

2005 SPRING AND DURUM WHEAT VARIETY RECOMMENDATION MOTIONS

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1) A motion to remove Amidon, Lew, Hi-Line and Fergus from the Montana hard red spring wheat recommendation list, effective February 2005.

Currently there is no Certified seed of the above varieties being grown in Montana. There is less than 1 percent acreage of Hi-Line and Fergus being grown across Montana and although there is more than 2% acreage of both Amidon and Lew, we feel that there are newer improved varieties to replace these older semi-solid stemmed varieties.

2) A motion to recommend Outlook hard red spring wheat for districts 1-6 on both dryland and irrigated sites in Montana, effective February 2005.

Outlook was released in 2003 and from 2000-2004 it has yielded ~ two bushels more than McNeal across Montana and has been a top yielder at many locations in the advanced and offstation spring wheat nurseries. Test weight is similar to Hank and Outlook heads about a half day later than McNeal. Outlook's plant height is about the same as McNeal and Reeder. Outlook has a grain protein averaging 15% and has acceptable milling and baking qualities. There were ~ 200 acres of Registered seed and ~ 30 acres of Certified seed grown and an estimated 8000 and 1200 bushels produced, respectively in 2004.

3) A motion to recommend Choteau hard red spring wheat for districts 2, 3, 5 and 6 on dryland and irrigated sites where the wheat stem sawfly is a problem in Montana, effective February 2005.

Choteau was released in 2004 and from 2000-2004 has yielded about the same as McNeal across the state in the advanced and offstation spring wheat nurseries. Compared to other sawfly tolerant spring wheats Choteau yields 7.5, 3.5 and 2.5 bushels more than Fortuna, Ernest and Amidon, respectively. Choteau has very solid stems and although the past few years of drought have kept sawfly populations down, off-station nurseries at Loma, Loring and Turner show that Choteau shows tolerance to sawfly pressure similar to Fortuna and better than other varieties. Choteau has an average test weight of 60 pounds per bushel, heads about the same as Reeder or about two days earlier than McNeal and has a height averaging at 29 inches similar to Hank and Conan. Choteau has good protein averaging 15.6% and exhibits good milling and baking quality.

Approximately 625 acres of registered seed passed inspection with an estimated 25,000 bushels produced in 2004.

TABLE OF PAIRED T-TEST RESULTS FROM THE 2000-2004 ADVANCED SPRING WHEAT NURSERIES GROWN ACROSS MONTANA

GRAIN YIELD (BU/AC)

REFERENCE MEAN: MCNEAL 65.2 (N= 48)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
CI 10003	THATCHER	53.7	48	-11.5	-9.4	.000
CI 13596	FORTUNA	57.4	48	-7.8	-5.6	.000
CI 17430	NEWANA	63.8	48	-1.4	-1.5	.130
PI549275	HI-LINE	62.6	48	-2.7	-3.9	.000
PI527682	AMIDON	62.6	48	-2.6	-2.9	.006
PI592761	ERNEST	61.5	48	-3.7	-4.1	.000
PI607557	SCHOLAR	63.4	48	-1.8	-1.7	.091
ND 695	Reeder	67.0	48	1.8	1.9	.059
WB 926	WESTBRED 926	63.4	48	-1.8	-1.7	.090
BZ992588	Conan	60.2	48	-5.0	-5.2	.000
BZ992322	HANK	67.3	48	2.1	2.4	.020
PI632252	OUTLOOK	67.8	48	2.5	3.0	.004
PI633974	CHOTEAU	65.1	48	-.2	-.2	.836

TEST WEIGHT (LB/BU)

REFERENCE MEAN: MCNEAL 59.3 (N= 48)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
CI 10003	THATCHER	57.9	48	-1.4	-8.2	.000
CI 13596	FORTUNA	60.2	48	.9	3.9	.000
CI 17430	NEWANA	59.5	48	.2	.9	.355
PI549275	HI-LINE	59.2	48	-.1	-.5	.654
PI527682	AMIDON	59.6	48	.3	1.8	.082
PI592761	ERNEST	60.3	48	1.0	6.1	.000
PI607557	SCHOLAR	60.5	48	1.2	6.2	.000
ND 695	Reeder	60.4	48	1.1	6.0	.000
WB 926	WESTBRED 926	58.9	48	-.4	-1.9	.066
BZ992588	Conan	60.0	48	.7	3.4	.001
BZ992322	HANK	58.5	48	-.8	-4.0	.000
PI632252	OUTLOOK	58.8	48	-.5	-4.2	.000
PI633974	CHOTEAU	60.1	48	.7	4.4	.000

HEADING DATE (JULIAN DAYS; 175 = JUNE 24)

REFERENCE MEAN: MCNEAL 176.7 (N= 48)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
CI 10003	THATCHER	178.1	48	1.3	6.5	.000
CI 13596	FORTUNA	175.1	48	-1.7	-11.8	.000
CI 17430	NEWANA	177.6	48	.8	6.1	.000
PI549275	HI-LINE	173.5	48	-3.2	-18.8	.000
PI527682	AMIDON	175.4	48	-1.3	-7.8	.000
PI592761	ERNEST	175.3	48	-1.4	-7.0	.000
PI607557	SCHOLAR	176.4	48	-.3	-1.8	.076
ND 695	Reeder	174.3	48	-2.4	-12.0	.000
WB 926	WESTBRED 926	172.2	48	-4.6	-18.6	.000
BZ992588	Conan	174.2	48	-2.5	-14.5	.000
BZ992322	HANK	173.0	48	-3.7	-15.1	.000
PI632252	OUTLOOK	177.2	48	.5	3.1	.003
PI633974	CHOTEAU	174.7	48	-2.0	-11.0	.000

PLANT HEIGHT (INCHES)

REFERENCE MEAN: MCNEAL 31.5 (N= 48)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
CI 10003	THATCHER	38.4	48	6.9	15.3	.000
CI 13596	FORTUNA	36.0	48	4.5	12.8	.000
CI 17430	NEWANA	29.7	48	-1.8	-9.1	.000
PI549275	HI-LINE	29.1	48	-2.4	-13.7	.000
PI527682	AMIDON	35.7	48	4.2	11.3	.000
PI592761	ERNEST	35.6	48	4.2	13.6	.000
PI607557	SCHOLAR	34.2	48	2.8	9.3	.000
ND 695	Reeder	31.9	48	.4	1.7	.089
WB 926	WESTBRED 926	28.8	48	-2.6	-9.7	.000
BZ992588	Conan	29.3	48	-2.1	-9.6	.000
BZ992322	HANK	29.2	48	-2.2	-8.3	.000
PI632252	OUTLOOK	31.7	48	.2	1.0	.322
PI633974	CHOTEAU	29.4	48	-2.0	-10.7	.000

TABLE OF PAIRED T-TEST RESULTS

Grain protein (%)

REFERENCE MEAN: MCNEAL 15.2 (N= 47)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
CI 10003	THATCHER	15.8	47	.6	4.7	.000
CI 13596	FORTUNA	15.3	47	.1	1.3	.215
CI 17430	NEWANA	14.6	46	-.5	-4.3	.000
PI549275	HI-LINE	15.6	47	.4	2.9	.006
PI527682	AMIDON	15.3	47	.1	1.1	.265
PI592761	ERNEST	16.0	47	.8	7.8	.000
PI607557	SCHOLAR	15.8	47	.7	6.0	.000
ND 695	Reeder	15.5	47	.3	2.9	.006
WB 926	WESTBRED 926	15.7	47	.5	4.1	.000
BZ992588	Conan	15.5	47	.4	2.9	.005
BZ992322	HANK	15.5	47	.3	2.3	.025
PI632252	OUTLOOK	15.0	47	-.2	-1.9	.064
PI633974	CHOTEAU	15.6	47	.4	3.2	.002

2000-2004 GRAIN YIELD (BU/AC) SUMMARY FOR OUTLOOK AND CHOTEAU COMPARED TO SELECTED SPRING WHEATS GROWN IN THE ADVANCED SPRING WHEAT NURSERIES ACROSS MONTANA

ID	DISTRICT 1							DISTRICT 2							DISTRICT 2								
	KALISPELL, HIGH RAINFALL							BOZEMAN DRYLAND							BOZEMAN IRRIGATED								
	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE		
THATCHER	110.7	115.6	88.8	69.8	81.4	5	93.3	54.4	60.9	48.5	31.1	64.3	5	51.9	63.9	64.4	61.5	53.4	71.9	5	63.0		
FORTUNA	111.9	106.8	85.7	74.4	100.7	5	95.9	65.1	69.0	50.5	41.7	81.4	5	61.5	52.7	73.5	72.1	63.5	100.6	5	72.5		
NEWANA	126.3	130.0	109.0	83.7	103.5	5	110.5	64.5	72.9	59.8	37.0	78.9	5	62.6	92.0	87.6	82.7	66.6	98.8	5	85.5		
HI-LINE	120.9	116.6	95.1	77.5	90.2	5	100.1	67.7	82.3	66.4	36.6	78.3	5	66.3	87.3	85.6	80.1	70.0	97.5	5	84.1		
MCNEAL	123.3	121.5	102.0	78.5	86.8	5	102.4*	66.6	78.2	69.6	39.8	85.3	5	67.9*	87.4	92.0	88.1	65.3	102.9	5	87.1*		
AMIDON	121.7	125.5	87.3	78.3	99.4	5	102.4*	66.8	75.1	56.6	37.9	83.7	5	64.0	84.9	76.1	74.7	66.8	102.5	5	81.0		
ERNEST	118.7	120.4	95.8	75.9	89.3	5	100.0	65.8	77.3	56.9	41.9	80.5	5	64.5	75.2	78.5	69.8	74.1	90.5	5	77.6		
SCHOLAR	122.2	138.6	99.9	82.6	99.3	5	108.5*	70.0	74.9	55.8	41.9	84.1	5	65.3	84.6	81.1	65.7	69.2	95.9	5	79.3		
Reeder	118.1	138.0	109.5	87.4	92.4	5	109.1*	72.3	80.1	63.3	44.5	85.4	5	69.1*	72.8	90.5	73.4	74.7	97.2	5	81.7		
WESTBRED 926	128.3	142.1	100.6	75.2	100.1	5	109.2*	69.7	72.9	66.1	43.0	89.3	5	68.2*	65.4	80.2	82.1	71.6	95.2	5	78.9		
Conan	114.8	104.3	91.6	79.7	99.0	5	97.9	65.3	73.6	68.9	37.8	81.7	5	65.4	71.0	80.1	84.1	68.9	89.9	5	78.8		
HANK	121.1	135.5	91.9	72.6	103.2	5	104.9*	72.7	77.9	78.6	41.9	89.0	5	72.0*	91.8	93.5	99.5	74.5	115.3	5	94.9		
OUTLOOK	124.6	142.5	114.1	70.5	94.7	5	109.3*	77.1	80.2	72.8	42.7	87.4	5	72.1	83.9	92.7	73.6	74.3	104.2	5	85.7		
CHOTEAU	115.1	113.8	98.7	77.9	88.6	5	98.8	70.0	78.2	73.6	37.7	90.0	5	69.9*	79.6	92.8	93.8	70.4	103.2	5	87.9*		
AVERAGE	119.8	125.1	97.9	77.4	94.9	5	103.0	67.7	75.3	63.4	39.7	82.8	5	65.8	78.0	83.5	78.7	68.8	97.5	5	81.3		
C.V. (S/MEAN%)																						7.85	
LSD (.05)																							8.1

ID	DISTRICT 3							DISTRICT 3							DISTRICT 4								
	HUNTLEY DRYLAND							HUNTLEY IRRIGATED							MOCCASIN DRYLAND								
	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE	2001	2003	2004	YRS	AVE				
THATCHER	48.9	35.4	5.5	31.4	34.0	5	31.1*	81.7	106.8	104.3	76.1	93.6	5	92.5	35.0	10.6	28.3	3	24.6				
FORTUNA	41.9	25.4	11.4	37.7	31.7	5	29.6	93.2	99.2	107.4	79.4	108.9	5	97.6	40.4	18.1	37.1	3	31.9				
NEWANA	46.2	35.0	7.8	36.6	37.4	5	32.6*	96.1	112.4	108.4	93.3	117.5	5	105.5*	38.7	14.8	33.5	3	29.0				
HI-LINE	57.2	29.0	11.4	39.0	33.5	5	34.0*	89.7	107.2	110.8	93.9	109.9	5	102.3*	38.0	15.3	34.6	3	29.3				
MCNEAL	53.4	35.6	9.3	36.0	39.1	5	34.7*	90.5	110.6	118.5	88.1	114.4	5	104.4*	47.5	20.3	36.9	3	34.9*				
AMIDON	49.6	34.5	9.1	34.6	34.8	5	32.5*	92.2	123.9	117.9	89.2	110.0	5	106.6*	43.4	17.5	35.4	3	32.1				
ERNEST	42.8	30.9	7.6	33.1	35.1	5	29.9	103.3	114.8	117.0	86.0	114.0	5	107.0*	34.3	15.9	34.1	3	28.1				
SCHOLAR	47.5	32.4	10.3	36.6	32.7	5	31.9*	101.8	121.1	111.7	87.3	116.0	5	107.6*	39.9	17.8	36.1	3	31.3				
Reeder	48.6	32.7	13.8	40.6	32.8	5	33.7*	96.5	116.0	125.5	85.5	110.5	5	106.8*	43.6	18.4	37.9	3	33.3				
WESTBRED 926	54.1	22.9	14.0	39.0	21.2	5	30.3	89.7	103.6	122.2	78.4	113.5	5	101.5	38.1	16.0	37.2	3	30.4				
Conan	41.7	26.3	11.0	35.6	28.3	5	28.6	91.0	101.5	109.5	77.5	113.4	5	98.6	40.3	17.8	39.3	3	32.4				
HANK	57.4	26.2	11.9	42.3	29.5	5	33.5*	104.9	107.0	123.0	85.6	123.3	5	108.7*	45.6	21.4	41.5	3	36.1				
OUTLOOK	58.8	29.3	9.8	42.5	39.3	5	35.9	99.7	117.0	119.0	88.9	116.2	5	108.2*	42.3	16.6	39.5	3	32.8				
CHOTEAU	52.6	28.1	9.8	37.2	28.7	5	31.3*	95.3	114.9	119.0	86.6	128.7	5	108.9	38.3	15.0	35.6	3	29.6				
AVERAGE	50.1	30.3	10.2	37.3	32.7	5	32.1	94.7	111.1	115.3	85.4	113.6	5	104.0	40.4	16.8	36.2	3	31.1				
C.V. (S/MEAN%)																						5.24	
LSD (.05)																							2.73

2000-2004 GRAIN YIELD (BU/AC) SUMMARY FOR OUTLOOK AND CHOTEAU COMPARED TO SELECTED VARIETIES GROWN ACROSS MONTANA IN THE ADVANCED SPRING WHEAT NURSERY

ID	DISTRICT 5							DISTRICT 5						
	HAVRE DRYLAND							CONRAD DRYLAND						
	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE
THATCHER	30.4	18.4	34.0	8.2	36.1	5	25.5	33.4	14.4	43.8	33.2	44.6	5	33.9
FORTUNA	35.9	16.7	28.5	10.8	42.0	5	26.8	39.2	14.1	42.8	49.6	58.0	5	40.7
NEWANA	35.6	21.5	39.1	12.3	35.2	5	28.8	46.3	15.1	44.6	44.8	55.3	5	41.2*
HI-LINE	37.6	19.7	38.0	11.2	40.7	5	29.4	39.1	12.7	43.7	53.0	58.2	5	41.3*
MCNEAL	40.2	18.9	36.3	13.9	40.8	5	30.0	38.8	13.4	41.5	49.5	57.5	5	40.1
AMIDON	35.9	22.2	41.4	10.9	38.0	5	29.7	35.6	16.1	44.0	39.9	50.8	5	37.3
ERNEST	37.3	19.6	36.4	11.8	39.8	5	29.0	37.5	16.6	45.7	42.6	56.7	5	39.8
SCHOLAR	38.5	21.0	36.4	12.2	44.7	5	30.6	44.8	16.5	43.0	46.4	52.8	5	40.7
Reeder	43.3	22.5	34.9	12.4	40.9	5	30.8	47.6	17.1	49.1	53.9	60.7	5	<u>45.7</u>
WESTBRED 926	38.0	18.7	29.9	10.5	41.9	5	27.8	46.5	13.0	40.9	54.1	61.5	5	43.2*
Conan	36.0	20.4	33.7	13.5	43.3	5	29.4	42.6	15.1	40.8	45.9	58.0	5	40.5
HANK	41.7	20.5	37.8	10.4	45.0	5	31.1	46.4	13.7	42.0	48.9	60.0	5	42.2*
OUTLOOK	41.0	22.9	44.5	16.2	49.0	5	<u>34.7</u>	44.4	15.2	43.0	48.8	60.2	5	42.3*
CHOTEAU	34.2	19.3	34.9	13.1	42.5	5	28.8	40.8	14.2	45.2	59.5	63.8	5	44.7*
AVERAGE	37.5	20.2	36.1	12.0	41.4	5	29.4	41.6	14.8	43.6	47.9	57.0	5	41.0
C.V. (S/MEAN%)							8.41							8.82
LSD (.05)							3.14							4.59

ID	DISTRICT 6							DISTRICT 6						
	SIDNEY DYRLAND							SIDNEY IRRIGATED						
	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE
THATCHER	51.4	51.0	33.0	49.4	55.8	5	48.1	76.2	41.4	42.6	78.2	71.1	5	61.9
FORTUNA	54.4	40.1	35.5	57.4	60.3	5	49.5	78.3	28.2	37.4	77.5	66.4	5	57.6
NEWANA	61.9	53.0	34.3	55.9	71.0	5	55.2	89.6	48.6	56.9	93.0	79.5	5	73.5
HI-LINE	54.1	39.0	40.1	61.9	64.9	5	52.0	87.6	46.5	51.9	106.3	76.0	5	73.7
MCNEAL	60.3	48.2	43.4	60.7	68.3	5	56.2	101.6	62.6	56.7	107.5	83.4	5	82.4*
AMIDON	60.6	50.8	40.6	57.9	60.3	5	54.0	99.5	45.0	48.0	97.4	82.6	5	74.5
ERNEST	56.1	51.1	40.8	54.7	61.2	5	52.8	99.7	45.2	49.9	92.8	76.4	5	72.8
SCHOLAR	56.1	51.6	41.6	59.4	67.6	5	55.2	90.8	45.1	50.9	94.4	72.1	5	70.7
Reeder	67.4	54.3	52.5	67.6	68.0	5	<u>62.0</u>	111.1	66.8	52.0	102.5	88.8	5	<u>84.2</u>
WESTBRED 926	58.4	46.3	43.9	59.6	65.1	5	54.7	91.2	52.4	51.6	101.9	86.0	5	76.6
Conan	51.0	44.4	39.5	55.7	59.1	5	50.0	80.3	56.7	47.3	88.3	76.1	5	69.8
HANK	61.7	44.9	39.4	63.3	66.6	5	55.2	98.1	59.2	53.3	113.5	87.6	5	82.3*
OUTLOOK	63.4	54.8	44.3	69.0	67.5	5	59.8*	109.9	66.9	49.7	104.1	84.2	5	83.0*
CHOTEAU	60.5	55.4	42.8	61.2	61.9	5	56.4	102.3	55.0	60.6	107.3	76.0	5	80.2*
AVERAGE	58.4	48.9	40.8	59.6	64.1	5	54.4	94.0	51.4	50.6	97.5	79.0	5	74.5
C.V. (S/MEAN%)							6.31							7.34
LSD (.05)							4.35							6.94

OVERALL		
AVE	YEARS	RANK
53.7	48	14
57.4	48	13
63.8	48	6
62.6	48	10
65.2*	48	4
62.6	48	9
61.5	48	11
63.4	48	7
67.0*	48	3
63.4	48	8
60.2	48	12
67.3*	48	2
<u>67.8</u>	48	1
65.1*	48	5
62.9	48	0
5.37		
2.93		

2000-2004 TEST WEIGHT (LB/BU) SUMMARY FOR OUTLOOK AND CHOTEAU COMPARED TO SELECTED VARIETIES GROWN ACROSS MONTANA IN THE ADVANCED SPRING WHEAT NURSERY

ID	DISTRICT 1							DISTRICT 2							DISTRICT 2							
	KALISPELL, HIGH RAINFALL							BOZEMAN DRYLAND							BOZEMAN IRRIGATED							
	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE	
THATCHER	60.9	62.0	60.2	56.2	59.4	5	59.7	58.0	58.2	59.4	51.2	59.6	5	57.3	59.3	61.0	60.5	54.3	61.8	5	59.4	
FORTUNA	63.0	64.3	61.0	60.0	62.1	5	62.1	61.9	61.7	61.3	57.5	62.6	5	61.0	62.0	63.6	62.2	60.9	62.7	5	62.3	
NEWANA	62.9	61.8	61.1	57.9	60.9	5	60.9*	59.2	57.8	59.0	55.4	62.7	5	58.8	60.4	59.7	61.7	58.4	62.1	5	60.5	
HI-LINE	62.9	63.4	61.3	54.0	60.4	5	60.4	59.8	61.1	57.4	51.7	61.3	5	58.3	62.6	62.3	62.7	56.1	61.9	5	61.1	
MCNEAL	62.3	62.5	59.9	55.5	60.9	5	60.2	60.0	59.3	59.6	54.0	60.7	5	58.7	61.8	61.7	62.1	58.0	62.5	5	61.2*	
AMIDON	62.2	62.9	60.3	58.2	60.8	5	60.8*	60.4	60.0	60.4	56.1	62.6	5	59.9*	61.3	61.7	61.4	59.5	61.0	5	61.0	
ERNEST	63.4	64.2	62.3	58.9	60.7	5	61.9*	61.7	61.1	60.2	56.9	61.3	5	60.2*	62.2	62.6	62.4	59.4	61.1	5	61.5*	
SCHOLAR	62.7	61.6	61.6	60.3	61.7	5	61.5*	60.7	60.6	60.4	57.2	62.5	5	60.2*	61.8	62.1	61.8	60.2	62.8	5	61.7*	
Reeder	62.7	61.7	61.8	59.0	61.6	5	61.3*	61.7	60.7	60.3	54.5	62.8	5	60.0*	61.9	62.7	62.3	58.6	62.7	5	61.6*	
WESTBRED 926	62.8	62.6	59.1	57.8	60.5	5	60.6	59.7	58.9	56.4	53.6	60.0	5	57.7	61.3	59.0	61.3	58.1	61.3	5	60.2	
Conan	62.3	62.5	61.4	58.7	61.0	5	61.1*	61.0	60.3	59.5	55.0	60.4	5	59.2	61.4	61.3	62.8	58.3	62.2	5	61.2*	
HANK	62.3	60.0	57.0	55.0	59.2	5	58.7	59.5	57.0	57.3	51.7	60.6	5	57.2	61.6	60.3	61.7	57.2	62.4	5	60.6	
OUTLOOK	61.7	61.9	60.0	53.9	58.4	5	59.2	59.3	59.2	58.9	52.9	62.0	5	58.5	61.0	60.6	60.9	57.1	61.3	5	60.2	
CHOTEAU	62.3	62.9	61.4	57.2	60.1	5	60.8*	60.6	60.4	59.8	54.5	61.5	5	59.4	61.4	63.1	62.3	58.9	61.9	5	61.5*	
AVERAGE	62.5	62.5	60.6	57.3	60.6	5	60.7	60.3	59.7	59.3	54.4	61.5	5	59.0	61.4	61.6	61.9	58.2	62.0	5	61.0	
C.V. (S/MEAN %)							1.67							1.62							1.45	
LSD (.05)							1.29							1.21								1.13

ID	DISTRICT 3							DISTRICT 3							DISTRICT 4							
	HUNTLEY DRYLAND							HUNTLEY IRRIGATED							MOCCASIN DRYLAND							
	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE	2001	2003	2004	YRS	AVE			
THATCHER	57.1	60.0	47.4	56.2	61.9	5	56.5	57.0	62.5	60.9	59.8	62.0	5	60.4	59.6	46.9	51.9	3	52.8			
FORTUNA	59.0	58.9	50.4	60.7	62.4	5	58.3	61.3	61.9	63.1	61.9	63.5	5	62.3*	58.6	50.1	56.9	3	55.1*			
NEWANA	58.3	60.9	50.0	60.0	63.4	5	58.5*	59.7	62.2	62.3	62.3	61.8	5	61.6*	55.0	50.3	54.6	3	53.3			
HI-LINE	57.8	59.9	46.6	60.1	62.0	5	57.3	61.1	61.8	62.1	63.3	62.1	5	62.0*	58.1	47.0	53.3	3	52.8			
MCNEAL	57.1	59.6	48.0	58.6	62.4	5	57.1	59.2	61.9	62.8	61.6	63.4	5	61.7*	58.3	48.8	55.0	3	54.0*			
AMIDON	58.7	60.1	48.7	60.0	62.5	5	58.0	61.3	62.5	62.3	59.4	62.3	5	61.5*	58.7	51.5	56.2	3	55.4*			
ERNEST	59.7	60.5	48.9	61.0	63.6	5	58.7*	60.5	63.1	62.3	60.9	63.3	5	62.0*	58.6	50.8	55.0	3	54.8*			
SCHOLAR	60.2	60.9	51.6	61.1	61.6	5	59.0*	61.4	63.2	62.9	60.6	63.1	5	62.2*	58.4	52.3	57.3	3	56.0			
Reeder	59.4	60.9	50.7	62.8	63.8	5	59.5	61.2	63.5	63.2	60.8	63.2	5	62.4	57.7	51.2	56.2	3	55.1			
WESTBRED 926	58.6	59.8	48.7	60.9	62.4	5	58.1	59.2	62.0	61.5	61.3	60.2	5	60.8	58.1	49.0	52.7	3	53.3			
Conan	58.6	60.4	49.9	61.8	63.2	5	58.7*	59.9	62.3	62.5	58.6	61.9	5	61.0	58.6	51.6	57.0	3	55.7*			
HANK	58.7	59.5	48.2	60.3	61.7	5	57.7	58.9	60.7	61.5	60.6	61.0	5	60.5	56.6	49.1	53.6	3	53.1			
OUTLOOK	57.8	60.3	47.1	59.2	62.4	5	57.4	60.4	61.9	62.3	60.8	61.9	5	61.4*	56.6	48.2	54.1	3	53.0			
CHOTEAU	60.1	59.7	49.6	61.2	62.8	5	58.6*	58.4	63.6	62.7	61.4	63.8	5	61.9*	57.2	51.1	57.1	3	55.1*			
AVERAGE	58.6	60.1	49.0	60.3	62.6	5	58.1	60.0	62.4	62.3	61.0	62.4	5	61.6	57.9	49.9	55.0	3	54.3			
C.V. (S/MEAN %)							1.5							1.44							2.33	
LSD (.05)							1.07							1.13								2.12

2000-2004 TEST WEIGHT (LB/BU) SUMMARY FOR OUTLOOK AND CHOTEAU COMPARED TO SELECTED VARIETIES GROWN ACROSS MONTANA IN THE ADVANCED SPRING WHEAT NURSERY

ID	DISTRICT 5								DISTRICT 5							
	CONRAD DRYLAND								HAVRE DRYLAND							
	2000	2001	2002	2003	2004	YRS	AVE		2000	2001	2002	2003	2004	YRS	AVE	
THATCHER	56.3	58.7	60.5	52.6	59.8	5	57.6		55.9	55.5	58.3	50.5	54.1	5	54.9	
FORTUNA	59.8	60.6	61.4	57.9	62.9	5	60.5		59.2	57.2	59.2	57.1	59.2	5	58.4*	
NEWANA	59.9	62.7	62.4	54.0	60.7	5	59.9*		57.7	59.6	62.0	56.1	58.5	5	58.7*	
HI-LINE	58.7	60.9	62.6	55.2	62.9	5	60.1		56.0	56.4	60.9	56.6	57.5	5	57.5	
MCNEAL	58.1	60.2	61.9	56.9	61.8	5	59.7*		57.4	57.7	60.2	53.9	57.2	5	57.3	
AMIDON	58.7	61.3	60.7	54.5	61.2	5	59.2*		59.1	57.7	59.9	56.8	59.6	5	58.6*	
ERNEST	59.8	62.3	61.3	55.9	62.9	5	60.4*		59.7	58.0	60.1	56.8	59.6	5	58.8*	
SCHOLAR	60.0	62.3	62.0	56.7	61.1	5	60.4*		60.7	59.4	61.2	57.2	59.4	5	59.6	
Reeder	60.5	62.5	61.7	56.3	60.2	5	60.2*		60.1	58.2	60.6	57.4	59.2	5	59.1*	
WESTBRED 926	58.3	62.3	61.8	55.2	60.8	5	59.6*		56.5	58.3	60.2	56.8	57.6	5	57.9	
Conan	59.7	62.5	61.9	54.7	60.2	5	59.8*		59.4	59.5	60.9	56.7	59.7	5	59.2*	
HANK	58.0	61.9	62.0	52.4	59.5	5	58.8		57.3	57.7	59.6	56.2	58.3	5	57.8	
OUTLOOK	57.1	60.8	60.5	54.7	60.2	5	58.7		56.9	56.9	59.7	54.3	57.7	5	57.1	
CHOTEAU	60.1	61.8	60.8	55.7	63.9	5	60.4*		58.5	57.0	60.0	58.0	58.8	5	58.4*	
AVERAGE	58.9	61.5	61.5	55.2	61.3	5	59.7		58.2	57.8	60.2	56.0	58.3	5	58.1	
C.V. (S/MEAN %)							1.67								1.61	
LSD (.05)							1.27								1.18	

ID	DISTRICT 6								DISTRICT 6							
	SIDNEY DYRLAND								SIDNEY IRRIGATED							
	2000	2001	2002	2003	2004	YRS	AVE		2000	2001	2002	2003	2004	YRS	AVE	
THATCHER	61.4	59.0	55.4	58.5	58.3	5	58.5		59.9	57.2	59.5	61.4	62.0	5	60.0	
FORTUNA	61.4	58.5	58.3	61.3	61.8	5	60.2*		61.4	52.4	59.6	62.1	63.1	5	59.7	
NEWANA	62.2	60.3	56.0	59.5	60.6	5	59.7		59.6	57.2	60.3	61.7	63.0	5	60.4	
HI-LINE	62.4	60.4	55.2	60.2	60.7	5	59.8		60.2	55.6	61.0	62.8	62.6	5	60.4	
MCNEAL	61.4	60.0	58.2	59.8	60.0	5	59.9		61.1	58.1	60.3	62.9	62.4	5	60.9*	
AMIDON	61.7	60.0	54.9	60.5	60.3	5	59.5		60.7	57.8	59.6	62.4	62.6	5	60.5*	
ERNEST	63.1	60.6	58.0	62.1	61.3	5	61.0		62.3	59.0	59.8	62.6	63.3	5	61.3*	
SCHOLAR	63.0	61.3	57.7	60.8	61.3	5	60.7*		60.9	59.3	61.8	63.6	63.0	5	61.7	
Reeder	62.0	60.9	58.3	61.3	61.8	5	60.8*		60.6	59.4	61.1	63.0	63.0	5	61.4*	
WESTBRED 926	61.2	58.4	55.3	59.6	61.2	5	59.1		59.1	56.6	59.9	60.9	62.1	5	59.7	
Conan	62.0	60.7	58.3	61.2	61.5	5	60.7*		59.1	59.9	61.5	62.6	63.0	5	61.2*	
HANK	61.0	58.5	54.5	58.2	61.0	5	58.7		59.2	55.7	59.4	61.3	62.7	5	59.7	
OUTLOOK	61.0	59.8	57.2	60.2	61.3	5	59.9		59.1	57.8	59.4	61.8	62.2	5	60.1	
CHOTEAU	62.6	60.6	57.0	61.6	61.7	5	60.7*		61.9	59.2	61.0	62.8	62.8	5	61.5*	
AVERAGE	61.9	59.9	56.7	60.3	60.9	5	60.0		60.4	57.5	60.3	62.3	62.7	5	60.6	
C.V. (S/MEAN %)							1.28								1.62	
LSD (.05)							0.98								1.25	

OVERALL		
AVE	YEARS	RANK
57.9	48	14
60.2*	48	4
59.5	48	8
59.2	48	10
59.3	48	9
59.6	48	7
60.3*	48	3
60.3*	48	1
60.5	48	1
60.3*	48	2
58.9	48	11
60.0	48	6
58.5	48	13
58.8	48	12
60.1*	48	5
59.5	48	0
0.89		
0.47		

2000-2004 HEADING DATE (JULIAN DAYS; 180=JUNE 29) SUMMARY FOR OUTLOOK AND CHOTEAU COMPARED TO SELECTED VARIETIES
GROWN ACROSS MONTANA IN THE ADVANCED SPRING WHEAT NURSERY

ID	DISTRICT 1							DISTRICT 2							DISTRICT 2						
	KALISPELL, HIGH RAINFALL							BOZEMAN DRYLAND							BOZEMAN IRRIGATED						
	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE
THATCHER	175.7	175.7	187.6	177.0	173.9	5	178.0	180	178	187	187	184	5	183	180	179	187	183	183	5	182.4
FORTUNA	172.7	175.5	183.5	173.3	168.0	5	174.6	177	174	185	184	181	5	180	178	176	184	181	180	5	179.8
NEWANA	175.0	176.0	185.7	175.6	172.2	5	176.9	180	178	187	188	184	5	183	180	179	187	183	184	5	182.6
HI-LINE	170.7	174.1	179.3	169.7	166.5	5	172.0*	175	172	183	183	180	5	179*	176	175	183	179	179	5	178.4*
MCNEAL	172.3	177.3	184.5	173.1	168.7	5	175.2	180	176	186	187	183	5	182	179	178	186	182	182	5	181.4
AMIDON	173.0	176.2	184.8	173.0	168.6	5	175.1	177	175	185	184	182	5	181	177	175	184	181	181	5	179.6
ERNEST	172.3	175.3	185.6	173.7	170.7	5	175.5	178	175	184	183	182	5	180	177	175	183	180	182	5	179.4
SCHOLAR	173.3	176.3	186.0	174.3	170.2	5	176.0	179	175	186	186	183	5	182	178	177	186	181	183	5	181.0
Reeder	172.3	173.7	180.5	173.0	167.6	5	173.4	177	174	184	184	181	5	180	175	175	184	180	181	5	179.0
WESTBRED 926	164.7	172.5	176.7	169.6	165.1	5	169.7	174	172	183	182	179	5	178	174	173	183	178	179	5	177.4
Conan	169.7	175.0	179.5	171.4	166.5	5	172.3*	176	173	183	184	181	5	179.*	177	175	184	179	180	5	179.0
HANK	168.7	172.9	177.7	170.3	166.5	5	171.2	174	172	183	182	182	5	178*	175	173	184	180	179	5	178.2*
OUTLOOK	174.0	178.5	186.0	175.4	171.4	5	177.0	181	177	187	188	183	5	183	181	180	186	183	183	5	182.6
CHOTEAU	171.0	174.5	180.8	172.0	167.7	5	173.2	176	173	184	183	182	5	180	177	177	183	179	180	5	179.2
AVERAGE	171.8	175.2	182.7	173.0	168.8	5	174.3	177.4	174.6	184.8	184.6	181.9	5	181	177.4	176.2	184.6	180.6	181.1	5	180.0
C.V (S/MEAN %)							0.67							0.40							0.42
LSD (.05)							1.49							0.91							0.96

ID	DISTRICT 3							DISTRICT 3							DISTRICT 4						
	HUNTLEY DRYLAND							HUNTLEY IRRIGATED							MOCCASIN DRYLAND						
	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE	2001	2003	2004	YRS	AVE		
THATCHER	165.4	163.3	175.0	167.7	161.4	5	166.6	162.0	168.0	173.2	168.0	165.7	5	167.4	180.5	186.3	189.2	3	185.3		
FORTUNA	164.0	160.3	172.3	166.0	158.4	5	164.2	160.0	168.4	172.1	166.4	160.4	5	165.5	175.5	182.7	184.9	3	181.0		
NEWANA	167.6	162.7	175.0	167.3	160.0	5	166.5	162.0	170.0	174.5	168.4	162.0	5	167.4	180.3	184.7	186.9	3	184.0		
HI-LINE	161.7	158.3	170.7	163.7	157.5	5	162.4	158.0	165.3	169.8	163.6	158.4	5	163.0	177.0	180.7	182.8	3	180.1*		
MCNEAL	165.7	162.0	175.0	167.0	160.0	5	166.0	163.0	169.3	174.2	167.1	161.4	5	167.0	179.1	183.7	185.7	3	182.8		
AMIDON	163.7	160.3	174.3	166.3	159.2	5	164.8	160.7	167.3	172.2	167.4	160.6	5	165.6	177.2	182.3	184.2	3	181.2		
ERNEST	165.4	161.0	175.0	166.0	160.2	5	165.5	160.3	167.0	172.5	166.0	160.9	5	165.3	176.8	182.4	185.0	3	181.4		
SCHOLAR	163.9	161.0	174.0	166.7	158.8	5	164.9	159.0	167.4	173.4	166.7	161.4	5	165.6	179.4	183.4	185.7	3	182.8		
Reeder	161.4	159.3	172.7	165.3	158.3	5	163.4	158.7	163.3	170.9	164.2	159.3	5	163.3	175.7	182.7	184.6	3	181.0		
WESTBRED 926	158.7	157.3	170.0	162.7	158.4	5	161.4	155.0	162.3	169.6	162.0	158.1	5	161.4	176.0	180.0	180.6	3	178.9		
Conan	161.7	159.0	171.3	165.0	157.3	5	162.9	158.3	165.0	171.3	164.9	159.0	5	163.7	177.7	181.7	183.6	3	181.0		
HANK	161.0	158.7	170.7	164.0	158.0	5	162.5	156.7	164.0	171.9	162.9	160.3	5	163.2	176.2	181.0	182.0	3	179.7*		
OUTLOOK	166.0	162.3	175.0	167.0	159.9	5	166.0	162.7	168.4	175.3	167.4	164.4	5	167.6	179.5	184.3	186.1	3	183.3		
CHOTEAU	163.0	160.0	172.7	165.0	157.8	5	163.7	158.0	167.0	172.8	166.8	161.3	5	165.2	177.3	183.0	184.1	3	181.5		
AVERAGE	163.5	160.4	173.1	165.7	158.9	5	164.3	159.6	166.6	172.4	165.9	161.0	5	165.1	177.7	182.8	184.7	3	181.7		
C.V (S/MEAN %)							0.45							0.57							0.42
LSD (.05)							0.93							1.20							1.28

2000-2004 HEADING DATE (JULIAN DAYS; 180=JUNE 29) SUMMARY FOR OUTLOOK AND CHOTEAU COMPARED TO SELECTED VARIETIES
GROWN ACROSS MONTANA IN THE ADVANCED SPRING WHEAT NURSERY

ID	DISTRICT 5							DISTRICT 5						
	CONRAD DRYLAND							HAVRE DRYLAND						
	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE
THATCHER	181	178	188	185	186	5	183.6	178.8	176.7	186.0	183.9	183.4	5	181.8
FORTUNA	179	174	185	183	183	5	180.8	174.5	173.4	187.1	177.9	180.4	5	178.6*
NEWANA	179	176	187	185	185	5	182.4	177.6	175.4	188.4	181.5	184.0	5	181.4
HI-LINE	177	173	183	180	183	5	179.2*	172.8	172.9	186.9	179.4	180.7	5	178.5*
MCNEAL	179	176	186	183	185	5	181.8	177.1	174.8	187.6	180.7	181.6	5	180.4
AMIDON	178	175	186	182	185	5	181.2	174.8	174.5	187.0	177.7	183.3	5	179.5
ERNEST	179	175	186	183	184	5	181.4	173.1	173.8	186.9	177.5	182.2	5	178.6*
SCHOLAR	180	176	188	184	186	5	182.8	175.0	175.6	188.5	180.3	181.9	5	180.3
Reeder	178	174	183	180	185	5	180.0	173.2	173.1	187.0	179.2	182.1	5	178.9
WESTBRED 926	174	173	182	180	182	5	<u>178.2</u>	172.0	172.4	187.1	176.2	179.5	5	<u>177.4</u>
Conan	178	174	185	181	185	5	180.6	173.5	174.8	187.9	179.7	180.1	5	179.2
HANK	178	174	182	180	183	5	179.4	172.9	172.4	186.2	176.8	179.0	5	177.4*
OUTLOOK	179	176	186	183	186	5	182.0	176.2	174.4	188.0	180.0	181.9	5	180.1
CHOTEAU	179	174	186	181	185	5	181.0	174.6	173.9	187.3	178.6	181.7	5	179.2
AVERAGE	178.4	174.9	185.2	182.1	184.5	5	181.0	174.7	174.2	187.3	179.2	181.6	5	179.4
C.V (S/MEAN %)							0.44							0.58
LSD (.05)							1.02							1.32

ID	DISTRICT 6							DISTRICT 6							OVERALL		
	SIDNEY DYRLAND							SIDNEY IRRIGATED							ave	YEARS	RANK
	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE			
THATCHER	169.0	176.3	183.3	172.0	178.2	5	175.8	167.0	184.0	184.9	179.9	183.0	5	179.8	178.1	48	14
FORTUNA	165.2	173.3	181.3	169.3	172.9	5	172.4	162.1	180.6	182.2	175.5	180.0	5	176.1	175.1	48	7
NEWANA	168.9	176.0	182.3	171.0	176.8	5	175.0	165.2	183.9	184.3	179.7	181.0	5	178.8	177.6	48	13
HI-LINE	163.9	172.3	180.0	167.0	171.6	5	171.0	160.4	179.9	182.1	174.0	175.7	5	174.4	173.5	48	3
MCNEAL	168.1	175.0	182.0	171.0	175.9	5	174.4	165.0	182.1	184.2	179.2	182.3	5	178.6	176.7	48	11
AMIDON	165.8	174.6	180.7	170.0	174.4	5	173.1	162.8	181.0	182.6	174.7	179.0	5	176.0	175.4	48	9
ERNEST	165.4	173.3	180.7	170.0	173.6	5	172.6	161.7	180.2	181.7	175.3	178.0	5	175.4	175.3	48	8
SCHOLAR	167.7	175.4	181.7	171.0	175.2	5	174.2	163.4	182.8	183.3	178.8	179.3	5	177.5	176.4	48	10
Reeder	164.2	173.6	180.7	168.0	173.4	5	172.0	161.3	179.7	181.5	174.0	178.7	5	175.0	174.3	48	5
WESTBRED 926	160.7	170.0	178.0	166.0	169.2	5	<u>168.8</u>	159.8	178.2	180.3	171.3	175.7	5	<u>173.1</u>	<u>172.2</u>	48	1
Conan	163.8	173.0	179.0	168.0	171.5	5	171.0	161.6	180.6	182.0	175.8	178.0	5	175.6	174.2	48	4
HANK	161.3	170.0	179.0	166.7	169.6	5	169.3*	160.0	178.8	181.1	173.0	173.3	5	173.2*	173.0	48	2
OUTLOOK	168.7	175.0	182.0	171.0	176.3	5	174.6	165.1	182.3	184.1	178.8	179.3	5	177.9	177.2	48	12
CHOTEAU	164.5	173.0	180.3	168.7	172.6	5	171.8	162.5	180.9	181.8	174.1	179.3	5	175.7	174.7	48	6
AVERAGE	165.5	173.6	180.8	169.3	173.7	5	172.6	162.7	181.1	182.6	176.0	178.8	5	176.2	175.3	48	0
C.V (S/MEAN %)							0.40							0.51	0.32		
LSD (.05)							0.88							1.15	0.49		

2000-2004 PLANT HEIGHT (INCHES) SUMMARY FOR OUTLOOK AND CHOTEAU COMPARED TO SELECTED VARIETIES GROWN ACROSS MONTANA IN TE ADVANCED SPRING WHEAT NURSERY

ID	DISTRICT 1 KALISPELL, HIGH RAINFALL							DISTRICT 2 BOZEMAN DRYLAND							DISTRICT 2 BOZEMAN IRRIGATED						
	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE
THATCHER	42.6	39.4	35.1	44.6	47.9	5	<u>41.9</u>	44.7	41.3	47.0	37.1	49.6	5	<u>43.9</u>	47.5	43.8	45.0	41.6	46.6	5	<u>44.9</u>
FORTUNA	41.0	38.5	35.5	39.8	45.3	5	40.0	42.4	37.5	45.1	36.6	44.7	5	41.3	45.6	38.3	40.3	40.2	43.1	5	41.5
NEWANA	30.7	30.6	30.0	31.7	35.2	5	31.6	33.3	31.0	33.8	27.5	34.7	5	32.1	36.0	32.8	36.7	32.2	37.6	5	35.1
HI-LINE	30.4	31.6	28.8	30.6	33.9	5	31.1	33.4	28.9	33.8	28.3	33.8	5	31.6	35.3	29.9	34.8	30.8	36.0	5	33.4
MCNEAL	32.4	33.4	32.7	31.8	36.8	5	33.4	35.3	33.2	35.5	29.6	36.5	5	34.0	39.1	34.5	38.9	33.1	39.7	5	37.1
AMIDON	38.2	39.4	36.4	39.7	41.9	5	39.1	42.2	37.6	46.0	34.3	45.3	5	41.1	43.1	40.2	45.5	36.4	45.4	5	42.1
ERNEST	36.9	38.2	35.1	39.1	40.1	5	37.9	42.0	36.9	44.1	33.1	42.9	5	39.8	42.7	41.2	46.9	37.8	45.8	5	42.9
SCHOLAR	35.5	35.6	34.4	37.3	39.2	5	36.4	38.6	36.4	44.2	32.8	42.0	5	38.8	41.9	38.1	43.6	35.7	42.7	5	40.4
Reeder	32.2	35.5	32.1	35.2	37.6	5	34.5	37.7	31.6	36.6	30.7	39.2	5	35.2	39.4	34.7	39.8	35.1	40.1	5	37.8
WESTBRED 926	30.2	32.0	27.1	32.0	32.4	5	30.7	32.3	30.0	32.5	28.5	34.1	5	31.5	35.5	30.6	37.0	31.7	33.0	5	33.5
Conan	29.9	31.8	28.9	32.2	34.8	5	31.5	33.7	30.3	33.1	27.3	36.4	5	32.2	36.0	31.9	35.9	32.0	36.1	5	34.4
HANK	29.8	30.5	28.0	31.0	34.1	5	30.7	32.8	29.3	34.6	28.0	34.5	5	31.8	35.3	30.5	33.7	31.5	33.5	5	32.9
OUTLOOK	33.2	33.7	31.7	32.9	36.6	5	33.6	36.2	32.2	35.9	29.4	36.5	5	34.0	40.2	35.9	37.7	32.8	40.6	5	37.4
CHOTEAU	31.5	30.6	29.5	31.4	35.4	5	31.7	33.4	30.5	35.5	28.6	35.1	5	32.6	35.3	31.6	36.4	31.7	36.4	5	34.3
AVERAGE	33.9	34.3	31.8	34.9	37.9	5	34.6	37.0	33.3	38.4	30.8	38.9	5	35.7	39.5	35.3	39.4	34.5	39.8	5	37.7
C.V. (S/MEAN %)							3.60							3.41							3.41
LSD (.05)							1.58							1.55							1.63

ID	DISTRICT 3 HUNTLEY DRYLAND							DISTRICT 3 HUNTLEY DRYLAND							DISTRICT 4 MOCCASIN DRYLAND						
	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE	2001	2003	2004	YRS	AVE		
THATCHER	38.3	31.1	23.4	37.2	27.9	5	<u>31.6</u>	43.1	41.6	45.8	45.1	53.1	5	<u>45.7</u>	35.5	25.3	38.0	3	32.9*		
FORTUNA	35.8	25.8	28.1	32.5	24.5	5	29.3	39.7	41.9	43.8	38.1	44.7	5	41.6	34.0	27.3	37.7	3	<u>33.0</u>		
NEWANA	26.5	24.5	20.9	27.3	22.6	5	24.4	32.5	33.6	34.3	32.9	41.7	5	35.0	29.9	23.3	33.0	3	28.8		
HI-LINE	28.2	21.1	22.9	28.6	21.1	5	24.4	30.9	32.4	33.7	31.7	38.7	5	33.5	30.3	23.3	32.5	3	28.7		
MCNEAL	31.2	22.9	23.0	29.8	24.9	5	26.3	34.1	34.4	37.1	35.1	40.9	5	36.3	31.3	25.0	37.5	3	31.2*		
AMIDON	34.6	24.1	25.0	33.3	23.2	5	28.0	37.2	40.8	44.4	40.6	46.6	5	41.9	34.6	25.3	37.6	3	32.5*		
ERNEST	35.8	26.1	23.6	34.0	26.3	5	29.1	39.8	40.8	45.5	38.6	48.5	5	42.7	33.2	26.0	39.3	3	32.8*		
SCHOLAR	33.7	24.6	24.8	34.3	24.3	5	28.3	36.3	38.6	42.5	37.7	45.8	5	40.2	31.9	26.7	36.4	3	31.7		
Reeder	31.0	20.8	24.1	30.4	20.1	5	25.3	33.7	35.6	39.8	35.5	44.8	5	37.9	30.8	25.7	32.5	3	29.7		
WESTBRED 926	29.5	19.1	24.3	28.0	19.4	5	24.1	29.6	32.2	34.0	29.3	34.3	5	31.9	28.0	25.7	32.2	3	28.6		
Conan	27.6	19.7	21.3	28.6	20.9	5	23.6	32.2	31.5	34.8	29.1	39.3	5	33.4	33.4	23.3	31.9	3	29.5		
HANK	27.6	18.9	23.6	28.8	20.3	5	23.8	32.4	32.7	35.3	30.4	39.1	5	34.0	30.3	26.0	32.9	3	29.7		
OUTLOOK	31.8	25.8	20.9	30.8	24.1	5	26.7	35.0	36.1	37.7	36.1	44.1	5	37.8	30.6	24.3	32.5	3	29.2		
CHOTEAU	28.6	19.5	21.3	28.6	19.8	5	23.5	31.6	34.1	35.9	33.2	39.9	5	34.9	29.3	22.7	32.5	3	28.2		
AVERAGE	31.4	23.1	23.4	30.9	22.8	5	26.3	34.9	36.2	38.9	35.2	43.0	5	37.6	31.7	25.0	34.8	3	30.5		
C.V. (S/MEAN %)							6.56							3.39							4.93
LSD (.05)							2.19							1.62							2.52

2000-2004 PLANT HEIGHT (INCHES) SUMMARY FOR OUTLOOK AND CHOTEAU COMPARED TO SELECTED VARIETIES GROWN ACROSS MONTANA IN TE ADVANCED SPRING WHEAT NURSERY

ID	DISTRICT 5 HAVRE DRYLAND							DISTRICT 5 CONRAD DRYLAND						
	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE
THATCHER	32.4	20.0	28.7	24.4	36.6	5	<u>28.4</u>	37.0	26.0	34.0	43.0	42.0	5	<u>36.4</u>
FORTUNA	32.8	19.4	24.9	23.4	34.0	5	26.9	36.0	23.0	33.0	41.0	38.0	5	34.2
NEWANA	27.2	19.5	23.5	20.8	28.2	5	23.8	28.0	19.0	26.0	31.0	30.0	5	26.8
HI-LINE	27.3	18.1	22.7	19.7	27.8	5	23.1	27.0	19.0	26.0	33.0	31.0	5	27.2
MCNEAL	30.7	18.2	24.2	21.8	29.7	5	24.9	29.0	21.0	28.0	34.0	34.0	5	29.2
AMIDON	32.1	19.1	26.4	22.2	31.1	5	26.2	33.0	22.0	32.0	40.0	40.0	5	33.4
ERNEST	32.1	20.1	25.7	24.2	33.0	5	27.0	34.0	22.0	33.0	39.0	39.0	5	33.4
SCHOLAR	31.7	19.1	25.5	22.7	30.8	5	26.0	32.0	21.0	30.0	40.0	38.0	5	32.2
Reeder	30.2	19.1	23.3	21.3	31.1	5	25.0	29.0	20.0	29.0	34.0	37.0	5	29.8
WESTBRED 926	28.3	18.2	21.9	19.3	28.1	5	23.2	28.0	20.0	27.0	33.0	32.0	5	28.0
Conan	27.8	17.5	22.5	20.5	30.4	5	23.7	29.0	20.0	26.0	30.0	34.0	5	27.8
HANK	28.5	18.3	21.9	19.2	28.6	5	23.3	28.0	21.0	30.0	33.0	34.0	5	29.2
OUTLOOK	28.5	19.3	24.1	21.2	29.9	5	24.6	30.0	22.0	28.0	32.0	34.0	5	29.2
CHOTEAU	26.2	17.4	23.0	19.7	28.5	5	23.0	28.0	19.0	26.0	33.0	34.0	5	28.0
AVERAGE	29.7	18.8	24.2	21.4	30.6	5	24.9	30.6	21.1	29.1	35.4	35.5	5	30.3
C.V. (S/MEAN %)							4.06							4.57
LSD (.05)							1.29							1.76

ID	DISTRICT 6 SIDNEY DYRLAND							DISTRICT 6 SIDNEY IRRIGATED							OVERALL		
	2000	2001	2002	2003	2004	YRS	AVE	2000	2001	2002	2003	2004	YRS	AVE	ave	YEARS	RANK
THATCHER	36.1	35.8	30.7	39.9	39.3	5	<u>36.4</u>	42.0	32.0	35.9	45.9	41.9	5	<u>39.5</u>	<u>38.4</u>	48	1
FORTUNA	33.2	30.5	30.6	39.0	37.0	5	34.1	37.7	31.9	32.9	42.3	38.2	5	36.6	36.0	48	2
NEWANA	28.1	26.8	23.1	29.5	31.6	5	27.8	34.3	25.7	28.2	36.0	31.3	5	31.1	29.7	48	9
HI-LINE	27.3	25.5	24.0	29.4	31.1	5	27.5	32.2	24.5	26.5	37.1	30.5	5	30.2	29.1	48	13
MCNEAL	28.9	27.9	25.9	33.2	31.0	5	29.4	36.5	26.5	27.7	39.0	33.2	5	32.6	31.5	48	8
AMIDON	32.4	31.5	27.8	37.7	36.8	5	33.2	37.1	34.3	36.2	44.3	38.2	5	38.0	35.7	48	3
ERNEST	32.0	31.3	29.1	37.3	33.7	5	32.7	37.6	32.0	34.7	43.1	37.6	5	37.0	35.6	48	4
SCHOLAR	31.9	31.5	28.9	36.9	35.0	5	32.8	35.2	30.0	34.7	41.1	31.9	5	34.6	34.2	48	5
Reeder	28.2	26.7	25.6	33.4	32.7	5	29.3	35.9	28.5	27.8	40.5	35.4	5	33.6	31.9	48	6
WESTBRED 926	26.8	22.8	23.9	29.5	28.7	5	26.3	31.8	26.0	26.1	35.4	32.9	5	30.4	28.8	48	14
Conan	26.4	23.9	23.4	30.7	29.5	5	26.8	32.5	26.0	25.6	36.0	31.9	5	30.4	29.3	48	11
HANK	26.2	23.4	24.8	30.1	29.7	5	26.8	31.3	26.7	28.0	36.5	28.3	5	30.2	29.2	48	12
OUTLOOK	30.1	28.0	26.1	34.3	32.0	5	30.1	36.6	27.5	30.4	38.4	32.0	5	33.0	31.7	48	7
CHOTEAU	26.7	25.5	24.4	31.2	29.1	5	27.4	32.4	25.1	28.7	35.9	28.9	5	30.2	29.4	48	10
AVERAGE	29.6	27.9	26.3	33.7	32.7	5	30.0	35.2	28.3	30.2	39.4	33.7	5	33.4	32.2	48	0
C.V. (S/MEAN %)							3.22							4.26	3.44		
LSD (.05)							1.23							1.81	0.98		

2000- 2003 MILLING AND BAKING QUALITY EVALUATION FOR OUTLOOK AND CHOTEAU COMPARED TO SELECTED SPRING WHEATS GROWN IN THE ADVANCED SPRING WHEAT NURSERY (12 LOCATION AVERAGE)

	GRAIN PROTEIN (%)	FLOUR PROTEIN (%)	FLOUR YIELD (%)	FLOUR ASH (%)	MIXOGRAPH TOLERANCE (1=WEAK-5=VERY STRONG)	BAKE ABSORPTION (%)	LOAF VOLUME (CC)
McNEAL	16.5	13.9	63.6	.44	5.5	76.4	1231
FORTUNA	16.4	13.6	67.4	.46	2.9	72.5	1120
NEWANA	15.6	13.1	61.4	.42	4.0	71.8	1206
HI-LINE	16.7	13.9	61.5	.45	5.7	76.9	1250
AMIDON	16.5	14.0	67.8	.44	4.1	73.7	1129
ERNEST	17.1	14.5	67.3	.42	4.1	75.2	1226
SCHOLAR	17.2	14.6	67.3	.46	3.5	73.6	1157
WESTBRED 926	16.8	14.1	64.4	.46	3.4	73.6	1183
CONAN	16.5	13.5	64.8	.43	4.7	73.7	1178
REEDER	16.6	14.0	65.3	.39	2.9	73.7	1120
OUTLOOK	16.1	13.9	66.0	.44	4.7	73.7	1145
CHOTEAU	16.7	14.1	65.0	.40	4.1	73.8	1140
NURSERY AVERAGE	16.5	13.8	65.0	.44	4.5	74.2	1162

2000-2004 STEM SOLID RATINGS (5=HOLLOW,25=VERY SOLID) FROM THE ADVANCED SPRING WHEAT NURSERY GROWN AT BOZEMAN

PEDIGREE	2000		2001		2002		2003		2004	
	DRY	IRR	DRY	IRR	DRY	IRR	DRY	IRR	DRY	IRR
MCNEAL	6.7	8.6	7.1	8.6	6.5	5.0	6.5	6.4	6.8	5.7
THATCHER	6.8	7.0	7.1	6.7	6.0	5.3	9.8	6.5	7.4	5.4
FORTUNA	21.7	17.5	20.1	19.9	11.5	9.9	19.8	18.3	19.7	18.6
LEW	15.7	14.5	11.6	14.1	NA	NA	NA	NA	NA	NA
NEWANA	7.9	7.0	6.9	8.3	6.0	5.1	7.5	6.6	5.9	5.9
HI-LINE	6.3	6.6	6.7	7.5	5.7	5.2	7.4	6.2	6.6	6.2
AMIDON	14.0	12.0	13.9	11.8	8.3	5.4	13.3	14.3	11.7	9.8
ERNEST	17.1	13.1	14.7	14.8	12.7	9.0	16.3	17.2	18.3	12.2
SCHOLAR	13.9	13.4	12.4	17.6	8.2	7.9	14.9	13.6	12.8	13.0
WESTBRED 926	8.9	7.6	7.7	11.3	6.9	5.9	9.0	7.7	7.7	7.2
Conan	9.9	10.0	10.3	10.6	8.1	7.1	13.5	9.5	10.6	8.6
Reeder	6.9	6.0	6.1	8.6	5.4	5.1	6.6	6.9	6.8	5.1
OUTLOOK	8.2	8.2	7.3	7.9	7.0	5.0	8.3	7.3	7.0	5.7
CHOTEAU	21.5	20.9	23.7	22.4	20.4	18.6	23.9	21.7	20.8	21.9
HANK	9.1	8.1	9.6	11.0	7.0	5.6	9.0	7.5	8.2	6.9
EXPLORER	13.6	12.7	12.8	16.1	7.3	7.0	12.3	14.9	11.6	17.5
MTHW9420	7.4	7.4	10.9	11.5	6.4	5.0	8.3	7.3	7.7	6.5

2000-2004 SAWFLY DAMAGE RATINGS FROM SOME OFFSTATION SPRING WHEAT NURSERIES GROWN IN NORTH-CENTRAL MONTANA

VARIETY	2000		2001	2002	2002			2003		2004
	LOMA OBS. (% PLOT)	LOMA OFF (0-5 SCALE)	LOMA OBS. (0-5 SCALE)	LOMA OBS. (% PLOT)	TURNER (0-5 SCALE)	LORING (0-5 SCALE)	FORT BENTON (%PLOT)	LORING (% STEMS CUT)	TURNER	LORING (% STEMS CUT)
MCNEAL	10	1	2	2	3.30	2.0	16.70	60.0	15.0	63.3
FORTUNA	0	0	0	0	1.30	0.67	1.00	13.3	3.7	20.0
LEW	5	0.33	0	NA	1.00	0.67	1.70	15.0	2.3	NA
NEWANA	15	1.67	2	15	2.70	2.00	12.70	28.3	8.3	81.7
HI-LINE	15	0.67	2	2	3.00	1.20	7.30	33.3	10.0	53.3
AMIDON	10	1.67	2	10	2.00	1.20	9.70	28.3	16.0	90.0
ERNEST	2	0.33	0	1	2.00	0.83	2.30	16.7	6.7	45.0
SCHOLAR	10	1.67	0	15	2.70	1.00	5.70	33.3	15.0	78.3
WESTBRED 926	0	0.67	2	5	2.00	1.30	2.30	28.3	15.0	75.0
Conan	5	1	0	0	1.67	1.00	2.30	30.0	2.3	16.7
Reeder	20	2.33	3	30	2.30	1.20	9.30	26.7	15.0	68.3
OUTLOOK	0	NA	0	0	1.70	1.20	13.00	35.0	6.7	66.7
CHOTEAU	0	NA	0	0	1.70	0.50	1.70	10.0	3.7	28.3
HANK	5	NA	2	30	2.00	1.30	7.30	25.0	20.0	86.7
EXPLORER	10	1	0	10	2.70	1.30	6.00	28.3	11.7	93.3
MTHW9420	5	2.67	5	5	3.30	2.00	11.70	21.7	15.0	95.0

TABLE OF PAIRED T-TEST RESULTS FROM THE 2002-2004 OFFSTATION SPRING WHEAT NURSERIES GROWN ACROSS MONTANA

GRAIN YIELD (BU/AC)

REFERENCE MEAN: MCNEAL 41.9 (N= 37)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
CI 13596	FORTUNA	37.7	37	-4.2	-3.0	.005
PI549275	HI-LINE	40.0	37	-2.0	-2.4	.021
PI527682	AMIDON	36.8	37	-5.1	-5.4	.000
C982-324	RAMBO	39.0	37	-2.9	-3.9	.000
PI592761	ERNEST	38.8	37	-3.1	-3.9	.000
PI607557	SCHOLAR	38.5	37	-3.4	-3.7	.001
WB 926	WESTBRED 926	40.0	37	-1.9	-2.5	.019
BZ992588	Conan	38.8	37	-3.1	-3.6	.001
ND 695	Reeder	41.6	37	-.3	-.4	.658
PI632252	OUTLOOK	42.2	37	.2	.3	.732
PI633974	CHOTEAU	41.7	37	-.2	-.4	.712
BZ992322	HANK	41.7	37	-.2	-.3	.760
MTHW9420	MT8182/MT8289	38.9	37	-3.0	-2.7	.010
PI619086	EXPLORER	38.3	37	-3.7	-2.9	.007

TEST WEIGHT (LB/BU)

REFERENCE MEAN: MCNEAL 56.4 (N= 37)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
CI 13596	FORTUNA	58.0	37	1.6	6.8	.000
PI549275	HI-LINE	56.5	37	.1	.3	.735
PI527682	AMIDON	57.3	37	.8	2.4	.020
C982-324	RAMBO	57.5	37	1.1	4.8	.000
PI592761	ERNEST	57.8	37	1.4	5.3	.000
PI607557	SCHOLAR	58.5	37	2.0	7.6	.000
WB 926	WESTBRED 926	56.4	37	-.0	-.1	.939
BZ992588	Conan	58.0	37	1.5	6.8	.000
ND 695	Reeder	57.8	37	1.4	6.4	.000
PI632252	OUTLOOK	56.1	37	-.3	-2.0	.049
PI633974	CHOTEAU	57.7	37	1.3	4.7	.000
BZ992322	HANK	55.8	37	-.6	-2.5	.018
MTHW9420	MT8182/MT8	55.9	37	-.5	-2.0	.050
PI619086	EXPLORER	57.0	37	.6	2.2	.032

TABLE OF PAIRED T-TEST RESULTS FROM THE 2002-2004 OFFSTATION SPRING WHEAT NURSERIES GROWN ACROSS MONTANA

PLANT HEIGHT (INCHES)

REFERENCE MEAN: MCNEAL 29.4 (N= 37)

ID	NAME	ACTUAL MEAN	NO. OBS	MEAN DIFF	T-PAIRED VALUE	P-VALUE
CI 13596	FORTUNA	32.8	37	3.5	7.5	.000
PI549275	HI-LINE	27.5	37	-1.9	-6.8	.000
PI527682	AMIDON	32.5	37	3.2	8.0	.000
C982-324	RAMBO	26.8	37	-2.5	-10.4	.000
PI592761	ERNEST	32.5	37	3.1	8.7	.000
PI607557	SCHOLAR	31.9	37	2.6	6.6	.000
WB 926	WESTBRED 9	27.5	37	-1.9	-5.2	.000
BZ992588	Conan	27.6	37	-1.8	-5.2	.000
ND 695	Reeder	29.2	37	-.1	-.5	.649
PI632252	OUTLOOK	29.3	37	-.1	-.3	.749
PI633974	CHOTEAU	27.4	37	-2.0	-6.4	.000
BZ992322	HANK	27.8	37	-1.5	-4.5	.000
MTHW9420	MT8182/MT8	27.7	37	-1.6	-4.8	.000
PI619086	EXPLORER	27.7	37	-1.6	-4.4	.000

2002-2004 GRAIN YIELD (BU/AC) SUMMARY FOR OUTLOOK AND CHOTEAU COMPARED TO SELECTED VARIETIES GROWN ACROSS MONTANA IN THE OFFSTATION SPRING WHEAT NURSERY

ID	WTARC-CUT BANK					WTARC-CHOTEAU				WTARC-THE "KNEES"					WTARC- CONRAD DRYLAND					
	2002	2003	2004	YRS	AVE	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE	2002	2003	YRS	AVE		
MCNEAL	28.6	38.8	44.1	3	37.2	36.6	64.9	2	50.8	30.6	34.8	51.7	3	39.0*	41.6	28.8	2	35.2		
FORTUNA	26.8	34.1	45.9	3	35.6*	38.3	54.7	2	46.5	24.6	38.1	48.1	3	36.9*	43.1	35.2	2	39.1		
HI-LINE	19.8	34.4	47.4	3	33.8*	36.9	63.4	2	50.2	30.8	39.0	47.9	3	39.2*	40.5	31.0	2	35.7		
RAMBO	30.2	34.8	45.5	3	36.9*	33.4	53.6	2	43.6	25.2	25.8	41.3	3	30.8	41.6	35.7	2	38.7		
AMIDON	31.5	22.3	34.3	3	29.4	31.2	52.1	2	41.6	25.9	33.8	43.3	3	34.3	35.5	29.8	2	32.6		
ERNEST	26.5	29.6	36.8	3	31.0	34.0	60.0	2	47.0	27.1	29.6	44.5	3	33.7	40.4	34.0	2	37.1		
SCHOLAR	26.5	28.4	36.9	3	30.6	31.5	52.9	2	42.2	27.3	32.4	46.4	3	35.4	37.2	30.5	2	33.9		
WESTBRED 926	19.6	30.2	34.0	3	27.9	34.2	61.3	2	47.7	23.7	38.7	49.0	3	37.1*	43.8	33.1	2	38.4		
Conan	18.9	29.8	42.1	3	30.3	36.3	65.5	2	50.9	22.6	29.6	48.3	3	33.5	42.6	32.7	2	37.6		
Reeder	23.4	33.0	38.9	3	31.8	35.9	66.9	2	51.4*	29.2	35.7	52.8	3	39.2*	45.2	31.4	2	38.3		
OUTLOOK	25.8	38.0	45.7	3	36.4*	36.5	74.9	2	55.7	26.7	27.3	53.4	3	35.8	45.0	37.1	2	41.1		
CHOTEAU	20.6	35.7	45.2	3	33.8*	39.1	65.8	2	52.4*	28.9	38.6	50.5	3	39.4	41.8	34.6	2	38.2		
HANK	17.8	31.7	39.4	3	29.6	33.8	66.6	2	50.2	28.5	37.9	51.4	3	39.2*	41.1	31.2	2	36.1		
MTHW9420	18.7	24.2	35.9	3	26.3	33.0	58.6	2	45.8	27.1	36.7	50.0	3	37.93*	41.8	31.7	2	36.7		
EXPLORER	21.1	31.3	39.8	3	30.7	35.0	57.2	2	46.1	24.6	38.5	48.4	3	37.1*	41.6	30.7	2	36.1		
AVERAGE	23.3	31.5	40.5	3	32.1	35.2	61.8	2	48.1	27.0	35.0	49.0	3	36.6	41.5	32.3	2	37.0		
C.V. (S/MEAN %)					14.94				8.28					9.77				13.2		
P value (Entry)					<.0001				<.0001					<.0001				0.33		
LSD (.05)					4.94				4.61					3.35				5.64		
ID	WTARC-CONRAD IRRIGATED					NARC-TURNER					NARC-LORING					NARC-LOMA				
	2002	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE
MCNEAL	90.2	66.7	99.4	3	85.4	44.2	22.3	58.4	3	41.6	38.1	26.5	46.9	3	37.1*	13.2	28.6	31.7	3	24.5*
FORTUNA	76.4	60.7	67.5	3	68.2	30.3	20.4	49.7	3	33.5	31.5	30.0	45.0	3	35.5	13.8	28.0	30.1	3	23.9*
HI-LINE	93.3	71.6	95.9	3	86.9*	37.4	21.9	55.2	3	38.1	35.1	25.0	46.2	3	35.4	14.1	26.7	30.9	3	23.9*
RAMBO	82.7	65.2	95.4	3	81.1	36.9	22.7	57.1	3	38.9	33.4	24.0	50.0	3	35.8*	11.9	23.2	27.4	3	20.8
AMIDON	75.2	60.7	84.2	3	73.4	37.5	22.5	48.3	3	36.1	33.7	22.9	38.2	3	31.6	15.4	25.9	24.4	3	21.9
ERNEST	71.9	63.3	86.1	3	73.8	38.2	25.6	54.5	3	39.4*	34.7	26.7	48.2	3	36.5*	16.0	23.7	28.0	3	22.6
SCHOLAR	79.8	70.2	86.2	3	78.7	39.3	22.8	52.9	3	38.3	37.0	25.1	43.0	3	35.1	19.3	26.7	29.1	3	25.0*
WESTBRED 926	87.7	74.7	100.8	3	87.7*	31.8	20.7	47.0	3	33.2	35.6	26.7	38.7	3	33.7	15.4	27.8	34.6	3	25.9*
Conan	75.8	68.7	86.1	3	76.9	37.5	23.6	53.0	3	38.0	34.1	26.9	45.4	3	35.5	18.0	24.9	35.8	3	26.2*
Reeder	78.9	78.0	95.4	3	84.0	38.7	23.6	56.0	3	39.4*	36.3	28.5	46.4	3	37.0*	22.0	25.2	31.8	3	26.3*
OUTLOOK	87.0	66.5	93.0	3	82.2	34.2	24.7	54.6	3	37.8	35.6	28.0	49.0	3	37.5*	16.1	26.2	35.5	3	25.9*
CHOTEAU	90.3	64.0	105.7	3	86.6*	40.9	24.5	55.2	3	40.1*	33.4	27.3	52.7	3	37.8	14.4	24.7	34.7	3	24.6*
HANK	98.3	74.0	104.5	3	92.3	35.7	22.2	51.8	3	36.6	36.1	28.1	41.5	3	35.2	14.5	28.5	33.1	3	25.3*
MTHW9420	82.7	70.7	95.5	3	82.9	32.4	18.6	46.1	3	32.4	33.9	25.9	37.8	3	32.5	14.6	23.7	32.4	3	23.6
EXPLORER	89.6	70.7	89.1	3	83.1	32.6	23.3	47.6	3	34.5	34.8	28.6	40.8	3	34.7	18.1	26.3	35.8	3	26.8
AVERAGE	84.1	68.6	92.1	3	81.6	36.5	22.6	52.2	3	37.2	35.0	26.9	44.3	3	35.4	16.1	26.2	32.0	3	24.5
C.V. (S/MEAN %)					8.56					7.28					6.06					12.11
P value (Entry)					<.0001					<.0001					<.0001					<.001
LSD (.05)					6.54					2.54					2.01					2.78

2002-2004 GRAIN YIELD (BU/AC) SUMMARY FOR OUTLOOK AND CHOTEAU COMPARED TO SELECTED VARIETIES GROWN ACROSS MONTANA IN THE OFFSTATION SPRING WHEAT NURSERY

ID	CARC-MOCCASIN NO-TILL				CARC-DENTON					CARC-WINIFRED			
	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE	2002	2003	YRS	AVE
MCNEAL	22.5	28.3	2	25.4*	21.6	15.5	32.4	3	23.2	42.1	18.7	2	30.4
FORTUNA	21.5	27.7	2	24.5*	18.5	18.4	29.1	3	22.0	37.5	19.8	2	28.7
HI-LINE	17.6	27.2	2	22.4	22.5	14.6	31.8	3	23.0	41.7	17.4	2	29.6
RAMBO	21.0	26.0	2	23.5	18.3	17.0	32.1	3	22.5	35.6	17.9	2	26.8
AMIDON	20.8	26.5	2	23.7	17.4	17.5	28.2	3	21.0	36.5	16.9	2	26.7
ERNEST	18.4	24.0	2	21.2	18.1	16.1	27.9	3	20.7	34.1	18.7	2	26.4
SCHOLAR	19.2	28.3	2	23.7	20.9	18.5	31.9	3	23.7*	41.0	18.9	2	30.0
WESTBRED 926	19.1	27.2	2	23.2	22.1	17.4	34.9	3	24.7*	38.0	19.0	2	28.5
Conan	16.9	28.4	2	22.6	21.5	17.4	32.4	3	23.7*	40.2	19.0	2	29.6
Reeder	19.9	30.3	2	25.0*	24.0	16.8	35.5	3	25.4*	44.4	19.3	2	31.8
OUTLOOK	22.2	30.9	2	26.6	24.1	17.6	36.0	3	25.9	39.9	20.1	2	30.0
CHOTEAU	21.3	27.5	2	24.4*	20.7	16.0	34.1	3	23.6	38.2	16.4	2	27.3
HANK	17.2	29.9	2	23.6	20.6	16.7	33.8	3	23.7*	40.6	18.8	2	29.7
MTHW9420	17.3	27.2	2	22.3	20.4	17.3	31.3	3	23.0	42.3	18.0	2	30.2
EXPLORER	17.3	25.8	2	21.5	23.7	17.5	32.9	3	24.7*	38.8	19.6	2	29.2
AVERAGE	19.4	27.8	2	23.6	21.2	17.0	32.3	3	23.4	39.7	18.6	2	29.1
C.V. (S/MEAN %)				10.40					9.95				
P value (Entry)				0.02					.0001				
LSD (.05)				2.82					2.18				

ID	SARC-MOLT DRYLAND					SARC-RYEGATE DRYLAND				SARC-HYSHAM IRRIGATED					OVERALL STATION		
	2002	2003	2004	YRS	AVE	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE	AVERAGE	YEARS	RANK
MCNEAL	7.3	17.7	30.9	3	18.6	11.2	13.1	2	12.2	104.1	107.2	112.0	3	107.8*	41.9*	37	2
FORTUNA	7.2	13.3	32.5	3	17.7	14.9	12.2	2	13.6	86.5	75.3	109.4	3	90.4	37.7	37	14
HI-LINE	7.2	17.1	35.1	3	19.8	11.5	11.7	2	11.6	88.1	96.7	93.9	3	92.9	39.9*	37	7
RAMBO	7.2	16.3	31.8	3	18.4	8.4	13.3	2	10.9	85.0	105.9	109.2	3	100.0	39.0	37	8
AMIDON	7.4	15.6	28.4	3	17.1	9.9	14.2	2	12.1	104.0	85.1	105.9	3	98.3	36.8	37	15
ERNEST	7.2	14.7	30.2	3	17.4	8.8	12.2	2	10.5	110.4	100.7	116.2	3	109.1*	38.8	37	12
SCHOLAR	7.3	16.5	29.1	3	17.6	11.1	14.6	2	12.8	90.4	84.0	112.8	3	95.8	38.5	37	11
WESTBRED 926	7.4	17.8	22.7	3	16.0	14.7	9.9	2	12.3	105.1	106.1	109.4	3	106.9*	39.9*	37	6
Conan	7.4	17.8	26.1	3	17.1	12.4	10.9	2	11.7	88.8	97.7	102.3	3	96.3	38.8	37	11
Reeder	7.3	16.8	28.8	3	17.6	10.7	13.8	2	12.3	104.2	105.2	110.3	3	106.5*	41.6*	37	5
OUTLOOK	7.5	14.4	33.8	3	18.6	12.4	16.5	2	14.4	109.6	104.3	109.7	3	107.8*	42.2	37	1
CHOTEAU	7.3	15.5	29.3	3	17.4	9.8	17.7	2	13.7	98.3	116.1	105.7	3	106.7*	41.7*	37	3
HANK	7.4	17.8	31.7	3	19.0	13.4	13.4	2	13.4	99.3	123.9	109.8	3	111.0	41.6*	37	4
MTHW9420	7.2	12.9	31.9	3	17.3	12.9	10.3	2	11.6	79.5	114.7	125.9	3	106.7*	39.0	37	9
EXPLORER	7.4	14.5	28.5	3	16.8	11.7	9.0	2	10.4	67.1	105.8	90.7	3	87.9	38.3	37	13
AVERAGE	7.3	15.9	29.9	3	17.7	11.8	12.8	2	12.2	95.4	101.6	108.2	3	101.6	39.8	37	0
C.V. (S/MEAN %)					14.19				20.99					8.14	7.92		
P value (Entry)					0.215				0.23					<.0001	<.0001		
LSD (.05)					2.36				2.97					7.74	2.28		

2002-2004 TEST WEIGHT (LB/BU) SUMMARY FOR OUTLOOK AND CHOTEAU COMPARED TO SELECTED VARIETIES GROWN ACROSS MONTANA IN THE OFFSTATION SPRING WHEAT NURSERY

ID	WTARC-CUT BANK					WTARC-CHOTEAU				WTARC-THE "KNEES"					WTARC- CONRAD DRYLAND			
	2002	2003	2004	YRS	AVE	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE	2002	2003	YRS	AVE
MCNEAL	57.3	54.3	63.1	3	58.2	51.1	59.3	2	55.2	58.6	51.8	54.7	3	55.0	60.4	54.0	2	57.2
FORTUNA	58.0	54.3	63.7	3	58.7	55.4	61.2	2	58.3	59.2	54.7	58.0	3	57.3	62.1	56.4	2	59.3
HI-LINE	61.0	53.7	63.9	3	59.5	51.5	58.2	2	54.9	59.3	50.7	55.3	3	55.1	61.2	56.1	2	58.7
RAMBO	57.6	55.1	63.4	3	58.7	53.7	59.5	2	56.6	58.8	51.6	55.7	3	55.4	61.4	53.3	2	57.4
AMIDON	56.6	55.6	62.3	3	58.2	53.5	59.4	2	56.5	58.8	53.1	59.1	3	57.0	59.8	52.1	2	56.0
ERNEST	59.5	55.5	63.1	3	59.4	54.4	60.2	2	57.3	58.6	53.9	59.5	3	57.3	60.8	56.1	2	58.5
SCHOLAR	56.6	56.2	63.7	3	58.8	53.8	60.5	2	57.2	60.5	54.8	57.2	3	57.5	61.1	55.5	2	58.3
WESTBRED 926	57.6	53.9	62.4	3	58.0	52.3	58.6	2	55.5	59.1	51.2	53.8	3	54.7	60.7	52.1	2	56.4
Conan	58.3	56.1	64.1	3	59.5	54.5	60.7	2	57.6	58.8	51.7	56.4	3	55.6	60.6	54.1	2	57.4
Reeder	57.6	57.2	64.1	3	59.6	52.0	60.7	2	56.4	59.3	52.2	56.6	3	56.0	61.7	53.6	2	57.7
OUTLOOK	54.2	55.0	62.5	3	57.2	51.1	60.0	2	55.6	58.1	50.2	55.5	3	54.6	59.3	52.9	2	56.1
CHOTEAU	59.4	57.6	64.3	3	60.4	53.5	59.7	2	56.6	58.0	54.0	59.5	3	57.2	61.1	56.7	2	58.9
HANK	55.5	54.1	62.9	3	57.5	49.9	58.5	2	54.2	59.8	50.8	53.1	3	54.6	60.2	52.1	2	56.2
MTHW9420	58.1	55.0	64.0	3	59.0	49.9	59.3	2	54.6	58.1	49.2	54.3	3	53.9	61.0	54.1	2	57.6
EXPLORER	59.3	57.4	63.1	3	59.9	52.7	60.2	2	56.5	59.8	52.2	56.6	3	56.2	61.0	54.2	2	57.6
AVERAGE	57.8	55.4	63.4	3	58.9	52.5	59.8	2	56.2	59.0	52.2	56.4	3	55.9	60.8	54.3	2	57.5

ID	WTARC-CONRAD IRRIGATED					NARC-TURNER					NARC-LORING					NARC-LOMA				
	2002	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE
MCNEAL	62.6	57.2	62.7	3	60.8	58.4	58.0	61.3	3	59.2	58.3	52.9	61.6	3	57.6	50.7	50.2	47.1	3	49.3
FORTUNA	63.4	60.4	62.6	3	62.1	58.1	58.8	61.2	3	59.4	59.1	55.2	62.3	3	58.9	52.1	54.9	51.3	3	52.8
HI-LINE	63.7	60.7	63.3	3	62.6	58.3	58.1	61.3	3	59.3	57.5	53.3	62.9	3	57.9	49.0	49.2	44.5	3	47.6
RAMBO	62.0	60.0	62.6	3	61.5	58.5	59.6	61.2	3	59.5	60.1	54.7	62.3	3	59.2	53.6	54.6	47.5	3	51.9
AMIDON	61.9	59.8	62.0	3	61.2	57.0	57.9	60.0	3	58.3	58.2	54.3	61.5	3	58.0	52.3	55.0	51.1	3	52.8
ERNEST	62.4	61.1	62.4	3	62.0	57.2	58.7	60.3	3	58.7	58.2	54.6	62.2	3	58.3	52.6	54.1	50.0	3	52.3
SCHOLAR	62.6	60.2	62.8	3	61.9	58.2	59.5	61.5	3	59.7	59.9	56.1	62.5	3	59.5	53.8	56.0	50.1	3	53.3
WESTBRED 926	61.9	60.9	61.2	3	61.3	57.5	58.7	60.2	3	58.8	57.5	53.1	60.7	3	57.1	50.0	50.5	46.6	3	49.0
Conan	61.2	60.0	62.7	3	61.3	59.1	60.0	61.6	3	60.2	59.9	55.1	63.3	3	59.5	52.8	54.2	50.0	3	52.3
Reeder	62.6	61.6	62.2	3	62.1	59.1	58.3	61.7	3	59.7	58.8	55.0	62.4	3	58.7	52.4	52.5	47.1	3	50.7
OUTLOOK	60.8	57.6	61.5	3	60.0	58.7	57.9	60.8	3	59.1	58.0	52.5	61.7	3	57.4	50.4	49.8	46.8	3	49.0
CHOTEAU	62.5	59.1	63.5	3	61.7	57.6	57.7	60.3	3	58.6	57.1	53.6	61.7	3	57.5	49.3	52.9	49.3	3	50.5
HANK	62.6	58.6	61.9	3	61.0	57.7	58.4	60.1	3	58.7	56.2	53.1	60.1	3	56.5	48.3	50.0	45.0	3	47.8
MTHW9420	62.7	61.0	61.9	3	61.9	56.8	57.9	60.4	3	58.4	57.4	51.4	59.4	3	56.1	49.0	48.9	45.2	3	47.7
EXPLORER	62.2	61.4	62.5	3	62.0	57.4	58.5	60.8	3	58.9	58.2	54.5	61.0	3	57.9	50.2	51.3	47.4	3	49.6
AVERAGE	62.4	60.0	62.4	3	61.6	58.0	58.4	60.8	3	59.1	58.2	53.9	61.7	3	57.9	50.9	52.1	48.0	3	50.3

2002-2004 TEST WEIGHT (LB/BU) SUMMARY FOR OUTLOOK AND CHOTEAU COMPARED TO SELECTED VARIETIES GROWN ACROSS MONTANA IN THE OFFSTATION SPRING WHEAT NURSERY

ID	CARC-MOCCASIN NO-TILL				CARC-DENTON					CARC-WINIFRED								
	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE	2002	2003	YRS	AVE					
MCNEAL	53.6	53.4	2	53.5	56.6	53.0	58.4	3	56.0	59.1	53.7	2	56.4					
FORTUNA	54.6	55.7	2	55.1	58.7	55.3	58.3	3	57.4	59.1	56.0	2	57.5					
HI-LINE	53.7	52.6	2	53.2	56.4	52.9	59.4	3	56.2	56.9	54.4	2	55.7					
RAMBO	54.1	55.4	2	54.7	59.5	55.9	58.8	3	58.1	59.2	55.9	2	57.6					
AMIDON	55.9	55.1	2	55.5	58.5	56.0	56.8	3	57.1	58.2	55.7	2	57.0					
ERNEST	54.5	54.6	2	54.5	58.4	56.2	59.6	3	58.1	58.4	56.4	2	57.4					
SCHOLAR	57.8	56.2	2	57.0	59.4	56.2	60.1	3	58.6	60.1	58.2	2	59.2					
WESTBRED 926	51.8	54.0	2	52.9	65.4	53.0	58.8	3	59.1	56.2	53.1	2	54.7					
Conan	54.8	56.6	2	55.7	59.4	55.9	59.7	3	58.3	60.5	57.4	2	59.0					
Reeder	56.6	57.5	2	57.1	58.3	55.4	59.9	3	57.9	60.1	56.6	2	58.3					
OUTLOOK	52.4	54.2	2	53.3	57.9	53.2	58.6	3	56.6	57.6	53.4	2	55.5					
CHOTEAU	56.0	57.2	2	56.6	59.6	55.8	61.0	3	58.8	57.7	55.6	2	56.7					
HANK	54.8	54.0	2	54.4	56.8	53.4	56.9	3	55.7	56.4	54.3	2	55.3					
MTHW9420	51.9	52.2	2	52.1	55.9	53.3	58.2	3	55.8	57.3	52.9	2	55.1					
EXPLORER	54.5	55.2	2	54.9	58.7	55.6	59.0	3	57.8	56.9	55.8	2	56.4					
AVERAGE	54.5	54.9	2	54.7	58.6	54.7	58.9	3	57.4	58.2	55.2	2	56.7					
ID	SARC-MOLT DRYLAND					SARC-RYEGATE DRYLAND				SARC-HYSHAM IRRIGATED					OVERALL STATION			
	2002	2003	2004	YRS	AVE	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE	AVE	YEARS	RANK	
MCNEAL	56.6	56.2	57.3	3	56.7	47.2	52.0	2	49.6	58.8	62.9	63.5	3	61.7	56.4	37	11	
FORTUNA	57.1	58.9	58.8	3	58.3	50.3	54.7	2	52.5	60.2	61.9	64.1	3	62.0	58.0*	37	2	
HI-LINE	54.6	58.2	59.9	3	57.6	44.7	53.1	2	48.9	58.6	61.0	61.9	3	60.5	56.5	37	10	
RAMBO	55.4	59.0	59.1	3	57.8	50.3	54.5	2	52.4	58.3	62.4	62.9	3	61.2	57.5	37	7	
AMIDON	52.1	59.6	58.2	3	56.6	51.4	55.1	2	53.3	60.4	61.5	62.9	3	61.6	57.3	37	8	
ERNEST	54.8	59.5	59.8	3	58.1	48.6	55.2	2	51.9	60.3	63.0	63.9	3	62.4	57.8	37	4	
SCHOLAR	58.1	60.2	59.1	3	59.2	51.3	56.9	2	54.1	59.9	61.9	64.2	3	62.0	58.5	37	1	
WESTBRED 926	53.7	58.4	58.1	3	56.7	48.9	55.1	2	52.0	57.2	61.8	60.9	3	60.0	56.4	37	12	
Conan	58.0	59.3	58.7	3	58.7	50.6	55.0	2	52.8	59.2	61.7	62.9	3	61.3	57.9*	37	3	
Reeder	55.2	59.5	58.6	3	57.8	49.8	53.7	2	51.8	61.0	63.5	63.6	3	62.7	57.8	37	5	
OUTLOOK	54.0	57.4	57.8	3	56.4	48.5	51.9	2	50.2	58.9	61.7	62.1	3	60.9	56.1	37	13	
CHOTEAU	55.4	59.6	59.2	3	58.1	48.8	56.2	2	52.5	57.9	63.4	64.4	3	61.9	57.7	37	6	
HANK	50.8	57.3	58.4	3	55.5	48.2	54.2	2	51.2	56.0	62.0	62.1	3	60.0	55.8	37	15	
MTHW9420	56.5	58.5	58.9	3	58.0	47.8	51.8	2	49.8	54.0	62.1	63.3	3	59.8	55.9	37	14	
EXPLORER	54.5	58.3	59.0	3	57.3	48.6	52.3	2	50.5	54.6	62.4	62.3	3	59.8	57.0	37	9	
AVERAGE	55.1	58.6	58.7	3	57.5	48.9	54.1	2	51.5	58.4	62.2	63.0	3	61.2	57.1	37	0	
																		C.V. (S/MEAN %) 1.52
																		P value (Entry) <.0001
																		LSD (.05) 0.64

2002-2004 PLANT HEIGHT (INCHES) SUMMARY FOR OUTLOOK AND CHOTEAU COMPARED TO SELECTED VARIETIES GROWN ACROSS MONTANA IN THE OFFSTATION SPRING WHEAT NURSER

ID	WTARC-CUT BANK				WTARC-CHOTEAU				WTARC-THE "KNEES"					WTARC- CONRAD DRYLAND			
	2003	2004	YRS	AVE	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE	2002	2003	YRS	AVE
MCNEAL	32.0	34.0	2	33.0	33.0	40.0	2	36.50	29.0	32.0	35.0	3	32.0	29.0	33.0	2	31.0
FORTUNA	37.0	41.0	2	39.0	39.0	46.0	2	42.50	31.0	39.0	42.0	3	37.3	33.0	38.0	2	35.5
HI-LINE	29.0	33.0	2	31.0	32.0	36.0	2	34.00	25.0	30.0	32.0	3	29.0	28.0	30.0	2	29.0
RAMBO	30.0	31.0	2	30.5	28.0	37.0	2	32.50	25.0	30.0	31.0	3	28.7	28.0	30.0	2	29.0
AMIDON	37.0	39.0	2	38.0	37.0	46.0	2	41.50	31.0	39.0	39.0	3	36.3	35.0	36.0	2	35.5
ERNEST	35.0	38.0	2	36.5	38.0	45.0	2	41.50	32.0	35.0	40.0	3	35.7	35.0	36.0	2	35.5
SCHOLAR	37.0	37.0	2	37.0	35.0	44.0	2	39.50	27.0	38.0	40.0	3	35.0	34.0	35.0	2	34.5
WESTBRED 926	28.0	31.0	2	29.5	30.0	36.0	2	33.00	26.0	31.0	33.0	3	30.0	30.0	28.0	2	29.0
Conan	28.0	31.0	2	29.5	28.0	35.0	2	31.50	24.0	30.0	33.0	3	29.0	26.0	30.0	2	28.0
Reeder	32.0	34.0	2	33.0	32.0	40.0	2	36.00	24.0	33.0	37.0	3	31.3	29.0	30.0	2	29.5
OUTLOOK	32.0	35.0	2	33.5	30.0	39.0	2	34.50	28.0	32.0	38.0	3	32.7	30.0	32.0	2	31.0
CHOTEAU	30.0	32.0	2	31.0	29.0	36.0	2	32.50	24.0	30.0	35.0	3	29.7	28.0	30.0	2	29.0
HANK	30.0	32.0	2	31.0	29.0	36.0	2	32.50	24.0	32.0	35.0	3	30.3	28.0	30.0	2	29.0
MTHW9420	29.0	34.0	2	31.5	29.0	36.0	2	32.50	26.0	32.0	35.0	3	31.0	27.0	29.0	2	28.0
EXPLORER	29.0	32.0	2	30.5	30.0	36.0	2	33.00	26.0	32.0	35.0	3	31.0	28.0	30.0	2	29.0
AVERAGE	31.8	34.5	2	32.9	31.9	39.2	2	35.76	26.8	33	36	3	31.9	30.0	31.9	2	31.0

ID	WTARC-CONRAD IRRIGATED					NARC-TURNER					NARC-LORING					NARC-LOMA				
	2002	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE
MCNEAL	33.0	36.0	37.0	3	35.3	24.8	23.4	29.2	3	25.8	27.5	24.4	29.9	3	27.3	21.6	26.7	31.9	3	26.7
FORTUNA	40.0	39.0	41.0	3	40.0	29.5	23.7	36.3	3	29.8	31.2	30.2	33.5	3	31.6	23.5	30.7	37.4	3	30.5
HI-LINE	31.0	32.0	34.0	3	32.3	23.6	20.7	30.3	3	24.9	24.8	23.2	29.1	3	25.7	21.6	26.4	29.3	3	25.7
RAMBO	32.0	32.0	35.0	3	33.0	23.1	22.8	27.7	3	24.5	24.8	21.6	28.1	3	24.9	19.0	24.8	29.2	3	24.4
AMIDON	40.0	38.0	45.0	3	41.0	27.6	24.7	35.4	3	29.2	30.0	27.4	30.7	3	29.4	25.7	27.9	35.8	3	29.8
ERNEST	42.0	41.0	44.0	3	42.3	26.6	25.2	33.1	3	28.3	29.7	27.3	32.5	3	29.8	24.3	26.6	33.2	3	28.0
SCHOLAR	38.0	41.0	42.0	3	40.3	26.9	24.2	33.4	3	28.2	30.8	27.1	33.6	3	30.5	25.1	28.5	35.7	3	29.8
WESTBRED 926	32.0	33.0	36.0	3	33.7	23.5	21.8	27.9	3	24.4	24.3	24.7	24.2	3	24.4	22.5	26.6	29.9	3	26.3
Conan	33.0	32.0	38.0	3	34.3	24.5	21.8	28.7	3	25.0	24.8	23.7	27.4	3	25.3	22.4	26.3	33.0	3	27.2
Reeder	34.0	35.0	39.0	3	36.0	24.1	21.4	30.0	3	25.2	26.3	25.6	27.9	3	26.6	25.9	27.1	34.5	3	29.2
OUTLOOK	36.0	33.0	35.0	3	34.7	24.9	22.8	30.5	3	26.1	27.8	25.1	28.3	3	27.1	22.0	26.6	32.9	3	27.2
CHOTEAU	33.0	31.0	35.0	3	33.0	22.4	21.7	27.6	3	23.9	24.2	24.6	28.5	3	25.8	22.2	26.6	31.7	3	26.8
HANK	32.0	33.0	36.0	3	33.7	23.1	20.5	27.3	3	23.6	27.4	24.9	26.2	3	26.2	23.3	25.3	31.6	3	26.7
MTHW9420	33.0	29.0	35.0	3	32.3	21.9	20.6	25.0	3	22.5	25.0	24.0	26.9	3	25.3	25.5	26.3	31.9	3	27.9
EXPLORER	34.0	30.0	35.0	3	33.0	24.5	22.3	26.3	3	24.4	26.9	24.7	26.0	3	25.9	23.5	27.0	32.5	3	27.7
AVERAGE	34.9	34.5	38.0	3	35.7	24.8	22.5	29.7	3	25.8	27.2	25.5	28.9	3	27.2	23.2	26.9	32.7	3	27.8

2002-2004 PLANT HEIGHT (INCHES) SUMMARY FOR OUTLOOK AND CHOTEAU COMPARED TO SELECTED VARIETIES GROWN ACROSS MONTANA IN THE OFFSTATION SPRING WHEAT NURSERY

ID	CARC-MOCCASIN NO-TILL				CARC-DENTON					CARC-WINIFRED			
	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE	2002	2003	YRS	AVE
MCNEAL	27.0	32.9	2	30.0	26.0	23.0	31.5	3	26.8	22.0	25.0	2	23.5
FORTUNA	29.0	33.2	2	31.1	22.0	24.0	36.2	3	27.4	25.0	28.0	2	26.5
HI-LINE	24.7	32.0	2	28.3	24.0	20.0	27.2	3	23.7	20.0	23.0	2	21.5
RAMBO	24.0	28.8	2	26.4	22.0	17.0	30.3	3	23.1	21.0	22.0	2	21.5
AMIDON	28.3	34.4	2	31.4	25.0	24.0	37.0	3	28.7	23.0	26.0	2	24.5
ERNEST	27.3	33.6	2	30.5	26.0	24.0	35.0	3	28.4	25.0	27.0	2	26.0
SCHOLAR	27.7	33.7	2	30.7	25.0	25.0	34.7	3	28.2	21.0	27.0	2	24.0
WESTBRED 926	25.0	34.0	2	29.5	22.0	25.0	28.4	3	25.1	19.0	25.0	2	22.0
Conan	24.7	31.8	2	28.3	21.0	22.0	28.7	3	23.9	26.0	22.0	2	24.0
Reeder	26.3	34.0	2	30.2	22.0	23.0	31.5	3	25.5	19.0	23.0	2	21.0
OUTLOOK	25.3	31.6	2	28.5	24.0	22.0	30.3	3	25.4	21.0	24.0	2	22.5
CHOTEAU	23.7	32.6	2	28.1	20.0	21.0	29.1	3	23.4	23.0	20.0	2	21.5
HANK	23.7	32.2	2	27.9	24.0	25.0	30.7	3	26.6	25.0	23.0	2	24.0
MTHW9420	27.0	30.4	2	28.7	23.0	22.0	28.4	3	24.5	24.0	24.0	2	24.0
EXPLORER	26.7	31.1	2	28.9	23.0	23.0	27.2	3	24.4	22.0	23.0	2	22.5
AVERAGE	26.0	32.4	2	26.9	23.3	22.7	31.1	3	25.7	22.4	24.1	2	23.3

ID	SARC-MOLT DRYLAND					SARC-RYEGATE DRYLAND				SARC-HYSHAM IRRIGATED					OVERALL STATION		
	2002	2003	2004	YRS	AVE	2003	2004	YRS	AVE	2002	2003	2004	YRS	AVE	AVE	YEARS	RANK
MCNEAL	17.8	22.7	26.1	3	22.2	21.9	21.8	2	21.8	37.2	43.7	41.3	3	40.7	29.5	36	5
FORTUNA	17.8	24.0	30.0	3	23.9	30.2	24.4	2	27.3	42.0	39.5	42.7	3	41.4	33.1	36	1
HI-LINE	17.2	21.6	25.5	3	21.4	24.3	22.1	2	23.2	37.5	37.7	38.1	3	37.8	27.7	36	12
RAMBO	15.0	21.7	25.8	3	20.8	21.5	21.3	2	21.4	34.0	38.9	36.5	3	36.4	26.8	36	15
AMIDON	17.6	24.2	27.9	3	23.2	28.0	24.5	2	26.3	44.7	42.8	45.3	3	44.3	32.7*	36	2
ERNEST	18.0	24.6	28.7	3	23.8	27.9	24.7	2	26.3	44.0	45.6	47.2	3	45.6	32.7*	36	3
SCHOLAR	20.0	25.3	27.1	3	24.1	28.3	23.3	2	25.8	43.0	39.0	43.9	3	41.9	32.1	36	4
WESTBRED 926	16.2	22.8	22.1	3	20.4	26.4	19.7	2	23.0	35.2	40.7	34.9	3	36.9	27.7	36	13
Conan	19.2	21.4	25.1	3	21.9	23.4	21.0	2	22.2	35.4	40.3	38.4	3	38.0	27.8	36	11
Reeder	17.5	21.2	23.8	3	20.8	23.6	22.4	2	23.0	40.5	44.6	43.0	3	42.7	29.4	36	7
OUTLOOK	20.1	22.6	27.2	3	23.3	23.2	23.5	2	23.3	39.7	43.4	42.1	3	41.8	29.5	36	6
CHOTEAU	14.9	19.3	25.2	3	19.8	23.4	22.7	2	23.0	36.0	41.4	37.2	3	38.2	27.6	36	14
HANK	18.2	21.5	24.0	3	21.2	24.8	20.9	2	22.9	34.6	40.2	35.3	3	36.7	28.0	36	8
MTHW9420	16.2	21.3	23.3	3	20.3	25.1	20.8	2	23.0	36.1	41.8	39.6	3	39.2	27.9	36	9
EXPLORER	17.6	20.3	23.7	3	20.6	25.9	21.7	2	23.8	34.3	40.3	33.0	3	35.8	27.9	36	10
AVERAGE	17.7	22.3	25.7	3	21.9	25.5	22.4	2	23.9	38.6	41.5	40.2	3	40.1	29.5	36	0
															C.V. (S/MEAN %)	4.52	
															P value (Entry)	<.00001	
															LSD (.05)	0.99	