PROJECT TITLE: 2003 Spring barley intrastate and preliminary performance nurseries in crop-fallow systems in central Montana.

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OBJECTIVES:
Evaluate the agronomic performance of advanced (2107)and early generation (3107)spring barley development lines in crop-fallow environments in central Montana.

RESULTS:
Cool wet growing conditions in April delayed emergence and development of spring seeded cereals. Dry conditions along with much above average temperatures in June and July contributed to low yield potentials and low test weights. For some cereals tillering was reduced so test weights were not as low as in other instances.

SUMMARY:
Drought conditions contributed to low yields and test weights and above normal grain protein levels. Haxby and Conlin exhibited the ability produce well and to produce decent test weights in droughty conditions. Xena exhibited good yield potential in droughty conditions, also.

FUTURE PLANS:
Barley variety evaluations will continue at Moccasin..

Table 1 2003 Intrastate barley performance evaluation.
Exp2107 Central Agricultural Research Center, Moccasin Montana.

ID	Pedigree	Trt	Head Date	Plant Ht	Yield	Test Wt	Protein
				"	bu/a	lbs/bu	%
MT981210	MT910150/Stark	27	181	25	37.5	44.7	20.4
MT950186	Haxby	13	179	26	35.8	46.7	18.4
ND13299	Conlon	3	174	26	35.2	42.9	18.1
MT000153	MT920059/Baronesse	39	179	27	34.6	43.4	18.4
MT010155	MT920041/H1851195	52	179	25	34.2	44.1	19.5
MT981212	MT910150/Stark	28	180	25	33.9	42.9	19.0
MT990106	Apex/H1851195	30	183	25	33.9	40.2	20.2
MT970116	Klages/Baronesse	18	179	26	33.9	46.3	18.9
MT010156	MT920041/H1851195	53	180	25	33.6	43.1	19.7
MT010097	MT890008/Logan	49	181	25	33.6	43.7	18.8
MT970148	MT861596/ND 11120	19	182	24	33.6	41.3	19.6
MT010213	MT920073/Logan	63	184	24	33.4	41.8	20.0
MT000138	MT920041/H1851195	38	179	24	32.8	42.4	19.2
MT010177	MT920041/MT890008	57	180	21	32.5		18.9
MT960228	Stark/Baronesse	16	183	25	32.4		18.0
MT010158	MT920041/Harrington	54	182	24	32.0	43.1	20.4
MT910189	ND 7293/Bearpaw	12	180	27	32.0	43.3	19.1
MT010080	MT886610/H1851195	45	180	24	31.1	43.0	21.2
MT010198	MT920059/ND 13300	60	179	26	30.9	43.1	20.3
MT000156	MT920059/Baronesse	40	177	25	30.8	42.5	21.0
MT000092	MT890008/Lewis	35	181	24	30.7	41.9	19.4
MT010093	MT890008/H2860224	47	187	24	30.6	42.7	21.2
MT000045	Chinook/MT920161	32	183	25	30.4	45.9	19.8
MT970026	Baronesse/MT860756	17	182	24	30.0	43.2	19.3
MT000047	Chinook/MT920161	33	180	24	29.8	44.0	20.0
MT010001	78A10274/Baronesse	43	184	25	29.5	42.5	20.6
PI568246	Baronesse	2	186	22	29.2	41.3	20.3
MT010183	MT920053/Baronesse	58	184	25	29.0	43.2	21.3
MT000040	Chinook/MT920161	31	182	24	28.9	45.3	20.3
MT010081	MT886610/H1851195	46	184	23	28.9	43.6	19.9
MT981030	Baronesse/MT910160	24	183	24	28.6	42.8	20.9
MT000125	MT910189/Lewis	36	182	25	28.5	46.0	18.8
MT981238	ND112311/Lewis	29	179	25	28.5	43.2	19.1
6B952482	(BA6B95-2482) 6B89--	10	181	26	28.5		19.8
MT000130	MT910189/MT890070	37	180	26	28.3	43.9	17.9
MT981006	Baronesse/H2860224	23	184	24	28.2	41.4	21.4
MT010160	MT920041/Harrington	55	181	26	28.1	42.8	20.4
MT010212	MT920073/Baronesse	62	185	24	27.9	40.6	21.6
MT981004	Baronesse/H2860224	22	184	25	27.7	41.4	21.6
MT010095	MT890008/Logan	48	182	23	27.6	41.2	21.4
MT981091	MT851195/MT140523	26	183	20	27.5	42.3	19.6

Table 1 2003 Intrastate barley performance evaluation. (continued)

ID	Pedigree	Trt	Head Date	Plant Ht	Yield	Test Wt	Protein
				"	bu/a	lbs/bu	%
MT000180	MT930029/Baronesse	41	184	23	27.5	43.9	18.3
MT000063	H3860224/MT920041	34	184	23	27.4	43.9	21.7
MT010133	MT910189/Baronesse	51	186	21	27.3	44.4	20.0
PI491534	Gallatin	1	180	25	27.2	41.9	19.7
MT970229	MT890021/Stark	21	184	22	27.0	42.1	20.3
MT010162	MT920041/Harrington	56	184	22	26.9	43.1	21.1
MT960099	Manley/Baronesse	14	187	21	26.7	43.2	20.9
MT010219	MT930029/Baronesse	64	184	24	26.7	43.1	21.1
MT010205	MT920073/Baronesse	61	187	20	26.5	44.1	21.1
PI610264	Valier	4	184	25	26.3	44.4	21.3
BZ594-19	Xena	50	184	24	26.2	44.8	19.2
6B932978	Legacy	9	180	25	25.9	40.8	19.2
MT010061	Elisa/Baronesse	44	187	22	25.6	44.0	20.8
MT970155	MT886610/MT140523	20	191	22	25.4	46.8	20.5
B99AL621	B99AL-621	11	189	21	25.0		20.9
SK 76333	Harrington	5	183	24	24.1	43.5	21.5
2B914947	Merit	8	185	23	23.7	40.1	21.3
MT000239	Harrington/MT920059	42	185	22	23.4	42.8	21.3
MT010191	MT920053/Harrington	59	190	22	21.6	40.6	21.6
MT960101	Manley/Baronesse	15	190	21	21.5		20.7
MT981060	Hays	25	185	22	20.3	41.4	21.8
PI605472	Garnet	7	187	22	19.6	42.5	20.7
PI533600	Haybet	6	181	24	10.1	39.6	21.4
OVERALL MEAN =			182.8	23.89	28.69	43.03	20.2
F-RATIO (df=126)			6.774	2.135	2.375		
P-VALUE TRTS =			0	0.0001	0		
CV (S/MEAN) % =			1.163	8.42	17.57		
LSD(0.05 by t)=			3.435	3.25	8.146		

Seed Date 22-Apr-03

Fertilizer: 10-10-10-5 w/seed 45 N topdress urea.

Harvest Da 01-Aug-03

Table 2 2003 Barley preliminary performance evaluation.
Exp3107 Central Agricultural Research Center, Moccasin Montana.

ID	Pedigree	Trt	Head Date	Plant Ht	Yield	Test Wt	Dry Basis Protein
			"	bu/a	lbs/bu	%	%
MT020192	Valier/Baronesse	48	186	24	27.3	32.1	20.5
ND 13299	Conlon	60	175	27	40.5	48.6	17.7
PI568246	Baronesse	62	184	24	27.9	46.6	21.1
MT020123	MT960174/MTLB 2	27	182	26	32.4	49.8	18.9
MT020024	CMB6432A/MTLB 2	4	187	22	22.6	46.5	20.4
MT020162	MT960225/H1851195	40	182	24	30.7	49.7	19.5
MT020145	MT960222/MTLB 6	35	184	23	31.6	47.2	19.3
MT020090	MT960013/MT960101	20	187	21	19.0	45.0	20.3
MT020169	MT960225/H3860224	43	182	25	33.7	48.3	19.2
MT020085	MT960013/MT960101	18	186	23	23.1	45.1	20.2
MT020231	MTLB 32/MT890008	55	182	23	29.6	44.4	21.0
MT020205	MTLB 32/H1851195	51	181	25	30.6	46.2	20.2
MT020036	Lewis/Kiebitz	6	187	23	19.9	46.1	19.4
MT020155	MT960225/H1851195	36	177	26	34.3	46.7	18.4
MT020022	CMB6432A/MT890008	3	183	23	19.1	45.1	19.8
MT020227	Triumph/MT960222	53	182	21	28.5	45.6	19.7
MT020072	MT910160/MT890008	14	183	23	23.3	48.8	21.0
MT020230	MTLB 32/MT890008	54	189	21	20.4	47.0	21.2
MT020100	MT960101/Baronesse	24	185	23	30.2	48.4	21.5
MT020138	MT960222/MTLB 6	32	183	25	29.1	48.7	20.1
MT020204	MTLB 32/H1851195	50	181	23	30.9	46.6	21.0
MT020159	MT960225/H1851195	38	177	26	34.5	46.8	18.2
MT020037	Lewis/Kiebitz	7	179	23	27.7	48.1	20.2
MT020191	Valier/Baronesse	47	185	22	28.4	46.1	21.2
MT020246	MT960013/MT960101	58	191	22	23.8	45.8	22.0
MT020207	MTLB 32/Stark	52	178	23	32.9	50.1	17.5
MT020236	MTLB 48/Alexis	56	183	24	24.6	46.9	20.5
MT020195	Valier/MT890008	49	186	22	20.6	45.1	20.8
MT020133	MT960222/H3860224	29	186	24	27.5	48.6	20.4
MT020020	CMB6432A/MT890008	2	184	22	16.0	46.2	20.5
MT020139	MT960222/MTLB 6	33	185	24	26.3	47.2	20.1
MT020167	MT960225/H3860224	42	184	24	29.6	49.1	21.1
MT020103	MT960101/Baronesse	25	187	23	27.2	45.8	21.8
MT020143	MT960222/MTLB 6	34	185	24	32.5	48.2	19.9
MT020086	MT960013/MT960101	19	191	24	25.4	45.1	21.7
MT020082	MT960013/MT920059	17	189	23	29.2	43.0	20.4
MT020028	Harrington/Zeisig	5	184	23	22.7	47.7	21.3
MT020247	MT960013/MT960222	59	187	23	23.5	44.8	21.0
MT020038	MT890008/MT960013	8	185	24	28.3	46.3	20.2
MT950186	Haxby	61	181	22	30.7	49.8	19.7

Table 2 2003 Barley preliminary performance evaluation. (Continued)

ID	Pedigree	Trt	Head Date	Plant Ht	Yield	Test Wt	Dry Basis Protein
MT020075	MT950220/MTLB 5	15	187	22	25.4	46.3	20.1
MT020096	MT960013/MT960222	22	185	25	19.9	45.9	20.4
MT020098	MT960101/Baronesse	23	186	24	22.6	46.8	22.4
MT020135	MT960222/H3860224	31	187	24	23.7	45.9	21.5
MT020244	MT950220/MT960226	57	180	25	31.2	47.8	19.5
PI491534	Gallatin	64	180	23	28.9	47.7	20.8
MT020120	MT960174/MT960222	26	184	25	28.4	46.0	20.0
MT020131	MT960222/H3860224	28	186	23	26.0	46.5	19.3
MT020051	MT890008/MTLB 13	10	183	22	21.7	45.7	20.5
MT020173	MT960225/MT890008	45	181	26	34.5	47.0	19.6
MT020043	MT890008/MT960174	9	187	21	25.6	46.8	19.9
MT020019	CMB6432A/MT890008	1	185	23	21.2	43.6	19.4
MT020058	MT890008/MTLB 32	12	185	23	27.9	46.3	20.9
MT020091	MT960013/MT960101	21	193	23	22.2	45.0	21.2
MT020134	MT960222/H3860224	30	188	24	26.7	45.3	20.9
MT020064	MT910160/H1851195	13	181	24	28.8	47.8	19.8
MT020053	MT890008/MTLB 13	11	184	24	14.5	45.1	18.1
MT020171	MT960225/MT890008	44	183	24	27.2	46.2	19.9
MT020179	MTLB 13/Stark	46	181	25	30.7	46.6	20.7
MT020080	MT960013/MT920059	16	187	23	25.6	44.8	20.0
SK 76333	Harrington	63	183	24	22.6	45.6	20.7
MT020161	MT960225/H1851195	39	179	26	26.5	46.4	18.6
MT020166	MT960225/H3860224	41	183	25	32.1	47.2	19.2
MT020156	**MT960225/H1851195**	37	178	26	27.2	47.1	19.0
OVERALL MEAN =			183.9	23.61	26.83	46.45	
F-RATIO(df=126)			16.17	1.9	4.307	1.209	
P-VALUE TRTS =			0	0.0011	0	0.1829	
CV (S/MEAN) % =			0.8263	7.139	15.17	8.016	
LSD(0.05 by t)=			2.456	2.724	6.577	6.016	

Seed Date: 22-Apr-03

Fertilizer: 10-10-10-5 w/seed 45 N topdress urea.

Harvest Date: 01-Aug-03