610/MT140523	46.5	49.4	46.8	48.6	45.3	45.6	47.0	0.37	0.44
MT970229	MT890021/Stark	47.3	51.2	42.1	53.7	51.1	47.5	48.8	1.29	0.88
MT981004	Baronesse/H2860224	45.8	50.0	41.4	49.0	43.0	43.7	45.5	1.05	0.83
MT981006	Baronesse/H2860224	45.6	49.0	41.4	49.2	46.4	44.8	46.1	0.97	0.97
MT981030	Baronesse/MT910160	46.6	49.9	42.8	51.8	48.4	43.6	47.2	1.14	0.92
MT981060	Hays	43.0	45.3	41.4	48.0	42.5	42.1	43.7	0.78	0.86
MT981091	MT851195/MT140523	48.8	50.5	42.3	51.3	49.7	47.9	48.4	0.99	0.84
MT981210	MT910150/Stark	48.3	51.4	44.7	52.3	49.0	46.0	48.6	0.98	0.97
MT981212	MT910150/Stark	48.3	51.4	42.9	54.4	51.4	48.9	49.5	1.22	0.86
MT981238	ND112311/Lewis	47.6	52.0	43.2	53.6	47.7	47.6	48.6	1.22	0.97
MT990106	Apex/H1851195	47.3	50.4	40.2	51.3	47.6	45.8	47.1	1.29	0.95
ND13299	Conlon	49.8	52.2	42.9	52.8	49.8	50.1	49.6	1.07	0.82
PI491534	Gallatin	47.9	51.1	41.9	51.6	46.3	46.2	47.5	1.17	0.95
PI533600	Haybet	42.2	43.1	39.6	48.9	42.8	43.4	43.3	0.87	0.71
PI568246	Baronesse	46.1	48.2	41.3	51.2	48.1	44.7	46.6	1.11	0.92
PI605472	Garnet	45.2	48.5	42.5	49.7	45.7	41.5	45.5	1.01	0.85
PI610264	Valier	46.9	50.4	44.4	51.8	48.3	44.9	47.8	0.96	0.93
SK 76333	Harrington	45.4	47.3	41.4	51.1	46.5	42.5	45.7	1.12	0.91
Site Mean	SITE MEAN *****	47.0	49.8	42.9	51.3	47.1	45.6	47.3	1.00	1.00
C.V.		1.4	2.0	3.8	1.4	***	1.5	***	***	***
F-Value		15.3	10.6	3.2	9.2	***	22.0	***	***	***
L.S.D.	L.S.D. (.05)	1.1	1.7	2.6	1.6	***	1.4	***	***	***
Efficiency of Design	Rel to RCB	1.2	1.1	***	1.4	***	***	***	***	***

Table 4. 2003 Montana Dryland Intrastate Spring Barley Nursery – Plump Summary (%) by Location.

ID	Pedigree	Havre	Sidney	Huntley	Conrad	Bozeman	Mean	Byx	RSQ
2B914947	Merit	31.0	73.0	57.0	72.0	14.0	49.4	1.72	0.64
6B932978	Legacy	50.0	57.0	38.3	51.0	14.4	42.1	1.05	0.56
6B952482	(BA6B95-2482) 6B89--2126/	45.5	70.0	58.5	23.0	22.7	43.9	1.47	0.71
B99AL621	B99AL-621	41.0	33.0	33.6	18.0	14.8	28.1	0.44	0.22
BZ594-19	Xena	20.5	51.0	11.3	9.0	8.5	20.1	1.27	0.73
MT000040	Chinook/MT920161	38.4	80.0	40.4	12.0	33.4	40.8	1.55	0.58
MT000045	Chinook/MT920161	51.0	83.0	53.1	65.0	38.4	58.1	1.29	0.86
MT000047	Chinook/MT920161	39.3	77.0	54.0	42.0	28.0	48.1	1.53	0.99
MT000063	H3860224/MT920041	34.3	52.0	40.2	40.0	17.0	36.7	0.99	0.88
MT000092	MT890008/Lewis	41.6	72.0	67.1	62.0	46.9	57.9	0.87	0.65
MT000125	MT910189/Lewis	49.2	65.0	60.3	57.0	23.8	51.1	1.14	0.72
MT000130	MT910189/MT890070	48.0	86.0	67.0	68.0	58.2	65.4	0.97	0.70
MT000138	MT920041/H1851195	69.3	70.0	74.8	42.0	58.2	62.8	0.41	0.14
MT000153	MT920059/Baronesse	43.1	45.0	56.7	64.0	35.9	48.9	0.22	0.06
MT000156	MT920059/Baronesse	51.1	76.0	70.0	60.0	48.5	61.1	0.90	0.84
MT000180	MT930029/Baronesse	43.2	0.0	41.7	49.0	32.5	41.6	0.00	0.00
MT000239	Harrington/MT920059	32.0	0.0	33.4	43.0	38.5	36.7	0.00	0.00
MT010001	78A10274/Baronesse	47.8	74.0	53.8	48.0	51.1	54.9	0.78	0.74
MT010061	Elisa/Baronesse	37.1	41.0	29.2	29.0	21.5	31.6	0.50	0.63
MT010080	MT886610/H1851195	37.1	80.0	44.1	45.0	35.5	48.3	1.41	0.88
MT010081	MT886610/H1851195	40.7	46.0	60.8	18.0	27.0	38.5	0.66	0.23
MT010093	MT890008/H2860224	39.1	73.0	28.3	39.0	34.5	42.8	1.16	0.64
MT010095	MT890008/Logan	19.8	62.0	18.5	42.0	15.6	31.6	1.37	0.69
MT010097	MT890008/Logan	36.2	72.0	68.0	49.0	31.5	51.3	1.34	0.79
MT010133	MT910189/Baronesse	33.3	46.0	17.6	9.0	14.9	24.2	0.88	0.49
MT010155	MT920041/H1851195	53.8	0.0	67.9	82.0	56.3	65.0	0.00	0.00
MT010156	MT920041/H1851195	53.1	77.0	81.2	27.0	54.5	58.5	0.92	0.26
MT010158	MT920041/Harrington	53.0	54.0	56.5	24.0	28.2	43.1	0.75	0.33
MT010160	MT920041/Harrington	37.9	70.0	52.7	61.0	21.8	48.7	1.40	0.78
MT010162	MT920041/Harrington	20.7	0.0	30.4	29.0	14.2	23.6	0.00	0.00
MT010177	MT920041/MT890008	32.5	58.0	60.9	46.0	30.7	45.6	0.92	0.63
MT010183	MT920053/Baronesse	19.8	36.0	49.7	35.0	15.7	31.2	0.68	0.36
MT010191	MT920053/Harrington	37.4	64.0	35.9	43.0	32.2	42.5	0.95	0.83
MT010198	MT920059/ND 13300	66.8	92.0	78.7	65.0	44.2	69.3	1.41	0.92
MT010205	MT920073/Baronesse	47.2	86.0	43.3	15.0	37.5	45.8	1.57	0.55
MT010212	MT920073/Baronesse	51.6	53.0	32.5	26.0	27.0	38.0	0.66	0.36
MT010213	MT920073/Logan	41.3	70.0	51.1	29.0	40.6	46.4	1.01	0.64
MT010219	MT930029/Baronesse	41.6	80.0	50.1	42.0	46.9	52.1	1.13	0.73
MT910189	ND 7293/Bearpaw	61.2	73.0	76.9	60.0	43.6	62.9	0.87	0.65
MT950186	Haxby	42.5	63.0	31.7	35.0	34.6	41.4	0.83	0.62
MT960099	Manley/Baronesse	15.8	32.0	25.7	9.0	8.5	18.2	0.76	0.78
MT960101	Manley/Baronesse	20.8	37.0	17.6	16.0	15.3	21.3	0.66	0.78
MT960228	Eslick (Stark/Baronesse)	24.4	71.0	33.0	45.0	13.8	37.4	1.71	0.89

Table 4 continued on next page

Table 4. 2003 Montana Dryland Intrastate Spring Barley Nursery – Plump Summary (%) by Location.
(continued)

ID	Pedigree	Havre	Sidney	Huntley	Conrad	Bozeman	Mean	Byx	RSQ
MT970026	Baronesse/MT860756	36.0	80.0	44.2	64.0	29.5	50.7	1.50	0.76
MT970116	Klages/Baronesse	54.2	72.0	60.6	80.0	41.3	61.6	0.82	0.43
MT970148	MT861596/ND 11120	59.6	57.0	58.7	58.0	34.4	53.5	0.54	0.37
MT970155	MT886610/MT140523	46.5	62.0	32.0	57.0	37.1	46.9	0.64	0.37
MT970229	MT890021/Stark	48.4	0.0	74.5	69.0	42.9	58.7	0.00	0.00
MT981004	Baronesse/H2860224	44.5	59.0	16.5	9.0	17.1	29.2	1.15	0.42
MT981006	Baronesse/H2860224	43.9	49.0	34.7	30.0	26.2	36.7	0.61	0.60
MT981030	Baronesse/MT910160	17.1	56.0	15.9	29.0	10.8	25.8	1.35	0.81
MT981060	Hays	25.7	57.0	28.5	16.0	11.6	27.8	1.39	0.90
MT981091	MT851195/MT140523	45.2	57.0	45.1	59.0	28.3	46.9	0.75	0.54
MT981210	MT910150/Stark	45.5	78.0	58.4	60.0	34.6	55.3	1.31	0.93
MT981212	MT910150/Stark	41.8	57.0	70.3	80.0	44.9	58.8	0.39	0.08
MT981238	ND112311/Lewis	40.0	79.0	59.5	40.0	30.0	49.7	1.56	0.93
MT990106	Apex/H1851195	52.6	84.0	57.7	56.0	46.8	59.4	1.15	0.94
ND13299	Conlon	75.9	94.0	98.8	89.0	84.8	88.5	0.40	0.31
PI491534	Gallatin	36.9	60.0	42.9	25.0	22.9	37.5	1.14	0.84
PI533600	Haybet	8.3	7.0	12.1	15.0	6.7	9.8	-0.01	0.00
PI568246	Baronesse	38.2	36.0	40.4	70.0	20.1	40.9	0.27	0.03
PI605472	Garnet	48.7	79.0	68.8	49.0	40.5	57.2	1.24	0.88
PI610264	Valier	25.9	80.0	18.1	25.0	14.6	32.7	1.98	0.80
SK 76333	Harrington	33.5	78.0	55.6	54.0	33.1	50.8	1.45	0.89
*****	SITE MEAN *****	40.8	64.1	47.6	43.4	31.1	45.4	1.00	1.00
C.V.	C.V. (S/Mean) * 100	***	***	16.60	***	21.38	***	***	***
F-Value		***	***	16.83	***	10.28	***	***	***
L.S.D.	L.S.D. (.05)	***	***	13.38	***	13.27	***	***	***
Efficiency of Design Rel to RCB		***	***	1.08	***	***	***	***	***

Table 5. 2003 Montana Dryland Intrastate Spring Barley Nursery – Heading Date Summary (Days > Jan. 1) by Location.

ID	Pedigree	Havre	Sidney	Moccasin	Huntley	Conrad	Bozeman	Mean	Byx	RSQ
2B914947	Merit	185.7	169.7	184.5	179.1	183.0	183.0	180.8	0.91	0.95
6B932978	Legacy	183.0	166.4	180.4	164.7	179.0	181.0	175.7	1.06	0.70
6B952482	(BA6B95-2482) 6B89--2126/	182.7	167.3	181.4	165.4	180.0	181.3	176.4	1.02	0.67
B99AL621	B99AL-621	188.8	169.8	189.0	179.1	182.0	182.3	181.8	1.07	0.91
BZ594-19	Xena	191.3	170.0	183.4	178.3	182.0	182.7	181.3	1.09	0.97
MT000040	Chinook/MT920161	187.7	169.3	181.6	178.9	181.0	181.7	180.0	0.94	0.98
MT000045	Chinook/MT920161	188.1	168.6	182.7	179.0	181.0	182.0	180.2	1.02	0.99
MT000047	Chinook/MT920161	186.4	168.1	180.7	178.6	180.0	181.3	179.2	0.95	0.98
MT000063	H3860224/MT920041	186.7	169.9	184.3	180.3	183.0	182.7	181.1	0.92	0.97
MT000092	MT890008/Lewis	184.9	168.1	181.9	177.0	182.0	181.7	179.3	0.94	0.97
MT000125	MT910189/Lewis	198.7	168.6	181.8	179.0	182.0	181.7	182.0	1.40	0.84
MT000130	MT910189/MT890070	186.9	168.2	181.9	179.0	180.0	181.3	179.5	0.97	0.98
MT000138	MT920041/H1851195	183.8	167.5	179.4	176.0	180.0	180.7	177.9	0.89	0.98
MT000153	MT920059/Baronesse	186.3	167.5	180.4	178.3	180.0	181.3	179.0	0.98	0.98
MT000156	MT920059/Baronesse	185.0	166.7	176.8	178.3	179.0	180.7	177.7	0.91	0.89
MT000180	MT930029/Baronesse	184.3	170.0	183.9	179.0	182.0	182.0	180.2	0.82	0.94
MT000239	Harrington/MT920059	192.2	170.3	185.0	179.7	184.0	184.7	182.6	1.14	0.99
MT010001	78A10274/Baronesse	188.3	168.1	183.0	178.4	180.0	181.7	179.9	1.05	0.98
MT010061	Elisa/Baronesse	190.5	170.9	187.5	179.1	182.0	182.0	182.0	1.05	0.94
MT010080	MT886610/H1851195	186.0	167.5	180.3	176.7	180.0	181.0	178.6	0.98	1.00
MT010081	MT886610/H1851195	189.6	168.4	184.3	176.6	181.0	182.0	180.3	1.13	0.98
MT010093	MT890008/H2860224	193.1	171.6	188.5	183.0	184.0	184.0	184.0	1.10	0.94
MT010095	MT890008/Logan	185.5	168.7	181.5	179.0	182.0	183.0	179.9	0.91	0.96
MT010097	MT890008/Logan	185.1	169.7	180.7	178.4	181.0	183.0	179.7	0.83	0.96
MT010133	MT910189/Baronesse	188.4	171.0	185.9	180.3	184.0	183.7	182.2	0.96	0.99
MT010155	MT920041/H1851195	184.3	166.2	179.4	177.3	181.0	181.0	178.2	0.98	0.96
MT010156	MT920041/H1851195	185.2	167.8	179.9	177.0	179.0	181.0	178.3	0.92	0.99
MT010158	MT920041/Harrington	185.5	168.6	183.1	178.9	182.0	181.3	179.9	0.93	0.97
MT010160	MT920041/Harrington	187.0	168.9	182.1	177.7	182.0	182.7	180.1	0.98	0.99
MT010162	MT920041/Harrington	190.7	170.3	183.7	179.7	184.0	183.7	182.0	1.06	0.99
MT010177	MT920041/MT890008	185.4	167.0	179.7	177.1	180.0	181.3	178.4	0.98	0.99
MT010183	MT920053/Baronesse	191.6	170.3	184.5	179.0	182.0	183.7	181.8	1.10	0.98
MT010191	MT920053/Harrington	193.7	171.6	189.0	181.6	185.0	187.0	184.6	1.18	0.98
MT010198	MT920059/ND 13300	185.4	167.9	178.9	167.4	179.0	180.7	176.5	1.01	0.77
MT010205	MT920073/Baronesse	188.7	171.1	188.4	179.7	185.0	184.7	182.9	1.02	0.94
MT010212	MT920073/Baronesse	186.3	169.1	185.2	179.0	184.0	183.3	181.2	0.99	0.95
MT010213	MT920073/Logan	192.1	169.7	185.1	179.0	181.0	182.7	181.6	1.14	0.95
MT010219	MT930029/Baronesse	190.5	169.2	183.6	179.1	181.0	183.3	181.1	1.09	0.98
MT910189	ND 7293/Bearpaw	187.5	167.3	180.0	179.0	179.0	181.0	179.0	1.00	0.94
MT950186	Haxby	186.2	168.3	178.8	178.3	180.0	181.7	178.9	0.91	0.95
MT960099	Manley/Baronesse	190.6	171.0	187.0	179.6	184.0	184.0	182.7	1.07	0.99
MT960101	Manley/Baronesse	192.3	172.0	188.8	180.3	183.0	184.0	183.4	1.08	0.94

Table 5 continued on next page

Table 5. 2003 Montana Dryland Intrastate Spring Barley Nursery – Heading Date Summary (Days > Jan. 1) by Location.
(continued)

ID	Pedigree	Havre	Sidney	Moccasin	Huntley	Conrad	Bozeman	Mean	Byx	RSQ
MT960228	Eslick (Stark/Baronesse)	189.9	169.4	183.0	178.4	183.0	182.7	181.1	1.07	0.99
MT970026	Baronesse/MT860756	187.7	168.7	182.2	177.0	182.0	182.0	179.9	1.02	1.00
MT970116	Klages/Baronesse	186.2	167.3	178.9	177.0	180.0	181.7	178.5	0.98	0.97
MT970148	MT861596/ND 11120	188.1	167.9	181.2	178.3	180.0	181.3	179.5	1.03	0.98
MT970155	MT886610/MT140523	191.9	171.2	190.6	183.0	182.0	183.3	183.7	1.09	0.87
MT970229	MT890021/Stark	188.1	169.0	182.7	179.0	181.0	182.3	180.3	1.00	1.00
MT981004	Baronesse/H2860224	188.2	168.0	184.6	179.1	181.0	181.3	180.4	1.08	0.98
MT981006	Baronesse/H2860224	186.7	168.1	183.7	178.3	181.0	181.3	179.8	1.01	0.99
MT981030	Baronesse/MT910160	187.5	171.4	183.7	179.7	184.0	184.7	181.8	0.89	0.98
MT981060	Hays	187.2	170.1	184.6	183.0	184.0	184.0	182.2	0.92	0.92
MT981091	MT851195/MT140523	185.9	167.8	181.3	178.4	179.0	181.0	178.9	0.94	0.97
MT981210	MT910150/Stark	187.8	170.1	181.6	177.4	182.0	182.3	180.2	0.94	0.99
MT981212	MT910150/Stark	185.7	168.0	179.5	175.6	179.0	181.3	178.2	0.94	0.98
MT981238	ND112311/Lewis	182.1	168.3	177.6	176.7	179.0	181.3	177.5	0.75	0.91
MT990106	Apex/H1851195	185.5	169.2	183.6	178.9	183.0	181.7	180.3	0.91	0.96
ND13299	Conlon	179.5	165.0	172.7	163.6	177.0	177.0	172.5	0.86	0.66
PI491534	Gallatin	185.1	167.7	179.2	176.7	180.0	181.7	178.4	0.92	0.97
PI533600	Haybet	183.9	167.3	181.0	177.0	181.0	182.3	178.8	0.94	0.96
PI568246	Baronesse	188.6	170.1	185.2	179.7	183.0	183.0	181.6	1.00	0.99
PI605472	Garnet	190.4	171.0	187.4	178.4	183.0	184.0	182.3	1.07	0.96
PI610264	Valier	191.3	170.1	184.5	179.7	183.0	185.0	182.3	1.11	0.99
SK 76333	Harrington	189.4	169.3	183.2	179.0	183.0	183.0	181.1	1.06	1.00
SiteMean	SITE MEAN *****	187.6	169.0	182.8	177.9	181.5	182.3	180.2	1.00	1.00
C.V.	C.V. (S/Mean) * 100	1.35	0.32	0.93	0.46	***	0.29	***	***	***
F-Value		4.64	20.74	10.18	57.76	***	22.85	***	***	***
L.S.D.	L.S.D. (.05)	4.19	0.92	2.95	1.34	***	0.85	***	***	***
Efficiency of Design	Rel to RCB	1.01	1.08	1.38	1.01	***	1.00	***	***	***

Table 6. 2003 Montana Dryland Intrastate Spring Barley Nursery – Plant Height Summary (inches) by Location.

ID	Pedigree	Havre	Sidney	Moccasin	Huntley	Conrad	Bozeman	Mean	Byx	RSQ
2B914947	Merit	19.5	29.2	22.4	25.1	34.0	25.4	25.9	1.03	0.96
6B932978	Legacy	18.3	30.3	25.1	29.6	37.0	31.1	28.6	1.27	0.95
6B952482	(BA6B95-2482) 6B89--2126/	18.5	31.1	25.2	29.5	33.0	31.5	28.1	1.03	0.85
B99AL621	B99AL-621	17.8	26.2	20.8	23.6	29.0	25.7	23.8	0.81	0.96
BZ594-19	Xena	19.6	28.7	24.5	26.0	33.0	26.6	26.4	0.91	0.99
MT000040	Chinook/MT920161	17.4	28.8	24.1	25.5	35.0	27.9	26.5	1.19	0.99
MT000045	Chinook/MT920161	18.3	28.7	25.4	25.1	34.0	27.3	26.5	1.04	0.97
MT000047	Chinook/MT920161	18.6	28.1	24.6	26.5	34.0	28.6	26.7	1.03	0.97
MT000063	H3860224/MT920041	19.3	27.3	23.0	25.8	35.0	27.8	26.4	1.07	0.97
MT000092	MT890008/Lewis	19.6	29.9	23.6	27.1	36.0	27.6	27.3	1.14	0.99
MT000125	MT910189/Lewis	18.3	28.4	25.0	26.2	33.0	27.5	26.4	0.98	0.98
MT000130	MT910189/MT890070	19.7	31.4	24.6	29.6	34.0	29.1	28.1	1.02	0.93
MT000138	MT920041/H1851195	19.6	31.8	24.4	27.8	37.0	28.2	28.1	1.22	0.98
MT000153	MT920059/Baronesse	19.5	30.0	25.6	23.3	32.0	27.4	26.3	0.88	0.89
MT000156	MT920059/Baronesse	18.5	29.6	25.5	25.4	32.0	28.2	26.5	0.93	0.94
MT000180	MT930029/Baronesse	20.5	26.1	22.9	25.1	32.0	26.0	25.4	0.78	0.96
MT000239	Harrington/MT920059	19.9	29.1	22.5	25.9	37.0	27.2	26.9	1.19	0.95
MT010001	78A10274/Baronesse	18.9	29.3	25.6	24.4	33.0	27.9	26.5	0.96	0.95
MT010061	Elisa/Baronesse	19.8	25.6	21.9	22.2	33.0	25.3	24.6	0.90	0.89
MT010080	MT886610/H1851195	19.2	29.1	23.9	26.4	33.0	29.1	26.8	0.97	0.96
MT010081	MT886610/H1851195	19.2	29.2	22.8	28.1	34.0	27.8	26.9	1.04	0.96
MT010093	MT890008/H2860224	17.9	27.0	22.7	23.8	33.0	25.4	25.0	1.03	0.99
MT010095	MT890008/Logan	20.1	28.0	23.4	26.8	33.0	26.9	26.3	0.89	0.98
MT010097	MT890008/Logan	19.6	28.3	24.4	25.7	34.0	27.3	26.6	0.98	1.00
MT010133	MT910189/Baronesse	18.7	27.0	20.9	22.5	33.0	24.2	24.4	1.01	0.93
MT010155	MT920041/H1851195	20.2	30.4	24.7	26.4	35.0	28.5	27.5	1.04	1.00
MT010156	MT920041/H1851195	18.8	30.4	25.7	28.2	31.0	28.2	27.1	0.85	0.86
MT010158	MT920041/Harrington	19.1	28.8	23.7	23.7	32.0	26.1	25.6	0.91	0.97
MT010160	MT920041/Harrington	19.7	29.7	24.9	27.5	34.0	27.5	27.2	0.97	0.98
MT010162	MT920041/Harrington	18.8	28.0	22.2	25.4	29.0	24.9	24.7	0.75	0.93
MT010177	MT920041/MT890008	19.3	28.4	22.1	26.6	32.0	25.8	25.7	0.91	0.95
MT010183	MT920053/Baronesse	20.1	29.5	25.0	26.1	33.0	27.0	26.8	0.89	0.99
MT010191	MT920053/Harrington	17.9	27.6	22.1	21.8	34.0	25.4	24.8	1.12	0.95
MT010198	MT920059/ND 13300	19.1	29.3	27.0	25.2	36.0	27.7	27.4	1.10	0.94
MT010205	MT920073/Baronesse	19.8	28.0	18.8	25.3	31.0	26.0	24.8	0.89	0.83
MT010212	MT920073/Baronesse	19.1	29.1	23.6	25.3	37.0	26.6	26.8	1.22	0.97
MT010213	MT920073/Logan	18.9	27.2	23.4	23.8	30.0	26.0	24.9	0.78	0.99
MT010219	MT930029/Baronesse	20.3	29.3	24.6	26.8	33.0	28.1	27.0	0.89	1.00
MT910189	ND 7293/Bearpaw	17.9	28.8	26.9	25.9	36.0	26.8	27.1	1.15	0.93
MT950186	Haxby	19.4	29.2	25.2	27.4	35.0	26.4	27.1	1.03	0.97
MT960099	Manley/Baronesse	17.6	25.9	21.2	21.9	31.0	24.4	23.7	0.94	0.98
MT960101	Manley/Baronesse	18.2	25.6	21.4	22.1	29.0	25.6	23.7	0.77	0.96
MT960228	Eslick (Stark/Baronesse)	19.5	26.4	24.5	25.4	36.0	27.6	26.6	1.07	0.93

Table 6 continued on next page

Table 6. 2003 Montana Dryland Intrastate Spring Barley Nursery – Plant Height Summary (inches) by Location.
(continued)

ID	Pedigree	Havre	Sidney	Moccasin	Huntley	Conrad	Bozeman	Mean	Byx	RSQ
MT970026	Baronesse/MT860756	20.1	30.6	23.6	27.3	36.0	27.5	27.5	1.12	0.98
MT970116	Klages/Baronesse	19.4	32.5	26.6	29.8	37.0	29.7	29.2	1.20	0.97
MT970148	MT861596/ND 11120	17.7	27.5	23.9	23.7	30.0	25.4	24.7	0.84	0.96
MT970155	MT886610/MT140523	18.3	27.1	22.5	23.8	34.0	26.4	25.4	1.08	0.98
MT970229	MT890021/Stark	19.9	30.0	23.3	24.6	32.0	26.2	26.0	0.89	0.95
MT981004	Baronesse/H2860224	19.3	29.8	25.4	25.5	33.0	28.1	26.8	0.95	0.97
MT981006	Baronesse/H2860224	18.9	28.2	23.6	26.5	35.0	27.4	26.6	1.09	0.99
MT981030	Baronesse/MT910160	20.2	29.8	23.5	23.1	33.0	24.9	25.7	0.93	0.90
MT981060	Hays	18.0	29.9	21.7	23.1	37.0	26.8	26.1	1.36	0.96
MT981091	MT851195/MT140523	19.0	28.0	21.6	24.5	32.0	24.9	25.0	0.93	0.97
MT981210	MT910150/Stark	20.1	29.5	24.9	27.2	33.0	26.7	26.9	0.89	0.98
MT981212	MT910150/Stark	18.7	28.1	25.7	26.7	33.0	28.0	26.7	0.94	0.96
MT981238	ND112311/Lewis	19.8	30.3	26.2	27.3	34.0	27.7	27.6	0.96	0.98
MT990106	Apex/H1851195	18.1	24.8	25.1	24.4	34.0	26.4	25.5	0.98	0.88
ND13299	Conlon	17.5	31.9	26.7	28.5	34.0	27.1	27.6	1.11	0.90
PI491534	Gallatin	18.3	29.9	25.7	26.0	34.0	28.0	27.0	1.07	0.98
PI533600	Haybet	18.6	31.6	24.0	27.8	39.0	29.3	28.4	1.42	0.99
PI568246	Baronesse	19.7	26.9	23.2	23.4	30.0	24.9	24.7	0.72	0.98
PI605472	Garnet	19.9	28.7	22.1	25.8	32.0	27.4	26.0	0.89	0.96
PI610264	Valier	18.2	29.2	24.3	25.5	32.0	28.1	26.2	0.96	0.96
SK 76333	Harrington	19.5	27.0	23.5	25.8	36.0	25.9	26.3	1.08	0.93
SiteMean	SITE MEAN *****	19.0	28.8	23.9	25.7	33.6	27.1	26.3	1.00	1.00
C.V.	C.V. (S/Mean) * 100	4.13	4.90	6.98	5.19	***	2.56	***	***	***
F-Value		2.79	3.82	2.65	6.09	***	12.53	***	***	***
L.S.D.	L.S.D. (.05)	1.36	2.36	2.88	2.21	***	1.19	***	***	***
Efficiency of Design	Rel to RCB	1.46	1.03	1.30	1.01	***	1.17	***	***	***

Table 7. 2003 Montana Dryland Intrastate Spring Barley Nursery – Protein Summary (%) by Location.

ID	Pedigree	Havre	Sidney	Moccasin	Huntley	Conrad	Bozeman	Mean	Byx	RSQ
2B914947	Merit	18.9	12.8	21.3	18.8	15.7	18.4	17.6	1.30	0.95
6B932978	Legacy	17.1	13.9	19.2	18.4	15.1	16.5	16.7	0.84	0.88
6B952482	(BA6B95-2482) 6B89--2126/	17.1	13.8	19.8	18.3	16.2	17.0	17.0	0.88	0.94
B99AL621	B99AL-621	19.4	13.1	20.9	16.3	17.2	17.6	17.4	1.10	0.84
BZ594-19	Xena	17.5	12.8	19.2	18.2	15.6	16.5	16.6	1.00	0.98
MT000040	Chinook/MT920161	19.4	13.3	20.3	17.8	18.5	17.9	17.9	1.02	0.88
MT000045	Chinook/MT920161	18.7	13.9	19.8	17.8	16.7	17.5	17.4	0.89	0.98
MT000047	Chinook/MT920161	19.2	13.1	20.0	18.5	17.3	17.7	17.6	1.07	0.97
MT000063	H3860224/MT920041	20.1	13.9	21.7	17.7	17.4	18.4	18.2	1.13	0.91
MT000092	MT890008/Lewis	18.0	12.8	19.4	20.8	14.9	16.1	17.0	1.17	0.77
MT000125	MT910189/Lewis	17.9	13.7	18.8	18.6	15.7	17.3	17.0	0.84	0.92
MT000130	MT910189/MT890070	17.5	12.4	17.9	18.0	15.6	15.3	16.1	0.93	0.91
MT000138	MT920041/H1851195	18.3	14.0	19.2	17.2	17.7	17.5	17.3	0.74	0.88
MT000153	MT920059/Baronesse	18.8	13.2	18.4	19.5	15.3	16.6	17.0	0.97	0.81
MT000156	MT920059/Baronesse	19.6	14.9	21.0	18.3	16.6	17.0	17.9	0.93	0.90
MT000180	MT930029/Baronesse	18.3	12.8	18.3	18.4	15.8	15.4	16.5	0.95	0.89
MT000239	Harrington/MT920059	20.0	14.2	21.3	18.5	17.4	18.5	18.3	1.08	0.97
MT010001	78A10274/Baronesse	18.7	13.6	20.6	16.8	16.8	17.0	17.2	0.99	0.90
MT010061	Elisa/Baronesse	19.1	14.9	20.8	0.0	17.9	18.4	18.2	0.00	0.00
MT010080	MT886610/H1851195	19.3	14.2	21.2	18.0	17.7	17.4	18.0	1.01	0.94
MT010081	MT886610/H1851195	18.8	14.5	19.9	17.7	18.3	17.8	17.8	0.76	0.88
MT010093	MT890008/H2860224	18.5	13.6	21.2	17.1	16.9	17.8	17.5	1.04	0.90
MT010095	MT890008/Logan	18.5	13.6	21.4	18.4	16.5	17.0	17.6	1.13	0.96
MT010097	MT890008/Logan	17.3	13.0	18.8	17.4	15.6	16.2	16.4	0.89	0.99
MT010133	MT910189/Baronesse	18.2	13.1	20.0	20.2	17.2	16.6	17.5	1.10	0.88
MT010155	MT920041/H1851195	19.0	14.0	19.5	20.2	15.9	17.4	17.7	0.97	0.84
MT010156	MT920041/H1851195	18.7	13.9	19.7	18.1	18.1	17.3	17.6	0.85	0.92
MT010158	MT920041/Harrington	17.4	14.1	20.4	18.9	17.3	17.8	17.7	0.88	0.90
MT010160	MT920041/Harrington	18.3	13.9	20.4	17.4	15.8	18.0	17.3	0.95	0.90
MT010162	MT920041/Harrington	18.6	13.6	21.1	18.3	17.8	18.3	17.9	1.06	0.95
MT010177	MT920041/MT890008	18.0	13.4	18.9	19.4	16.1	16.5	17.1	0.92	0.88
MT010183	MT920053/Baronesse	19.6	14.5	21.3	19.1	18.8	18.6	18.7	0.98	0.95
MT010191	MT920053/Harrington	19.1	14.5	21.6	0.0	17.7	19.0	18.4	0.00	0.00
MT010198	MT920059/ND 13300	18.2	13.3	20.3	17.8	16.3	17.5	17.2	1.02	0.98
MT010205	MT920073/Baronesse	19.1	13.9	21.1	18.9	18.3	17.8	18.2	1.05	0.96
MT010212	MT920073/Baronesse	19.1	13.8	21.6	19.4	17.0	17.4	18.1	1.17	0.98
MT010213	MT920073/Logan	19.3	14.1	20.0	19.3	19.0	18.0	18.3	0.90	0.88
MT010219	MT930029/Baronesse	18.9	13.1	21.1	19.7	16.4	17.1	17.7	1.24	0.97
MT910189	ND 7293/Bearpaw	17.3	13.2	19.1	18.8	15.8	16.5	16.8	0.94	0.93
MT950186	Haxby	18.0	12.7	18.4	19.4	16.0	16.3	16.8	0.98	0.86
MT960099	Manley/Baronesse	18.6	14.0	20.9	17.3	17.4	17.9	17.7	0.95	0.91
MT960101	Manley/Baronesse	19.3	13.4	20.7	17.5	16.7	18.2	17.6	1.08	0.93
MT960228	Eslick (Stark/Baronesse)	18.1	12.0	18.0	17.4	16.2	17.1	16.5	0.97	0.90

Table 7 continued on next page

Table 7. 2003 Montana Dryland Intrastate Spring Barley Nursery – Protein Summary (%) by Location.
(continued)

ID	Pedigree	Havre	Sidney	Moccasin	Huntley	Conrad	Bozeman	Mean	Byx	RSQ
MT970026	Baronesse/MT860756	18.3	13.2	19.3	18.3	15.5	16.2	16.8	0.98	0.96
MT970116	Klages/Baronesse	18.0	13.4	18.9	17.9	15.5	17.2	16.8	0.88	0.95
MT970148	MT861596/ND 11120	17.8	12.8	19.6	18.5	15.3	16.0	16.6	1.08	0.95
MT970155	MT886610/MT140523	19.5	13.6	20.5	18.7	17.0	17.5	17.8	1.07	0.99
MT970229	MT890021/Stark	18.4	14.3	20.3	18.0	16.6	17.1	17.4	0.89	0.98
MT981004	Baronesse/H2860224	19.4	12.8	21.6	16.1	17.4	17.9	17.5	1.21	0.81
MT981006	Baronesse/H2860224	19.3	13.1	21.4	17.8	17.9	18.2	17.9	1.18	0.93
MT981030	Baronesse/MT910160	18.0	14.3	20.9	18.9	16.6	17.8	17.8	0.95	0.94
MT981060	Hays	18.4	13.8	21.8	18.8	16.0	17.5	17.7	1.16	0.93
MT981091	MT851195/MT140523	17.7	13.0	19.6	19.0	15.7	16.8	17.0	1.04	0.94
MT981210	MT910150/Stark	19.0	14.2	20.4	18.8	17.1	17.8	17.9	0.96	1.00
MT981212	MT910150/Stark	19.3	13.7	19.0	17.9	15.6	17.0	17.1	0.91	0.91
MT981238	ND112311/Lewis	18.5	14.1	19.1	18.3	17.6	16.2	17.3	0.77	0.88
MT990106	Apex/H1851195	19.3	14.0	20.2	17.6	18.0	18.2	17.9	0.90	0.89
ND13299	Conlon	16.5	13.0	18.1	19.1	15.9	15.6	16.4	0.84	0.77
PI491534	Gallatin	19.2	12.9	19.7	19.4	16.5	16.6	17.4	1.13	0.94
PI533600	Haybet	20.4	14.2	21.4	18.4	16.9	17.1	18.1	1.11	0.92
PI568246	Baronesse	18.5	14.5	20.3	19.8	16.1	16.9	17.7	0.95	0.89
PI605472	Garnet	19.0	13.8	20.7	19.1	17.4	17.9	18.0	1.05	0.99
PI610264	Valier	19.1	13.8	21.3	19.0	17.5	17.8	18.1	1.12	1.00
SK 76333	Harrington	19.2	13.0	21.5	18.5	16.3	17.6	17.7	1.28	0.99
Site Mean	SITE MEAN *****	18.6	13.6	20.2	18.4	16.7	17.3	17.5	1.00	1.00
C.V.	C.V. (S/Mean) * 100	***	4.63	***	***	***	2.60	***	***	***
F-Value		***	2.63	***	***	***	6.43	***	***	***
L.S.D.	L.S.D. (.05)	***	1.09	***	***	***	0.90	***	***	***
Efficiency of Design	Rel to RCB	***	1.35	***	***	***	***	***	***	***

Table 8. 2003 Montana Irrigated Intrastate Spring Barley Nursery – Overall Summary.

ID	PEDIGREE	Yield bu/ac	Test Wt lb/bu	Plump %	Thin %	Heading Date	Plant Height inches	Protein %
B99AL621	B99AL-621	134.0	51.8	85.6	5.9	178.3	31.9	12.1
MT960228	Eslick (Stark/Baronesse)	131.5	51.7	81.0	7.7	178.5	34.2	12.2
MT970148	MT861596/ND 11120	131.4	52.0	92.5	2.4	176.0	30.1	12.1
MT981006	Baronesse/H2860224	130.6	52.2	87.6	3.8	177.8	32.4	12.9
MT000040	Chinook/MT920161	130.1	52.8	83.3	5.6	177.1	33.3	13.6
MT000153	MT920059/Baronesse	129.7	52.8	92.1	3.8	175.5	32.7	13.1
MT981004	Baronesse/H2860224	129.2	51.7	84.8	3.8	177.6	32.3	12.7
MT981091	MT851195/MT140523	128.9	52.2	85.6	5.4	175.0	31.2	13.1
PI568246	Baronesse	128.5	52.3	86.3	6.3	178.6	33.2	12.1
MT010095	MT890008/Logan	127.0	50.8	75.1	7.0	177.7	35.8	12.9
MT950186	Haxby	126.5	53.7	86.5	3.6	176.8	33.8	12.7
MT010133	MT910189/Baronesse	126.2	53.2	84.9	4.0	179.9	33.6	11.8
MT010081	MT886610/H1851195	126.2	52.5	89.0	4.3	175.6	34.7	13.0
MT000047	Chinook/MT920161	126.2	52.6	85.9	6.2	175.7	32.5	13.3
MT981030	Baronesse/MT910160	126.1	52.7	79.6	6.7	179.7	33.6	12.6
MT960099	Manley/Baronesse	125.9	51.1	76.9	7.8	179.5	29.3	12.8
MT010191	MT920053/Harrington	125.8	51.7	84.5	4.5	180.5	34.2	12.8
BZ594-19	Xena	125.7	52.2	84.5	5.3	177.9	35.7	12.2
MT010093	MT890008/H2860224	125.3	50.9	84.0	3.8	181.1	32.3	13.2
MT970116	Klages/Baronesse	124.9	53.4	91.5	3.5	175.4	35.6	12.7
MT970229	MT890021/Stark	124.7	53.9	93.4	1.4	177.9	32.6	12.0
MT000092	MT890008/Lewis	124.7	52.8	91.9	3.5	175.6	34.0	12.5
MT990106	Apex/H1851195	124.6	52.5	90.3	3.2	178.3	32.2	13.6
MT010156	MT920041/H1851195	124.4	52.4	91.6	2.8	174.3	34.3	13.6
MT010212	MT920073/Baronesse	124.0	51.4	87.1	5.8	175.8	34.9	12.7
MT010158	MT920041/Harrington	123.9	52.7	89.6	3.6	176.1	32.8	13.0
MT000180	MT930029/Baronesse	123.8	52.0	85.4	5.3	176.8	35.1	13.1
MT000063	H3860224/MT920041	123.8	53.4	85.6	5.6	178.3	33.0	13.3
MT010213	MT920073/Logan	123.7	53.3	89.1	3.7	178.6	30.8	13.2
MT010001	78A10274/Baronesse	123.6	52.2	89.4	4.3	176.4	33.9	12.5
MT910189	ND 7293/Bearpaw	123.6	52.9	92.9	3.2	173.9	33.6	13.0
S3482	Calgary	123.5	51.3	84.0	2.8	178.7	28.4	12.7
MT000125	MT910189/Lewis	123.3	53.0	92.3	3.1	177.2	34.9	12.8
MT981212	MT910150/Stark	123.2	53.3	90.1	3.7	175.7	33.8	12.8
MT010162	MT920041/Harrington	123.2	51.7	82.1	5.6	179.0	32.7	13.4
MT010160	MT920041/Harrington	123.1	51.9	84.5	4.7	177.0	34.6	12.1
MT010097	MT890008/Logan	123.1	51.5	85.8	5.6	176.4	33.8	13.3
MT010155	MT920041/H1851195	122.9	52.5	92.6	2.5	174.2	35.2	13.3
Site Mean	SITE MEAN *****	122.7	52.1	86.3	4.8	177.0	33.7	12.9
MT981210	MT910150/Stark	122.7	52.3	88.9	4.2	177.0	34.2	13.3
MT970026	Baronesse/MT860756	122.5	52.7	82.5	5.2	176.2	33.9	12.9
MT010080	MT886610/H1851195	121.7	52.2	87.4	5.5	174.9	33.9	12.5

Table 8 continued on next page

Table 8. 2003 Montana Irrigated Intrastate Spring Barley Nursery – Overall Summary. (continued)

ID	PEDIGREE	Yield bu/ac	Test Wt lb/bu	Plump %	Thin %	Heading Date	Plant Height inches	Protein %
MT000156	MT920059/Baronesse	121.7	52.7	90.5	3.4	173.2	32.3	13.5
MT000130	MT910189/MT890070	121.7	53.1	92.9	2.5	174.6	35.2	13.6
MT960101	Manley/Baronesse	121.4	51.9	78.8	7.3	179.7	31.8	12.3
MT010183	MT920053/Baronesse	121.2	52.9	86.8	5.0	179.2	34.0	12.8
MT000045	Chinook/MT920161	121.2	52.5	91.5	3.0	176.5	33.0	13.1
MT970155	MT886610/MT140523	121.2	51.8	89.9	2.7	179.3	32.7	13.4
PI491534	Gallatin	121.1	53.1	86.8	6.7	174.0	35.5	12.2
MT010198	MT920059/ND 13300	121.0	53.0	91.0	3.7	173.4	34.4	13.2
SK 76333	Harrington	120.7	50.0	81.6	8.0	177.8	33.7	13.1
2B914947	Merit	120.7	49.7	83.1	5.1	178.4	33.7	13.1
PI610264	Valier	120.6	52.2	77.3	8.0	179.8	34.6	13.4
6B952482	(BA6B95-2482) 6B89--2126/	120.3	50.9	89.5	2.2	174.0	35.1	12.4
MT000138	MT920041/H1851195	119.4	53.4	95.4	2.2	173.7	34.9	14.0
MT010061	Elisa/Baronesse	119.2	52.0	87.0	3.1	178.2	32.2	13.2
PI605472	Garnet	118.8	51.2	93.2	2.6	178.9	35.0	12.7
MT010219	MT930029/Baronesse	117.2	51.9	93.0	1.8	178.2	35.6	12.9
MT000239	Harrington/MT920059	117.1	50.8	83.8	5.0	180.2	35.7	13.6
MT981238	ND112311/Lewis	116.3	53.4	92.1	3.2	174.4	34.8	13.4
MT010205	MT920073/Baronesse	116.0	51.5	89.1	3.1	180.3	33.7	13.5
ND13299	Conlon	114.9	53.2	96.1	1.2	170.3	34.3	12.9
6B932978	Legacy	112.1	48.7	76.1	5.5	174.9	36.4	12.9
MT981060	Hays	105.8	48.9	73.7	11.0	179.5	33.9	12.7
PI533600	Haybet	86.8	48.8	48.3	24.1	176.9	37.7	14.0
C.V.	C.V. (S/Mean) * 100	5.28	1.78	7.38	***	0.93	5.27	4.6
P-Value		<.0001	<.0001	<.0001	***	<.0001	<.0001	<.0001
L.S.D.	L.S.D. (.05)	8.07	1.16	7.94	***	2.04	2.21	0.7

Table 9. 2003 Montana Irrigated Intrastate Spring Barley Nursery - Yield Summary (bu/a) by Location.

Id	Pedigree	Kalispell	Sidney	Huntley	Conrad	Bozeman	Avg	BYX	RSQ
2B914947	Merit	108.9	121.6	125.5	132.6	114.8	120.7	1.22	0.32
6B932978	Legacy	101.6	130.5	111.3	107.8	109.4	112.1	1.24	0.23
6B952482	(BA6B95-2482) 6B89--2126/	116.7	130.8	119.8	120.4	113.8	120.3	0.43	0.08
B99AL621	B99AL-621	127.8	134.2	148.4	131.5	128.0	134.0	1.63	0.66
BZ594-19	Xena	109.3	130.1	133.2	123.1	132.9	125.7	2.15	0.83
MT000040	Chinook/MT920161	123.9	125.0	140.3	133.2	128.1	130.1	1.17	0.54
MT000045	Chinook/MT920161	131.7	113.6	137.6	110.9	112.4	121.2	0.25	0.01
MT000047	Chinook/MT920161	114.8	130.4	132.5	127.6	125.8	126.2	1.53	0.89
MT000063	H3860224/MT920041	114.8	125.7	133.8	123.8	120.9	123.8	1.55	0.91
MT000092	MT890008/Lewis	122.1	118.9	135.2	120.5	127.1	124.7	0.98	0.40
MT000125	MT910189/Lewis	107.7	123.1	134.9	128.4	122.5	123.3	2.16	0.84
MT000130	MT910189/MT890070	113.1	111.9	135.3	123.4	124.6	121.7	1.60	0.50
MT000138	MT920041/H1851195	111.9	120.8	132.7	116.7	114.8	119.4	1.69	0.79
MT000153	MT920059/Baronesse	119.1	122.1	136.7	139.1	131.6	129.7	1.21	0.34
MT000156	MT920059/Baronesse	126.7	123.0	122.1	122.3	114.6	121.7	-0.44	0.18
MT000180	MT930029/Baronesse	121.2	127.4	113.5	127.4	129.4	123.8	-0.49	0.10
MT000239	Harrington/MT920059	105.0	122.8	114.2	119.7	123.6	117.1	0.94	0.27
MT010001	78A10274/Baronesse	122.7	124.6	125.4	115.0	130.6	123.6	0.38	0.08
MT010061	Elisa/Baronesse	107.4	128.6	135.1	108.2	116.9	119.2	2.52	0.76
MT010080	MT886610/H1851195	112.3	120.1	125.4	124.7	126.1	121.7	1.06	0.61
MT010081	MT886610/H1851195	117.2	124.3	136.7	126.1	126.6	126.2	1.54	0.88
MT010093	MT890008/H2860224	109.3	125.0	121.7	144.1	126.5	125.3	0.90	0.09
MT010095	MT890008/Logan	126.7	124.6	136.5	126.9	120.4	127.0	0.66	0.23
MT010097	MT890008/Logan	122.5	122.3	118.8	130.8	121.3	123.1	-0.39	0.13
MT010133	MT910189/Baronesse	114.2	125.6	136.4	128.0	126.9	126.2	1.79	0.92
MT010155	MT920041/H1851195	123.2	121.9	122.6	121.8	124.8	122.9	-0.04	0.02
MT010156	MT920041/H1851195	121.1	121.7	131.5	126.4	121.5	124.4	0.74	0.49
MT010158	MT920041/Harrington	116.5	119.6	136.3	124.0	123.0	123.9	1.49	0.71
MT010160	MT920041/Harrington	114.2	124.5	130.7	122.3	123.9	123.1	1.39	1.00
MT010162	MT920041/Harrington	114.7	124.8	128.4	116.6	131.6	123.2	1.29	0.56
MT010183	MT920053/Baronesse	116.5	125.2	124.7	115.6	124.3	121.2	0.83	0.55
MT010191	MT920053/Harrington	115.0	126.4	137.7	119.0	130.8	125.8	1.96	0.84
MT010198	MT920059/ND 13300	119.9	122.5	112.9	124.7	125.1	121.0	-0.51	0.19
MT010205	MT920073/Baronesse	106.4	115.8	124.2	115.9	117.7	116.0	1.46	0.95
MT010212	MT920073/Baronesse	119.8	118.9	130.8	125.4	125.0	124.0	0.77	0.47
MT010213	MT920073/Logan	110.4	123.0	134.3	124.8	126.0	123.7	1.94	0.92
MT010219	MT930029/Baronesse	108.5	111.1	120.2	124.8	121.5	117.2	0.81	0.24
MT910189	ND 7293/Bearpaw	124.8	121.6	141.8	114.6	115.3	123.6	1.29	0.25
MT950186	Haxby	116.9	128.3	133.3	126.9	127.2	126.5	1.38	0.97
MT960099	Manley/Baronesse	110.4	134.5	130.9	121.2	132.3	125.9	1.99	0.71
MT960101	Manley/Baronesse	109.0	131.3	116.0	128.4	122.4	121.4	0.78	0.13
MT960228	Eslick (Stark/Baronesse)	125.0	126.1	144.5	133.8	128.0	131.5	1.40	0.55
MT970026	Baronesse/MT860756	112.9	126.9	134.6	114.8	123.2	122.5	1.93	0.85

Table 9 continued on next page

Table 9. 2003 Montana Irrigated Intrastate Spring Barley Nursery - Yield Summary (bu/a) by Location.
(continued)

Id	Pedigree	Kalispell	Sidney	Huntley	Conrad	Bozeman	Avg	BYX	RSQ
MT970116	Klages/Baronesse	122.8	137.1	120.9	122.5	121.3	124.9	0.12	0.01
MT970148	MT861596/ND 11120	122.2	133.4	145.0	125.0	131.6	131.4	1.95	0.87
MT970155	MT886610/MT140523	111.2	123.4	128.8	116.7	125.7	121.2	1.56	0.87
MT970229	MT890021/Stark	124.8	114.6	128.7	126.0	129.3	124.7	0.12	0.01
MT981004	Baronesse/H2860224	124.3	136.9	132.8	123.3	128.7	129.2	0.91	0.45
MT981006	Baronesse/H2860224	110.9	136.4	140.9	137.5	127.5	130.6	2.50	0.77
MT981030	Baronesse/MT910160	127.7	125.0	134.8	114.0	128.8	126.1	0.66	0.14
MT981060	Hays	105.8	112.4	97.4	92.7	120.7	105.8	-0.26	0.01
MT981091	MT851195/MT140523	122.3	137.3	121.9	136.4	126.8	128.9	0.10	0.00
MT981210	MT910150/Stark	120.0	122.2	132.2	116.5	122.4	122.7	1.02	0.55
MT981212	MT910150/Stark	120.8	127.6	125.2	116.0	126.2	123.2	0.54	0.24
MT981238	ND112311/Lewis	109.7	117.3	122.0	111.2	121.2	116.3	1.12	0.71
MT990106	Apex/H1851195	120.8	127.1	129.1	120.8	125.2	124.6	0.77	0.76
ND13299	Conlon	114.6	116.7	111.8	117.5	113.7	114.9	-0.21	0.15
PI491534	Gallatin	127.2	119.4	122.1	117.8	119.1	121.1	-0.46	0.28
PI533600	Haybet	97.9	87.2	83.9	87.2	77.9	86.8	-1.24	0.52
PI568246	Baronesse	117.4	137.3	137.4	124.1	126.2	128.5	1.84	0.80
PI605472	Garnet	115.8	120.8	124.0	115.7	118.0	118.8	0.72	0.75
PI610264	Valier	114.2	120.4	124.7	121.6	122.2	120.6	0.85	0.86
S3482	Calgary	100.0	132.9	133.1	120.1	131.4	123.5	3.04	0.83
SK 76333	Harrington	122.0	118.8	124.2	118.3	120.4	120.7	0.14	0.06
Site Mean	SITE MEAN *****	116.3	124.0	128.1	121.8	123.1	122.7	1.00	1.00
C.V.	C.V. (S/Mean) * 100	7.72	4.96	8.33	8.51	4.81	***	***	***
F-Value		1.78	4.89	2.80	2.12	4.75	***	***	***
L.S.D.	L.S.D. (.05)	15.62	10.64	18.15	17.92	10.39	***	***	***
Efficiency of Design	Rel to RCB	1.53	1.00	1.10	1.34	2.53	***	***	***

Table 10. 2003 Montana Irrigated Intrastate Spring Barley Nursery – Test Weight Summary (lbs/bu) by Location.

Id	Pedigree	Kalispell	Sidney	Huntley	Conrad	Bozeman	Avg	BYX	RSQ
2B914947	Merit	44.7	49.2	52.6	53.0	49.2	49.7	1.56	0.88
6B932978	Legacy	43.1	48.2	52.2	50.3	50.0	48.7	1.71	0.99
6B952482	(BA6B95-2482) 6B89--2126/	47.4	50.0	52.9	51.9	52.1	50.9	1.09	0.99
B99AL621	B99AL-621	49.5	51.5	53.7	51.8	52.4	51.8	0.72	0.90
BZ594-19	Xena	49.2	52.2	53.2	53.3	52.9	52.2	0.82	0.93
MT000040	Chinook/MT920161	49.8	51.8	55.7	54.3	52.5	52.8	1.07	0.90
MT000045	Chinook/MT920161	50.2	51.2	54.6	53.0	53.7	52.5	0.85	0.88
MT000047	Chinook/MT920161	50.1	51.0	54.6	53.5	53.9	52.6	0.91	0.89
MT000063	H3860224/MT920041	51.1	52.2	55.5	54.5	53.7	53.4	0.85	0.92
MT000092	MT890008/Lewis	50.9	52.5	54.7	52.6	53.5	52.8	0.63	0.85
MT000125	MT910189/Lewis	49.5	52.5	54.7	54.0	54.3	53.0	1.04	0.98
MT000130	MT910189/MT890070	50.4	52.3	54.7	54.1	53.9	53.1	0.85	0.99
MT000138	MT920041/H1851195	51.9	51.8	55.0	54.2	54.2	53.4	0.64	0.78
MT000153	MT920059/Baronesse	49.8	52.0	53.9	53.7	54.7	52.8	0.90	0.86
MT000156	MT920059/Baronesse	50.2	51.8	54.4	53.1	54.3	52.7	0.82	0.89
MT000180	MT930029/Baronesse	49.2	51.8	54.1	52.5	52.3	52.0	0.86	0.95
MT000239	Harrington/MT920059	47.5	51.2	52.5	52.7	50.1	50.8	0.94	0.79
MT010001	78A10274/Baronesse	51.1	51.2	53.7	52.9	52.3	52.2	0.49	0.77
MT010061	Elisa/Baronesse	48.0	51.3	53.9	53.7	53.1	52.0	1.21	0.98
MT010080	MT886610/H1851195	50.4	51.5	53.6	52.7	53.0	52.2	0.62	0.95
MT010081	MT886610/H1851195	48.5	52.0	54.5	53.9	53.6	52.5	1.19	0.98
MT010093	MT890008/H2860224	45.9	51.2	53.0	52.6	51.7	50.9	1.39	0.94
MT010095	MT890008/Logan	44.0	50.7	53.1	54.0	52.2	50.8	1.90	0.92
MT010097	MT890008/Logan	48.1	51.5	52.9	52.7	52.4	51.5	0.96	0.95
MT010133	MT910189/Baronesse	49.8	52.7	54.4	55.4	53.9	53.2	1.01	0.89
MT010155	MT920041/H1851195	50.3	51.2	53.5	53.8	53.5	52.5	0.74	0.86
MT010156	MT920041/H1851195	49.3	51.3	54.3	53.2	54.0	52.4	1.01	0.94
MT010158	MT920041/Harrington	50.2	50.8	54.4	53.8	54.2	52.7	0.91	0.84
MT010160	MT920041/Harrington	48.0	51.0	54.1	52.9	53.5	51.9	1.20	0.97
MT010162	MT920041/Harrington	47.9	51.7	54.3	52.6	52.2	51.7	1.15	0.96
MT010183	MT920053/Baronesse	51.2	52.0	54.4	53.7	53.2	52.9	0.62	0.94
MT010191	MT920053/Harrington	47.8	51.5	54.4	51.9	52.8	51.7	1.17	0.93
MT010198	MT920059/ND 13300	49.9	52.8	54.4	54.3	53.6	53.0	0.90	0.96
MT010205	MT920073/Baronesse	48.3	51.5	54.0	52.3	51.4	51.5	0.98	0.92
MT010212	MT920073/Baronesse	48.7	50.5	54.2	51.4	52.3	51.4	0.95	0.88
MT010213	MT920073/Logan	50.8	52.3	55.7	53.8	54.2	53.3	0.89	0.93
MT010219	MT930029/Baronesse	47.3	52.3	53.7	53.5	52.7	51.9	1.25	0.92
MT910189	ND 7293/Bearpaw	49.8	51.3	54.7	53.9	54.8	52.9	1.04	0.88
MT950186	Haxby	51.7	52.8	56.2	54.6	53.4	53.7	0.78	0.83
MT960099	Manley/Baronesse	46.7	51.7	53.4	51.7	52.3	51.1	1.22	0.90
MT960101	Manley/Baronesse	48.9	51.3	54.0	53.1	52.1	51.9	0.96	0.98
MT960228	Eslick (Stark/Baronesse)	48.2	50.8	54.2	53.6	51.6	51.7	1.15	0.94
MT970026	Baronesse/MT860756	48.5	52.7	55.0	54.4	52.8	52.7	1.22	0.94

Table 10 continued on next page

Table 10. 2003 Montana Irrigated Intrastate Spring Barley Nursery – Test Weight Summary (lbs/bu) by Location.
(continued)

Id	Pedigree	Kalispell	Sidney	Huntley	Conrad	Bozeman	Avg	BYX	RSQ
MT970116	Klages/Baronesse	51.9	53.0	54.3	54.1	53.9	53.4	0.48	0.98
MT970148	MT861596/ND 11120	48.2	51.2	54.4	52.6	53.5	52.0	1.18	0.96
MT970155	MT886610/MT140523	47.8	53.0	52.9	53.4	52.0	51.8	0.99	0.75
MT970229	MT890021/Stark	51.2	53.3	54.4	55.2	55.3	53.9	0.77	0.83
MT981004	Baronesse/H2860224	47.7	50.7	54.4	52.5	53.3	51.7	1.28	0.97
MT981006	Baronesse/H2860224	47.5	52.0	54.9	53.4	53.3	52.2	1.39	0.98
MT981030	Baronesse/MT910160	49.6	51.0	55.8	53.1	53.9	52.7	1.13	0.88
MT981060	Hays	45.9	49.7	50.9	48.4	49.5	48.9	0.80	0.73
MT981091	MT851195/MT140523	46.6	52.7	54.3	54.1	53.2	52.2	1.51	0.91
MT981210	MT910150/Stark	48.6	51.8	55.2	53.4	52.6	52.3	1.19	0.98
MT981212	MT910150/Stark	50.7	53.0	54.6	54.2	53.9	53.3	0.77	0.99
MT981238	ND112311/Lewis	51.4	52.2	54.3	54.4	54.5	53.4	0.67	0.85
MT990106	Apex/H1851195	48.1	51.5	55.7	55.0	52.5	52.5	1.47	0.95
ND13299	Conlon	50.2	52.8	54.7	55.0	53.1	53.2	0.90	0.91
PI491534	Gallatin	50.3	52.0	54.6	54.6	54.1	53.1	0.93	0.95
PI533600	Haybet	50.1	45.5	50.2	49.4	49.1	48.8	0.10	0.01
PI568246	Baronesse	51.4	52.0	53.9	52.1	52.3	52.3	0.37	0.62
PI605472	Garnet	48.3	49.8	53.2	53.4	51.5	51.2	1.03	0.90
PI610264	Valier	48.5	51.7	54.6	53.9	52.3	52.2	1.15	0.96
S3482	Calgary	45.3	51.0	55.5	52.1	52.9	51.3	1.83	0.95
SK 76333	Harrington	47.3	49.7	52.1	51.6	49.6	50.0	0.89	0.88
Site Mean	SITE MEAN *****	48.9	51.5	54.1	53.2	52.8	52.1	1.00	1.00
C.V.	C.V. (S/Mean) * 100	***	1.47	1.09	1.68	2.09	***	***	***
F-Value		***	7.98	8.92	5.92	3.07	***	***	***
L.S.D.	L.S.D. (.05)	***	1.23	1.00	1.48	2.21	***	***	***
Efficiency of Design	Rel to RCB	***	0.00	1.10	1.01	0.00	***	***	***

Table 11. 2003 Montana Irrigated Intrastate Spring Barley Nursery – Heading Date Summary
(Days > Jan 1) by Location.

Id	Pedigree	Kalispell	Sidney	Huntley	Conrad	Bozeman	Avg	BYX	RSQ
2B914947	Merit	175.7	176.1	174.7	182.0	183.7	178.4	0.88	1.00
6B932978	Legacy	175.3	172.1	165.3	180.0	181.6	174.9	1.27	0.82
6B952482	(BA6B95-2482) 6B89--2126/	171.3	171.7	166.7	179.0	181.1	174.0	1.26	0.98
B99AL621	B99AL-621	175.0	175.8	175.3	182.0	183.6	178.3	0.87	0.97
BZ594-19	Xena	174.7	176.0	174.7	181.0	183.3	177.9	0.84	0.97
MT000040	Chinook/MT920161	173.1	173.3	176.3	181.0	181.7	177.1	0.76	0.75
MT000045	Chinook/MT920161	174.0	173.4	172.0	181.0	182.4	176.5	1.01	0.98
MT000047	Chinook/MT920161	172.3	172.4	172.3	180.0	181.6	175.7	0.98	0.96
MT000063	H3860224/MT920041	176.7	176.0	175.0	181.0	183.0	178.3	0.73	0.97
MT000092	MT890008/Lewis	171.9	174.1	169.0	181.0	182.0	175.6	1.21	0.98
MT000125	MT910189/Lewis	174.9	173.4	173.0	182.0	182.6	177.2	0.99	0.95
MT000130	MT910189/MT890070	172.4	172.6	166.0	180.0	182.0	174.6	1.34	0.94
MT000138	MT920041/H1851195	171.5	171.4	166.0	179.0	180.7	173.7	1.27	0.96
MT000153	MT920059/Baronesse	172.9	171.9	171.0	180.0	181.9	175.5	1.06	0.98
MT000156	MT920059/Baronesse	170.3	170.9	165.0	179.0	181.0	173.2	1.40	0.97
MT000180	MT930029/Baronesse	174.5	174.3	170.7	181.0	183.7	176.8	1.13	0.98
MT000239	Harrington/MT920059	176.9	178.5	175.0	185.0	185.5	180.2	1.02	0.99
MT010001	78A10274/Baronesse	172.7	173.5	175.0	179.0	182.0	176.4	0.77	0.83
MT010061	Elisa/Baronesse	175.1	177.0	175.7	181.0	182.2	178.2	0.68	0.96
MT010080	MT886610/H1851195	171.8	173.0	168.3	180.0	181.4	174.9	1.19	0.99
MT010081	MT886610/H1851195	173.6	173.5	167.7	181.0	182.4	175.6	1.27	0.95
MT010093	MT890008/H2860224	179.0	179.0	179.7	184.0	183.7	181.1	0.51	0.88
MT010095	MT890008/Logan	173.1	177.1	173.0	182.0	183.4	177.7	1.01	0.94
MT010097	MT890008/Logan	173.8	174.1	170.3	181.0	183.0	176.4	1.13	0.99
MT010133	MT910189/Baronesse	177.3	179.0	175.7	183.0	184.7	179.9	0.81	0.98
MT010155	MT920041/H1851195	171.4	172.3	166.7	180.0	180.7	174.2	1.26	0.96
MT010156	MT920041/H1851195	171.5	172.3	165.3	181.0	181.3	174.3	1.42	0.94
MT010158	MT920041/Harrington	173.2	174.4	169.7	181.0	182.0	176.1	1.12	0.98
MT010160	MT920041/Harrington	175.3	175.4	170.3	181.0	183.1	177.0	1.06	0.95
MT010162	MT920041/Harrington	177.5	178.7	173.0	182.0	184.0	179.0	0.87	0.90
MT010183	MT920053/Baronesse	176.2	177.9	175.3	182.0	184.7	179.2	0.84	0.97
MT010191	MT920053/Harrington	178.3	179.1	174.0	184.0	187.1	180.5	1.07	0.96
MT010198	MT920059/ND 13300	171.0	171.5	164.7	179.0	181.0	173.4	1.38	0.95
MT010205	MT920073/Baronesse	178.3	179.0	174.7	184.0	185.6	180.3	0.94	0.97
MT010212	MT920073/Baronesse	174.0	175.3	165.7	181.0	183.1	175.8	1.36	0.87
MT010213	MT920073/Logan	175.3	176.0	177.0	181.0	183.6	178.6	0.71	0.86
MT010219	MT930029/Baronesse	174.4	176.6	174.3	182.0	183.6	178.2	0.92	0.98
MT910189	ND 7293/Bearpaw	170.1	171.3	166.7	180.0	181.3	173.9	1.37	0.99
MT950186	Haxby	172.7	174.2	174.0	181.0	182.4	176.8	0.93	0.94
MT960099	Manley/Baronesse	175.9	177.6	177.0	183.0	183.9	179.5	0.77	0.94
MT960101	Manley/Baronesse	175.4	179.0	176.3	183.0	184.6	179.7	0.83	0.92
MT960228	Eslick (Stark/Baronesse)	173.5	175.7	177.0	183.0	183.4	178.5	0.86	0.81

Table 11 continued on next page

Table 11. 2003 Montana Irrigated Intrastate Spring Barley Nursery – Heading Date Summary Days > Jan 1) by Location.
(continued)

Id	Pedigree	Kalispell	Sidney	Huntley	Conrad	Bozeman	Avg	BYX	RSQ
MT970026	Baronesse/MT860756	173.7	174.3	169.7	181.0	182.3	176.2	1.13	0.98
MT970116	Klages/Baronesse	171.8	174.1	168.7	180.0	182.6	175.4	1.22	0.98
MT970148	MT861596/ND 11120	171.5	172.6	174.7	179.0	182.2	176.0	0.86	0.81
MT970155	MT886610/MT140523	176.4	175.0	178.3	183.0	183.8	179.3	0.73	0.76
MT970229	MT890021/Stark	174.4	175.7	175.3	181.0	183.3	177.9	0.82	0.94
MT981004	Baronesse/H2860224	173.7	174.3	176.3	181.0	182.5	177.6	0.77	0.82
MT981006	Baronesse/H2860224	174.5	173.3	178.0	181.0	182.1	177.8	0.65	0.61
MT981030	Baronesse/MT910160	177.0	178.6	174.7	183.0	185.3	179.7	0.93	0.98
MT981060	Hays	175.1	176.0	179.0	182.0	185.5	179.5	0.78	0.71
MT981091	MT851195/MT140523	171.5	173.6	168.0	180.0	182.0	175.0	1.24	0.98
MT981210	MT910150/Stark	174.5	176.6	169.0	182.0	182.7	177.0	1.16	0.91
MT981212	MT910150/Stark	171.3	174.0	172.3	179.0	182.0	175.7	0.95	0.94
MT981238	ND112311/Lewis	171.7	172.2	166.7	180.0	181.3	174.4	1.29	0.97
MT990106	Apex/H1851195	175.5	176.0	175.7	182.0	182.5	178.3	0.75	0.96
ND13299	Conlon	167.7	170.0	163.0	175.0	176.1	170.3	1.11	0.93
PI491534	Gallatin	170.3	172.3	166.0	179.0	182.4	174.0	1.40	0.97
PI533600	Haybet	174.0	173.4	173.0	181.0	182.9	176.9	0.99	0.97
PI568246	Baronesse	175.5	176.1	176.0	182.0	183.4	178.6	0.79	0.96
PI605472	Garnet	175.5	177.8	174.7	183.0	183.7	178.9	0.89	0.97
PI610264	Valier	176.5	176.0	179.0	183.0	184.3	179.8	0.70	0.76
S3482	Calgary	176.7	175.7	177.0	181.0	183.1	178.7	0.63	0.87
SK 76333	Harrington	175.2	176.9	171.3	182.0	183.4	177.8	1.04	0.96
Site Mean	SITE MEAN *****	174.0	174.9	172.2	181.1	182.8	177.0	1.00	1.00
C.V.	C.V. (S/Mean) * 100	0.65	0.44	0.79	***	0.24	***	***	***
F-Value		11.51	28.1	30.78	***	35.07	***	***	***
L.S.D.	L.S.D. (.05)	1.05	1.28	2.20	***	0.76	***	***	***
Efficiency of Design Rel to RCB		0.65	1.03	0.00	***	1.07	***	***	***

Table 12. 2003 Montana Irrigated Intrastate Spring Barley Nursery – Plant Height Summary (inches) by Location.

Id	Pedigree	Kalispell	Sidney	Huntley	Conrad	Bozeman	Avg	BYX	RSQ
2B914947	Merit	31.8	35.7	34.3	36.0	30.7	33.7	0.86	0.56
6B932978	Legacy	34.4	38.1	38.3	36.0	35.1	36.4	0.74	0.76
6B952482	(BA6B95-2482) 6B89--2126/	35.9	37.3	34.2	33.0	35.3	35.1	0.31	0.15
B99AL621	B99AL-621	30.5	35.7	34.3	30.0	28.8	31.9	1.39	0.94
BZ594-19	Xena	32.0	39.6	38.2	38.0	30.4	35.7	1.74	0.76
MT000040	Chinook/MT920161	32.2	34.4	33.5	35.0	31.4	33.3	0.49	0.45
MT000045	Chinook/MT920161	32.7	36.6	34.1	30.0	31.6	33.0	1.01	0.69
MT000047	Chinook/MT920161	32.0	35.6	33.5	29.0	32.4	32.5	0.76	0.43
MT000063	H3860224/MT920041	33.2	36.4	34.7	29.0	31.5	33.0	1.00	0.53
MT000092	MT890008/Lewis	31.8	37.0	35.7	34.0	31.5	34.0	1.13	0.94
MT000125	MT910189/Lewis	33.3	37.7	34.4	36.0	33.2	34.9	0.75	0.66
MT000130	MT910189/MT890070	35.1	37.1	36.8	34.0	32.7	35.2	0.83	0.84
MT000138	MT920041/H1851195	34.1	36.2	36.2	34.0	34.1	34.9	0.51	0.80
MT000153	MT920059/Baronesse	30.2	34.1	34.5	33.0	31.7	32.7	0.65	0.58
MT000156	MT920059/Baronesse	32.9	34.9	33.3	29.0	31.4	32.3	0.72	0.44
MT000180	MT930029/Baronesse	34.4	38.1	34.7	38.0	30.4	35.1	1.08	0.50
MT000239	Harrington/MT920059	33.4	38.2	37.5	39.0	30.7	35.7	1.28	0.55
MT010001	78A10274/Baronesse	33.0	37.0	36.8	31.0	31.6	33.9	1.20	0.75
MT010061	Elisa/Baronesse	31.5	35.4	33.0	32.0	29.0	32.2	1.11	0.95
MT010080	MT886610/H1851195	32.7	36.9	35.3	32.0	32.8	33.9	0.90	0.81
MT010081	MT886610/H1851195	34.4	37.3	35.9	33.0	32.7	34.7	0.87	0.86
MT010093	MT890008/H2860224	30.7	34.0	33.0	35.0	29.0	32.3	0.81	0.47
MT010095	MT890008/Logan	33.6	37.9	39.1	37.0	31.1	35.8	1.34	0.70
MT010097	MT890008/Logan	33.0	38.2	33.8	33.0	31.0	33.8	1.22	0.90
MT010133	MT910189/Baronesse	30.5	35.2	36.7	37.0	28.9	33.6	1.21	0.46
MT010155	MT920041/H1851195	35.0	36.5	34.6	36.0	33.8	35.2	0.36	0.49
MT010156	MT920041/H1851195	34.3	36.5	35.9	31.0	33.8	34.3	0.66	0.40
MT010158	MT920041/Harrington	32.0	36.1	35.9	28.0	31.9	32.8	1.10	0.47
MT010160	MT920041/Harrington	32.6	37.3	37.8	33.0	32.3	34.6	1.17	0.80
MT010162	MT920041/Harrington	30.4	34.9	37.8	29.0	31.4	32.7	1.17	0.45
MT010183	MT920053/Baronesse	33.9	38.2	37.5	29.0	31.4	34.0	1.47	0.60
MT010191	MT920053/Harrington	30.3	36.6	37.5	35.0	31.7	34.2	1.20	0.64
MT010198	MT920059/ND 13300	34.5	37.0	31.4	37.0	32.1	34.4	0.48	0.14
MT010205	MT920073/Baronesse	30.6	37.9	38.6	30.0	31.3	33.7	1.71	0.70
MT010212	MT920073/Baronesse	33.0	38.1	34.9	37.0	31.7	34.9	1.05	0.66
MT010213	MT920073/Logan	29.4	34.7	32.6	27.0	30.4	30.8	1.05	0.54
MT010219	MT930029/Baronesse	34.3	37.7	36.0	38.0	31.9	35.6	0.90	0.54
MT910189	ND 7293/Bearpaw	32.9	34.9	35.4	33.0	31.6	33.6	0.68	0.81
MT950186	Haxby	34.0	39.8	34.6	30.0	30.6	33.8	1.63	0.75
MT960099	Manley/Baronesse	27.7	33.1	29.5	28.0	28.2	29.3	0.97	0.81
MT960101	Manley/Baronesse	29.7	35.0	32.1	32.0	29.9	31.8	0.96	0.86
MT960228	Eslick (Stark/Baronesse)	33.1	37.9	35.8	33.0	31.4	34.2	1.25	0.99

Table 12 continued on next page

Table 12. 2003 Montana Irrigated Intrastate Spring Barley Nursery – Plant Height Summary (inches) by Location.
(continued)

Id	Pedigree	Kalispell	Sidney	Huntley	Conrad	Bozeman	Avg	BYX	RSQ
MT970026	Baronesse/MT860756	32.0	38.2	35.4	32.0	32.1	33.9	1.28	0.89
MT970116	Klages/Baronesse	35.0	40.7	34.2	34.0	34.1	35.6	1.08	0.61
MT970148	MT861596/ND 11120	28.5	32.8	32.4	27.0	29.8	30.1	0.88	0.53
MT970155	MT886610/MT140523	32.7	36.4	34.2	30.0	30.0	32.7	1.19	0.80
MT970229	MT890021/Stark	32.2	36.2	31.6	32.0	31.0	32.6	0.83	0.69
MT981004	Baronesse/H2860224	32.1	36.0	33.9	29.0	30.7	32.3	1.08	0.67
MT981006	Baronesse/H2860224	31.0	35.2	32.3	33.0	30.3	32.4	0.83	0.82
MT981030	Baronesse/MT910160	33.3	39.1	34.4	31.0	30.1	33.6	1.59	0.86
MT981060	Hays	31.1	39.1	30.0	38.0	31.5	33.9	1.02	0.24
MT981091	MT851195/MT140523	31.2	31.8	31.3	33.0	28.9	31.2	0.37	0.26
MT981210	MT910150/Stark	34.4	37.9	34.5	35.0	29.3	34.2	1.30	0.75
MT981212	MT910150/Stark	33.9	38.2	35.6	30.0	31.3	33.8	1.34	0.71
MT981238	ND112311/Lewis	31.8	38.7	36.4	35.0	32.0	34.8	1.36	0.91
MT990106	Apex/H1851195	31.8	35.0	33.7	31.0	29.3	32.2	1.06	0.94
ND13299	Conlon	34.1	36.6	36.6	33.0	31.4	34.3	1.00	0.83
PI491534	Gallatin	34.8	38.2	35.5	37.0	31.9	35.5	0.96	0.69
PI533600	Haybet	35.9	40.4	36.0	41.0	35.1	37.7	0.73	0.29
PI568246	Baronesse	33.3	35.7	33.6	34.0	29.4	33.2	0.95	0.72
PI605472	Garnet	34.7	35.8	37.4	35.0	31.9	35.0	0.75	0.59
PI610264	Valier	31.6	36.6	33.7	39.0	32.2	34.6	0.67	0.20
S3482	Calgary	27.3	30.3	26.8	31.0	26.4	28.4	0.49	0.23
SK 76333	Harrington	32.6	37.7	37.4	30.0	30.6	33.7	1.54	0.76
Site Mean	SITE MEAN *****	32.5	36.6	34.8	33.1	31.3	33.7	1.00	1.00
C.V.	C.V. (S/Mean) * 100	4.02	3.66	7.63	***	1.92	***	***	***
F-Value		5.46	6.31	2.12	***	21.13	***	***	***
L.S.D.	L.S.D. (.05)	2.22	2.16	4.49	***	1.04	***	***	***
Efficiency of Design	Rel to RCB	1.10	0.00	1.07	***	1.34	***	***	***

Table 13. 2003 Montana Irrigated Intrastate Spring Barley Nursery – Protein Summary (%) by Location.

Id	Pedigree	Kalispell	Sidney	Huntley	Conrad	Bozeman	Avg	BYX	RSQ
2B914947	Merit	15.6	10.9	12.9	13.5	12.5	13.1	0.99	0.88
6B932978	Legacy	15.5	11.5	13.7	12.2	11.8	12.9	0.94	0.85
6B952482	(BA6B95-2482) 6B89--2126/	14.8	11.5	11.9	12.1	11.8	12.4	0.79	0.91
B99AL621	B99AL-621	13.9	10.4	12.7	12.6	11.1	12.1	0.80	0.86
BZ594-19	Xena	15.6	10.9	11.8	12.4	10.5	12.2	1.24	0.99
MT000040	Chinook/MT920161	15.7	11.7	13.3	14.3	13.1	13.6	0.85	0.86
MT000045	Chinook/MT920161	15.2	11.7	13.1	13.6	11.8	13.1	0.88	0.97
MT000047	Chinook/MT920161	15.7	12.0	12.7	13.9	12.0	13.3	0.95	0.96
MT000063	H3860224/MT920041	16.5	11.5	13.8	13.3	11.3	13.3	1.28	0.97
MT000092	MT890008/Lewis	13.9	12.3	12.1	11.0	10.6	12.0	0.59	0.56
MT000125	MT910189/Lewis	15.8	11.2	12.4	13.4	11.0	12.8	1.19	0.98
MT000130	MT910189/MT890070	14.7	11.5	12.2	13.2	11.0	12.5	0.89	0.94
MT000138	MT920041/H1851195	15.6	11.9	14.0	15.6	12.8	14.0	0.85	0.70
MT000153	MT920059/Baronesse	14.8	11.8	13.8	13.8	11.4	13.1	0.81	0.81
MT000156	MT920059/Baronesse	15.6	12.2	13.8	13.5	12.4	13.5	0.82	0.97
MT000180	MT930029/Baronesse	15.6	10.9	14.2	13.1	11.9	13.1	1.05	0.84
MT000239	Harrington/MT920059	16.5	11.8	13.6	13.2	12.8	13.6	1.04	0.93
MT010001	78A10274/Baronesse	14.2	11.7	12.9	14.0	12.4	13.0	0.56	0.74
MT010061	Elisa/Baronesse	16.9	11.7	13.1	12.7	11.8	13.2	1.28	0.95
MT010080	MT886610/H1851195	15.7	12.1	13.8	14.0	12.3	13.6	0.88	0.96
MT010081	MT886610/H1851195	15.0	11.4	13.4	13.6	11.6	13.0	0.89	0.92
MT010093	MT890008/H2860224	16.4	12.0	12.9	12.9	11.8	13.2	1.13	0.97
MT010095	MT890008/Logan	16.2	11.4	12.8	13.1	11.1	12.9	1.25	1.00
MT010097	MT890008/Logan	15.0	10.9	11.5	12.1	11.3	12.1	0.99	0.94
MT010133	MT910189/Baronesse	14.1	11.3	12.1	10.7	10.9	11.8	0.73	0.73
MT010155	MT920041/H1851195	15.9	11.8	13.7	12.5	12.4	13.3	0.94	0.87
MT010156	MT920041/H1851195	16.4	12.2	13.0	14.2	12.0	13.6	1.09	0.96
MT010158	MT920041/Harrington	15.8	10.8	13.1	13.8	11.6	13.0	1.18	0.94
MT010160	MT920041/Harrington	16.2	11.4	13.4	13.8	11.6	13.3	1.19	0.98
MT010162	MT920041/Harrington	16.5	10.7	12.5	12.6	11.7	12.8	1.32	0.95
MT010183	MT920053/Baronesse	15.0	11.8	12.6	13.3	11.2	12.8	0.89	0.96
MT010191	MT920053/Harrington	16.1	11.6	12.5	12.6	11.2	12.8	1.18	0.97
MT010198	MT920059/ND 13300	15.4	12.0	13.7	13.6	11.6	13.2	0.91	0.93
MT010205	MT920073/Baronesse	16.2	12.2	13.4	13.7	12.2	13.5	1.01	1.00
MT010212	MT920073/Baronesse	14.5	11.7	12.6	13.8	11.0	12.7	0.81	0.82
MT010213	MT920073/Logan	16.3	12.2	12.3	13.1	11.9	13.2	1.07	0.92
MT010219	MT930029/Baronesse	16.2	11.8	12.4	12.6	11.3	12.9	1.17	0.96
MT910189	ND 7293/Bearpaw	14.8	11.5	12.5	12.9	10.9	12.5	0.91	0.97
MT950186	Haxby	15.6	11.8	12.4	13.1	10.5	12.7	1.13	0.93
MT960099	Manley/Baronesse	15.8	11.0	13.4	12.9	11.0	12.8	1.21	0.96
MT960101	Manley/Baronesse	16.1	10.6	11.1	12.5	11.0	12.3	1.34	0.93
MT960228	Eslick (Stark/Baronesse)	14.4	11.6	11.7	11.4	12.0	12.2	0.64	0.71

Table 13 continued on next page

Table 13. 2003 Montana Irrigated Intrastate Spring Barley Nursery – Protein Summary (%) by Location.
(continued)

Id	Pedigree	Kalispell	Sidney	Huntley	Conrad	Bozeman	Avg	BYX	RSQ
MT970026	Baronesse/MT860756	16.1	11.9	12.0	13.0	11.6	12.9	1.11	0.93
MT970116	Klages/Baronesse	14.2	11.6	13.0	13.8	11.0	12.7	0.75	0.77
MT970148	MT861596/ND 11120	15.0	10.9	11.8	12.3	10.4	12.1	1.10	0.99
MT970155	MT886610/MT140523	16.2	12.0	13.8	13.5	11.5	13.4	1.12	0.96
MT970229	MT890021/Stark	15.4	11.7	12.4	12.4	10.8	12.5	1.04	0.95
MT981004	Baronesse/H2860224	14.9	11.3	12.2	14.1	11.1	12.7	0.97	0.84
MT981006	Baronesse/H2860224	16.5	10.9	12.6	12.8	11.6	12.9	1.32	0.98
MT981030	Baronesse/MT910160	15.4	11.5	11.6	13.8	10.7	12.6	1.11	0.86
MT981060	Hays	16.1	11.7	12.0	12.9	10.9	12.7	1.22	0.95
MT981091	MT851195/MT140523	15.8	12.0	13.1	13.6	11.2	13.1	1.07	0.96
MT981210	MT910150/Stark	16.6	12.3	13.3	12.7	11.6	13.3	1.16	0.93
MT981212	MT910150/Stark	15.3	12.4	13.4	13.9	12.2	13.4	0.77	0.97
MT981238	ND112311/Lewis	15.7	11.9	13.6	13.9	11.7	13.4	0.99	0.96
MT990106	Apex/H1851195	16.7	12.3	12.9	13.5	12.5	13.6	1.09	0.95
ND13299	Conlon	14.5	12.2	12.6	13.2	11.9	12.9	0.63	0.96
PI491534	Gallatin	14.7	11.0	12.2	12.1	11.2	12.2	0.91	0.99
PI533600	Haybet	16.4	13.6	14.1	12.8	13.3	14.0	0.72	0.69
PI568246	Baronesse	14.2	10.7	11.8	12.4	11.5	12.1	0.80	0.95
PI605472	Garnet	14.0	11.0	13.4	13.8	11.6	12.7	0.70	0.68
PI610264	Valier	17.5	11.7	12.6	13.2	12.1	13.4	1.41	0.95
S3482	Calgary	17.0	11.0	11.7	12.7	11.0	12.7	1.51	0.96
SK 76333	Harrington	15.5	11.4	13.4	12.4	12.8	13.1	0.84	0.79
Site Mean	SITE MEAN *****	15.6	11.6	12.8	13.1	11.6	12.9	1.00	1.00
C.V.	C.V. (S/Mean) * 100	***	3.79	***	***	6.24	4.60	***	***
F-Value		***	4.30	***	***	1.69	3.36	***	***
L.S.D.	L.S.D. (.05)	***	0.75	***	***	1.44	0.74	***	***
Efficiency of Design	Rel to RCB	***	1.18	***	***	***	***	***	***