

PROJECT TITLE: Statewide Spring Wheat Variety Performance - 2009

PRINCIPAL INVESTIGATION:

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Personnel:

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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 2009 Advanced Spring Wheat yield trial was grown at two irrigated and seven rain fed sites across Montana. Irrigated sites were at Sidney and Bozeman. Rain fed 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 Brennan at **Havre**, AgriPro 12 at **Sidney dryland**, MT0801 at **Moccasin**, MT0801 at **Conrad**, Vida at **Huntley**, Vida at **Conrad**, MTHW0867 at **Bozeman dryland**, AgriPro 12 at **Sidney irrigated**, and AgriPro 12 at **Kalispell**. Highest yielding line on a statewide basis was Vida (Table 1).

The entry with the highest test weight on a statewide basis was Volt (Table 2). The entry with the highest protein on a statewide basis was BZ9M7106 (Table 3). Earliest heading entry was MTHW0771, while latest heading entry was BZ9M7106 (Table 4). Shortest entry was Jedd, while tallest entry 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 Brennan at Havre, AgriPro 12 at Sidney dryland, MT0801 at Moccasin, MT0801 at Conrad, Vida at Huntley, Vida at Conrad, MTHW0867 at Bozeman dryland, AgriPro 12 at Sidney irrigated, and AgriPro 12 at Kalispell. Highest yielding line on a statewide basis was Vida.

FUNDING SUMMARY: Expenditure information to be provided by OSP. No other grants support this project.

MWBC FY2011 GRANT SUBMISSION PLANS: It is planned to submit this project for funding consideration in the next fiscal year.

Table 1. 2009 yield (bu/ac) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dryland	Sidney, dryland	Moccasin, dryland	Conrad, dryland	Huntley, dryland	Bozeman, dryland	Sidney irrigated	Kalispell, high rainfall	average	BYX	RSQ
VOLT	42.5	39.8	28.2	74.7	44.6	79.0*	96.9	<u>87.2</u>	75.4	63.1	17
BRENNAN	<u>55.1</u>	43.2	25.5	60.2	43.2	51.9	94.5	55.7	95.3*	58.3	51
AGRIPR11	46.8	46.6	29.1*	69.5	41.7	69.3	96.2	72.9	91.7	62.6	22
AGRIPR12	43.9	<u>50.0</u>	30.1*	80.6*	51.6*	65.6	<u>104.4</u>	69.0	<u>105.2</u>	66.7*	4
FREYR	43.2	43.9	29.6*	66.2	47.3	60.1	91.0	65.7	81.6	58.7	47
KELBY	44.0	42.4	25.5	60.6	36.2	49.3	88.3	51.1	80.0	53.0	64
KUNTZ	44.4	45.9	29.1*	72.4	50.5*	61.0	95.2	64.8	81.1	60.5	40
AP604 CL	42.1	43.5	27.4	60.7	48.1	49.8	90.2	58.0	97.2*	57.4	55
JENNA	42.9	47.5*	27.1	72.7	50.8*	69.3	99.6*	70.8	85.3	62.9	20
BZ92413R	45.4	36.3	30.6*	67.7	49.5	64.1	86.5	70.2	72.5	58.1	52
BZ92413W	48.2	38.1	27.8	73.8	51.9*	63.0	86.2	69.6	76.8	59.5	46
HANK	46.7	42.8	31.1*	75.3	55.3*	69.7	99.2*	79.2	89.6	65.4*	7
CONAN	43.3	37.4	29.6*	62.2	40.4	58.7	82.7	60.0	63.3	53.1	63
CORBIN	45.9	39.2	26.6	72.5	48.0	67.1	93.4	65.0	87.0	60.5	41
ONEAL	48.6	46.8	31.2*	85.4*	55.9*	71.9	100.5*	80.6	94.3	68.3*	2
JEDD	43.3	42.3	26.4	68.2	50.0	69.5	82.5	72.1	95.3*	61.1	36
BZ9M7106	40.1	36.5	25.0	86.6*	44.0	69.9	81.6	84.2*	40.3	56.5	57
THATCHER	47.7	44.4	25.5	64.3	46.4	57.3	70.5	66.0	57.1	53.2	62
FORTUNA	46.3	39.7	26.2	62.8	45.6	63.6	75.5	62.6	78.3	55.6	60
LILLIAN	43.4	37.6	27.7	69.7	47.1	61.1	81.5	73.1	67.2	56.5	58
MT 0414	47.5	44.9	31.7*	74.8	47.3	74.3	90.2	79.6	94.0	64.9*	9
MT 0664	46.2	43.5	31.6*	78.7	49.1	72.5	102.6*	76.1	83.5	64.8*	10
MT 0718	47.2	40.2	29.6*	73.9	45.9	74.8	90.1	79.8	81.5	62.6	23
MT 0735	44.3	41.6	28.4	71.7	48.0	63.8	89.0	66.3	86.5	59.9	43
MT 0744	47.9	45.0	33.7*	81.6*	48.1	67.5	90.6	78.8	75.2	63.2	16
MT 0745	46.0	44.7	31.5*	70.8	52.6*	67.6	94.5	73.0	71.8	61.4	32
MT 0746	48.0	44.6	30.9*	71.9	46.3	67.7	89.1	71.0	87.2	61.9	26
MT 0747	50.3*	45.9	32.9*	75.7	44.5	64.8	90.2	68.6	84.5	61.9	27
MT 0750	42.7	40.9	29.7*	79.9*	53.3*	63.9	89.0	68.7	87.7	61.8	28
MT 0751	51.6*	40.3	32.3*	76.0	43.8	62.4	86.0	67.1	82.2	60.2	42
MT 0755	44.7	40.6	31.8*	74.8	44.4	63.5	93.2	74.2	89.5	61.8	29
MT 0801	47.9	47.0	<u>34.7</u>	<u>86.8</u>	46.6	63.0	92.8	67.8	90.4	64.1	12
MT 0802	44.4	46.5	31.1*	75.4	56.3*	77.0*	97.8	84.8*	82.7	66.2*	5
MT 0807	39.5	39.4	30.4*	55.9	43.1	53.5	83.3	53.3	95.5	54.9	61
MT 0808	42.5	40.9	33.7*	65.7	49.9	53.3	95.8	58.6	85.9	58.5	49
MT 0813	44.2	44.6	26.2	68.2	48.2	53.6	93.8	55.9	88.2	58.1	53
MT 0814	46.6	45.7	30.1*	78.5	45.1	69.2	101.8*	71.4	92.0	64.5	11
MT 0815	42.4	35.2	24.5	67.9	43.2	56.5	88.9	55.9	92.0	56.3	59
MT 0816	48.0	44.4	25.1	66.9	47.8	58.2	99.1*	61.8	87.7	59.9	44
MT 0824	43.9	40.0	29.7*	76.5	46.5	67.1	92.0	71.8	89.1	61.8	30

(continued)

Table 1 (continued). 2009 yield (bu/ac) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dryland	Sidney, dryland	Moccasin, dryland	Conrad, dryland	Huntley, dryland	Bozeman, dryland	Sidney irrigated	Kalispell, high rainfall	average	BYX	RSQ
MT 0826	39.6	39.5	27.2	70.9	47.0	64.3	88.2	65.0	80.9	58.1	54
MT 0827	42.7	42.9	31.0*	67.1	44.4	62.2	92.3	66.2	90.1	59.9	45
MT 0829	41.0	42.2	33.1*	69.4	45.5	59.6	80.5	63.8	77.2	56.9	56
MT 0830	44.8	41.3	30.9*	71.7	50.9*	64.6	94.5	68.4	85.0	61.3	33
MT 0832	41.2	43.8	29.0	77.5	40.9	71.2	101.4*	74.9	90.4	63.4	15
MT 0847	50.6*	44.4	28.5	71.6	51.3*	67.4	92.1	69.2	88.2	62.6	24
MT 0849	42.8	39.9	26.5	72.7	45.3	70.5	94.8	72.6	81.1	60.7	39
MT 0852	44.7	41.3	27.9	70.3	48.8	68.9	95.8	72.3	82.0	61.3	34
MT 0853	45.6	42.4	29.8*	69.7	48.7	64.9	95.8	66.5	90.0	61.5	31
MT 0855	48.7	44.4	29.2*	74.6	47.6	67.8	90.3	72.5	91.3	62.9	21
MT 0856	51.7*	42.8	28.4	68.2	43.3	56.8	85.4	59.8	91.9	58.7	48
MT 0861	43.5	41.4	30.0*	76.7	46.5	74.3	100.4*	73.7	87.8	63.8	14
MT 0862	44.8	41.7	27.4	70.6	47.7	68.0	94.4	67.3	85.6	60.8	38
MT 0868	42.0	38.5	28.6	69.4	41.7	66.2	88.8	67.0	84.6	58.5	50
MT 0869	45.2	41.0	29.2*	73.9	49.0	71.6	104.0	78.0	94.2	65.1*	8
MT 0873	46.8	42.5	29.7*	79.5	46.5	74.5	96.7	78.1	97.9*	65.8*	6
MTHW0771	41.6	40.2	29.6*	70.6	40.7	65.9	100.9*	71.4	101.8*	62.5	25
MTHW0867	45.5	42.6	28.6	72.4	53.9*	<u>80.1</u>	82.5	82.0*	89.5	64.1	13
REEDER	49.0*	44.5	30.5*	78.7	51.1*	72.1	95.7	82.6*	99.9*	67.1*	3
MOTT	44.1	40.0	29.7*	77.5	54.0*	68.0	98.2*	68.5	71.2	61.3	35
MCNEAL	42.4	45.0	33.9*	74.7	47.2	64.6	95.3	68.9	77.8	61.1	37
OUTLOOK	44.3	44.7	27.9	82.0*	47.9	72.9	96.3	80.9	71.2	63.1	18
CHOTEAU	40.7	39.8	24.4	75.0	45.7	73.9	94.8	80.3	92.1	63.0	19
VIDA	53.8*	49.5*	34.3*	85.5*	<u>57.1</u>	78.7*	96.0	81.4	91.9	<u>69.8</u>	1
site mean	45.3	42.4	29.3	72.6	47.5	65.9	92.2	70.2	84.9	61.1	
CV (S/mean)	8.31	3.74	11.27	5.71	8.48	4.35	3.99	4.74	6.95	9.08	
F-value	2.07**	10.27**	1.53*	6.32**	2.89**	16.33**	9.03**	15.56**	8.47**	3.75**	
LSD (.05)	6.33	2.71	5.63	7.03	6.70	4.84	6.22	5.62	10.02	5.14	

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. 2009 test weight (lb/bu) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dryland	Sidney, dryland	Moccasin, dryland	Conrad, dryland	Huntley, dryland	Bozeman, dryland	Sidney irrigated	Kalispell, high rainfall	average	BYX	RSQ
VOLT	59.8*	<u>65.0</u>	<u>61.7</u>	<u>65.2</u>	62.1*	<u>63.3</u>	<u>63.1</u>	<u>64.1</u>	63.1	<u>63.0</u>	1
BRENNAN	59.3	64.0	61.4*	63.9	60.5	62.9	62.0	62.6	64.1	62.3	8
AGRIPR11	59.0	64.5*	60.9	64.0	60.3	62.4	63.0	62.0	62.9	62.1	11
AGRIPR12	59.4	65.0*	61.6*	64.9*	61.6*	62.5	62.6	62.8	63.5	62.7*	4
FREYR	59.4	63.7	60.5	63.4	60.6	62.1	62.2	62.3	62.7	61.9	18
KELBY	59.5	63.7	60.1	63.5	59.7	63.0	61.7	62.5	64.0	62.0	13
KUNTZ	58.4	64.4	59.8	63.6	60.9	62.5	62.6*	62.5	63.4	62.0	14
AP604 CL	59.8*	64.8*	60.3	64.2	61.4	62.2	62.7*	63.0	64.1	62.5*	5
JENNA	57.6	63.2	58.2	63.3	59.2	61.1	61.3	61.9	61.2	60.8	46
BZ92413R	60.2*	62.9	60.7	63.4	61.2	63.3	62.1	62.7	61.5	62.0	15
BZ92413W	60.3*	63.1	61.1*	63.6	61.2	61.5	62.1	62.7	61.9	61.9	19
HANK	58.8	62.8	58.1	63.1	60.1	59.9	60.8	60.4	62.2	60.7	50
CONAN	59.8*	63.3	61.5*	62.7	60.4	59.8	61.6	61.2	61.3	61.3	34
CORBIN	59.9*	63.6	60.6	64.5*	60.8	62.1	62.0	62.8	63.4	62.2	9
ONEAL	60.6*	64.1	60.9	63.4	62.2*	61.1	61.9	61.5	61.5	61.9	20
JEDD	59.7	65.0*	60.9	63.7	61.8*	62.6	61.8	63.6	63.8	62.5*	6
BZ9M7106	55.2	60.7	55.8	60.2	57.6	55.6	58.0	59.1	54.6	57.4	64
THATCHER	59.0	62.5	57.3	61.7	59.5	60.8	59.8	59.9	61.1	60.2	60
FORTUNA	59.5	62.7	58.7	63.3	60.3	62.4	61.4	62.8	63.4	61.6	29
LILLIAN	57.4	62.3	58.0	62.0	58.1	61.3	60.6	61.5	59.6	60.1	61
MT 0414	59.4	63.7	61.0*	63.8	61.1	60.3	61.9	62.8	63.4	61.9	21
MT 0664	59.1	63.3	61.0*	63.8	61.0	62.3	62.8*	62.3	62.8	62.0	16
MT 0718	58.8	63.4	60.0	63.7	60.2	62.0	61.9	62.7	62.7	61.7	26
MT 0735	57.4	62.7	58.3	63.0	58.6	60.9	60.5	61.6	62.7	60.6	52
MT 0744	59.9*	63.5	61.2*	64.0	60.6	61.6	61.4	61.9	61.2	61.7	27
MT 0745	59.9*	63.2	60.3	62.8	61.3	59.6	61.5	61.4	61.6	61.3	35
MT 0746	58.4	62.0	59.3	62.1	58.6	60.4	60.0	61.4	60.9	60.3	58
MT 0747	58.7	62.8	60.4	62.5	59.8	60.8	60.6	61.5	62.3	61.0	41
MT 0750	58.3	62.2	58.8	63.2	59.8	58.5	61.5	61.7	61.7	60.6	53
MT 0751	58.4	62.0	57.8	62.3	58.9	61.4	60.5	61.0	60.8	60.3	59
MT 0755	58.8	62.9	60.5	63.4	60.1	61.0	61.4	62.3	62.2	61.4	32
MT 0801	58.2	62.7	59.3	62.8	60.3	61.3	61.5	61.5	61.7	61.0	42
MT 0802	58.8	62.4	60.2	62.4	61.1	61.5	61.1	62.2	59.0	61.0	43
MT 0807	<u>60.8</u>	64.2	61.2*	64.1	<u>62.2</u>	62.8	62.8*	62.7	64.0	62.8*	2
MT 0808	58.9	62.9	58.9	62.8	60.7	60.4	61.6	62.6	63.1	61.3	36
MT 0813	59.6	64.0	59.7	63.4	60.1	61.6	61.9	62.6	64.1	61.9	22
MT 0814	59.8*	63.7	60.5	63.9	61.4	62.1	62.3*	62.3	62.9	62.1	12
MT 0815	60.5*	64.7*	61.1*	64.8*	61.8*	62.0	62.7*	62.9	<u>64.5</u>	62.8*	3
MT 0816	59.5	63.3	58.5	63.2	59.2	62.3	61.1	61.9	62.1	61.2	37
MT 0824	58.0	62.5	58.0	63.3	60.5	61.4	60.7	61.2	61.7	60.8	47

(continued)

Table 2 (continued). 2009 test weight (lb/bu) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dryland	Sidney, dryland	Moccasin, dryland	Conrad, dryland	Huntley, dryland	Bozeman, dryland	Sidney irrigated	Kalispell, high rainfall	average	BYX	RSQ
MT 0826	57.8	62.9	58.1	62.5	60.2	61.7	61.1	61.4	62.5	60.9	45
MT 0827	59.5	63.8	60.9	63.2	60.7	62.3	61.5	62.2	62.9	61.9	23
MT 0829	58.1	63.0	59.6	62.6	60.0	61.6	61.0	61.9	61.7	61.1	40
MT 0830	59.2	64.0	61.0*	63.9	61.2	62.2	62.7*	62.5	63.0	62.2	10
MT 0832	57.8	62.8	58.2	62.8	60.1	61.4	61.1	61.2	62.0	60.8	48
MT 0847	59.6	63.8	60.8	64.2	60.9	62.1	61.0	61.8	63.2	61.9	24
MT 0849	57.6	62.9	58.1	62.6	59.4	60.5	60.2	61.1	61.1	60.4	57
MT 0852	58.5	63.4	59.8	63.3	60.9	61.5	61.8	61.4	62.4	61.5	30
MT 0853	58.4	63.1	58.7	62.8	60.3	61.5	60.8	61.7	61.9	61.0	44
MT 0855	57.8	62.1	57.2	62.3	59.7	59.7	59.5	61.5	61.6	60.1	62
MT 0856	57.7	61.5	56.4	61.7	58.7	60.6	59.3	60.1	60.8	59.6	63
MT 0861	57.7	62.5	58.2	62.9	59.9	61.0	61.4	61.4	61.0	60.7	51
MT 0862	59.0	62.3	58.4	62.8	60.0	60.4	60.3	61.2	62.4	60.8	49
MT 0868	59.1	63.7	59.8	63.9	60.4	61.3	62.4*	62.2	62.9	61.7	28
MT 0869	59.2	63.3	58.9	62.9	59.7	61.9	61.4	63.3	62.7	61.5	31
MT 0873	58.9	63.7	60.5	63.3	61.4	61.3	62.5*	61.5	63.2	61.8	25
MTHW0771	59.7	64.1	61.1*	63.5	60.4	62.9	62.9*	63.5	64.4	62.5*	7
MTHW0867	58.7	62.3	57.3	62.3	60.5	61.1	60.5	61.2	61.1	60.6	54
REEDER	59.9*	63.6	60.9	63.3	61.6*	61.7	62.2	62.2	62.5	62.0	17
MOTT	58.0	63.3	58.9	63.9	59.8	61.9	62.1	62.2	62.2	61.4	33
MCNEAL	58.5	62.5	61.3*	62.7	60.5	60.0	61.7	61.7	61.9	61.2	38
OUTLOOK	59.2	62.5	59.0	62.1	60.0	60.6	60.9	61.7	59.5	60.6	55
CHOTEAU	57.9	63.2	58.5	63.2	60.1	61.8	60.9	62.5	62.7	61.2	39
VIDA	58.9	62.8	59.3	62.5	60.4	60.6	60.3	59.6	61.4	60.6	56
site mean	58.9	63.2	59.6	63.2	60.4	61.4	61.4	61.9	62.2	61.4	
CV (S/mean)	1.03	0.50	0.67	0.65	0.63	1 REP	0.77	1 REP	1 REP	1.06	
F-value	7.11**	19.39**	33.07	10.92**	19.08**		12.29**			17.79**	
LSD (.05)	1.00	0.54	0.68	0.69	0.61		0.79			0.60	

Means followed by an asterisk are not significantly different at the .05 level from wheat with the highest test weight which is underlined

Table 3. 2009 protein content (percent) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dryland	Sidney, dryland	Moccasin, dryland	Conrad, dryland	Huntley, dryland	Bozeman, dryland	Sidney irrigated	Kalispell, high rainfall	average	rank
VOLT	14.2	13.8	15.1	13.0	12.9	13.0	13.5	13.8	13.4	13.6
BRENNAN	14.8	13.6	16.1	15.9	14.6	15.0	15.1	15.0	14.5	15.0
AGRIPR11	15.2	13.9	16.1	14.7	13.3	13.6	13.9	13.9	13.8	14.3
AGRIPR12	13.7	12.4	16.3	13.5	12.9	13.0	13.5	13.3	13.1	13.5
FREYR	14.4	13.3	16.1	15.0	12.6	14.0	15.0	15.0	14.5	14.4
KELBY	15.0	13.8	16.3	16.3	16.0	15.4	15.4	14.9	14.9	15.3*
KUNTZ	14.2	13.5	14.6	13.6	12.5	13.1	13.9	13.9	13.5	13.6
AP604 CL	14.7	14.5	16.2	16.1	12.2	14.5	15.0	15.6	15.3	14.9
JENNA	14.9	13.9	16.3	13.1	12.7	14.0	14.4	14.6	14.1	14.2
BZ92413R	14.3	14.4	15.5	13.7	13.6	13.8	14.4	14.5	14.4	14.3
BZ92413W	14.3	13.8	15.3	13.7	13.1	13.7	13.9	14.4	14.4	14.1
HANK	14.6	13.6	16.7	13.3	12.3	13.7	14.2	13.9	13.7	14.0
CONAN	14.9	14.1	15.7	13.9	13.8	14.3	14.9	14.7	15.3	14.6
CORBIN	14.6	15.0	17.9	13.8	13.0	13.2	14.0	14.3	14.3	14.5
ONEAL	14.6	12.8	16.6	13.4	11.7	14.1	13.0	14.8	14.1	13.9
JEDD	15.0	12.8	17.5	13.8	12.8	13.4	13.9	14.1	14.0	14.1
BZ9M7106	16.3	14.8	17.2	14.6	12.9	15.1	16.4	15.8	18.9	<u>15.8</u>
THATCHER	14.5	12.6	16.6	12.6	11.7	13.1	14.5	13.4	15.0	13.8
FORTUNA	14.8	14.4	15.2	14.2	12.5	14.1	15.1	14.6	14.5	14.4
LILLIAN	16.1	14.6	18.0	14.8	13.6	15.2	16.7	15.4	16.9	15.7*
MT 0414	14.7	13.9	16.2	14.4	13.9	14.8	15.5	15.6	14.6	14.8
MT 0664	14.4	13.6	14.9	13.3	12.1	14.1	15.0	13.7	15.0	14.0
MT 0718	14.6	14.6	15.9	13.4	12.8	13.6	13.7	14.0	14.0	14.1
MT 0735	15.5	14.0	15.9	14.6	11.9	14.2	15.0	14.2	14.3	14.4
MT 0744	14.9	13.8	16.1	14.1	14.2	14.5	14.9	14.6	16.3	14.8
MT 0745	14.8	14.5	16.7	14.7	13.4	14.5	15.6	14.9	15.2	14.9
MT 0746	15.2	15.5	16.5	15.8	14.1	15.5	16.2	16.0	15.9	15.6*
MT 0747	15.1	14.5	16.3	14.8	12.4	14.7	15.0	15.4	14.7	14.8
MT 0750	15.0	13.7	17.1	14.1	12.2	14.1	15.0	14.9	14.5	14.5
MT 0751	14.9	14.4	16.4	14.9	13.3	15.3	15.8	16.1	15.5	15.2
MT 0755	15.0	14.9	15.8	14.5	13.8	15.6	14.8	16.2	15.6	15.1
MT 0801	15.1	13.1	16.7	14.0	12.0	14.0	15.4	14.7	15.0	14.4
MT 0802	14.9	13.6	17.4	13.3	12.4	13.7	15.1	14.3	15.0	14.4
MT 0807	14.8	16.1	16.5	15.6	13.7	15.3	16.2	16.0	15.2	15.5*
MT 0808	14.4	13.8	16.6	13.7	12.4	14.8	15.6	16.3	14.4	14.7
MT 0813	14.7	13.8	15.4	14.4	12.8	14.2	14.3	15.3	14.2	14.3
MT 0814	14.7	14.5	17.3	13.9	12.2	14.0	15.8	14.8	15.2	14.7
MT 0815	15.2	15.3	16.3	14.8	13.5	15.1	14.7	15.7	15.1	15.1
MT 0816	14.8	12.9	16.2	15.1	13.6	14.2	15.3	14.6	15.2	14.7
MT 0824	15.1	14.9	16.7	14.1	13.2	14.7	15.5	15.3	14.5	14.9

(continued)

Table 3 (continued). 2009 protein content (percent) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dryland	Sidney, dryland	Moccasin, dryland	Conrad, dryland	Huntley, dryland	Bozeman, dryland	Sidney irrigated	Kalispell, high rainfall	average	rank
MT 0826	16.2	14.4	17.6	15.1	13.8	15.7	15.3	15.9	15.4	15.5*
MT 0827	15.1	14.1	16.5	15.3	13.0	15.1	15.4	15.8	14.8	15.0
MT 0829	15.2	14.9	16.4	14.7	13.8	14.9	15.7	15.7	15.1	15.2
MT 0830	14.8	14.1	16.6	15.3	12.8	15.2	14.8	15.7	14.9	14.9
MT 0832	14.9	13.7	17.0	14.2	12.6	14.0	14.0	14.8	14.1	14.4
MT 0847	15.0	15.0	16.8	15.1	13.0	14.1	14.6	15.0	14.9	14.8
MT 0849	15.3	14.7	17.1	14.1	13.0	14.4	15.8	15.6	15.6	15.1
MT 0852	15.4	14.0	16.8	15.4	13.2	14.1	15.2	14.6	14.7	14.8
MT 0853	15.3	14.4	16.7	15.6	13.3	14.9	15.9	15.6	15.6	15.3*
MT 0855	15.2	13.4	16.3	13.7	13.0	14.1	14.9	14.6	14.2	14.4
MT 0856	14.9	14.5	16.8	15.2	12.9	15.2	15.9	15.2	15.3	15.1
MT 0861	15.2	13.8	15.3	14.0	12.7	13.6	15.3	14.2	15.2	14.4
MT 0862	14.8	13.6	17.4	14.4	13.4	14.7	15.2	16.1	15.2	15.0
MT 0868	15.3	14.9	17.1	14.6	15.6	15.2	16.2	16.1	15.3	15.6*
MT 0869	14.8	14.1	17.5	14.6	13.7	14.5	15.8	15.3	14.8	15.0
MT 0873	14.5	13.1	15.9	14.1	11.4	13.6	14.6	14.0	14.0	13.9
MTHW0771	14.8	13.7	16.0	14.9	14.2	14.7	14.1	15.3	13.5	14.6
MTHW0867	14.9	14.3	16.5	13.2	11.8	13.4	13.7	14.0	14.3	14.0
REEDER	14.6	13.9	16.3	14.4	13.5	14.4	15.7	14.8	14.2	14.6
MOTT	15.1	14.1	16.1	13.5	12.8	13.7	14.7	13.8	15.3	14.3
MCNEAL	15.0	14.1	15.7	13.8	12.8	13.8	14.8	13.9	14.6	14.3
OUTLOOK	14.9	13.7	15.8	13.5	12.8	13.5	15.1	14.5	15.0	14.3
CHOTEAU	15.4	15.0	16.9	14.6	13.4	14.3	15.6	15.3	14.2	15.0
VIDA	14.2	14.2	15.8	13.7	10.9	13.6	14.1	14.3	14.2	13.9
site mean	14.9	14.1	16.4	14.3	13.0	14.3	15.0	14.9	14.8	14.9
CV (S/mean)	1 rep	1 rep	1 rep	1 rep	1 rep	1 rep	1 rep	1 rep	1 rep	3.82
F-value										8.27**
LSD (.05)										0.52

Means followed by an asterisk are not significantly different at the .05 level from wheat with the highest protein which is underlined

Table 4. 2009 heading date (days from January 1) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dryland	Sidney, dryland	Moccasin, dryland	Conrad, dryland	Huntley, dryland	Bozeman, dryland	Sidney irrigated	Kalispell, high rainfall	average	BYX	RSQ
VOLT	179.7	173.0	182.3	180.0	168.7	196.0	179.4	196.0	189.7	182.7	59
BRENNAN	176.5	169.7	181.1	178.0	166.6	187.0	174.6	188.0	182.7	178.2	10
AGRIPR11	178.4	173.0	183.5	180.0	170.0	192.0	177.3	191.0	183.4	180.9	47
AGRIPR12	177.5	172.3	182.0	180.0	169.4	191.0	176.0	189.0	182.9	180.0	39
FREYR	177.5	171.0	182.0	179.0	168.6	190.0	175.8	189.0	183.8	179.6	33
KELBY	176.0	169.3	180.8	178.0	167.3	188.0	174.4	188.0	182.2	178.2	11
KUNTZ	178.8	172.6	182.6	179.0	170.4	191.0	177.5	190.0	184.9	180.7	44
AP604 CL	175.6	170.0	180.8	179.0	167.3	189.0	173.9	188.0	181.7	178.4	12
JENNA	181.0	174.3	185.0	182.0	172.4	195.0	177.6	194.0	186.5	183.1	62
BZ92413R	176.5	170.3	181.3	179.0	166.6	189.0	174.4	189.0	183.9	178.9	22
BZ92413W	176.1	170.0	180.7	179.0	167.0	189.0	174.7	189.0	182.9	178.7	17
HANK	177.7	170.0	181.6	179.0	168.3	189.0	174.9	188.0	181.1	178.8	19
CONAN	178.4	172.3	182.1	180.0	168.3	191.0	176.0	190.0	183.6	180.2	40
CORBIN	176.7	170.0	181.4	178.0	167.0	191.0	174.7	189.0	182.8	179.0	24
ONEAL	178.8	172.7	183.2	180.0	169.4	192.0	177.0	192.0	185.0	181.1	53
JEDD	177.4	169.3	180.8	179.0	167.7	189.0	174.6	189.0	181.1	178.6	16
BZ9M7106	183.5	175.4	187.4	184.0	174.0	196.0	179.5	196.0	189.9	185.1	64
THATCHER	180.4	171.3	185.1	182.0	171.7	195.0	179.4	195.0	188.3	183.1	63
FORTUNA	177.3	172.7	182.2	179.0	167.7	190.0	176.9	190.0	183.6	179.9	38
LILLIAN	179.9	173.6	184.8	181.0	172.4	194.0	178.3	194.0	186.8	182.7	60
MT 0414	178.3	172.4	182.9	180.0	170.1	192.0	175.5	192.0	185.1	180.9	48
MT 0664	178.0	172.0	182.5	179.0	168.6	193.0	177.7	191.0	184.8	180.7	45
MT 0718	177.7	171.9	183.1	179.0	169.3	192.0	175.2	191.0	184.5	180.4	41
MT 0735	175.6	169.3	180.2	178.0	167.0	188.0	173.8	188.0	181.3	177.9	7
MT 0744	176.9	172.1	183.3	179.0	168.0	194.0	177.3	193.0	185.7	181.0	51
MT 0745	176.1	171.3	181.0	178.0	166.3	191.0	175.7	190.0	184.3	179.3	30
MT 0746	176.5	170.7	180.7	179.0	167.0	190.0	174.7	189.0	184.3	179.1	28
MT 0747	176.0	170.7	181.3	179.0	166.7	193.0	175.4	189.0	184.1	179.5	31
MT 0750	179.3	173.3	182.3	179.0	170.3	193.0	176.7	191.0	184.4	181.0	52
MT 0751	176.8	171.4	182.0	179.0	169.6	191.0	174.7	190.0	183.2	179.7	35
MT 0755	175.7	170.7	180.6	178.0	168.0	190.0	174.6	189.0	182.6	178.8	20
MT 0801	176.0	170.3	181.7	179.0	165.3	188.0	174.4	189.0	183.3	178.5	13
MT 0802	180.3	174.0	185.4	182.0	171.3	194.0	178.3	194.0	185.9	182.8	61
MT 0807	173.7*	<u>167.4</u>	<u>178.5</u>	<u>176.0</u>	162.7*	<u>187.0</u>	173.9	188.0	180.3	176.4*	3
MT 0808	173.8*	168.4*	178.7*	176.0	<u>162.3</u>	188.0	173.5*	187.0	180.2	176.4*	4
MT 0813	173.6*	167.9*	178.5*	176.0	163.3*	187.0	173.3*	187.0	178.9*	176.2*	2
MT 0814	177.2	170.0	180.9	179.0	167.7	190.0	174.2	189.0	181.3	178.8	21
MT 0815	176.3	169.0*	180.8	178.0	166.0	188.0	174.2	188.0	181.7	178.0	9
MT 0816	174.7*	168.6*	179.3*	177.0	165.6	188.0	173.7*	187.0	179.7*	177.1	5
MT 0824	177.2	169.7	181.1	178.0	167.7	189.0	174.8	189.0	183.4	178.9	23

(continued)

Table 4 (continued). 2009 heading date (days from January 1) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dryland	Sidney, dryland	Moccasin, dryland	Conrad, dryland	Huntley, dryland	Bozeman, dryland	Sidney irrigated	Kalispell, high rainfall	average	BYX	RSQ
MT 0826	177.0	170.9	181.7	179.0	168.0	189.0	174.3	188.0	183.0	179.0	25
MT 0827	176.7	171.1	180.6	178.0	167.0	188.0	174.6	188.0	182.5	178.5	14
MT 0829	176.5	170.0	181.6	179.0	166.3	189.0	174.5	189.0	182.1	178.7	18
MT 0830	176.3	171.0	182.0	179.0	168.0	189.0	175.4	189.0	183.2	179.2	29
MT 0832	176.3	172.0	181.0	179.0	167.4	189.0	175.2	189.0	182.6	179.0	26
MT 0847	176.9	171.7	182.2	179.0	169.4	199.0	175.7	190.0	184.4	180.9	49
MT 0849	177.1	172.0	181.5	180.0	168.0	191.0	174.8	189.0	183.2	179.6	34
MT 0852	177.9	172.6	182.2	180.0	170.3	191.0	176.0	190.0	184.2	180.5	42
MT 0853	176.3	169.4	179.8	177.0	165.0	189.0	174.4	188.0	182.0	177.9	8
MT 0855	177.4	170.7	181.0	179.0	167.7	190.0	175.0	189.0	181.6	179.0	27
MT 0856	176.1	168.7*	179.7	178.0	165.0	188.0	174.0	188.0	180.9	177.6	6
MT 0861	178.4	171.0	182.4	181.0	168.7	192.0	176.1	190.0	184.6	180.5	43
MT 0862	176.8	170.4	180.5	178.0	165.7	191.0	174.1	188.0	181.9	178.5	15
MT 0868	176.7	171.3	182.2	180.0	169.0	191.0	174.7	189.0	183.7	179.7	36
MT 0869	176.8	171.0	181.7	179.0	167.7	192.0	174.9	191.0	183.7	179.8	37
MT 0873	178.6	172.0	183.8	180.0	170.3	194.0	175.8	191.0	184.7	181.1	54
MTHW0771	<u>173.9</u>	168.0*	178.6*	176.0	163.3*	187.0	<u>172.6</u>	187.0	<u>178.6</u>	<u>176.1</u>	1
MTHW0867	179.2	173.0	182.1	179.0	170.3	194.0	176.4	192.0	183.8	181.1	55
REEDER	177.2	172.0	183.2	179.0	168.6	194.0	175.1	193.0	185.0	180.8	46
MOTT	179.1	174.3	184.4	182.0	171.6	193.0	178.4	193.0	185.7	182.4	57
MCNEAL	180.0	174.0	183.8	180.0	169.7	193.0	178.4	193.0	185.1	181.9	56
OUTLOOK	180.3	174.7	184.6	181.0	171.3	193.0	178.4	194.0	185.2	182.5	58
CHOTEAU	177.1	170.7	181.4	179.0	169.0	191.0	175.1	190.0	182.6	179.5	32
VIDA	178.3	173.1	183.5	180.0	169.4	192.0	175.9	192.0	183.5	180.9	50
site mean	177.3	171.2	181.9	179.1	168.1	190.9	175.6	190.1	183.5	179.8	
CV (S/mean)	0.41	0.58	0.30	1 rep	0.56	1 rep	0.36	1 rep	0.38	0.49	
F-value	17.15**	9.37**	29.51**		18.11**		18.06**		26.5**	38.14**	
LSD (.05)	1.21	1.62	0.91		1.53		1.07		1.16	0.8	

Means followed by an asterisk are not significantly different at the .05 level from the earliest heading wheat which is underlined

Table 5. 2009 plant height (inches) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dryland	Sidney, dryland	Moccasin, dryland	Conrad, dryland	Huntley, dryland	Bozeman, dryland	Sidney irrigated	Kalispell, high rainfall	average	BYX	RSQ
VOLT	25.6	20.1	24.4	27.0	32.3	30.9	29.7	31.7	27.7	38	0.99
BRENNAN	24.2	20.4	24.4	24.0	31.0	26.2	26.1	28.0	25.5	61	0.68
AGRIPR11	24.1	21.3	25.2	27.0	33.0	28.3	29.8	30.9	27.4	46	0.90
AGRIPR12	23.7	18.9	22.7	25.0	29.7	26.6	28.0	27.3	25.2	62	0.82
FREYR	28.3*	23.6	26.4	30.0	35.6	32.1	31.9	33.4	30.2	7	0.93
KELBY	25.6	20.3	22.1	25.0	31.4	27.0	27.5	28.7	26.0	59	0.82
KUNTZ	24.8	21.1	25.1	26.0	32.0	28.4	28.1	29.1	26.8	55	0.77
AP604 CL	25.4	20.6	23.1	28.0	34.6	28.9	30.5	31.6	27.8	33	1.09
JENNA	25.1	20.9	24.7	28.0	31.7	30.8	30.7	31.6	27.9	30	0.95
BZ92413R	25.3	21.3	24.1	29.0	33.1	30.0	30.4	30.1	27.9	31	0.94
BZ92413W	24.2	21.6	24.4	29.0	33.2	29.9	29.0	30.3	27.7	39	0.91
HANK	24.7	21.2	23.6	28.0	31.9	28.1	28.2	29.9	26.9	51	0.83
CONAN	26.2	21.9	24.6	28.0	31.5	29.4	29.1	30.6	27.7	40	0.77
CORBIN	25.8	21.5	21.5	27.0	33.4	30.5	30.3	31.9	27.7	41	1.06
ONEAL	26.0	22.4	25.0	30.0	33.0	30.5	31.8	31.9	28.8	21	0.92
JEDD	22.0	19.5	19.9	24.0	28.2	25.7	26.0	25.9	23.9	64	0.74
BZ9M7106	22.7	20.2	21.2	28.0	28.9	30.3	30.9	32.3	26.8	56	1.05
THATCHER	28.6*	<u>27.9</u>	<u>30.9</u>	<u>38.0</u>	<u>42.5</u>	<u>39.4</u>	<u>41.0</u>	<u>43.5</u>	<u>36.5</u>	1	1.45
FORTUNA	<u>30.1</u>	24.0	29.3*	35.0	40.5*	35.9	37.9	40.1	34.1	2	1.39
LILLIAN	27.6	21.2	25.6	31.0	36.4	34.4	35.6	39.4	31.4	3	1.44
MT 0414	26.6	21.2	27.2	29.0	33.8	32.8	32.4	32.7	29.4	11	1.01
MT 0664	25.9	22.1	25.2	31.0	33.7	30.9	33.6	32.7	29.4	12	1.03
MT 0718	23.3	19.7	22.2	25.0	33.4	27.7	26.6	28.9	25.8	60	0.98
MT 0735	26.9	21.3	25.5	29.0	36.0	31.2	32.3	31.9	29.3	15	1.10
MT 0744	27.7	22.9	26.3	29.0	34.9	33.5	32.4	35.0	30.2	8	1.03
MT 0745	25.6	19.7	23.3	27.0	31.3	30.4	29.1	30.4	27.1	49	0.95
MT 0746	28.0	21.9	27.3	32.0	34.4	32.8	33.4	34.3	30.5	6	1.04
MT 0747	26.0	21.1	23.7	27.0	32.0	30.4	29.2	32.5	27.7	42	0.94
MT 0750	26.9	23.0	24.1	31.0	37.0	32.8	35.3	34.4	30.6	5	1.25
MT 0751	25.4	19.9	23.7	29.0	32.3	29.3	30.1	32.4	27.8	34	1.04
MT 0755	26.2	20.2	25.3	29.0	31.8	30.6	31.0	31.1	28.2	27	0.95
MT 0801	27.4	22.1	27.0	32.0	34.3	31.6	31.8	33.3	29.9	9	0.96
MT 0802	27.0	22.5	25.0	31.0	33.4	32.1	35.0	33.1	29.9	10	1.04
MT 0807	27.2	20.1	25.9	31.0	35.6	30.6	31.3	33.7	29.4	13	1.16
MT 0808	25.9	21.3	26.4	30.0	36.6	28.2	30.7	32.4	28.9	20	1.04
MT 0813	27.9	22.4	26.2	28.0	34.5	29.3	31.4	29.8	28.7	23	0.81
MT 0814	26.4	21.3	23.7	31.0	31.9	28.5	29.3	29.8	27.7	43	0.83
MT 0815	26.5	20.9	23.4	29.0	35.3	29.1	32.0	34.0	28.8	22	1.18
MT 0816	25.1	20.3	21.5	27.0	31.1	27.5	28.4	29.0	26.2	58	0.88
MT 0824	24.1	19.4	23.4	28.0	32.9	28.9	28.2	30.6	26.9	52	1.03

(continued)

Table 5 (continued). 2009 plant height (inches) summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Havre, dryland	Sidney, dryland	Moccasin, dryland	Conrad, dryland	Huntley, dryland	Bozeman, dryland	Sidney irrigated	Kalispell, high rainfall	average	BYX	RSQ
MT 0826	25.8	21.0	23.0	30.0	32.6	29.1	31.1	30.2	27.9	32	0.97
MT 0827	27.3	20.2	25.7	29.0	34.4	30.5	30.8	31.7	28.7	24	1.03
MT 0829	25.6	20.0	25.3	30.0	33.5	29.2	28.0	30.5	27.8	35	0.93
MT 0830	24.2	20.0	24.5	28.0	32.9	27.9	31.0	29.7	27.3	47	0.98
MT 0832	27.9	20.5	24.1	29.0	33.6	29.8	30.8	30.7	28.3	26	0.97
MT 0847	25.2	20.0	23.4	26.0	33.3	28.9	28.4	31.7	27.1	50	1.02
MT 0849	25.3	21.4	22.3	29.0	32.5	30.5	30.5	30.1	27.7	44	0.98
MT 0852	25.9	21.0	24.6	30.0	33.7	30.4	31.6	31.9	28.6	25	1.04
MT 0853	26.2	20.3	23.9	28.0	34.0	28.6	31.9	31.0	28.0	28	1.06
MT 0855	26.0	21.4	23.8	29.0	31.9	29.2	29.9	30.2	27.7	45	0.86
MT 0856	26.9	21.1	24.0	27.0	33.2	29.6	31.6	30.3	28.0	29	0.95
MT 0861	25.0	20.1	23.2	28.0	32.0	29.4	29.3	28.5	26.9	53	0.91
MT 0862	23.8	20.7	20.9	25.0	32.5	29.0	30.0	28.5	26.3	57	1.00
MT 0868	24.9	18.4	22.7	29.0	33.3	29.8	30.1	30.0	27.3	48	1.15
MT 0869	25.2	19.7	23.8	27.0	32.9	30.4	32.2	31.0	27.8	36	1.10
MT 0873	25.9	21.1	23.2	28.0	30.8	30.5	32.5	30.5	27.8	37	0.94
MTHW0771	22.9	19.2	20.5	25.0	30.5	27.3	27.3	27.4	25.0	63	0.92
MTHW0867	24.3	23.1	26.5	29.0	32.4	31.7	34.0	32.2	29.1	17	0.92
REEDER	25.8	19.8	25.3	29.0	34.5	32.3	33.4	33.7	29.2	16	1.24
MOTT	26.9	21.6	24.8	34.0	36.3	32.2	36.9	33.7	30.8	4	1.30
MCNEAL	24.7	22.0	27.3	31.0	32.9	30.1	34.5	30.8	29.1	18	0.92
OUTLOOK	25.5	23.1	24.3	30.0	34.1	31.7	34.2	32.4	29.4	14	1.04
CHOTEAU	24.4	20.8	21.3	27.0	31.4	29.0	30.8	30.6	26.9	54	1.01
VIDA	26.4	21.1	23.7	33.0	34.2	31.0	30.3	32.1	29.0	19	1.07
site mean	25.7	21.1	24.3	28.8	33.3	30.1	31.1	31.6	28.3		1.00
CV (S/mean)	4.18	4.72	7.64	1 rep	3.92	2.63	4.06	3.46	4.29		
F-value	5.38**	5.64**	3.11**		8.52**	22.13**	13.11**	18.93**	20.64**		
LSD (.05)	1.81	1.69	3.14		2.17	1.33	2.12	1.83	1.18		

Means followed by an asterisk are not significantly different at the .05 level from the tallest wheat which is underlined

Table 6. 2009 over-all summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Grain yield (bu/ac)		Test weight (lb/bu)		Grain protein (%)		Heading date (178= June 27)		Plant height (in)	
	AVE	RANK	AVE	RANK	AVE	RANK	AVE	RANK	AVE	RANK
VOLT	63.1	17	<u>63.0</u>	1	183	59	27.7	38	13.6	63
BRENNAN	58.3	51	62.3	8	178	10	25.5	61	15.0	19
AGRIPR11	62.6	22	62.1	11	181	47	27.4	46	14.3	50
AGRIPR12	66.7*	4	62.7*	4	180	39	25.2	62	13.5	64
FREYR	58.7	47	61.9	18	180	33	30.2	7	14.4	38
KELBY	53.0	64	62.0	13	178	11	26.0	59	15.3*	7
KUNTZ	60.5	40	62.0	14	181	44	26.8	55	13.6	62
AP604 CL	57.4	55	62.5*	5	178	12	27.8	33	14.9	22
JENNA	62.9	20	60.8	46	183	62	27.9	30	14.2	51
BZ92413R	58.1	52	62.0	15	179	22	27.9	31	14.3	48
BZ92413W	59.5	46	61.9	19	179	17	27.7	39	14.1	53
HANK	65.4*	7	60.7	50	179	19	26.9	51	14.0	57
CONAN	53.1	63	61.3	34	180	40	27.7	40	14.6	33
CORBIN	60.5	41	62.2	9	179	24	27.7	41	14.5	36
ONEAL	68.3*	2	61.9	20	181	53	28.8	21	13.9	59
JEDD	61.1	36	62.5*	6	179	16	23.9	64	14.1	52
BZ9M7106	56.5	57	57.4	64	185	64	26.8	56	15.8	1
THATCHER	53.2	62	60.2	60	183	63	<u>36.5</u>	1	13.8	61
FORTUNA	55.6	60	61.6	29	180	38	34.1	2	14.4	41
LILLIAN	56.5	58	60.1	61	183	60	31.4	3	15.7*	2
MT 0414	64.9*	9	61.9	21	181	48	29.4	11	14.8	24
MT 0664	64.8*	10	62.0	16	181	45	29.4	12	14.0	55
MT 0718	62.6	23	61.7	26	180	41	25.8	60	14.1	54
MT 0735	59.9	43	60.6	52	178	7	29.3	15	14.4	40
MT 0744	63.2	16	61.7	27	181	51	30.2	8	14.8	26
MT 0745	61.4	32	61.3	35	179	30	27.1	49	14.9	20
MT 0746	61.9	26	60.3	58	179	28	30.5	6	15.6*	3
MT 0747	61.9	27	61.0	41	180	31	27.7	42	14.8	28
MT 0750	61.8	28	60.6	53	181	52	30.6	5	14.5	35
MT 0751	60.2	42	60.3	59	180	35	27.8	34	15.2	9
MT 0755	61.8	29	61.4	32	179	20	28.2	27	15.1	11
MT 0801	64.1	12	61.0	42	179	13	29.9	9	14.4	37
MT 0802	66.2*	5	61.0	43	183	61	29.9	10	14.4	39
MT 0807	54.9	61	62.8*	2	176*	3	29.4	13	15.5*	5
MT 0808	58.5	49	61.3	36	176*	4	28.9	20	14.7	30
MT 0813	58.1	53	61.9	22	176*	2	28.7	23	14.3	45
MT 0814	64.5	11	62.1	12	179	21	27.7	43	14.7	29
MT 0815	56.3	59	62.8*	3	178	9	28.8	22	15.1	13
MT 0816	59.9	44	61.2	37	177	5	26.2	58	14.7	31
MT 0824	61.8	30	60.8	47	179	23	26.9	52	14.9	23

(continued)

Table 6 (continued). 2009 over-all summary for the advanced spring wheat nursery grown across Montana.

Line or variety	Grain yield (bu/ac)		Test weight (lb/bu)		Grain protein (%)		Heading date (178= June 27)		Plant height (in)	
	AVE	RANK	AVE	RANK	AVE	RANK	AVE	RANK	AVE	RANK
MT 0826	58.1	54	60.9	45	179	25	27.9	32	15.5*	6
MT 0827	59.9	45	61.9	23	179	14	28.7	24	15.0	15
MT 0829	56.9	56	61.1	40	179	18	27.8	35	15.2	10
MT 0830	61.3	33	62.2	10	179	29	27.3	47	14.9	21
MT 0832	63.4	15	60.8	48	179	26	28.3	26	14.4	43
MT 0847	62.6	24	61.9	24	181	49	27.1	50	14.8	25
MT 0849	60.7	39	60.4	57	180	34	27.7	44	15.1	14
MT 0852	61.3	34	61.5	30	181	42	28.6	25	14.8	27
MT 0853	61.5	31	61.0	44	178	8	28.0	28	15.3*	8
MT 0855	62.9	21	60.1	62	179	27	27.7	45	14.4	42
MT 0856	58.7	48	59.6	63	178	6	28.0	29	15.1	12
MT 0861	63.8	14	60.7	51	181	43	26.9	53	14.4	44
MT 0862	60.8	38	60.8	49	179	15	26.3	57	15.0	17
MT 0868	58.5	50	61.7	28	180	36	27.3	48	15.6*	4
MT 0869	65.1*	8	61.5	31	180	37	27.8	36	15.0	16
MT 0873	65.8*	6	61.8	25	181	54	27.8	37	13.9	58
MTHW0771	62.5	25	62.5*	7	<u>176</u>	1	25.0	63	14.6	34
MTHW0867	64.1	13	60.6	54	181	55	29.1	17	14.0	56
REEDER	67.1*	3	62.0	17	181	46	29.2	16	14.6	32
MOTT	61.3	35	61.4	33	182	57	30.8	4	14.3	46
MCNEAL	61.1	37	61.2	38	182	56	29.1	18	14.3	49
OUTLOOK	63.1	18	60.6	55	183	58	29.4	14	14.3	47
CHOTEAU	63.0	19	61.2	39	180	32	26.9	54	15.0	18
VIDA	<u>69.8</u>	1	60.6	56	181	50	29.0	19	13.9	60
SITE MEAN	61.1		61.4		179.8		28.3		14.9	
C.V. (S/MEAN %)	9.08		1.06		0.49		4.29		3.8	
F-value	3.75**		17.79**		38.14**		20.64**		8.27**	
LSD (.05)	5.14		0.60		0.8		1.18		0.5	

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