

PROJECT TITLE: Statewide Spring Wheat Variety Performance - 2007

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OBJECTIVE: To evaluate new and existing varieties and experimental lines of spring wheat under various growing conditions and environments in Montana.

RESULTS: The 2007 Advanced Spring Wheat yield trial was grown at two irrigated and seven dryland sites across Montana. Irrigated sites were at Sidney and Bozeman. Dryland sites were at Havre, Sidney, Moccasin, Huntley, Conrad, Bozeman and Kalispell. Replicated multiple-row plots were established at all locations using standard research techniques. Summaries of yield, test weight, protein content, heading date, and plant height at maturity are shown in Tables 1, 2, 3, 4, and 5, respectively. A summary of averaged data across sites is shown in Table 6.

Highest yielding varieties at individual sites were Corbin at **Havre**, BZ9M1025 at **Sidney dryland**, MT0605 at **Sidney irrigated**, MT0657 at **Moccasin**, MT0515 at **Huntley**, MT0515 at **Conrad**, MT0414 at **Bozeman dryland**, BZ9M1024 at **Bozeman irrigated**, and MT0617 at **Kalispell**. Highest yielding line on a statewide basis was MT0515 (Table 1).

Lines with the highest test weights statewide were MT0519 and Kelby (Table 2). Lines with the highest protein contents statewide were Thatcher and MT0631 (Table 3). Earliest heading line was Clear White, while latest heading line MT0413 (Table 4). Shortest line was Patwin, while tallest line was Thatcher (Table 5). An overall summary for the advanced spring wheat nursery grown across Montana is shown in Table 6.

SUMMARY: Highest yielding varieties at individual sites were Corbin at Havre, BZ9M1025 at Sidney dryland, MT0605 at Sidney irrigated, MT0657 at Moccasin, MT0515 at Huntley, MT0515 at Conrad, MT0414 at Bozeman dryland, BZ9M1024 at Bozeman irrigated, and MT0617 at Kalispell. Highest yielding line on a statewide basis was MT0515.

FUTURE PLANS: New and existing varieties and experimental lines will continue to be evaluated at Bozeman and the Research Centers in Montana, so that breeders can release improved varieties and producers can have information on varieties best adapted to conditions in their areas.

Table 1. 2007 yield (bu/ac) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dry	Sidney, dry	Sidney, irr	Moccasin, dry	Huntley, dry	Conrad, dry	Bozeman, dry	Bozeman, irr	Kalispell, dry	ave	rank	BYX	RSQ
ACSS2610	35.3	53.5*	42.9	40.0	63.7*	34.5	41.7	60.1*	59.1	47.9*	17	1.28	0.94
Norpro	35.4	53.6*	29.5	41.3	65.3*	34.8	42.4	59.2*	48.3	45.5	40	1.30	0.85
Freyr	33.7	51.4	31.9	39.0	55.0	33.5	36.8	57.5*	54.1	43.7	54	1.17	0.89
Kelby	37.5	49.3	30.6	40.2	40.1	39.7*	50.1*	59.1*	46.8	43.7	55	0.52	0.28
Kuntz	31.5	51.6	30.8	41.4	57.1	37.0	42.7	59.5*	50.5	44.7	48	1.15	0.86
AP604 CL	36.3	54.1*	27.9	41.5	58.0	36.6	41.9	50.4	53.9	44.5	51	1.10	0.86
BZ902413	38.4*	51.2	42.1	41.9	60.4	39.3*	43.5	43.5	51.2	45.7	37	0.75	0.80
Hand	34.5	53.6*	40.3	42.3	61.4	33.1	44.7	56.2*	55.9	46.9	29	1.18	0.98
Conan	35.8	48.8	37.5	37.7	55.4	36.2	41.0	52.2	46.1	43.4	56	0.83	0.91
Corbin	42.8	55.7*	29.1	41.7	62.7*	37.0	40.8	49.5	53.0	45.8	36	1.06	0.76
BZ999592	34.5	51.0	40.3	40.6	60.9	37.0	45.9*	51.2	55.1	46.3	31	1.03	0.98
BZ9M1024	37.5	59.8	43.1	42.3	61.7	34.0	42.1	61.8	54.7	48.6*	9	1.20	0.88
Jedd	34.4	57.7*	37.1	46.0*	60.6	39.8*	44.9	52.9	54.8	47.6*	21	1.06	0.93
Thatcher	30.0	39.7	30.5	31.5	52.1	29.7	28.2	30.1	40.8	34.7	64	0.74	0.63
Fortuna	32.1	49.2	40.3	34.5	54.7	32.9	40.5	37.7	51.6	41.5	62	0.85	0.75
MT 0336	36.4	54.2	40.6	45.0*	64.0*	39.6*	45.9*	50.8	54.0	47.8*	19	1.00	0.95
MT 0405	36.5	52.3	35.9	40.2	56.8	34.4	43.9	59.0*	56.5	46.2	33	1.13	0.92
MT 0413	39.2*	55.4*	25.7	45.0*	62.4	38.4*	43.2	48.4	55.2	45.9	35	1.12	0.75
MT 0414	37.6	54.8	42.3	42.5	60.4	39.1*	50.7	56.7*	60.6	49.4*	7	1.05	0.95
MT 0415	37.7	47.6	42.4	39.6	57.0	40.5*	45.7*	54.8	65.6*	47.9*	18	0.97	0.77
MT 0416	36.8	56.7*	42.3	45.1*	65.4*	34.5	49.5*	59.3*	60.0	50.0*	4	1.27	0.97
MT 0515	36.6	57.0*	46.4*	44.1*	68.9	43.6	48.9*	58.4*	54.9	51.0	1	1.09	0.91
MT 0516	39.0*	48.2	33.5	42.3	64.7*	42.0*	50.5*	57.7*	58.8	48.5*	10	1.11	0.84
MT 0519	33.1	51.7	31.6	42.3	55.7	37.5	48.3*	55.0	58.6	46.0	34	1.11	0.87
MT 0539	36.2	51.4	48.4*	46.0*	64.5*	39.0*	45.1	50.4	54.5	48.4*	12	0.90	0.84
MT 0550	31.4	48.0	23.1	40.6	57.3	34.7	46.8*	53.4	47.6	42.5	60	1.14	0.77
MT 0562	35.1	49.0	43.5	42.0	60.2	33.8	38.5	50.1	45.6	44.2	53	0.87	0.81
MT 0602	33.1	49.7	47.8*	44.5*	52.5	36.2	47.8*	48.5	56.7	46.3	32	0.74	0.71
MT 0605	36.9	50.5	51.2	43.1	63.9*	38.8*	44.3	59.8*	56.8	49.5*	6	1.00	0.81
MT 0606	35.5	51.3	48.2	43.0	59.9	37.6	45.7*	52.4	58.3	48.0*	16	0.93	0.88
MT 0607	35.5	46.2	43.9	46.0*	62.4	36.2	45.3	51.5	57.3	47.1	27	0.97	0.87
MT 0608	37.3	45.1	29.9	40.4	55.6	37.1	43.7	38.9	60.3	43.1	58	0.88	0.62
MT 0613	36.5	48.4	46.8*	40.7	58.6	42.3*	48.5*	58.7*	58.4	48.8*	8	0.87	0.81
MT 0614	36.1	51.1	31.1	38.7	63.2*	41.9*	44.3	44.6	52.3	44.8	47	0.99	0.77
MT 0617	32.9	58.7*	33.9	42.9	63.9*	33.3	45.0	56.1*	67.6	48.3*	13	1.55	0.94
MT 0623	37.0	49.3	46.3*	39.0	52.0	34.9	45.5	53.6	53.0	45.6	39	0.74	0.79
MT 0624	35.9	56.1*	39.5	46.7*	59.2	32.8	42.0	36.1	58.3	45.2	44	0.94	0.60
MT 0626	40.6*	54.3*	41.6	46.0*	62.3	39.5*	39.9	44.1	57.1	47.3*	24	0.86	0.75
MT 0627	33.7	55.2*	33.0	41.3	58.2	32.3	44.0	48.7	54.1	44.5	52	1.15	0.94
MT 0628	37.3	50.7	32.1	43.0	65.3*	40.6*	40.2	57.6*	56.7	47.1	28	1.21	0.88

(continued)

Table 1 (continued). 2007 yield (bu/ac) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dry	Sidney, dry	Sidney, irr	Moccasin, dry	Huntley, dry	Conrad, dry	Bozeman, dry	Bozeman, irr	Kalispell, dry	ave	rank	BYX	RSQ
MT 0631	33.6	<u>46.3</u>	39.3	39.6	54.1	34.0	44.7	45.1	49.6	42.9	59	0.78	0.93
MT 0632	39.2*	59.3*	43.4	42.0	<u>64.1*</u>	39.6*	45.4	61.1*	58.1	50.2*	3	1.16	0.95
MT 0638	36.3	46.7	41.7	43.0	55.3	42.4*	46.9*	60.6*	57.0	47.8*	20	0.84	0.78
MT 0640	32.2	50.3	44.4*	41.4	59.4	34.7	44.1	50.7	54.0	45.7	38	1.00	0.93
MT 0643	34.7	48.0	36.5	44.7*	53.8	39.6*	45.0	54.3	47.3	44.9	45	0.74	0.83
MT 0645	32.7	52.0	33.9	39.6	58.2	38.1*	40.9	48.6	45.8	43.3	57	0.94	0.88
MT 0657	35.6	52.5	44.1	<u>47.9</u>	56.7	36.5	45.9*	55.3	60.0	48.3*	14	0.96	0.89
MT 0658	32.7	48.6	50.3*	42.8	55.7	33.8	47.7*	54.7	56.1	46.9	30	0.89	0.73
MT 0659	35.0	48.1	43.9	41.2	58.4	32.6	43.4	47.0	52.4	44.7	49	0.89	0.89
MT 0663	36.9	55.3*	50.2*	45.1*	59.4	35.5	48.1*	55.5*	62.5*	49.8*	5	1.01	0.84
MT 0664	33.5	51.5	45.2*	42.9	58.9	35.7	48.4*	53.5	57.2	47.4*	23	1.00	0.91
MT 0666	32.0	54.1*	50.2*	43.3	64.2*	35.3	43.9	55.2	55.2	48.2*	15	1.12	0.85
MT 0667	33.5	53.5*	36.1	41.7	63.0*	36.5	44.2	58.6*	58.4	47.3*	25	1.30	0.98
MT 0669	34.6	50.3	50.4*	42.5	51.4	38.4*	47.3*	56.1*	54.8	47.3*	26	0.70	0.66
MT 0674	36.2	49.7	30.6	41.5	57.7	38.1*	46.0*	53.6	54.9	45.4	41	1.03	0.88
MTHW0471	34.0	53.5*	45.8	38.7	63.2*	33.9	41.5	45.7	45.6	44.7	50	0.93	0.72
Reeder	35.6	52.1	44.1*	42.0	61.4	35.0	46.4*	57.0*	62.8*	48.5*	11	1.18	0.93
Patwin	31.6	41.1	34.3	35.5	54.3	34.3	33.0	50.3	39.6	39.3	63	0.81	0.74
McNeal	34.8	53.8*	46.4*	43.0	55.9	36.6	42.7	41.3	52.9	45.3	42	0.73	0.67
Ernest	32.7	46.7	35.0	38.2	60.1	39.4*	37.1	42.2	45.5	41.9	61	0.84	0.76
Outlook	35.5	55.7*	42.6	44.6*	63.4*	33.6	43.0	54.4	55.8	47.6*	22	1.17	0.96
Choteau	36.1	52.1	35.5	43.0	61.9	37.8*	39.8	54.1	47.2	45.3	43	1.00	0.86
Clear White	34.8	46.5	30.1	43.9	48.9	37.4	47.9*	60.1*	54.3	44.9	46	0.89	0.63
Vida	42.3*	56.2*	35.7	44.3*	67.2*	37.6	47.7*	58.0*	64.3*	50.4*	2	1.30	0.93
site mean	35.5	51.5	39.1	41.9	59.2	36.8	44.1	52.5	54.5	46.1		1.00	1.00
CV (S/mean)	8.48	8.15	10.85	5.57	6.31	9.41	6.98	7.13	6.03	8.93			
F-value	1.93**	2.43**	7.49**	4.03**	4.82**	1.95**	4.98**	8.87**	8.00**	4.04**			
LSD (.05)	5.02	7.15	7.10	3.97	6.34	5.87	4.99	6.35	5.59	3.81			

Means followed by an asterisk are not significantly different at the .05 level when compared to the highest yielding wheat which is underlined

Table 2. 2007 test weight (lb/bu) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dry	Sidney, dry	Sidney, irr	Moccasin, dry	Huntley, dry	Conrad, dry	Bozeman, dry	Bozeman, irr	Kalispell, dry	ave	rank	BYX	RSQ
ACSS2610	57.4	62.4	61.3*	59.7	63.9	60.6	53.6	59.7	<u>60.4</u>	59.9*	7	1.08	0.87
Norpro	55.3	62.1	58.7	57.2	63.5	58.3	53.6	57.5	57.8	58.2	42	1.16	0.95
Freyr	57.1	62.0	59.3	59.7	63.5	58.4	53.7	59.2	59.5	59.2	19	1.02	0.88
Kelby	<u>59.3</u>	62.8*	61.3*	<u>61.0</u>	63.6	<u>61.8</u>	57.0	58.5	59.3	60.5*	2	0.78	0.87
Kuntz	56.4	62.4	58.4	60.4	62.9	59.5	53.4	58.2	58.7	58.9	28	1.06	0.86
AP604 CL	57.8	<u>63.6</u>	61.5*	60.9	64.3*	60.4	55.3	58.4	58.6	60.1*	4	1.10	0.97
BZ902413	57.4	61.7	60.7*	57.3	63.6	59.3	56.1	59.5	58.8	59.4	11	0.86	0.87
Hand	54.6	60.6	58.8	53.3	62.2	55.9	53.0	56.8	55.2	56.7	61	1.12	0.81
Conan	57.3	61.3	60.2	58.1	62.6	59.6	55.3	58.7	58.0	59.0	25	0.84	0.96
Corbin	57.6	61.6	59.3	56.9	63.3	57.8	54.9	56.9	58.0	58.5	40	0.93	0.86
BZ999592	55.9	61.1	57.6	58.3	62.9	58.5	55.0	57.7	56.9	58.2	43	0.92	0.92
BZ9M1024	56.0	60.7	59.9	57.9	62.0	58.4	55.1	58.9	58.0	58.5	41	0.82	0.94
Jedd	58.2	62.7*	59.8	59.5	64.2*	61.2	56.3	59.6	60.4	60.2*	3	0.85	0.87
Thatcher	52.5	58.5	56.1	53.9	61.3	54.2	50.7	51.2	54.9	54.8	62	1.23	0.85
Fortuna	56.8	61.4	60.4*	58.4	62.2	58.8	56.1	59.0	57.5	59.0	26	0.79	0.95
MT 0336	55.9	62.0	61.1*	59.2	63.0	59.0	55.2	59.2	58.1	59.2	20	0.99	0.96
MT 0405	56.7	62.0	59.7	59.2	62.5	58.7	56.0	56.6	58.1	58.8	34	0.86	0.91
MT 0413	56.4	62.7*	57.5	60.3	64.0*	60.0	52.9	59.3	57.3	58.9	29	1.20	0.84
MT 0414	56.4	61.1	61.3*	58.7	63.5	58.9	56.4	59.7	56.9	59.2	21	0.89	0.87
MT 0415	57.2	61.7	60.7*	59.8	63.7	58.6	55.1	58.7	59.1	59.4	12	0.96	0.96
MT 0416	55.7	61.9	60.7*	59.4	63.3	58.6	54.7	58.4	58.3	59.0	27	1.06	0.97
MT 0515	56.4	62.9*	60.3*	60.7	64.1	59.4	<u>57.9</u>	60.1	58.9	60.1*	5	0.86	0.86
MT 0516	56.3	62.3	58.9	60.6	63.9	60.1	55.6	58.3	57.4	59.3	17	1.01	0.90
MT 0519	58.6*	62.8*	61.3*	60.4	64.3*	58.8	58.8	<u>60.9</u>	59.9	<u>60.6</u>	1	0.68	0.81
MT 0539	55.3	60.7	60.0	57.1	62.1	58.4	53.9	56.4	53.6	57.5	55	1.10	0.86
MT 0550	58.0	62.3	60.0	60.6	63.0	60.7	57.2	59.3	59.3	60.0*	6	0.71	0.93
MT 0562	56.5	61.1	59.9	58.5	61.9	59.1	50.7	57.4	58.0	58.1	46	1.17	0.84
MT 0602	54.8	60.1	59.4	58.5	62.4	56.5	54.0	57.8	56.8	57.8	52	0.99	0.93
MT 0605	55.5	61.5	59.6	59.8	63.1	57.4	55.1	56.0	53.9	58.0	48	1.11	0.82
MT 0606	56.0	61.9	60.5*	59.9	62.8	58.8	53.6	58.2	55.4	58.6	39	1.16	0.92
MT 0607	55.8	61.7	60.6*	60.1	63.4	57.5	55.5	58.7	55.4	58.7	36	1.05	0.86
MT 0608	57.0	61.5	60.1	59.3	62.8	58.2	56.9	58.8	57.8	59.1	22	0.75	0.94
MT 0613	57.4	61.4	60.6*	60.1	63.4	59.8	56.0	59.7	56.4	59.4	13	0.88	0.88
MT 0614	56.3	60.9	59.0	58.4	61.7	60.1	55.6	57.1	59.6	58.8	35	0.72	0.79
MT 0617	54.7	60.6	60.2	56.3	62.0	57.8	52.8	56.2	58.5	57.7	53	1.08	0.86
MT 0623	54.9	60.7	59.7	57.4	61.3	56.7	51.6	56.6	55.1	57.1	59	1.18	0.95
MT 0624	57.2	61.5	60.9*	60.0	63.2	58.4	55.0	58.7	55.7	58.9	30	0.99	0.88
MT 0626	56.6	61.9	60.7*	58.7	62.0	59.0	55.1	56.6	57.3	58.7	37	0.93	0.93
MT 0627	51.1	58.9	58.1	55.6	60.0	53.8	48.7	53.3	51.1	54.5	64	1.48	0.93
MT 0628	55.6	60.6	58.8	57.5	62.5	57.6	50.9	54.8	56.5	57.2	58	1.27	0.93

(continued)

Table 2 (continued). 2007 test weight (lb/bu) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dry	Sidney, dry	Sidney, irr	Moccasin, dry	Huntley, dry	Conrad, dry	Bozeman, dry	Bozeman, irr	Kalispell, dry	ave	rank	BYX	RSQ
MT 0631	55.8	61.1	58.3	58.0	62.0	59.1	53.6	56.4	56.8	57.9	50	0.99	0.94
MT 0632	57.0	62.0	61.5*	58.3	62.3	60.2	55.0	58.0	57.3	59.1	23	0.94	0.90
MT 0638	56.9	60.9	61.6*	58.7	63.5	59.6	57.1	59.7	58.0	59.5	9	0.79	0.86
MT 0640	56.4	61.6	61.0*	58.6	62.7	59.3	54.2	57.7	58.5	58.9	31	1.01	0.95
MT 0643	57.4	61.8	60.9*	58.7	63.2	59.8	55.6	58.7	57.7	59.3	18	0.91	0.97
MT 0645	56.2	61.8	59.8	59.6	62.9	58.7	52.5	53.4	58.6	58.2	44	1.21	0.77
MT 0657	55.2	61.4	59.8	59.0	63.4	57.6	54.6	57.8	55.2	58.2	45	1.14	0.94
MT 0658	56.7	61.6	<u>62.0</u>	59.5	<u>64.4</u>	58.4	56.8	59.2	57.4	59.6	8	0.97	0.88
MT 0659	54.6	61.7	59.6	58.8	63.1	56.4	51.2	55.6	56.7	57.5	56	1.40	0.95
MT 0663	57.2	62.7*	61.5*	60.4	63.3	59.3	54.7	58.7	57.6	59.5	10	1.06	0.96
MT 0664	55.2	61.6	61.1*	58.9	63.6	59.3	54.7	57.5	56.5	58.7	38	1.15	0.96
MT 0666	54.4	60.9	58.3	58.2	63.0	57.2	53.1	56.0	55.6	57.4	57	1.20	0.98
MT 0667	56.4	61.1	59.7	58.0	63.8	59.6	54.8	59.0	58.0	58.9	32	0.99	0.94
MT 0669	57.0	62.2	60.2	58.0	63.1	58.3	56.4	59.9	59.1	59.4	14	0.82	0.87
MT 0674	55.5	60.0	57.7	58.1	62.4	57.6	54.9	57.1	57.7	57.9	51	0.84	0.92
MTHW0471	57.5	62.3	60.8*	58.9	64.3*	58.6	55.1	58.2	59.4	59.4	15	1.02	0.94
Reeder	56.6	61.8	60.8*	59.4	63.5	59.1	56.8	59.8	57.0	59.4	16	0.87	0.90
Patwin	52.6	59.5	55.0	53.0	60.7	54.3	50.9	53.7	52.4	54.7	63	1.22	0.90
McNeal	54.8	60.9	58.3	59.1	62.1	57.1	53.8	57.2	56.2	57.7	54	1.03	0.95
Ernest	57.3	61.3	60.9*	58.7	62.5	59.4	55.1	58.2	58.8	59.1	24	0.84	0.94
Outlook	55.6	60.7	59.3	57.7	61.6	54.5	52.1	57.1	55.2	57.1	60	1.12	0.86
Choteau	55.5	62.0	60.1	59.2	63.5	59.8	54.8	56.9	58.3	58.9	33	1.09	0.94
Clear White	54.3	60.8	57.3	59.0	62.3	58.3	55.8	58.9	55.7	58.0	49	0.87	0.76
Vida	56.3	61.3	56.3	58.7	62.6	58.8	54.9	56.2	58.0	58.1	47	0.86	0.76
site mean	56.2	61.5	59.8	58.6	62.9	58.5	54.6	57.8	57.3	58.6		1.00	1.00
CV (S/mean)	0.94	1.00	1.70	2 REP	0.39	1 REP	1 REP	1 REP	1 REP	1.67			
F-value	18.78**	6.08**	5.84**		36.8**					14.13**			
LSD (.05)	0.90	1.03	1.67		0.42					0.90			

Means followed by an asterisk are not significantly different at the .05 level when compared to the highest yielding wheat which is underlined

Table 3. 2007 protein content (percent) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dry	Sidney, dry	Sidney, irr	Moccasin, dry	Huntley, dry	Conrad, dry	Bozeman, dry	Bozeman, irr	Kalispell, dry	ave	rank
ACSS2610	17.0	11.6	14.2	11.5	10.3	15.1	18.7	14.7	15.0	14.2	50
Norpro	17.1	11.5	15.6	11.9	10.1	15.0	16.4	15.2	17.3	14.5	38
Freyr	16.3	12.3	15.2	12.1	10.0	15.5	16.4	14.9	16.0	14.3	45
Kelby	16.6	13.5	<u>16.8</u>	12.6	<u>12.2</u>	15.2	16.7	16.1	17.0	15.2	5
Kuntz	16.3	12.2	15.1	11.1	9.8	14.8	16.1	14.3	15.8	13.9	62
AP604 CL	16.6	12.9	15.5	11.5	9.7	14.8	17.4	16.4	16.6	14.6	27
BZ902413	16.3	12.7	14.9	12.9	10.9	14.5	16.9	15.4	15.9	14.5	37
Hand	16.7	11.2	15.6	12.7	9.8	15.9	17.5	15.4	17.0	14.6	26
Conan	16.6	12.6	14.8	12.8	11.3	15.2	17.4	15.7	16.8	14.8	14
Corbin	16.5	11.5	14.8	13.7	9.6	15.6	17.5	16.2	17.0	14.7	21
BZ999592	17.6	11.8	15.6	11.8	9.1	15.1	16.9	15.5	17.3	14.5	32
BZ9M1024	16.2	12.0	14.5	12.4	9.3	14.7	16.2	14.9	15.6	14.0	59
Jedd	16.3	11.5	15.7	11.3	9.8	14.0	16.2	14.9	15.9	14.0	61
Thatcher	<u>17.7</u>	<u>13.8</u>	15.1	<u>14.2</u>	10.5	<u>16.6</u>	<u>18.5</u>	<u>18.3</u>	<u>18.3</u>	<u>15.9</u>	1
Fortuna	15.6	12.7	16.0	12.9	10.3	15.1	16.9	15.5	16.0	14.6	29
MT 0336	15.9	12.8	13.7	12.5	9.9	14.6	16.0	14.7	16.3	14.0	57
MT 0405	16.9	12.4	15.4	12.9	10.7	16.1	16.5	16.0	16.6	14.8	13
MT 0413	15.9	12.2	16.4	11.9	9.7	14.4	17.0	15.1	15.9	14.3	48
MT 0414	17.2	13.3	16.2	13.6	10.8	15.7	16.3	16.0	16.6	15.1	6
MT 0415	17.1	13.3	15.7	13.8	11.1	16.1	17.3	16.6	16.5	15.3	4
MT 0416	15.5	11.8	14.9	12.4	10.2	14.1	16.3	14.8	16.0	14.0	58
MT 0515	16.9	12.5	15.6	12.3	10.1	14.5	15.6	15.3	15.9	14.3	46
MT 0516	16.7	12.1	15.5	12.4	10.3	15.1	16.3	15.9	16.4	14.5	33
MT 0519	16.5	12.4	15.5	12.9	10.8	16.1	16.4	15.5	16.9	14.8	16
MT 0539	16.5	12.0	16.0	11.8	10.4	14.7	16.9	15.7	17.4	14.6	28
MT 0550	16.1	12.1	15.5	12.3	11.5	14.9	15.4	15.2	16.2	14.4	44
MT 0562	16.6	12.8	15.6	11.7	10.0	15.5	17.8	15.4	16.9	14.7	22
MT 0602	16.9	11.6	15.7	12.4	9.9	15.2	16.8	15.3	15.8	14.4	41
MT 0605	17.2	12.0	15.6	11.5	10.2	15.3	16.7	16.2	17.6	14.7	23
MT 0606	17.0	11.3	15.5	11.6	10.4	15.0	17.3	15.7	16.9	14.5	34
MT 0607	16.9	11.2	14.5	12.3	10.4	15.3	17.3	15.0	16.7	14.4	42
MT 0608	17.0	11.7	15.1	12.9	10.8	15.5	17.0	15.7	16.8	14.7	19
MT 0613	17.0	12.0	14.6	13.0	10.5	15.0	16.7	15.2	16.9	14.5	30
MT 0614	17.4	12.0	15.4	12.7	10.7	15.4	16.8	15.9	15.7	14.7	24
MT 0617	16.6	12.4	14.6	11.5	10.2	14.7	16.5	14.8	16.0	14.1	53
MT 0623	17.1	12.5	14.8	12.4	11.0	14.6	17.6	14.9	17.6	14.7	20
MT 0624	15.7	11.5	14.0	11.9	9.7	14.4	15.9	14.4	15.8	13.7	64
MT 0626	15.9	12.5	15.6	10.9	9.4	14.8	16.7	15.7	16.1	14.2	51
MT 0627	16.8	12.6	14.9	11.7	9.7	15.2	17.1	15.2	16.8	14.4	39
MT 0628	16.9	12.9	15.2	12.2	10.5	16.0	17.4	16.4	16.3	14.9	12

(continued)

Table 3 (continued). 2007 protein content (percent) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dry	Sidney, dry	Sidney, irr	Moccasin, dry	Huntley, dry	Conrad, dry	Bozeman, dry	Bozeman, irr	Kalispell, dry	ave	rank
MT 0631	17.2	13.5	15.9	13.6	11.4	16.0	17.3	16.3	17.0	15.4*	3
MT 0632	15.8	12.5	14.0	10.9	9.7	15.0	16.6	14.7	16.5	14.0	60
MT 0638	16.5	12.6	16.0	13.2	11.2	15.5	16.9	15.9	17.5	15.0	8
MT 0640	16.9	13.1	16.0	13.0	10.7	15.4	17.1	15.8	16.7	15.0	10
MT 0643	17.2	12.6	16.4	12.0	10.9	15.7	17.1	16.3	17.2	15.0	7
MT 0645	17.2	11.5	14.4	13.1	9.8	15.1	17.8	16.7	17.0	14.7	18
MT 0657	16.7	11.0	15.2	12.1	9.4	15.2	16.6	15.5	16.6	14.3	49
MT 0658	16.5	13.0	15.0	12.4	10.7	15.0	16.1	15.1	16.2	14.4	40
MT 0659	16.9	11.4	14.5	11.7	11.1	15.1	17.1	15.1	16.7	14.4	43
MT 0663	16.4	11.1	14.9	11.7	9.8	14.7	16.8	15.3	15.8	14.1	56
MT 0664	17.3	12.0	14.0	11.9	10.1	14.7	17.3	16.1	17.2	14.5	35
MT 0666	16.9	11.4	14.3	11.1	9.4	15.0	17.0	15.3	16.8	14.1	54
MT 0667	16.2	12.2	15.2	12.3	9.7	14.3	16.2	14.8	15.7	14.1	55
MT 0669	16.9	11.9	14.9	13.1	10.3	15.4	16.7	14.9	16.4	14.5	36
MT 0674	16.9	12.5	15.6	12.3	9.9	15.0	16.3	16.0	16.4	14.5	31
MTHW0471	16.9	12.0	14.5	13.7	9.7	15.4	17.8	16.1	16.8	14.8	17
Reeder	16.9	12.6	15.4	12.9	10.6	15.1	16.3	15.8	16.4	14.7	25
Patwin	18.6	13.2	17.1	13.7	9.7	16.5	18.3	17.2	18.1	15.8*	2
McNeal	17.3	12.9	15.9	11.9	10.4	15.3	17.3	15.7	16.5	14.8	15
Ernest	17.0	12.6	15.1	13.7	10.6	15.4	17.5	16.0	17.1	15.0	9
Outlook	16.4	11.8	14.5	11.6	10.2	15.8	16.7	14.9	16.7	14.3	47
Choteau	16.9	12.6	16.2	12.7	10.3	15.2	17.1	16.2	17.1	14.9	11
Clear White	15.2	11.9	16.0	12.5	9.9	13.9	14.9	14.1	15.1	13.7	63
Vida	16.5	11.9	15.3	11.5	9.4	14.9	16.2	16.0	15.6	14.1	52
site mean	16.7	12.2	15.3	12.4	10.3	15.2	16.8	15.6	16.6	14.5	
CV (S/mean)	1 rep	1 rep	1 rep	1 rep	1 rep	1 rep	1 rep	1 rep	1 rep	3.62	
F-value										6.15**	
LSD (.05)										0.49	

Means followed by an asterisk are not significantly different at the .05 level when compared to the highest yielding wheat which is underlined

Table 4. 2007 heading date (days from January 1) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dry	Sidney, dry	Sidney, irr	Moccasin, dry	Huntley, dry	Conrad, dry	Bozeman, dry	Bozeman, irr	Kalispell, dry	ave	rank	BYX	RSQ
ACSS2610	179.0	175.9	180.9	179.9	160.0	181.0	185.0	185.0	174.9	178.0	54	1.14	0.98
Norpro	177.9	172.7	175.5	177.7	160.1	179.0	180.0	182.0	173.7	175.4	37	0.98	0.98
Freyr	176.3	171.7	175.4	177.4	160.0	177.0	181.0	180.0	171.1	174.4	17	0.96	0.99
Kelby	173.9	<u>169.2</u>	175.3	174.0*	<u>156.6</u>	176.0	178.0	178.0	168.3*	172.1*	57	1.02	0.98
Kuntz	177.8	171.8	175.6	176.4	160.7	178.0	181.0	181.0	173.9	175.1	32	0.93	0.97
AP604 CL	<u>171.7</u>	170.4	<u>173.1</u>	174.3	157.3*	176.0	179.0	178.0	169.2	172.1*	58	0.98	0.99
BZ902413	174.9	170.2*	174.8	174.7	158.0	176.0	180.0	178.0	168.9	172.8	2	0.99	0.98
Hand	173.1*	169.6*	175.2	175.6	158.6	176.0	179.0	179.0	169.2	172.8	3	0.97	0.99
Conan	175.6	171.7	175.0	176.3	159.0	179.0	180.0	180.0	172.3	174.3	14	0.99	0.99
Corbin	173.7	169.8*	174.2*	176.3	159.3	177.0	179.0	179.0	169.8	173.1	5	0.94	0.99
BZ999592	176.5	172.1	176.2	178.2	160.4	179.0	182.0	183.0	173.3	175.6	41	1.03	1.00
BZ9M1024	177.2	171.6	175.0	177.0	160.3	178.0	180.0	181.0	170.4	174.5	19	0.97	0.99
Jedd	174.1	169.7*	173.9*	175.0	158.3	177.0	178.0	179.0	168.6*	172.6*	63	0.97	0.99
Thatcher	177.5	175.3	179.2	181.3	163.9	181.0	184.0	184.0	176.5	178.1	55	0.93	0.98
Fortuna	174.1	172.2	176.5	177.3	159.3	178.0	182.0	181.0	171.8	174.7	22	1.03	0.99
MT 0336	176.3	172.5	175.5	177.0	160.4	179.0	180.0	182.0	174.0	175.2	33	0.95	0.98
MT 0405	175.5	170.8	174.4*	174.7	159.1	178.0	180.0	181.0	171.2	173.9	11	0.99	0.99
MT 0413	173.6*	170.4	174.0*	175.5	158.6	<u>175.0</u>	179.0	179.0	168.9	172.6*	64	0.95	0.99
MT 0414	173.4*	171.9	174.8	177.6	158.9	179.0	182.0	182.0	169.1	174.3	15	1.09	0.97
MT 0415	174.9	173.9	175.4	177.7	159.3	180.0	182.0	181.0	169.7	174.9	27	1.06	0.97
MT 0416	175.7	171.1	174.8	178.0	159.1	179.0	180.0	180.0	171.7	174.4	18	1.01	0.99
MT 0515	177.7	173.4	176.5	178.0	159.6	180.0	181.0	183.0	172.0	175.7	42	1.06	0.99
MT 0516	173.4*	170.2*	174.3*	174.8	158.3	176.0	179.0	179.0	167.9*	172.5*	62	0.98	0.99
MT 0519	174.6	171.1	174.6	176.4	159.0	178.0	180.0	181.0	169.0	173.7	10	1.03	0.99
MT 0539	176.6	172.3	175.9	178.1	159.6	178.0	180.0	180.0	173.4	174.9	28	0.95	0.98
MT 0550	173.3*	170.1*	173.9*	174.3	157.6*	175.0	179.0	179.0	<u>167.4</u>	172.2*	59	1.00	0.98
MT 0562	177.0	174.4	177.5	178.0	160.6	179.0	182.0	183.0	173.9	176.1	46	1.00	0.99
MT 0602	177.3	171.5	176.2	178.0	159.8	179.0	182.0	182.0	172.8	175.4	38	1.04	0.99
MT 0605	176.3	173.4	176.0	178.7	160.3	179.0	182.0	183.0	173.5	175.8	44	1.02	0.99
MT 0606	175.3	172.7	175.7	178.3	159.5	179.0	182.0	182.0	172.8	175.2	34	1.04	0.99
MT 0607	175.4	172.6	175.5	178.4	159.6	179.0	181.0	182.0	173.4	175.2	35	1.02	0.99
MT 0608	174.4	171.5	173.8*	175.7	158.7	178.0	179.0	180.0	169.7	173.4	8	0.99	1.00
MT 0613	176.7	172.5	174.3*	178.3	160.7	179.0	182.0	182.0	171.4	175.2	36	1.01	0.99
MT 0614	174.8	171.5	173.8*	177.4	159.5	179.0	182.0	183.0	171.6	174.7	23	1.07	0.98
MT 0617	173.7	169.2*	173.3*	<u>173.0</u>	158.7	175.0	179.0	180.0	168.4*	172.2*	60	0.96	0.97
MT 0623	177.5	174.4	176.9	181.0	162.0	181.0	183.0	184.0	174.4	177.1	52	1.01	0.99
MT 0624	175.1	174.1	175.6	179.5	161.6	180.0	183.0	182.0	172.6	175.9	45	0.98	0.98
MT 0626	173.2*	171.5	175.0	175.6	159.6	177.0	181.0	182.0	172.3	174.1	12	0.99	0.98
MT 0627	176.1	172.2	174.7	177.3	160.3	177.0	183.0	182.0	172.6	175.0	31	1.00	0.97
MT 0628	177.0	171.4	175.3	175.7	159.0	178.0	181.0	180.0	171.8	174.3	16	1.00	0.98

(continued)

Table 4 (continued). 2007 heading date (days from January 1) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dry	Sidney, dry	Sidney, irr	Moccasin, dry	Huntley, dry	Conrad, dry	Bozeman, dry	Bozeman, irr	Kalispell, dry	ave	rank	BYX	RSQ
MT 0631	178.5	171.5	175.8	177.4	159.0	178.0	180.0	181.0	170.8	174.7	24	1.03	0.97
MT 0632	176.4	171.6	175.1	177.4	161.6	179.0	181.0	183.0	173.7	175.4	39	0.95	0.98
MT 0638	176.1	170.7	174.0*	177.0	158.7	176.0	180.0	180.0	169.2	173.5	9	1.01	0.98
MT 0640	174.7	170.9	174.5	176.3	159.2	176.0	180.0	180.0	168.0*	173.3	6	0.99	0.98
MT 0643	174.2	170.2*	173.5*	174.3	158.5	176.0	180.0	180.0	170.6	173.0	4	0.98	0.99
MT 0645	177.6	173.9	176.7	179.3	161.7	180.0	183.0	183.0	174.2	176.6	50	0.99	1.00
MT 0657	175.7	171.3	175.1	177.4	159.8	179.0	181.0	181.0	171.8	174.7	25	1.01	1.00
MT 0658	176.4	171.5	175.4	176.5	158.3	178.0	181.0	180.0	170.0	174.1	13	1.05	0.99
MT 0659	174.1	172.6	175.1	177.3	159.5	180.0	181.0	182.0	172.9	174.9	29	1.02	0.98
MT 0663	175.4	171.6	174.9	177.3	159.5	179.0	181.0	181.0	171.4	174.6	20	1.02	1.00
MT 0664	175.8	171.4	174.7	176.7	160.7	179.0	182.0	181.0	171.4	174.7	26	0.98	0.99
MT 0666	176.3	172.2	175.7	179.7	160.9	180.0	183.0	183.0	173.9	176.1	47	1.03	0.98
MT 0667	174.9	169.9*	173.9*	175.0	159.6	177.0	180.0	180.0	169.2	173.3	7	0.97	0.99
MT 0669	177.1	174.4	176.5	179.2	161.5	180.0	182.0	183.0	173.8	176.4	48	0.98	1.00
MT 0674	173.2*	170.6	174.5	174.4	157.7	175.0	179.0	178.0	169.6	172.4*	61	0.96	0.99
MTHW0471	177.8	174.7	178.0	180.7	162.6	181.0	183.0	183.0	174.7	177.3	53	0.96	0.99
Reeder	177.3	171.6	175.6	177.7	159.6	179.0	181.0	181.0	171.0	174.9	30	1.03	0.99
Patwin	179.6	177.2	181.3	181.7	161.7	182.0	186.0	186.0	175.6	179.0	56	1.12	0.99
McNeal	176.9	174.0	178.1	179.0	162.4	179.0	182.0	182.0	174.5	176.4	49	0.91	0.99
Ernest	177.2	172.2	175.0	177.6	159.3	180.0	182.0	182.0	173.9	175.5	40	1.05	0.98
Outlook	178.5	174.8	177.2	179.2	162.4	180.0	183.0	183.0	174.9	177.0	51	0.95	0.99
Choteau	177.7	171.4	174.7	176.4	160.4	179.0	180.0	180.0	171.3	174.6	21	0.94	0.97
Clear White	173.3*	170.1*	173.8*	174.7	156.3	175.0	<u>178.0</u>	<u>178.0</u>	167.9*	<u>171.9</u>	1	1.02	0.99
Vida	178.2	173.2	176.0	178.4	160.3	180.0	182.0	181.0	172.5	175.7	43	1.01	0.99
site mean	175.8	172.0	175.4	177.2	159.7	178.3	181.0	181.2	171.6	174.7		1.00	1.00
CV (S/mean)	0.68	0.36	0.49	0.35	0.46	1 REP	1 REP	1 REP	0.47	0.48			
F-value	5.49**	19.85**	8.84**	26.41**	10.36**				20.95**	31.56**			
LSD (.05)	2.04	1.06	1.43	1.03	1.23				1.36	0.78			

Means followed by an asterisk are not significantly different at the .05 level when compared to the highest yielding wheat which is underlined

Table 5. 2007 plant height (inches) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dry	Sidney, dry	Sidney, irr	Moccasin, dry	Huntley, dry	Conrad, dry	Bozeman, dry	Bozeman, irr	Kalispell, dry	ave	rank	BYX	RSQ
ACSS2610	25.8	30.0	31.7	34.5	30.8	25.0	31.0	32.5	31.7	30.3	46	0.93	0.85
Norpro	23.1	29.9	28.6	33.3	34.3	24.0	30.0	31.0	29.1	29.3	58	1.20	0.94
Freyr	27.6	33.2	30.3	36.2	36.4	30.0	32.6	34.6	33.6	32.7	12	0.92	0.89
Kelby	23.2	28.5	26.2	30.5	30.3	25.0	29.8	30.2	30.0	28.2	60	0.82	0.85
Kuntz	25.4	31.1	28.3	32.9	32.1	27.0	30.1	30.2	29.3	29.6	56	0.74	0.87
AP604 CL	26.3	33.9	25.9	36.5	36.0	28.0	33.8	35.8	33.6	32.2	17	1.16	0.69
BZ902413	25.7	29.8	31.4	36.9	32.1	26.0	29.3	32.1	31.5	30.5	44	1.04	0.85
Hand	24.4	27.0	29.5	35.3	32.2	27.0	31.2	31.3	30.5	29.8	53	0.99	0.84
Conan	24.3	29.7	30.9	34.1	32.6	25.0	29.5	32.0	29.5	29.7	54	1.06	0.96
Corbin	27.3	30.1	29.0	35.2	34.3	29.0	31.6	33.5	32.1	31.4	33	0.81	0.84
BZ999592	24.1	30.0	34.8	35.5	34.6	26.0	32.1	33.2	31.3	31.3	35	1.22	0.87
BZ9M1024	24.7	30.7	29.3	32.5	31.9	28.0	30.2	31.5	30.9	30.0	51	0.76	0.92
Jedd	22.7	26.8	24.9	31.5	29.2	24.0	27.1	28.5	29.0	27.1	62	0.86	0.86
Thatcher	<u>32.4</u>	<u>39.4</u>	<u>39.3</u>	<u>40.0</u>	<u>46.7</u>	<u>35.0</u>	<u>39.8</u>	<u>42.4</u>	<u>40.2</u>	<u>39.5</u>	1	1.16	0.76
Fortuna	29.1	37.6*	39.3*	40.0*	42.5	34.0	38.7*	40.6*	39.3*	37.9	2	1.24	0.88
MT 0336	26.3	32.1	31.9	34.5	35.4	30.0	31.5	32.9	33.4	32.0	20	0.82	0.87
MT 0405	26.0	31.0	28.7	34.4	33.1	27.0	31.9	34.1	31.6	30.9	41	0.94	0.91
MT 0413	24.6	30.1	31.2	34.7	33.4	26.0	32.5	35.3	31.6	31.0	40	1.17	0.95
MT 0414	28.3	34.1	33.2	38.7*	37.7	28.0	34.6	35.7	35.1	33.9	6	1.19	0.95
MT 0415	29.3	32.0	33.1	38.2*	36.3	31.0	33.0	36.5	34.5	33.8	7	0.90	0.90
MT 0416	25.2	31.6	30.9	34.2	34.2	28.0	30.8	33.7	31.4	31.1	38	0.97	0.97
MT 0515	24.7	33.2	34.6	35.1	34.1	29.0	31.9	34.7	31.7	32.1	18	1.03	0.85
MT 0516	27.2	29.7	31.8	35.1	34.7	29.0	32.4	35.6	32.9	32.0	21	0.90	0.88
MT 0519	26.4	32.8	31.9	36.5	35.2	29.0	33.9	35.6	33.5	32.8	11	1.06	0.97
MT 0539	25.1	29.0	32.8	34.5	33.7	28.0	30.7	32.1	30.7	30.7	43	0.92	0.87
MT 0550	27.9	31.0	27.8	36.6	34.3	29.0	33.2	35.2	33.0	32.0	22	0.91	0.73
MT 0562	25.9	31.0	33.5	34.6	35.0	29.0	31.9	34.1	31.9	31.9	26	0.93	0.91
MT 0602	26.5	34.6	35.4*	36.3	36.8	30.0	33.0	35.3	32.6	33.4	10	1.02	0.87
MT 0605	23.8	28.5	33.1	33.6	33.0	26.0	30.8	32.8	30.1	30.2	48	1.06	0.86
MT 0606	23.9	30.3	31.5	34.7	32.1	26.0	32.0	32.6	29.8	30.3	47	1.08	0.93
MT 0607	25.1	28.0	29.4	32.2	30.6	25.0	30.0	32.0	29.3	29.1	59	0.83	0.91
MT 0608	29.5	34.6	29.4	40.0*	36.9	29.0	36.3	37.4	34.1	34.1	5	1.14	0.75
MT 0613	25.2	32.3	30.8	33.9	33.4	26.0	30.9	32.2	30.0	30.5	45	0.97	0.93
MT 0614	27.2	34.6	31.0	39.3*	37.6	29.0	33.5	36.3	32.9	33.5	9	1.25	0.91
MT 0617	25.4	30.1	26.4	35.6	31.4	25.0	30.1	33.2	30.5	29.7	55	1.06	0.81
MT 0623	26.3	33.1	32.5	35.8	34.5	28.0	31.9	33.1	31.1	31.8	29	0.96	0.94
MT 0624	28.9	34.3	32.7	38.5*	37.2	30.0	33.6	35.7	33.4	33.8	8	0.99	0.94
MT 0626	26.5	32.5	32.4	35.2	33.5	29.0	31.5	34.2	33.2	32.0	23	0.87	0.95
MT 0627	27.4	34.2	27.8	36.6	33.2	27.0	32.7	34.7	33.9	31.9	27	1.00	0.72
MT 0628	26.0	33.1	34.9	36.8*	35.4	28.0	32.5	34.6	32.9	32.7	13	1.12	0.93

(continued)

Table 5 (continued). 2007 plant height (inches) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dry	Sidney, dry	Sidney, irr	Moccasin, dry	Huntley, dry	Conrad, dry	Bozeman, dry	Bozeman, irr	Kalispell, dry	ave	rank	BYX	RSQ
MT 0631	25.1	29.6	34.3	34.4	32.9	29.0	29.9	33.8	31.0	31.1	39	0.88	0.75
MT 0632	24.0	30.0	30.3	32.1	32.6	26.0	28.9	31.9	29.1	29.4	57	0.92	0.94
MT 0638	26.1	31.0	30.8	35.5	34.7	30.0	33.1	35.5	32.2	32.1	19	0.95	0.90
MT 0640	26.2	31.9	31.1	38.2*	34.7	27.0	33.7	35.8	33.1	32.4	15	1.25	0.95
MT 0643	25.1	31.1	28.6	35.4	31.6	26.0	30.3	33.4	30.2	30.2	49	1.03	0.91
MT 0645	25.0	30.3	32.7	33.6	34.2	26.0	30.9	33.3	31.4	30.8	42	1.04	0.93
MT 0657	24.6	29.6	30.2	34.0	32.5	25.0	30.6	33.2	31.4	30.1	50	1.08	0.97
MT 0658	26.2	32.0	31.6	33.9	33.0	29.0	31.3	33.2	31.4	31.3	36	0.77	0.96
MT 0659	27.2	31.7	31.2	35.1	33.5	29.0	30.5	32.9	31.7	31.4	34	0.76	0.94
MT 0663	24.0	31.4	32.2	34.7	32.9	29.0	31.2	32.7	33.2	31.3	37	0.97	0.87
MT 0664	26.1	32.0	31.2	37.9*	36.8	27.0	32.7	35.6	33.4	32.5	14	1.31	0.97
MT 0666	25.6	31.2	33.5	37.0*	35.1	28.0	31.1	34.7	30.9	31.9	28	1.14	0.92
MT 0667	24.1	28.4	27.1	33.6	28.9	23.0	29.1	31.2	28.2	28.2	61	0.98	0.84
MT 0669	25.2	29.3	33.3	34.4	34.7	31.0	31.3	34.4	31.9	31.7	31	0.87	0.74
MT 0674	25.8	32.9	32.0	35.1	35.1	27.0	33.5	33.2	33.2	32.0	24	1.06	0.93
MTHW0471	29.0	36.5	37.5*	38.5*	39.3	33.0	35.4	39.0	35.4	35.9	4	1.02	0.89
Reeder	27.1	31.2	33.3	35.4	35.4	25.0	32.6	33.6	32.6	31.8	30	1.09	0.86
Patwin	20.9	26.2	28.4	28.2	25.4	21.0	25.8	26.8	26.8	25.5	64	0.77	0.71
McNeal	25.9	31.8	34.7	36.2	34.6	28.0	31.1	34.0	32.2	32.0	25	1.04	0.89
Ernest	29.8	36.8	38.3	39.5*	41.8	36.0	36.4	40.1	35.0	37.1	3	0.99	0.74
Outlook	26.4	32.4	32.3	35.2	35.3	26.0	30.6	34.2	32.3	31.6	32	1.08	0.92
Choteau	24.2	31.0	28.6	33.7	32.9	25.0	30.5	33.2	30.6	30.0	52	1.11	0.96
Clear White	22.2	27.4	25.0	30.2	26.8	25.0	27.3	29.8	28.9	27.0	63	0.72	0.73
Vida	26.5	32.5	34.7	37.0*	36.2	27.0	31.6	34.6	31.7	32.4	16	1.16	0.90
site mean	25.9	31.5	31.4	35.3	34.2	27.7	31.8	33.9	31.9	31.5		1.00	1.00
CV (S/mean)	5.78	5.32	8.12	5.46	4.74	1 REP	3.41	2.66	2.99	3.93			
F-value	4.76**	6.26**	4.03**	4.26**	12.16**		13.57**	23.48**	15.06**	31.59**			
LSD (.05)	2.5	2.84	4.27	3.19	2.62		1.8	1.49	1.61	1.15			

Means followed by an asterisk are not significantly different at the .05 level when compared to the highest yielding wheat which is underlined

Table 6. 2007 over-all summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Grain yield (bu/ac)		Test weight (lb/bu)		Heading date (178= June 27)		Plant height (in)		Grain protein (%)	
	AVE	RANK	AVE	RANK	AVE	RANK	AVE	RANK	AVE	RANK
ACSS2610	47.9*	17	59.9*	7	178.0	54	30.3	46	14.2	50
Norpro	45.5	40	58.2	42	175.4	37	29.3	58	14.5	38
Freyr	43.7	54	59.2	19	174.4	17	32.7	12	14.3	45
Kelby	43.7	55	60.5*	2	172.1*	57	28.2	60	15.2	5
Kuntz	44.7	48	58.9	28	175.1	32	29.6	56	13.9	62
AP604 CL	44.5	51	60.1*	4	172.1*	58	32.2	17	14.6	27
BZ902413	45.7	37	59.4	11	172.8	2	30.5	44	14.5	37
Hand	46.9	29	56.7	61	172.8	3	29.8	53	14.6	26
Conan	43.4	56	59.0	25	174.3	14	29.7	54	14.8	14
Corbin	45.8	36	58.5	40	173.1	5	31.4	33	14.7	21
BZ999592	46.3	31	58.2	43	175.6	41	31.3	35	14.5	32
BZ9M1024	48.6*	9	58.5	41	174.5	19	30.0	51	14.0	59
Jedd	47.6*	21	60.2*	3	172.6*	63	27.1	62	14.0	61
Thatcher	34.7	64	54.8	62	178.1	55	39.5	1	15.9	1
Fortuna	41.5	62	59.0	26	174.7	22	37.9	2	14.6	29
MT 0336	47.8*	19	59.2	20	175.2	33	32.0	20	14.0	57
MT 0405	46.2	33	58.8	34	173.9	11	30.9	41	14.8	13
MT 0413	45.9	35	58.9	29	172.6*	64	31.0	40	14.3	48
MT 0414	49.4*	7	59.2	21	174.3	15	33.9	6	15.1	6
MT 0415	47.9*	18	59.4	12	174.9	27	33.8	7	15.3	4
MT 0416	50.0*	4	59.0	27	174.4	18	31.1	38	14.0	58
MT 0515	51.0	1	60.1*	5	175.7	42	32.1	18	14.3	46
MT 0516	48.5*	10	59.3	17	172.5*	62	32.0	21	14.5	33
MT 0519	46.0	34	60.6	1	173.7	10	32.8	11	14.8	16
MT 0539	48.4*	12	57.5	55	174.9	28	30.7	43	14.6	28
MT 0550	42.5	60	60.0*	6	172.2*	59	32.0	22	14.4	44
MT 0562	44.2	53	58.1	46	176.1	46	31.9	26	14.7	22
MT 0602	46.3	32	57.8	52	175.4	38	33.4	10	14.4	41
MT 0605	49.5*	6	58.0	48	175.8	44	30.2	48	14.7	23
MT 0606	48.0*	16	58.6	39	175.2	34	30.3	47	14.5	34
MT 0607	47.1	27	58.7	36	175.2	35	29.1	59	14.4	42
MT 0608	43.1	58	59.1	22	173.4	8	34.1	5	14.7	19
MT 0613	48.8*	8	59.4	13	175.2	36	30.5	45	14.5	30
MT 0614	44.8	47	58.8	35	174.7	23	33.5	9	14.7	24
MT 0617	48.3*	13	57.7	53	172.2*	60	29.7	55	14.1	53
MT 0623	45.6	39	57.1	59	177.1	52	31.8	29	14.7	20
MT 0624	45.2	44	58.9	30	175.9	45	33.8	8	13.7	64
MT 0626	47.3*	24	58.7	37	174.1	12	32.0	23	14.2	51
MT 0627	44.5	52	54.5	64	175.0	31	31.9	27	14.4	39
MT 0628	47.1	28	57.2	58	174.3	16	32.7	13	14.9	12

(continued)

Table 6 (continued). 2007 over-all summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Grain yield (bu/ac)		Test weight (lb/bu)		Heading date (178= June 27)		Plant height (in)		Grain protein (%)	
	AVE	RANK	AVE	RANK	AVE	RANK	AVE	RANK	AVE	RANK
MT 0631	42.9	59	57.9	50	174.7	24	31.1	39	15.4*	3
MT 0632	50.2*	3	59.1	23	175.4	39	29.4	57	14.0	60
MT 0638	47.8*	20	59.5	9	173.5	9	32.1	19	15.0	8
MT 0640	45.7	38	58.9	31	173.3	6	32.4	15	15.0	10
MT 0643	44.9	45	59.3	18	173.0	4	30.2	49	15.0	7
MT 0645	43.3	57	58.2	44	176.6	50	30.8	42	14.7	18
MT 0657	48.3*	14	58.2	45	174.7	25	30.1	50	14.3	49
MT 0658	46.9	30	59.6	8	174.1	13	31.3	36	14.4	40
MT 0659	44.7	49	57.5	56	174.9	29	31.4	34	14.4	43
MT 0663	49.8*	5	59.5	10	174.6	20	31.3	37	14.1	56
MT 0664	47.4*	23	58.7	38	174.7	26	32.5	14	14.5	35
MT 0666	48.2*	15	57.4	57	176.1	47	31.9	28	14.1	54
MT 0667	47.3*	25	58.9	32	173.3	7	28.2	61	14.1	55
MT 0669	47.3*	26	59.4	14	176.4	48	31.7	31	14.5	36
MT 0674	45.4	41	57.9	51	172.4*	61	32.0	24	14.5	31
MTHW0471	44.7	50	59.4	15	177.3	53	35.9	4	14.8	17
Reeder	48.5*	11	59.4	16	174.9	30	31.8	30	14.7	25
Patwin	39.3	63	54.7	63	179.0	56	25.5	64	15.8*	2
McNeal	45.3	42	57.7	54	176.4	49	32.0	25	14.8	15
Ernest	41.9	61	59.1	24	175.5	40	37.1	3	15.0	9
Outlook	47.6*	22	57.1	60	177.0	51	31.6	32	14.3	47
Choteau	45.3	43	58.9	33	174.6	21	30.0	52	14.9	11
Clear White	44.9	46	58.0	49	<u>171.9</u>	1	27.0	63	13.7	63
Vida	50.4*	2	58.1	47	175.7	43	32.4	16	14.1	52
SITE MEAN	46.1		58.6		174.7		31.5		14.5	
C.V. (S/MEAN %)	8.93		1.67		0.48		3.93		3.62	
F-value	4.04**		14.13**		31.56**		31.59**		6.15**	
LSD (.05)	3.81		0.90		0.78		1.15		0.49	

Means followed by an asterisk are not significantly different at the .05 level when compared to the highest yielding wheat which is underlined