

PROJECT TITLE: Statewide Spring Wheat Variety Performance

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

SUMMARY:

The 1989 Advanced Yield Spring Wheat trial was grown at six rainfed and five irrigated locations across Montana. Replicated multiple-row plots were established at all locations using standard research techniques.

RESULTS:

Yield, test weight, heading date and plant height at maturity are summarized in Tables 1, 2, 3 and 4 respectively.

Rainfall was adequate or nearly so at most of the Advanced Yield Trial sites in 1989. Timely rains at Conrad and Moccasin resulted in higher than normal yields in the dryland nurseries. Yields and test weights of the spring wheat grown at Havre were greatly reduced due to high winds combined with hot temperatures during the grainfill period. Dryland and irrigated nurseries in Sidney and Huntley had lower than normal yields, and test weights of the Huntley nurseries were greatly reduced, because of very hot, dry weather during bloom and grainfill.

The highest yielding varieties on a statewide average were Owens and Pennawawa, soft white wheat varieties, and the durum variety Westbred Laker. Pennawawa, Owens, Westbred Laker and MT 8845 generally yielded most in the irrigated nurseries and high rainfall areas, while Cutless (a solid stem variety), MT 8651 and MT 8804 generally yielded most under dryer conditions.

FUTURE PLANS: New and existing varieties will continue to be evaluated at various sites in Montana so that producers can grow the varieties best adapted to conditions in their areas.

TABLE 1. 1989 STATEWIDE YIELD (BU/AC) SUMMARY FOR SPRING WHEAT VARIETIES AND EXPERIMENTAL LINES GROWN IN THE ADVANCED SPRING WHEAT YIELD TRIAL

ID	PEDIGREE	HAVRE DKY	SIDNEY DRY	HOCASIN DKY	HUNTLEY DRY	CONRAD DRY	BOZEMAN DRY	SIDNEY IRR	HUNTLEY IRR	CONRAD IRR	BOZEMAN IRR	KALISPELL	STATEWIDE AVERAGE	BYX	RSD
C982-324	KAMID	25.36	17.13	46.82	22.11	66.49	49.94	67.77	48.52	63.32	83.34	108.43	54.5	1.02	0.99
CI 10003	THATCHER	21.60	12.30	42.78	21.46	54.64	42.70	50.87	53.27	62.59	62.27	96.43	47.4	0.86	0.95
CJ 13596	FORTUNA	24.09	17.67	46.52	26.23	60.30	45.70	52.07	55.40	61.06	57.52	99.45	49.6	0.81	0.92
CI 17282	CROSSBY	21.93	17.23	39.89	26.26	59.12	48.40	70.00	58.92	71.62	80.06	84.97	52.6	0.85	0.92
CJ 17429	LEW	22.35	17.53	48.59	19.91	54.67	46.92	59.13	52.78	68.31	73.37	95.80	50.9	0.89	0.97
CI 17430	NEWANA	25.77	16.80	47.43	24.81	64.73	52.32	70.73	58.92	67.24	83.73	108.40	56.4	1.02	1.00
CJ 17828	PONDERA	28.25	13.30	45.82	25.44	66.52	46.60	67.67	62.43	62.23	80.00	105.37	54.9	0.99	0.99
CI 17904	OWENS	25.99	15.47	44.26	23.41	60.73	50.45	73.80	64.99	60.99	87.80	140.70	59.0	1.29	0.96
CO982309	CO982309	22.56	13.27	31.57	17.68	64.32	50.86	62.50	49.58	56.05	80.42	106.68	50.5	1.05	0.98
KAMUT	KAMUT	18.97	12.47	39.11	23.10	52.90	39.33	53.17	49.35	64.84	67.84	71.10	44.9	0.72	0.89
MT 8182	YDING *S*/PCI *S*-287	28.12	16.00	32.47	20.35	67.69	54.34	68.80	46.50	55.43	89.49	117.00	54.2	1.12	0.95
MT 8287	TANAGER *S*	25.12	18.83	42.11	17.91	65.64	45.81	75.93	51.03	60.41	103.03	111.95	56.2	1.16	0.96
MT 8402	MT7336/SHORTANA	25.82	16.50	52.31	22.46	64.39	50.09	73.10	54.45	61.96	82.66	110.88	55.9	1.04	0.99
MT 8608	NEWANA/MT7746	23.70	20.37	36.21	22.68	62.93	53.24	63.23	50.66	66.30	83.09	114.48	54.3	1.06	0.98
MT 8612	C115838/MT7418//PONDERA	25.08	16.30	43.93	27.07	63.68	47.55	64.87	63.60	65.54	77.38	113.67	55.3	1.03	0.98
MT 8615	CI15838/MT7418//PONDERA	25.02	13.50	46.15	27.12	61.18	51.96	65.43	42.82	60.31	80.28	111.45	53.2	1.02	0.98
MT 8626	C115838/MT7418//PONDERA	25.88	20.97	48.20	27.88	62.04	52.81	68.60	47.84	59.82	77.02	108.78	54.5	0.94	0.98
MT 8641	NEWANA/MT7746	22.42	16.20	46.58	22.44	59.17	50.48	61.27	48.41	60.38	79.00	105.22	52.0	0.98	1.00
MT 8645	C115838/MT7418//PONDERA	23.03	18.10	43.01	27.64	58.57	47.76	62.73	62.48	55.77	78.65	102.90	52.8	0.93	0.98
MT 8651	CI15838/MT7418//PONDERA	28.27	21.57	43.32	26.44	68.18	50.59	61.87	62.52	65.82	86.17	108.88	56.7	0.98	0.98
MT 8653	MT7746/LEW	21.79	16.60	34.82	21.00	55.30	46.51	58.37	51.64	57.40	75.94	102.97	49.3	0.96	0.99
MT 8657	LEW/MT7632	26.18	17.53	42.95	19.56	60.93	50.16	73.80	55.41	51.48	63.76	101.78	51.2	0.90	0.94
MT 8801	DLAF/ISF PION	19.01	14.97	34.12	19.85	68.02	53.17	65.23	53.49	57.84	92.87	102.58	52.8	1.07	0.96
MT 8804	DLAF/MT7418//PONDERA	26.26	20.80	46.78	28.06	72.93	56.15	72.40	54.70	61.17	73.17	108.52	56.4	0.95	0.97
MT 8808	LEW/MT7746	23.60	16.83	39.68	22.89	55.77	47.90	65.40	41.17	56.08	71.39	91.43	48.4	0.84	0.98
MT 8812	HARBERG/MT7746	22.94	17.30	44.11	25.16	59.10	45.64	67.90	51.70	61.08	91.32	111.22	54.3	1.07	0.99
MT 8822	MT7635/ARIZONA	22.77	18.00	43.36	23.74	53.74	50.96	66.40	60.74	54.50	84.40	109.30	53.4	1.01	0.97
MT 8823	MT7747/LEW	25.68	17.90	44.12	22.03	63.11	46.89	52.27	51.93	60.80	71.84	103.77	50.9	0.91	0.97

TABLE 1. (CON.) 1989 STATEWIDE YIELD (BU/AC) SUMMARY FOR SPRING WHEAT VARIETIES AND EXPERIMENTAL LINES GROWN IN THE ADVANCED SPRING WHEAT YIELD TRIAL

ID	PEDIGREE	HAVRE DRY	SIDNEY DRY	HOCASIN DRY	HUNTLEY DRY	CONRAD DRY	BOZEMAN DRY	SIDNEY IRR	HUNTLEY IRR	CONRAD IRR	BOZEMAN IRR	KALISPELL	STATEWIDE AVERAGE	BYX	RSQ
HT	8824 MARIEBG/HT7746	26.84	17.03	46.65	23.10	62.72	53.06	61.37	56.59	75.17	82.12	110.05	55.9	1.02	0.98
HT	8826 PONDERA/HT7732	23.78	14.27	44.62	21.77	59.47	46.95	62.67	59.20	61.08	76.28	75.23	51.4	0.91	0.99
HT	8827 PONDERA/HT7732	21.92	16.60	33.67	23.57	62.39	50.18	59.50	48.23	57.19	75.67	109.97	50.8	1.01	0.98
HT	8828 PONDERA/ANGUS	22.46	14.60	44.02	26.45	52.57	47.62	66.63	49.62	60.78	79.28	108.58	52.1	1.00	0.98
HT	8833 PONDERA/ANGUS	22.68	15.00	46.93	23.24	54.69	52.21	68.03	51.34	60.38	78.95	111.93	53.2	1.03	0.98
HT	8836 HT7648/ANGIZANA	24.92	20.80	37.23	20.38	62.80	56.32	72.07	43.39	62.82	90.38	122.13	55.7	1.16	0.97
HT	8841 HT7648/HT7746	24.70	16.17	39.60	21.54	61.80	53.93	67.57	56.74	57.42	89.96	118.13	55.2	1.13	0.99
HT	8845 HT7648/HT7746	25.02	16.27	51.47	21.89	58.11	49.54	74.17	64.12	65.25	91.67	114.48	57.5	1.11	0.98
HT	8846 HT7648/HT7746	24.22	15.03	52.59	20.02	60.50	49.12	64.87	59.08	59.35	80.04	115.13	54.5	1.06	0.98
HT	8849 RS6880/HT7819	28.15	15.30	52.66	28.94	65.50	52.22	73.90	57.21	69.18	79.75	111.67	57.7	1.01	0.98
HT	8858 HT7421/BUTTE	24.29	16.10	53.33	24.11	55.81	54.97	72.23	68.72	63.65	88.54	109.58	57.4	1.04	0.96
HT	8182SE HT8182 SELECTION	20.86	15.83	34.47	20.18	63.57	52.59	70.20	55.23	58.19	97.62	107.67	54.2	1.12	0.97
HT	606 AKITION	27.04	13.87	46.29	27.73	66.24	50.94	68.83	63.92	66.17	73.92	106.02	55.5	0.96	0.97
HT	NDCUT CUTLESS	22.21	19.63	39.37	24.47	68.83	48.13	62.77	61.74	61.66	64.55	86.77	50.9	0.78	0.91
HT	NKF 8022 KLASIC	28.69	17.43	46.90	35.39	47.89	50.01	82.00	48.99	45.81	83.58	108.57	54.1	0.94	0.88
HT	PI 15892 WARD	22.47	11.47	43.95	26.64	64.13	46.40	66.53	52.25	70.66	79.99	95.33	52.7	0.95	0.97
HT	P1483235 GLENNAN	27.39	17.30	56.01	24.97	59.45	49.00	69.63	64.27	65.51	75.07	99.67	55.3	0.89	0.95
HT	P1510696 RENVILLE	25.68	16.07	45.90	25.44	63.96	50.48	76.57	54.65	65.09	94.21	106.53	56.8	1.06	0.98
HT	WA 8920 PENAWANA	26.25	21.10	51.41	25.12	63.11	46.25	79.07	43.84	74.66	101.29	118.37	59.1	1.16	0.95
HT	WB LAKER WESTBRED LAKER	24.03	16.77	45.46	25.87	69.99	49.71	80.77	63.84	65.40	94.04	123.38	59.9	1.20	0.99
HT	WB REGAL WESTBRED REGAL	20.54	13.57	45.03	24.48	57.91	47.94	63.03	46.90	66.29	86.70	100.02	52.0	0.99	0.97
HT	***** SITE MEAN *****	24.32	16.56	43.97	23.88	61.39	49.65	66.89	54.60	62.08	81.30	106.80	53.8	1.00	1.00

TABLE 2. 1989 STATEWIDE TEST WEIGHT (LB/BU) SUMMARY FOR SPRING WHEAT VARIETIES AND EXPERIMENTAL LINES GROWN IN THE ADVANCED SPRING WHEAT YIELD TRIAL

ID	PEDIGREE	HAVER DRY	SIDNEY DRY	HOCASIN DRY	HUNTLEY DRY	CONRAD DRY	BOZEMAN DRY	SIDNEY IRR	HUNTLEY IRR	CONRAD IRR	BOZEMAN IRR	KALISPELL	STATEWIDE AVERAGE	BYX	RSQ
C982-324	KAMBO	59.97	60.90	59.00	54.38	58.90	61.60	63.00	60.27	58.80	56.10	60.30	59.4	0.79	0.60
CI 10003	HATCHER	55.77	57.60	57.50	50.84	57.90	60.00	61.50	58.81	59.20	59.70	58.87	58.0	1.13	0.92
CI 13596	FORTUNA	57.63	60.10	59.90	54.29	59.60	61.10	63.50	59.99	61.00	59.80	60.40	59.8	0.93	0.94
CI 17282	CROSBY	59.07	58.20	58.80	55.50	60.10	61.60	64.50	60.45	61.70	62.00	59.73	60.2	0.87	0.77
CI 17429	LEW	57.87	59.50	60.60	52.47	59.30	62.50	64.50	61.70	61.40	59.40	60.97	60.0	1.25	0.92
CI 17430	NEWANA	57.83	60.20	59.60	53.29	58.70	60.10	63.50	60.24	59.60	59.70	59.77	59.3	1.01	0.98
CI 17828	PONDERA	58.57	60.90	59.90	53.16	58.80	60.40	63.50	60.85	60.50	60.20	60.27	59.7	1.04	0.96
CI 17904	OWENS	56.87	58.20	58.50	50.46	56.70	58.80	63.00	59.32	56.80	60.60	57.07	57.8	1.24	0.90
CD982309	CD982309	57.93	59.20	58.70	52.99	57.30	57.60	61.50	58.61	55.20	55.80	58.70	57.6	0.76	0.63
KAMUT	KAMUT	58.93	60.30	60.90	58.20	58.50	59.00	61.50	59.60	55.90	53.30	59.27	58.7	0.21	0.05
HT 8182	YOUNG *S*/FCJ *S*-287	55.53	56.80	58.80	50.71	56.40	57.50	61.00	58.65	55.50	55.30	56.57	56.6	1.00	0.83
HT 8289	TANAGER *S*	56.37	57.10	58.00	51.57	57.20	55.20	62.50	59.50	61.20	59.40	57.43	57.8	1.07	0.73
HT 8402	HT7336/SHOKTANA	57.17	58.50	59.60	48.24	58.90	58.80	64.00	60.63	61.30	59.50	60.57	58.8	1.60	0.93
HT 8608	NEWANA/HT7746	58.13	59.20	59.50	53.27	60.00	59.80	62.50	58.91	59.90	61.50	60.70	59.4	0.94	0.89
HT 8612	CI15838/HT7418//PONDERA	58.90	60.30	59.90	53.95	60.90	61.30	64.00	60.43	61.20	61.10	61.17	60.3	1.00	0.95
HT 8615	CI15838/HT7418//PONDERA	57.43	58.30	59.50	52.77	59.10	59.10	62.50	58.69	61.20	61.60	61.03	59.2	1.02	0.84
HT 8626	CI15838/HT7418//PONDERA	59.17	60.60	59.70	53.63	60.10	61.00	63.50	60.13	60.50	61.20	60.10	60.0	0.98	0.95
HT 8641	NEWANA/HT7746	57.83	58.40	59.90	53.57	57.90	58.70	61.50	59.56	58.60	56.20	60.30	58.4	0.78	0.75
HT 8645	CI15838/HT7418//PONDERA	57.97	60.40	58.80	52.59	59.70	59.50	63.00	59.37	60.50	60.70	59.87	59.3	1.04	0.92
HT 8651	CI15838/HT7418//PONDERA	58.63	60.20	59.40	55.24	59.80	60.60	64.00	60.56	60.50	59.90	59.67	59.9	0.84	0.95
HT 8653	HT7746/LEW	58.33	58.70	60.60	54.81	59.70	60.60	63.50	60.70	61.40	61.50	60.77	60.1	0.90	0.92
HT 8657	LEW/HT7632	58.00	59.90	57.60	51.04	58.30	59.70	63.00	59.78	59.10	61.00	58.83	58.8	1.17	0.91
HT 8801	OLAF/ISFPTON	55.57	59.10	59.30	51.71	56.20	58.80	62.00	60.69	52.80	57.00	57.27	57.3	1.02	0.60
HT 8804	OLAF/MIVHOR1177	58.47	57.90	58.30	52.59	59.10	60.30	63.50	59.88	58.80	60.20	58.77	58.9	1.05	0.93
HT 8808	LEW/HT7746	54.00	55.80	55.40	50.24	55.30	56.40	60.00	56.92	57.70	60.10	57.27	56.3	1.04	0.81
HT 8812	HARBERG/HT7746	55.53	55.30	58.80	49.99	57.10	57.40	61.50	58.91	59.30	59.40	59.23	57.5	1.21	0.87
HT 8822	HT7635/ANTIZANA	56.37	58.60	60.20	50.92	56.90	58.10	63.00	58.71	59.10	61.70	60.03	58.5	1.25	0.88
HT 8823	HT7747/LEW	56.83	59.80	60.50	53.93	59.30	60.80	63.50	60.35	60.30	59.80	60.80	59.6	1.00	0.94

TABLE 2. (CONT.) 1989 STATEWIDE TEST WEIGHT (LB/BU) SUMMARY FOR SPRING WHEAT VARIETIES AND EXPERIMENTAL LINES GROWN IN THE ADVANCED SPRING WHEAT YIELD TRIAL

ID	PEDIGREE	HAVRE DRY	SIDNEY DRY	HOCCASIN DRY	HUNTLEY DRY	CONRAD DRY	BOZEMAN DRY	SIDNEY IRR	HUNTLEY IRR	CONRAD IRR	BOZEMAN IRR	KALISPELL	STATEWIDE AVERAGE	BYX	RSD
NT	8824 KARLEIGH/NT7746	58.27	58.00	58.50	52.17	59.50	60.00	63.00	60.47	60.60	58.80	60.33	59.1	1.08	0.91
NT	8826 PONDERA/NT7732	58.47	56.70	57.90	52.81	58.40	59.20	62.00	59.00	59.40	59.90	58.93	58.2	0.94	0.90
NT	8827 PONDERA/NT7732	58.47	59.10	60.70	51.37	60.70	61.10	63.50	60.00	61.20	58.00	60.17	59.5	1.20	0.86
NT	8828 PONDERA/ANGUS	56.50	56.90	56.70	50.75	56.70	59.20	63.50	59.15	58.80	58.10	59.17	57.8	1.25	0.94
NT	8833 PONDERA/ANGUS	60.37	58.40	57.20	50.62	57.40	57.60	62.00	59.14	58.00	58.70	59.77	58.1	1.06	0.77
NT	8836 NT7648/ANTIZANA	57.83	58.00	58.60	52.53	57.90	58.90	63.00	59.81	58.50	59.80	60.20	58.6	1.04	0.96
NT	8841 NT7648/NT7746	56.37	59.80	59.60	52.98	58.90	59.00	63.50	59.47	60.10	61.30	60.07	59.2	1.08	0.92
NT	8845 NT7648/NT7746	55.57	56.80	59.40	50.32	56.40	57.00	61.50	58.45	58.60	59.20	59.40	57.5	1.17	0.90
NT	8846 NT7648/NT7746	54.23	57.10	58.80	49.44	55.50	55.60	61.50	58.16	56.70	56.20	58.67	56.5	1.21	0.87
NT	8849 RS6880/NT7819	57.00	58.70	57.80	52.71	58.30	59.30	63.50	58.82	59.40	60.20	60.13	58.9	1.08	0.97
NT	8858 NT7421/WHITE	55.23	55.80	57.50	49.52	58.30	58.80	62.50	58.99	58.70	58.60	57.77	57.4	1.31	0.93
NT8182SE	NT8182 SELECTION	55.03	57.50	58.80	49.83	56.70	56.80	61.00	57.74	56.80	56.50	56.23	56.6	1.10	0.91
ND	606 ANTIION	59.07	58.80	57.90	54.98	58.60	60.30	63.00	59.75	58.70	57.80	58.63	59.0	0.73	0.79
NO CUT	CUTLESS	59.27	60.80	59.20	54.75	57.70	61.40	63.50	59.63	60.70	60.90	58.93	59.7	0.82	0.86
NKF	8022 KLASIC	55.40	57.60	57.50	53.50	55.90	59.30	62.00	57.80	57.80	62.40	55.50	57.7	0.87	0.58
PI	15872 WARD	59.13	58.60	60.40	55.83	60.50	61.10	63.50	59.69	61.10	61.40	59.10	60.0	0.74	0.81
PJ483235	GLENMAN	56.37	58.60	59.70	51.45	57.20	59.40	63.50	58.09	60.00	57.10	59.67	58.3	1.19	0.90
PI510696	RENVILLE	59.20	59.60	60.20	55.61	58.80	60.90	63.50	58.34	58.80	62.10	60.10	59.7	0.75	0.75
WA	6920 PENAWANA	56.53	57.90	58.70	50.80	58.50	57.80	63.50	59.50	57.60	61.10	58.00	58.2	1.25	0.91
WB	LAKER WESTERD LAKER	60.50	60.70	61.50	56.81	59.50	61.50	63.50	60.92	57.70	59.90	60.73	60.3	0.62	0.64
WB	REGAL WESTERD REGAL	60.23	61.80	60.40	58.77	57.30	61.70	63.50	59.05	57.40	58.60	59.07	59.8	0.37	0.20
*****	SITE MEAN *****	57.50	58.72	59.11	52.74	58.33	59.43	62.83	59.47	59.09	59.39	59.34	58.7	1.00	1.00

TABLE 3. 1989 STATEWIDE HEADING DATE (DAYS FROM JAN. 1) SUMMARY FOR SPRING WHEAT VARIETIES AND EXPERIMENTAL LINES GROWN IN THE ADVANCED SPRING WHEAT YIELD TRIAL

ID	PEDIGREE	HAVRE DAY	SIDNEY DAY	HOCASIN DAY	HUNTLEY DAY	CONRAD DAY	BOZEMAN DAY	SIDNEY IRR	HUNTLEY IRR	CONRAD IRR	BOZEMAN IRR	KALISPELL	STATEWIDE AVERAGE	BYX	RSD
CY82-324	KAMUT	179.62	173.67	187.00	178.00	195.00	191.00	188.67	194.00	195.00	197.00	175.33	186.8	1.04	0.99
CI 10003	THATCHER	176.79	171.67	186.00	178.00	193.00	190.00	185.00	193.00	190.00	194.00	176.33	184.9	0.95	0.98
CI 13596	FORTUNA	177.81	171.00	184.67	177.00	192.00	189.00	185.00	191.00	190.00	195.00	177.00	184.5	0.93	0.98
CI 17282	CROSSBY	176.37	169.33	184.67	176.00	190.00	190.00	186.33	192.00	190.00	193.00	176.33	184.0	0.98	0.99
CI 17429	LEW	179.33	174.33	187.33	178.00	194.00	192.00	187.33	193.00	194.00	197.00	179.00	186.8	0.95	0.99
CI 17430	NEWANA	180.01	174.33	187.00	180.00	194.00	191.00	188.00	192.00	193.00	195.00	178.67	186.8	0.89	0.99
CI 17828	PONDERA	174.83	169.00	184.67	174.00	190.00	189.00	185.67	191.00	190.00	194.00	173.67	183.3	1.05	0.99
CI 17904	OWENS	177.72	170.00	186.33	175.00	191.00	189.00	185.00	191.00	192.00	194.00	177.67	184.4	0.97	0.99
CD982309	CD982309	178.73	173.00	187.00	179.00	194.00	191.00	187.33	192.00	193.00	197.00	177.33	186.3	0.97	0.99
KAMUT	KAMUT	177.67	172.00	186.67	180.00	194.00	193.00	190.00	194.00	194.00	199.00	180.00	187.3	1.03	0.97
NT 8182	YDING 'S'/PCI 'S'-287	178.01	170.67	186.00	174.00	193.00	189.00	187.00	192.00	193.00	196.00	174.67	184.8	1.08	0.99
NT 8289	TANAGER 'S'	176.58	168.67	185.00	177.00	193.00	189.00	189.67	193.00	193.00	196.00	174.00	185.0	1.12	0.98
NT 8402	NT7336/SIDORTANA	174.69	169.33	184.00	174.00	190.00	188.00	185.00	191.00	191.00	194.00	172.67	183.1	1.06	0.99
NT 8608	NEWANA/NT7746	175.67	170.00	186.00	175.00	193.00	190.00	186.00	193.00	192.00	193.00	176.00	184.5	1.05	0.99
NT 8612	CI15838/NT7418//PONDERA	176.60	170.33	184.33	174.00	191.00	189.00	185.33	191.00	190.00	194.00	174.33	183.6	1.01	1.00
NT 8615	CI15838/NT7418//PONDERA	176.54	169.00	184.00	174.00	191.00	189.00	185.33	192.00	191.00	193.00	176.00	183.7	1.02	0.99
NT 8626	CI15838/NT7418//PONDERA	173.57	171.67	183.33	174.00	191.00	188.00	184.67	191.00	189.00	192.00	173.33	182.9	0.98	0.98
NT 8641	NEWANA/NT7746	175.24	169.00	184.67	175.00	191.00	188.00	185.33	191.00	190.00	192.00	174.33	183.2	1.00	0.99
NT 8645	CI15838/NT7418//PONDERA	174.06	170.33	184.00	174.00	190.00	190.00	184.67	191.00	188.00	193.00	174.00	183.0	1.00	0.98
NT 8651	CI15838/NT7418//PONDERA	179.37	174.00	186.00	177.00	193.00	189.00	186.00	191.00	192.00	195.00	177.00	185.4	0.89	0.99
NT 8653	NT7746/LIW	172.82	169.67	184.33	174.00	189.00	189.00	184.33	191.00	189.00	192.00	172.33	182.5	1.03	0.99
NT 8657	LEW/NT7632	172.64	170.00	184.00	175.00	190.00	187.00	184.00	189.00	191.00	192.00	171.33	182.4	1.02	0.98
NT 8801	OLAF/ISEPTON	179.97	175.00	187.00	180.00	195.00	193.00	192.67	199.00	196.00	198.00	178.00	188.5	1.05	0.97
NT 8804	OLAF/NIUHO1177	173.87	169.67	185.00	174.00	191.00	189.00	184.00	191.00	191.00	192.00	172.67	183.0	1.06	1.00
NT 8808	LEW/NT7746	173.73	168.67	184.00	174.00	189.00	188.00	184.00	190.00	189.00	192.00	172.00	182.2	1.07	0.99
NT 8812	HARBURG/NT7746	173.38	169.00	184.00	174.00	191.00	187.00	185.00	192.00	191.00	193.00	171.33	182.8	1.10	0.99
NT 8822	NT7635/ANTIZANA	175.85	170.00	185.33	175.00	191.00	188.00	185.67	191.00	191.00	194.00	177.33	184.0	0.98	0.99
NT 8823	NT7747/LEW	178.11	173.33	186.00	176.00	193.00	190.00	186.33	193.00	192.00	196.00	178.33	185.6	0.96	0.99

TABLE 3. (CONT.) 1989 STATEWIDE HEADING DATE (DAYS FROM JAN. 1) SUMMARY FOR SPRING WHEAT VARIETIES AND EXPERIMENTAL LINES GROWN IN THE ADVANCED SPRING WHEAT YIELD

ID	PEDIGREE	HAVER	SIDNEY	HOCASIN	HUNTLEY	CONRAD	BOZEMAN	SIONEY	HUNTLEY	CONRAD	BOZEMAN	KALISPELL	STATEWIDE	BYX	RSD
		DRY	DRY	DRY	DRY	DRY	DRY	IKR	IHR	IHR	IHR	AVERAGE			
NT	8K24 MARKING/NT7746	174.47	169.67	184.33	174.00	190.00	188.00	184.33	192.00	191.00	193.00	172.67	183.0	1.05	0.99
NT	8B26 PONGERA/NT7732	175.70	171.33	185.00	177.00	191.00	190.00	185.33	191.00	191.00	194.00	175.67	184.3	0.96	0.99
NT	8K27 PONDIERA/NT7737	178.55	171.33	186.67	177.00	193.00	191.00	186.67	191.00	193.00	196.00	176.33	185.5	1.00	0.99
NT	8B28 PONGERA/ANGUS	175.79	169.00	185.00	174.00	191.00	189.00	186.33	189.00	191.00	193.00	173.33	183.3	1.04	0.99
NT	8K33 PONDIERA/ANGUS	175.77	171.33	185.33	174.00	191.00	189.00	186.00	192.00	191.00	194.00	173.33	183.9	1.04	1.00
NT	8B36 NT7648/ANTIZANA	178.68	172.67	187.00	180.00	192.00	191.00	186.67	193.00	193.00	194.00	178.00	186.0	0.90	0.99
NT	8B41 NT7648/NT7746	178.63	169.00	186.00	177.00	192.00	189.00	186.00	194.00	193.00	194.00	177.33	185.1	1.01	0.98
NT	8B45 NT7648/NT7746	176.71	170.67	185.67	176.00	193.00	190.00	186.00	191.00	193.00	194.00	177.67	184.9	1.00	0.97
NT	8B46 NT7648/NT7746	177.80	169.33	185.67	177.00	191.00	188.00	185.33	191.00	191.00	194.00	175.33	184.1	0.97	0.99
NT	8B49 RS6880/NT7819	178.29	173.00	186.33	177.00	194.00	191.00	187.00	193.00	193.00	194.00	177.67	185.8	0.96	0.99
NT	8B58 NT7421/HUNTE	177.95	171.00	186.67	175.00	192.00	190.00	185.33	189.00	192.00	195.00	177.33	184.7	0.96	0.97
NT	8182SE NT8182 SELECTION	179.69	170.67	185.67	176.00	191.00	190.00	186.67	192.00	195.00	195.00	174.33	185.1	1.03	0.97
ND	606 ANJION	176.35	170.67	185.33	174.00	192.00	189.00	186.33	194.00	192.00	193.00	176.67	184.5	1.03	0.99
ND	CUTLESS	178.66	171.67	185.00	176.00	192.00	189.00	184.67	191.00	191.00	193.00	174.00	184.2	0.94	0.98
NKF	8022 KLASIC	170.24	166.67	181.00	173.00	187.00	185.00	179.00	186.00	189.00	189.00	169.00	179.5	1.01	0.97
PI	15892 WARD	177.08	170.33	184.67	177.00	191.00	189.00	187.00	194.00	192.00	194.00	175.67	184.7	1.01	0.99
PI	13483235 GLENNAN	179.10	171.33	187.00	178.00	193.00	190.00	186.67	193.00	192.00	196.00	177.67	185.8	0.97	0.99
PI	1510676 RENVILLE	177.76	173.67	186.33	175.00	194.00	190.00	187.00	194.00	193.00	194.00	178.67	185.8	0.97	0.98
WA	8920 PENAWANA	178.86	172.67	187.33	178.00	195.00	191.00	187.00	194.00	194.00	194.00	178.33	186.4	0.97	0.99
WB	LAKER WESTBRED LAKER	178.99	174.33	187.00	177.00	194.00	192.00	188.00	194.00	194.00	196.00	180.00	186.8	0.96	0.99
WR	REGAL WESTBRED REGAL	179.13	172.67	187.33	178.00	194.00	192.00	187.67	193.00	196.00	196.00	178.00	186.7	1.01	0.99
*****	SITE MEAN *****	176.82	171.01	185.48	176.02	191.94	189.55	186.09	191.96	191.88	194.22	175.67	184.6	1.00	1.00

TABLE 4. 1989 STATEWIDE PLANT HEIGHT (INCHES) SUMMARY FOR SPRING WHEAT VARIETIES AND EXPERIMENTAL LINES GROWN IN THE ADVANCED SPRING WHEAT YIELD TRIAL

ID	PEDIGREE	HAVRE DRY	STONE DRY	HOCASIN DRY	HUNFLEY DRY	CONRAD DRY	BOZEMAN DRY	SIDNEY IHR	HUNFLEY IHR	CONRAD IHR	BOZEMAN IHR	KALISPELL	STATEWIDE AVERAGE	BYX	RSQ
CS82-324	KAMRO	24.56	19.00	27.44	22.00	30.00	24.80	32.67	31.00	31.00	26.80	33.99	27.6	0.04	0.87
CI 10003	THATCHER	29.76	18.00	33.92	35.50	40.00	33.20	41.00	44.00	43.00	36.00	48.56	36.6	1.56	0.76
CI 13596	FORTUNA	30.30	20.00	35.27	33.00	40.00	33.20	38.00	39.00	38.00	35.20	44.09	35.1	1.16	0.92
CI 17282	CROSBY	30.69	21.67	33.06	36.00	39.00	33.50	38.67	35.00	40.00	37.30	44.47	35.4	1.07	0.87
CI 17429	LEW	29.94	21.00	34.54	32.00	37.00	29.30	41.00	39.00	41.00	30.30	30.71	33.3	0.93	0.64
CI 17430	NEWANA	25.27	16.67	26.21	27.00	30.00	24.70	34.00	39.00	32.00	29.30	32.28	28.8	1.02	0.82
CI 17828	PONICKA	26.64	17.67	31.07	29.00	33.00	26.00	33.67	33.00	33.00	30.00	36.48	30.0	0.97	0.96
CI 17904	OWENS	27.30	15.00	26.73	29.50	29.00	25.50	32.00	32.00	32.00	28.50	36.07	28.5	1.01	0.94
CO982309	CO982309	27.36	17.33	29.97	27.00	31.00	27.20	35.67	34.00	33.00	31.70	37.80	30.2	1.04	0.95
KAMUT	KAMUT	33.06	24.67	37.36	37.50	44.00	35.50	46.67	42.00	46.00	39.00	51.57	39.8	1.40	0.75
HT 8182	YUING *S*/PCI *S*-287	29.01	17.67	30.21	26.00	29.00	22.80	35.33	32.00	32.00	31.50	33.86	29.0	0.91	0.84
HT 8289	TANAGER *S*	26.01	18.33	28.58	27.00	28.00	22.00	33.00	29.00	32.00	29.20	35.17	28.0	0.88	0.71
HT 8402	HT7336/SIDORTANA	26.23	18.67	28.77	27.00	29.00	23.80	32.00	32.00	32.00	28.50	34.51	28.4	0.85	0.98
HT 8608	NEWANA/HT7746	27.45	19.00	27.07	28.00	30.00	27.20	34.67	29.00	30.00	27.00	37.66	28.8	0.84	0.85
HT 8612	CI115838/HT7418//PONICKA	26.30	17.67	28.10	29.00	28.00	24.70	32.67	34.00	33.00	28.80	35.17	28.9	0.94	0.96
HT 8615	CI115838/HT7418//PONICKA	28.23	19.67	30.94	28.00	31.00	28.80	35.67	33.00	33.00	30.30	37.14	30.5	0.87	0.95
HT 8626	CI115838/HT7418//PONICKA	25.33	18.33	29.32	30.50	30.00	25.50	32.67	32.00	34.00	27.80	35.17	29.1	0.90	0.95
HT 8641	NEWANA/HT7746	26.70	17.00	30.07	30.00	30.00	24.20	36.00	33.00	36.00	32.00	34.78	30.0	1.05	0.92
HT 8645	CI115838/HT7418//PONICKA	25.41	21.33	29.06	30.00	29.00	22.00	30.33	31.00	31.00	28.00	33.99	28.3	0.69	0.84
HT 8651	CI115838/HT7418//PONICKA	27.02	22.00	29.94	30.50	33.00	24.70	34.00	31.00	35.00	28.30	36.22	30.2	0.80	0.89
HT 8653	HT7746/LEW	29.58	21.67	34.82	31.00	33.00	29.80	36.33	37.00	38.00	32.30	42.52	33.3	1.02	0.93
HT 8657	LEW/HT7632	25.58	18.67	26.44	27.00	27.00	23.70	31.00	31.00	31.00	25.20	33.07	27.2	0.78	0.96
HT 8801	OLAF/ISEPTON	27.93	20.00	33.07	29.00	35.00	26.20	39.00	30.00	36.00	31.70	39.24	31.6	1.03	0.86
HT 8804	OLAF/MIVIOR1177	27.95	20.33	28.97	31.00	33.00	26.30	35.67	33.00	34.00	28.20	33.60	30.2	0.82	0.92
HT 8808	LEW/HT7746	24.54	18.33	25.15	27.00	25.00	20.70	28.00	29.00	30.00	23.80	31.63	25.7	0.71	0.87
HT 8812	MARBERG/HT7746	25.59	17.33	28.72	27.00	29.00	23.80	31.00	34.00	30.00	25.70	35.30	27.7	0.72	0.92
HT 8822	HT7635/ANY17ANA	27.04	20.33	30.63	34.00	33.00	29.00	35.00	34.00	35.00	28.50	42.65	31.7	1.02	0.87
HT 8823	HT7747/LEW	29.27	19.67	31.77	32.50	34.00	29.20	39.33	39.00	37.00	31.30	41.21	33.1	1.16	0.98

TABLE 4. (CONT.) 1989 STATEWIDE PLANT HEIGHT (INCHES) SUMMARY FOR SPRING WHEAT VARIETIES AND EXPERIMENTAL LINES GROWN IN THE ADVANCED SPRING WHEAT YIELD TRIAL

ID	PEDIGREE	HAVRE DRY	SIDNEY DRY	HOCASIN DRY	HUNTLEY DRY	CONRAD DRY	BOZEMAN DRY	SIDNEY IRR	HUNTLEY IRR	CONRAD IRR	BOZEMAN IRR	KALISPELL	STATEWIDE AVERAGE	BYX	RSQ
MT	8824 HARKLEG/MT7746	28.77	21.00	31.29	29.00	35.00	28.00	34.00	35.00	35.00	30.50	38.45	31.5	0.90	0.95
MT	8826 FONDERA/MT7732	28.20	17.00	32.05	31.50	35.00	28.00	34.67	38.00	38.00	29.20	42.78	32.3	1.29	0.95
MT	8827 FONDERA/MT7732	27.52	18.00	27.28	26.50	32.00	25.50	34.67	33.00	35.00	28.00	37.53	29.5	1.05	0.96
MT	8828 FONDERA/ANGUS	25.85	16.67	27.96	28.00	31.00	24.30	31.67	31.00	37.00	27.80	34.25	28.7	1.00	0.92
MT	8833 FONDERA/ANGUS	27.87	19.67	30.43	27.00	30.00	28.30	34.67	36.00	37.00	31.80	37.66	30.9	0.98	0.91
MT	8836 MT7648/ANTIZANA	27.98	18.33	28.13	29.50	31.00	28.50	38.33	35.00	36.00	31.00	37.14	31.0	1.06	0.95
MT	8841 MT7648/MT7746	25.24	16.00	29.23	27.00	32.00	24.70	32.67	33.00	32.00	28.70	35.70	28.7	1.04	0.98
MT	8845 MT7648/MT7746	28.19	18.33	28.78	29.50	29.00	25.30	33.00	34.00	33.00	28.20	35.96	29.4	0.91	0.96
MT	8846 MT7648/MT7746	27.47	16.33	27.72	28.00	30.00	24.20	33.33	30.00	32.00	27.70	35.17	28.4	0.95	0.96
MT	8849 RS6980/MT7819	27.65	17.00	30.85	30.00	32.00	26.80	35.67	37.00	36.00	30.30	37.27	31.1	1.10	0.96
MT	8858 MT7421/BUTTE	27.48	19.00	28.73	29.50	30.00	25.00	35.67	36.00	35.00	29.00	37.66	30.3	1.04	0.95
MT	8182SE MT8182 SELECTION	25.61	17.33	27.43	26.00	30.00	25.00	34.33	33.00	33.00	27.80	32.55	28.4	0.93	0.95
ND	606 ANJION	29.25	18.00	32.49	33.50	39.00	30.80	38.33	41.00	41.00	33.20	41.47	34.4	1.31	0.95
ND	CUTLESS	27.34	20.67	27.54	33.50	36.00	28.20	34.33	33.00	39.00	29.30	39.89	31.7	1.01	0.87
NKF	8022 KLASIC	18.17	16.67	21.04	22.00	21.00	18.20	24.67	22.00	23.00	20.70	26.90	21.3	0.52	0.83
PT	15872 WARD	28.52	17.33	32.47	36.00	35.00	33.00	40.33	36.00	41.00	35.30	43.70	34.5	1.31	0.92
PT	1483235 GLENNAN	26.71	18.67	29.40	28.50	32.00	26.30	35.67	30.00	34.00	30.50	36.22	29.8	0.93	0.94
PT	1510696 RENVILLE	27.57	20.33	32.97	33.00	36.00	31.70	40.67	42.00	38.00	35.30	44.88	34.9	1.26	0.95
WA	8Y20 TENAWANA	26.15	18.00	23.85	25.00	29.00	22.70	33.33	30.00	32.00	27.50	33.07	27.3	0.88	0.91
WB	LAKER WESTBRED LAKER	25.04	17.67	26.89	28.00	32.00	26.20	36.33	34.00	33.00	31.00	35.70	29.6	1.04	0.95
WB	REGAL WESTBRED REGAL	29.79	20.67	33.52	36.00	41.00	31.00	40.67	41.00	43.00	37.00	44.49	36.2	1.33	0.96
****	SITE MEAN ****	27.36	18.77	29.78	29.59	32.22	26.71	35.14	34.10	34.92	30.04	37.50	30.6	1.00	1.00