

PROJECT TITLE: Statewide Spring Wheat Variety Performance

PROJECT LEADER:

L. Talbert, Spring Wheat breeder, Bozeman

PROJECT PERSONNEL:

G.D. Kushnak, WTARC, Conrad

G.R. Carlson, NARC, Havre

G.F. Stallknecht, SARC, Huntley

R.N. Stougaard, Kalispell

D.M. Wichman, CARC, Moccasin

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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 1995 Advanced Spring Wheat yield trial was grown at two irrigated and seven rainfed sites across Montana. Kalispell and Bozeman were considered high rainfall areas. Irrigated sites were at Sidney and Huntley. Replicated multiple-row plots were established at all locations using standard research techniques.

Yield, test weight, heading date, plant height at maturity, and disease ratings are summarized in Tables 1,2, 3, 4, and 5. Soft white wheats Penewawa and Vanna, and hard red wheat McNeal were highest yielding on a statewide basis.

Above average precipitation at Havre resulted in high yields. Septoria was noted at that site. Good soil moisture at planting and adequate rainfall at Sidney resulted in normal yields, although high winds at maturity resulted in shattering so that shatter resistant varieties yielded better than shatter susceptible varieties. Growing conditions at Moccasin were fairly good, with cool, wet weather, but nitrogen that was fall applied may have leached out of the root zone. Huntley received above average precipitation, and cool temperatures early in the season caused later maturity. Above average temperature and timely rainfall in Conrad resulted in very high yields. Late planting in Bozeman and Kalispell due to cool wet weather in the spring resulted in a late maturing crops, although above average precipitation resulted in high yields at both sites.

SUMMARY:

The highest yielding varieties on a statewide basis were soft white wheats Penewawa and Vanna. Highest yielding hard red wheats on a statewide basis were McNeal, Amidon, and Montana line MT9311.

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.

1995 YIELD (BU/AC) SUMMARY FOR THE ADVANCED SPRING WHEAT NURSERY GROWN ACROSS MONTANA

ID	PEDIGREE	HAVRE	SIDNEY DRY	SIDNEY IRR	MOCCASIN	HUNTLEY DRY	HUNTLEY IRR	CONRAD DRY	BOZEMAN DRY	KALISPELL	AVG	BYX	RSQ
BZ684-23	VANNA	66.39	41.05	52.62	38.20	73.90	82.26	89.26	93.97	121.87	73.3	1.12	0.91
BZ984326	BORDER	55.14	42.26	44.98	28.10	50.87	59.26	74.93	54.90	110.57	57.9	0.98	0.93
BZ992588	RAMBO/906R	66.61	43.90	56.25	29.40	56.17	77.42	74.71	55.43	115.40	63.9	1.03	0.96
BZ992632	FORTUNA/906R	54.36	38.66	50.15	39.20	54.12	70.22	83.47	67.58	108.93	63.0	0.95	0.95
BZ992634	FORTUNA/906R	46.10	41.36	56.48	32.03	56.54	71.33	77.77	68.05	97.67	60.8	0.84	0.92
CI 10003	THATCHER	50.37	31.69	49.58	33.87	49.09	63.26	62.24	60.26	100.90	55.7	0.87	0.97
CI 13596	FORTUNA	47.09	33.63	45.09	28.00	56.56	74.82	71.64	60.35	99.30	57.4	0.94	0.96
CI 17429	LEW	59.96	37.95	48.97	27.87	53.48	78.45	72.76	67.19	110.60	61.9	1.05	0.99
CI 17430	NEWANA	70.63	45.84	49.00	29.73	62.35	85.87	79.84	69.15	119.43	68.0	1.11	0.97
CI 17790	LEN	58.77	38.32	52.45	29.37	63.34	74.40	68.32	71.32	109.00	62.8	0.98	0.98
MT 9307	MT9339/3/FTA//NK715/BW559	61.90	28.96	48.43	27.20	52.72	69.39	75.31	67.76	104.13	59.5	1.01	0.96
MT 9311	MT7819/(OLAF/LEW)	72.27	40.51	53.42	34.63	64.85	81.61	79.51	77.41	115.40	68.8	1.04	0.97
MT 9328	MT7810/MT7926	64.40	23.74	49.53	34.07	62.79	92.60	80.84	72.39	130.73	67.9	1.36	0.96
MT 9332	MT7810/MT7926	68.00	35.85	54.49	40.20	65.02	82.41	76.29	62.27	122.70	67.5	1.09	0.96
MT 9354	MT7810/(SU73/LEW)	55.29	38.60	46.58	29.37	55.13	62.14	77.72	67.97	86.37	57.7	0.74	0.88
MT 9360	LEW/PND	62.05	29.54	54.18	29.00	63.93	76.49	68.24	62.57	113.80	62.2	1.08	0.97
MT 9403	MT8808/AMIDON	60.80	37.47	61.20	30.57	62.79	71.79	76.14	63.75	109.77	63.8	0.97	0.97
MT 9405	MT8808/AMIDON	46.44	37.81	48.59	26.73	65.06	76.09	56.77	55.67	99.27	56.9	0.88	0.90
MT 9406	MT8808/AMIDON	58.34	45.58	53.27	29.27	64.31	73.11	71.32	59.77	108.97	62.7	0.94	0.98
MT 9407	MT8808/MARBERG	66.08	42.16	47.16	29.27	58.36	68.64	80.27	61.71	121.87	63.9	1.13	0.97
MT 9408	MT8808/MARBERG	64.46	44.32	59.07	33.43	62.59	77.47	77.95	64.63	105.73	65.5	0.89	0.98
MT 9410	MT8808/MARBERG	68.12	44.78	60.83	36.57	62.70	79.37	82.15	65.48	115.40	68.4	0.98	0.98
MT 9413	MT8808/MARBERG	46.08	39.52	53.86	23.67	58.84	72.69	69.25	61.22	95.23	57.8	0.86	0.93
MT 9419	MT8808/MARBERG	64.93	41.38	54.21	34.63	67.03	81.72	72.32	62.36	122.70	66.8	1.09	0.97
MT 9420	MT8808/MARBERG	61.30	44.97	61.42	33.70	60.79	75.23	70.18	65.82	111.37	65.0	0.92	0.98
MT 9422	MT8808/MARBERG	63.68	44.29	57.10	31.60	62.89	75.49	73.91	69.38	117.83	66.2	1.03	0.99
MT 9425	MT8808/MARBERG	59.91	39.66	52.72	29.87	61.02	77.96	71.43	61.82	121.03	63.9	1.12	0.99
MT 9426	MT8808/MARBERG	57.28	41.60	51.17	28.13	64.37	66.40	77.23	62.62	121.87	63.4	1.12	0.97
MT 9427	MT8808/MARBERG	57.87	40.97	55.90	30.33	62.99	71.91	72.23	63.81	122.70	64.3	1.10	0.97
MT 9430	MT8808/MARBERG	65.87	38.40	53.64	31.57	59.41	83.52	69.14	63.03	105.73	63.4	0.94	0.95
MT 9432	MT8808/MARBERG	61.01	38.27	59.89	37.67	57.78	77.53	83.48	68.46	112.20	66.3	0.98	0.97
MT 9433	MT8808/MARBERG	69.65	40.93	59.79	28.73	66.01	82.67	73.29	64.14	121.07	67.4	1.11	0.97
MT 9434	MT8808/MARBERG	53.78	39.11	45.56	33.53	63.28	62.76	72.91	59.61	111.40	60.2	0.97	0.96

Table 1. (continued)

1995 YIELD (BU/AC) SUMMARY FOR THE ADVANCED SPRING WHEAT NURSERY GROWN ACROSS MONTANA

ID	PEDIGREE	HAVRE	SIDNEY	SIDNEY	MOCCASIN	HUNTLEY	HUNTLEY	CONRAD	BOZEMAN	KALISPELL	AVG	BYX	RSQ
			DRY	IRR		DRY	IRR		DRY	DRY			
MT 9450	GLENMAN/AMIDON	64.36	41.06	44.13	33.13	62.79	66.55	69.96	63.28	103.33	61.0	0.87	0.96
MT 9453	GLENMAN/AMIDON	66.64	38.46	51.20	37.73	66.73	76.54	76.27	68.39	121.87	67.1	1.08	0.98
MT 9467	GLENMAN/PONDERA	64.41	36.41	50.90	38.57	49.14	63.85	84.68	76.66	96.87	62.4	0.82	0.83
MT 9469	GLENMAN/PONDERA	53.91	42.67	30.54	26.53	49.45	50.23	69.88	64.79	95.27	53.7	0.83	0.83
MTRWA116	PI372129/2*PONDERA	50.55	43.75	54.16	27.03	56.56	64.89	65.85	65.00	107.33	59.5	0.92	0.95
ND 606	AMIDON	70.59	38.15	67.13	34.77	70.91	87.55	67.00	70.67	121.90	69.9	1.07	0.93
ND 673	GRANDIN/STOA'S'	55.18	39.98	59.58	31.90	60.76	90.77	64.67	68.46	113.83	65.0	1.03	0.92
ND 677	ND622*2/CUTLESS	66.27	35.18	60.69	29.73	63.87	84.46	77.81	60.46	121.87	66.7	1.16	0.97
PH981-61	WESTBRED 936	59.12	43.48	51.45	33.60	55.87	71.50	74.13	65.62	108.97	62.6	0.93	0.99
PI483235	GLENMAN	65.73	45.95	48.69	34.07	57.24	62.31	79.43	76.96	100.90	63.5	0.82	0.88
PI549275	HI-LINE	63.30	41.18	59.17	25.57	65.67	81.05	75.12	70.53	105.70	65.3	0.97	0.96
PI574642	MCNEAL	72.29	46.27	61.14	34.47	66.11	85.70	77.59	69.31	120.23	70.3	1.04	0.98
TR983239	FERGUS	55.59	43.92	59.33	32.33	59.16	79.35	73.44	60.77	125.13	65.4	1.12	0.96
WA 6920	PENAWAWA	73.84	44.99	61.29	42.43	68.89	86.79	99.53	76.04	122.70	75.2	1.08	0.96
WB 926	WESTBRED 926	52.81	45.35	49.91	34.07	57.68	73.08	76.07	64.86	106.57	62.3	0.91	0.98
WBEXPRES	WESTBRED EXPRESS	56.29	37.65	52.32	29.87	59.50	77.81	69.08	80.55	121.87	65.0	1.15	0.96
*****	SITE MEAN *****	60.73	39.95	53.25	31.95	60.64	75.08	74.76	66.41	111.94	63.9	1.00	1.00

Table 2.

1995 TEST WEIGHT (LB/BU) SUMMARY FOR THE ADVANCED SPRING WHEAT NURSERY GROWN ACROSS MONTANA

ID	PEDIGREE	HAVRE	SIDNEY DRY	SIDNEY IRR	MOCCASIN	HUNTLEY DRY	HUNTLEY IRR	CONRAD DRY	BOZEMAN DRY	KALISPELL	AVG	BYX	RSQ
BZ684-23	VANNA	59.62	60.27	55.00	60.60	57.60	57.30	59.00	61.00	59.97	58.9	1.31	0.85
BZ984326	BORDER	59.90	61.10	58.50	61.60	60.00	57.80	59.70	60.90	60.60	60.0	0.59	0.43
BZ992588	RAMBO/906R	62.23	61.06	58.17	62.33	59.20	59.50	56.10	60.90	60.73	60.0	0.95	0.42
BZ992632	FORTUNA/906R	60.47	59.63	56.50	60.73	57.00	59.50	61.20	61.50	62.87	59.9	1.29	0.73
BZ992634	FORTUNA/906R	60.77	60.52	57.00	61.47	58.50	59.30	60.00	61.20	59.67	59.8	0.95	0.85
CI 10003	THATCHER	60.78	60.18	55.83	60.13	56.40	57.70	59.30	59.90	61.33	59.1	1.38	0.93
CI 13596	FORTUNA	62.00	59.46	56.50	59.90	60.00	60.80	62.10	61.00	60.80	60.3	0.82	0.45
CI 17429	LEW	63.21	60.88	55.67	61.50	59.20	61.10	61.30	62.80	63.03	61.0	1.57	0.84
CI 17430	NEWANA	61.09	61.26	56.50	62.07	57.80	60.90	55.10	58.20	61.27	59.4	1.18	0.42
CI 17790	LEN	60.78	60.42	57.00	61.37	59.40	58.70	58.70	61.10	60.43	59.8	0.92	0.78
MT 9307	MT8339/3/FTA//NK715/BW559	62.81	61.37	57.83	61.40	59.50	60.40	61.70	61.50	62.00	60.9	1.03	0.89
MT 9311	MT7819/(OLAF/LEW)	63.11	61.42	57.50	63.93	59.70	59.20	60.80	61.10	63.30	61.1	1.40	0.83
MT 9328	MT7810/MT7926	60.39	59.65	56.83	60.60	57.20	59.60	58.80	58.90	61.37	59.3	0.99	0.81
MT 9332	MT7810/MT7926	62.41	60.80	58.67	62.10	60.40	60.00	61.20	61.40	61.40	60.9	0.74	0.80
MT 9354	MT7810/(SU73/LEW)	61.05	61.18	57.83	60.77	60.60	59.60	62.20	62.30	58.30	60.4	0.52	0.21
MT 9360	LEW/PND	61.42	61.23	55.67	61.80	59.70	60.40	61.20	61.20	60.83	60.4	1.22	0.80
MT 9403	MT8808/AMIDON	61.29	60.55	58.50	60.50	58.90	60.70	59.50	59.50	61.57	60.1	0.63	0.66
MT 9405	MT8808/AMIDON	58.32	58.10	56.67	59.03	58.70	59.50	61.90	58.50	58.27	58.8	0.25	0.06
MT 9408	MT8808/AMIDON	61.55	62.37	57.83	61.00	60.00	60.00	61.40	59.70	60.73	60.5	0.75	0.61
MT 9407	MT8808/MARBERG	61.88	60.22	59.00	60.43	56.70	60.20	60.20	59.70	62.63	60.1	0.89	0.53
MT 9408	MT8808/MARBERG	63.10	62.28	58.67	62.07	60.70	60.90	61.00	61.20	60.67	61.2	0.76	0.69
MT 9410	MT8808/MARBERG	63.52	61.82	59.67	61.53	60.10	61.50	60.60	62.20	61.77	61.4	0.71	0.70
MT 9413	MT8808/MARBERG	58.94	59.08	56.83	59.93	57.00	59.20	61.60	60.40	59.10	59.1	0.72	0.43
MT 9419	MT8808/MARBERG	59.27	59.29	57.67	59.40	58.30	59.70	60.20	58.70	60.47	59.2	0.44	0.46
MT 9420	MT8808/MARBERG	61.12	61.59	59.67	61.00	58.20	58.40	60.20	61.00	60.17	60.1	0.61	0.48
MT 9422	MT8808/MARBERG	60.39	60.96	58.00	60.60	56.50	59.20	56.20	60.80	59.50	59.1	0.90	0.46
MT 9425	MT8808/MARBERG	59.43	60.34	56.00	59.77	57.50	58.80	59.50	58.30	60.13	58.9	0.92	0.81
MT 9426	MT8808/MARBERG	59.62	60.89	56.17	60.30	57.80	59.30	58.30	59.70	60.17	59.1	0.99	0.85
MT 9427	MT8808/MARBERG	59.27	61.18	56.83	61.30	58.00	58.80	59.90	59.20	60.23	59.4	0.91	0.75
MT 9430	MT8808/MARBERG	62.72	60.96	58.33	61.17	59.70	61.30	61.20	60.50	61.67	60.8	0.78	0.74
MT 9432	MT8808/MARBERG	60.46	59.67	57.00	59.63	55.70	59.50	58.70	59.60	60.53	59.0	1.03	0.76
MT 9433	MT8808/MARBERG	63.07	61.22	58.33	61.83	59.90	59.80	58.60	61.20	61.73	60.6	0.95	0.68
MT 9434	MT8808/MARBERG	59.48	59.71	57.67	59.53	57.00	58.60	61.20	59.40	59.27	59.1	0.61	0.47
MT 9450	GLENMAN/AMIDON	63.28	61.67	58.00	62.50	60.20	60.00	59.00	61.30	60.30	60.7	0.96	0.63
MT 9453	GLENMAN/AMIDON	62.01	60.61	56.67	61.40	59.20	60.60	59.50	60.10	60.67	60.1	1.02	0.82

Table 2. (continued)

1995 TEST WEIGHT (LB/BU) SUMMARY FOR THE ADVANCED SPRING WHEAT NURSERY GROWN ACROSS MONTANA

ID	PEDIGREE	HAVRE	SIDNEY DRY	SIDNEY IRR	MOCCASIN	HUNTLEY DRY	HUNTLEY IRR	CONRAD DRY	BOZEMAN DRY	KALISPELL	AVG	BYX	RSQ
MT 9467	GLENMAN/PONDERA	60.37	58.90	52.50	60.07	54.90	55.30	58.10	61.40	59.63	57.9	2.05	0.88
MT 9469	GLENMAN/PONDERA	60.76	60.22	54.80	60.87	54.50	55.20	58.10	61.00	60.40	58.4	1.89	0.84
MTRWA116	PI372129/2'PONDERA	60.05	61.62	56.33	60.60	56.60	58.20	61.40	61.00	61.73	59.7	1.37	0.77
ND 606	AMIDON	61.98	61.08	57.50	60.60	58.80	60.60	59.30	57.80	61.40	59.9	0.83	0.50
ND 673	GRANDIN/STOA'S'	61.95	61.77	58.67	61.83	58.90	61.60	59.00	61.50	62.50	60.9	0.94	0.71
ND 677	ND622*2/CUTLESS	62.03	61.31	58.00	60.70	60.70	62.10	61.90	60.50	60.97	60.9	0.59	0.42
PH981-61	WESTBRED 936	59.14	60.17	55.50	61.17	56.60	55.90	59.10	59.80	60.83	58.7	1.38	0.78
PI483235	GLENMAN	60.87	59.47	53.67	60.50	53.30	56.00	54.40	61.70	58.50	57.6	2.05	0.73
PI549275	HI-LINE	61.25	60.56	57.67	61.27	58.90	61.00	62.70	61.20	61.73	60.7	0.89	0.65
PI574642	MCNEAL	62.34	60.63	58.67	61.53	58.40	59.80	60.20	60.10	62.27	60.4	0.91	0.78
TR983239	FERGUS	60.41	61.81	58.50	62.37	59.00	60.00	59.10	61.70	62.77	60.6	0.95	0.68
WA 6920	PENAWAWA	60.16	61.15	56.83	60.33	56.30	58.50	58.80	60.80	60.80	59.3	1.20	0.85
WB 926	WESTBRED 926	59.71	60.39	57.00	60.60	57.70	58.50	60.00	60.50	60.57	59.4	0.93	0.88
WBEXPRES	WESTBRED EXPRESS	60.34	60.88	55.83	61.90	57.40	59.00	60.40	58.20	61.60	59.5	1.31	0.78
*****	SITE MEAN *****	61.06	60.67	57.14	61.01	58.25	59.38	59.79	60.47	60.88	59.8	1.00	1.00

Table 3.

1995 HEADING DATE SUMMARY FOR THE ADVANCED SPRING WEHAT NURSERY GROWN ACROSS MONTANA

ID	PEDIGREE	HAVRE	SIDNEY DRY	SIDNEY IRR	MOCASIN	HUNTLEY DRY	HUNTLEY IRR	CONRAD DRY	BOZEMAN DRY	KALISPELL	AVG	BYX	RSQ
BZ684-23	VANNA	176.88	176.64	171.67	198.00	175.00	176.00	191.00	196.00	176.67	182.0	1.08	0.99
BZ984326	BORDER	175.10	172.94	169.04	192.67	170.50	171.00	189.00	189.00	169.33	177.6	1.04	0.99
BZ992588	RAMBO/906R	175.99	174.56	171.71	195.67	174.00	174.50	189.00	192.00	172.33	180.0	1.02	1.00
BZ992632	FORTUNA/906R	175.21	174.33	171.41	194.67	173.00	174.00	188.00	191.00	171.67	179.3	0.99	0.99
BZ992634	FORTUNA/906R	175.37	174.43	170.07	194.00	172.00	173.00	189.00	191.00	172.00	179.0	1.02	1.00
CI 10003	THATCHER	178.50	176.89	172.67	198.33	177.00	177.50	191.00	195.00	177.00	182.7	1.01	0.99
CI 13596	FORTUNA	175.21	174.99	170.94	195.33	176.50	175.00	189.00	192.00	173.33	180.3	0.98	0.99
CI 17429	LEW	179.11	178.51	174.30	198.00	178.50	178.00	192.00	195.00	177.67	183.5	0.96	1.00
CI 17430	NEWANA	178.91	177.46	173.93	197.33	178.00	179.00	191.00	194.00	177.33	183.0	0.93	1.00
CI 17790	LEN	176.35	176.49	171.62	198.00	176.50	175.50	190.00	193.00	173.67	181.2	1.04	0.99
MT 9307	MT8339/3/FTA/NK715/BW559	177.51	178.72	174.07	198.00	177.50	178.00	191.00	195.00	177.33	183.0	0.97	0.99
MT 9311	MT7819/(OLAF/LEW)	180.03	178.39	174.65	199.33	178.50	179.00	193.00	196.00	177.33	184.0	1.01	1.00
MT 9328	MT7810/MT7926	176.93	175.68	172.69	195.67	175.00	176.00	190.00	193.00	176.00	181.2	0.96	0.99
MT 9332	MT7810/MT7926	176.46	176.83	172.02	196.67	175.00	176.50	190.00	194.00	175.33	181.4	1.01	1.00
MT 9354	MT7810/(SU73/LEW)	176.67	176.42	171.99	195.67	176.50	176.50	189.00	192.00	177.00	181.3	0.91	0.99
MT 9360	LEW/PND	174.57	174.67	170.66	193.67	173.50	175.50	189.00	192.00	172.67	179.6	0.99	1.00
MT 9403	MT8808/AMIDON	176.65	175.11	169.58	194.33	174.00	176.00	189.00	192.00	173.67	180.0	0.98	0.99
MT 9405	MT8808/AMIDON	173.43	171.68	168.27	189.33	170.00	170.00	183.00	187.00	168.67	175.7	0.90	0.99
MT 9406	MT8808/AMIDON	173.24	172.50	168.71	190.67	171.00	170.00	187.00	189.00	169.67	176.9	0.99	1.00
MT 9407	MT8808/MARBERG	174.81	174.10	170.68	193.33	173.00	174.00	189.00	192.00	173.67	179.4	0.99	1.00
MT 9408	MT8808/MARBERG	173.28	174.28	168.95	192.67	171.00	172.50	189.00	189.00	171.00	178.0	1.01	0.99
MT 9410	MT8808/MARBERG	174.70	175.15	169.63	194.67	172.50	172.50	189.00	190.00	172.00	178.9	1.02	0.99
MT 9413	MT8808/MARBERG	174.16	173.13	169.33	192.33	170.50	171.00	188.00	190.00	170.00	177.6	1.03	0.99
MT 9419	MT8808/MARBERG	174.32	172.72	169.41	192.67	171.50	172.50	185.00	189.00	169.67	177.4	0.96	0.99
MT 9420	MT8808/MARBERG	175.21	175.03	171.33	194.67	172.50	174.50	190.00	192.00	172.00	179.7	1.03	0.99
MT 9422	MT8808/MARBERG	174.56	174.60	169.38	193.33	173.50	173.00	190.00	190.00	173.67	179.1	0.99	0.99
MT 9425	MT8808/MARBERG	175.26	172.94	168.99	192.00	171.50	170.50	186.00	189.00	170.00	177.4	0.97	0.99
MT 9426	MT8808/MARBERG	174.27	172.43	168.97	191.67	171.50	171.00	185.00	190.00	170.00	177.2	0.97	0.99
MT 9427	MT8808/MARBERG	173.83	173.17	169.01	191.67	171.50	171.50	188.00	190.00	172.33	177.9	0.98	0.99
MT 9430	MT8808/MARBERG	173.94	173.86	170.00	193.67	172.50	172.50	190.00	189.00	171.67	178.6	1.01	0.99
MT 9432	MT8808/MARBERG	175.55	175.47	171.65	195.67	174.00	176.00	190.00	194.00	175.67	180.9	1.02	0.99
MT 9433	MT8808/MARBERG	177.24	176.39	173.05	196.67	176.50	176.50	191.00	193.00	175.67	181.8	0.97	0.99
MT 9434	MT8808/MARBERG	173.50	172.33	168.66	190.67	171.00	170.50	186.00	190.00	169.00	176.9	0.99	0.99
MT 9450	GLENMAN/AMIDON	174.82	174.36	171.05	195.00	173.50	175.00	188.00	191.00	173.67	179.6	0.98	1.00
MT 9453	GLENMAN/AMIDON	176.13	175.62	172.03	195.00	176.50	176.50	190.00	193.00	173.67	180.9	0.97	0.99

Table 3. (continued)
 1995 HEADING DATE SUMMARY FOR THE ADVANCED SPRING WEHAT NURSERY GROWN ACROSS MONTANA

ID	PEDIGREE	HAVRE	SIDNEY DRY	SIDNEY IRR	MOCCASIN	HUNTLEY DRY	HUNTLEY IRR	CONRAD DRY	BOZEMAN DRY	KALISPELL	AVG	BYX	RSQ
MT 9467	GLENMAN/PONDERA	176.91	175.61	172.66	197.33	176.50	177.00	190.00	194.00	176.67	181.9	0.99	0.99
MT 9469	GLENMAN/PONDERA	175.54	177.24	173.07	197.00	176.00	177.00	190.00	194.00	177.00	181.9	0.98	0.99
MTRWA116	PI372129/2*PONDERA	174.35	173.50	169.63	193.00	172.00	172.50	189.00	191.00	170.00	178.3	1.04	0.99
ND 606	AMIDON	175.36	176.24	171.29	196.00	176.50	176.00	191.00	192.00	175.00	181.0	0.99	0.99
ND 673	GRANDIN/STOA'S'	175.52	175.92	171.62	195.67	174.00	175.00	189.00	192.00	174.33	180.3	0.99	1.00
ND 677	ND622*2/CUTLESS	174.62	174.46	170.65	194.33	176.00	175.00	189.00	193.00	174.00	180.1	0.99	0.99
PH981-61	WESTBRED 936	174.90	173.18	169.70	193.67	171.00	171.50	189.00	191.00	170.00	178.2	1.07	0.99
PI483235	GLENMAN	176.73	177.46	173.32	197.33	176.00	177.00	190.00	194.00	175.33	181.9	0.99	1.00
PI549275	HI-LINE	174.88	173.46	170.00	194.67	171.00	174.00	189.00	193.00	173.00	179.2	1.07	0.99
PI574642	MCNEAL	177.68	176.92	173.34	195.67	174.00	176.50	190.00	195.00	174.67	181.5	1.00	1.00
TR983239	FERGUS	176.03	173.61	170.68	195.00	172.00	172.50	187.00	191.00	169.33	178.6	1.04	0.98
WA 6920	PENAWAWA	176.58	175.94	171.32	198.00	174.50	176.00	190.00	191.00	175.67	181.0	1.01	0.99
WB 926	WESTBRED 926	174.21	172.03	168.93	193.67	170.00	170.50	185.00	190.00	169.67	177.1	1.04	0.99
WBEXPRES	WESTBRED EXPRESS	176.33	174.62	170.65	197.00	172.50	175.50	190.00	196.00	173.67	180.7	1.13	0.99
*****	SITE MEAN *****	175.66	174.96	171.00	194.89	173.82	174.43	189.02	191.96	173.28	179.9	1.00	1.00

Table 4.

1995 PLANT HEIGHT (INCHES) SUMMARY FOR THE ADVANCED SPRING WHEAT NURSERY GROWN ACROSS MONTANA

ID	PEDIGREE	HAVRE	SIDNEY DRY	SIDNEY IRR	MOCCASIN	HUNTLEY DRY	HUNTLEY IRR	CONRAD DRY	BOZEMAN DRY	KALISPELL	AVG	BYX	RSQ
BZ684-23	VANNA	32.51	27.82	29.05	27.67	29.00	34.00	35.00	30.01	32.81	30.9	0.90	0.95
BZ984326	BORDER	32.10	26.12	28.31	27.67	30.00	34.00	35.00	31.08	34.78	31.0	1.03	0.90
BZ992588	RAMBO/906R	33.17	27.03	28.01	28.00	31.00	34.00	35.99	29.94	34.78	31.3	1.08	0.95
BZ992632	FORTUNA/906R	33.40	28.74	28.06	32.00	29.00	34.00	38.00	32.59	36.75	32.5	1.09	0.86
BZ992634	FORTUNA/906R	33.32	29.13	28.39	29.67	29.00	34.00	35.00	31.44	34.78	31.6	0.86	0.92
CI 10003	THATCHER	48.11	35.56	36.51	37.33	40.00	45.00	46.99	41.48	47.90	42.1	1.57	0.86
CI 13596	FORTUNA	37.49	31.63	35.17	31.67	35.00	44.00	43.99	37.57	41.99	37.6	1.48	0.84
CI 17429	LEW	42.76	35.56	34.82	34.00	38.00	36.00	46.00	38.75	42.65	38.7	1.18	0.71
CI 17430	NEWANA	32.12	30.31	29.99	27.67	30.00	37.00	34.01	30.45	34.12	31.7	0.77	0.65
CI 17790	LEN	32.17	30.31	32.03	28.67	32.00	37.00	34.01	31.35	34.12	32.4	0.59	0.53
MT 9307	MT8339/3/FTA/NK715/BW559	40.96	34.78	36.57	34.33	29.00	44.00	46.00	36.96	43.31	38.4	1.60	0.75
MT 9311	MT7819/(OLAF/LEW)	36.75	32.02	31.93	34.33	36.00	35.00	41.00	34.55	37.40	35.4	0.84	0.79
MT 9328	MT7810/MT7926	37.92	32.81	32.21	32.00	34.00	36.00	38.99	34.25	37.40	35.1	0.84	0.92
MT 9332	MT7810/MT7926	36.53	32.02	32.26	33.33	34.00	37.00	40.01	32.21	38.06	35.0	0.95	0.93
MT 9354	MT7810/(SU73/LEW)	35.45	32.41	32.39	31.67	33.00	34.00	40.01	33.83	36.75	34.4	0.82	0.85
MT 9360	LEW/PND	34.56	29.92	31.78	29.33	33.00	38.00	38.00	32.44	35.43	33.6	0.97	0.84
MT 9403	MT8808/AMIDON	38.28	32.15	31.65	33.67	34.00	38.00	43.99	34.49	38.71	36.1	1.31	0.97
MT 9405	MT8808/AMIDON	30.39	28.35	26.31	29.00	30.00	35.00	35.99	31.49	31.50	30.9	0.90	0.76
MT 9406	MT8808/AMIDON	37.21	32.02	29.48	34.00	33.00	40.00	42.01	33.53	39.37	35.6	1.35	0.91
MT 9407	MT8808/MARBERG	39.39	33.46	34.17	34.33	34.00	41.00	43.99	37.43	39.37	37.5	1.22	0.95
MT 9408	MT8808/MARBERG	37.59	30.31	30.72	31.33	32.00	36.00	41.00	34.02	38.06	34.6	1.26	0.98
MT 9410	MT8808/MARBERG	37.69	31.63	30.13	33.33	33.00	37.00	43.00	31.43	38.06	35.0	1.33	0.90
MT 9413	MT8808/MARBERG	30.35	27.56	29.38	27.00	24.00	30.00	35.00	32.46	32.15	29.8	0.81	0.54
MT 9419	MT8808/MARBERG	38.81	31.63	32.52	33.33	34.00	37.00	40.01	34.45	37.40	35.5	0.96	0.94
MT 9420	MT8808/MARBERG	37.07	33.60	31.34	34.00	35.00	39.00	43.00	35.09	38.06	36.2	1.11	0.91
MT 9422	MT8808/MARBERG	37.44	32.94	30.23	33.00	32.00	36.00	40.01	33.69	38.06	34.8	1.02	0.89
MT 9425	MT8808/MARBERG	34.50	28.35	27.09	29.00	33.00	33.00	38.99	32.13	34.12	32.2	1.13	0.85
MT 9426	MT8808/MARBERG	33.46	28.48	30.47	29.67	31.00	33.00	37.01	30.36	33.46	31.9	0.84	0.92
MT 9427	MT8808/MARBERG	32.21	29.66	27.77	31.67	33.00	32.00	38.00	30.41	33.46	32.0	0.79	0.68
MT 9430	MT8808/MARBERG	36.56	32.28	30.19	34.00	34.00	37.00	40.01	35.19	38.06	35.3	0.96	0.90
MT 9432	MT8808/MARBERG	38.52	34.38	32.91	37.67	28.00	38.00	46.99	36.91	41.34	37.2	1.44	0.65
MT 9433	MT8808/MARBERG	39.38	32.41	32.98	34.33	36.00	37.00	43.00	34.82	39.37	36.6	1.11	0.91
MT 9434	MT8808/MARBERG	31.83	27.95	29.02	29.33	34.00	32.00	38.00	31.70	33.46	31.9	0.85	0.69
MT 9450	GLENMAN/AMIDON	37.05	32.41	33.81	30.67	35.00	37.00	40.01	34.02	37.40	35.3	0.90	0.87
MT 9453	GLENMAN/AMIDON	38.61	32.94	33.58	33.67	36.00	39.00	42.01	35.62	38.71	36.7	1.02	0.97

Table 4. (continued)

1995 PLANT HEIGHT (INCHES) SUMMARY FOR THE ADVANCED SPRING WHEAT NURSERY GROWN ACROSS MONTANA

ID	PEDIGREE	HAVRE	SIDNEY DRY	SIDNEY IRR	MOCCASIN	HUNTLEY DRY	HUNTLEY IRR	CONRAD DRY	BOZEMAN DRY	KALISPELL	AVG	BYX	RSQ
MT 9467	GLENMAN/PONDERA	32.21	28.74	30.59	28.67	29.00	32.00	32.99	29.90	35.43	31.1	0.64	0.69
MT 9469	GLENMAN/PONDERA	34.85	30.97	31.55	30.67	30.00	31.00	35.99	32.28	35.43	32.5	0.61	0.64
MTRWA116	PI372129/2*PONDERA	33.07	28.48	29.80	28.00	30.00	35.00	35.00	29.75	32.81	31.3	0.84	0.87
ND 606	AMIDON	42.09	35.43	34.93	34.00	39.00	42.00	43.00	34.93	41.34	38.5	1.11	0.80
ND 673	GRANDIN/STOA'S'	41.86	35.30	33.65	37.33	38.00	44.00	46.00	39.87	43.31	39.9	1.36	0.94
ND 677	ND622*2/CUTLESS	39.72	33.86	36.64	35.00	38.00	42.00	43.99	35.90	38.71	38.2	1.01	0.83
PH981-61	WESTBRED 936	28.96	24.41	24.97	26.00	25.00	28.00	32.00	26.13	28.22	27.1	0.78	0.91
PI483235	GLENMAN	33.71	30.31	30.50	32.00	31.00	34.00	37.01	31.16	34.78	32.7	0.74	0.93
PI549275	HI-LINE	30.93	26.12	27.70	27.00	27.00	34.00	32.99	29.96	31.50	29.7	0.88	0.84
PI574642	MCNEAL	37.92	30.05	30.83	31.33	33.00	36.00	35.99	31.17	36.75	33.7	0.88	0.76
TR983239	FERGUS	32.95	26.77	31.36	29.33	29.00	33.00	32.99	30.04	31.50	30.8	0.57	0.62
WA 6920	PENAWAWA	32.05	26.90	28.95	28.00	30.00	34.00	35.00	29.80	33.46	30.9	0.92	0.93
WB 926	WESTBRED 926	30.11	25.59	25.42	27.67	28.00	33.00	35.99	28.97	32.81	29.7	1.18	0.96
WBEXPRES	WESTBRED EXPRESS	27.45	24.93	23.82	25.67	25.00	28.00	30.00	27.94	28.87	26.9	0.64	0.85
*****	SITE MEAN *****	35.58	30.54	30.86	31.29	32.14	36.04	38.96	33.01	36.49	33.9	1.00	1.00

Table 5.

1995 Spring Wheat Disease Readings
 Taken by Bill Grey, Bob Johnston and Don Mathre

	Septoria			Tan Spot	
	Hav	Kal	Con	Sid-dry	Sid-Irr
Amidon	L	L	L	L-M	L
Border	M	M-H	L-M	L-M	L
BZ992588	L-M	L	M	L	L
BZ992632	M	M	M	L-M	L
BZ992634	M-H	M	L-M	M	L-M
Fergus	M-H	H	M	M	O-L
Fortuna	M-H	M-H	L-M	M	L
Glenman	L-M	L-M	L-M	L-M	O
Hi-Line	M	H	L-M	L-M	L
Len	L	L-M	M	L-M	O
Lew	L-M	L-M	L-M	H	L-M
McNeal	L	L	L	L	O
MT9307	L-M	M	L-M	L	M
MT9311	L-M	M-H	L	L	L-M
MT9328	L-M	M	L	L-M	L
MT9332	L-M	M	L-M	M	L-M
MT9354	L-M	M-H	L-M	M	M
MT9360	L	L	L	L-M	O-L
MT9403	M	L-M	M	L-M	M
MT9405	H	H	M	L-M	M-H
MT9406	M-H	L-M	L-M	M	M
MT9407	M	L-M	L-M	M	L
MT9408	L-M	L-M	L	M	L
MT9410	L-M	L-M	L	M	M
MT9413	H	H	M-H	M-H	M
MT9419	M	L	L-M	M	L-M
MT9420	L-M	H	L	M-H	L-M
MT9422	M	M-H	L	M-H	L-M
MT9425	M	M	L-M	M	L-M
MT9426	M	H	L-M	M-H	L
MT9427	M	M-H	L-M	M	L
MT9432	M	L-M	L-M	M	L
MT9433	L	L-M	L	L	L
MT9434	H	H	M	L-M	M
MT9450	M-H	L-M	L-M	L	L-M
MT9453	L	M	L-M	M	M

Table 5. (continued)

	Septoria			Tan Spot	
	Hav	Kal	Con	Sid-dry	Sid-Irr
MT9467	L-M	L-M	L	M	L-M
MT9469	H	M-H	M	L-M	L
MT9530	L	L-M	L	M	M
MTRWA116	M	M-H	M-H	M	L
ND673	L	L	L	L	L
ND677	L	L	L	L	O-L
Newana	M	L	L	M	L-M
Penawawa	L-M	L	L	L-M	L
Thatcher	L-M	L	L	L-M	O-L
Vanna	L-M	L-M	L	L	O-L
Westbred Express	M	L-M	L	L	L
Westbred926	M	M	M	L	M
Westbred936	M	L-M	L-M	L-M	L-M

Code:

Leaf Spots - Septoria and Tan Spot

- 0 - No disease
- O-L - Very low level of disease
- L - Low level of disease
- L-M - Low-Moderate level of disease
- M - Moderate level of disease
- M-H - Moderate-High level of disease
- H - High level of disease
- VH - Very high level of disease
- PLS - Physiological leaf spot