PROJECT TITLE: Small Grain Variety Performance in Central Montana

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OBJECTIVES: To evaluate small grain varieties under the environmental conditions prevalent in Central Montana.

SUMMARY:

Average winter wheat yields ranged between 46 and 71 bu/ac at Moore and Highwood, respectively. Except for QT 542, variety performance was quite variable between locations. Mean spring wheat yields ranged 36 and 41 bu/ac. Late maturing cultivars such as NK 751 and Owens tended to produce the highest yields this year. Spring triticale performance was extremely variable this year, however, the yields were higher than the spring wheat check. Average yields ranged between 41 and 53 bu/ac. Spring barley performance favored the later maturing cultivars also. Mean nursery yields ranged between 44 and 67 bu/ac. Winter barley was seeded on fallow and in stubble, no-till, however, only the no-till seeding survived the winter. Yields were substantially lower than spring barley and the 'Rocky' winter wheat check.

RESULTS: The off-station winter wheat nursery data from four locations (Moore, Geralding, Denton and Highwood) are reported in tables 1 through 4. The Highwood location was seeded no-till in spring wheat stubble. The highest yielding cultivar was different for each location, however, QT 542, a HybriTech hybrid, consistently performed in the top three at each location. The off-station spring grain nurseries were seeded at three locations (Moccasin, Denton and Geralding) this year. Wet spring weather prevented plantings at Moore and Highwood; the Moccasin location was seeded no-till in barley stubble. The late summer rains increased the performance of late maturing, spring wheat cultivars such as Owens, Penawawa, NK 751, etc. this year. These data are summarized in tables 5, 6 and 7. Tables 8, 9 and 10 contain the triticale performance information with Wapiti, a cultivar from Canada being the most consistent. The spring barley results are shown in table 11, 12 and 13. Again late maturing cultivars generally had the highest rankings. Winter barley results are presented in table 14. Yields were less than spring barley.

FUTURE PLANS: Continue small grain cultivar evaluation in Central Montana.

TABLE 1. OFF-STATION WINTER WHEAT VARIETY TEST - MOORE.
Central Agricultural Research Center - Moccasin, MT 1989

Variety	Grain Yield	Test Weight	Plant Height
	Bu/Ac.	Lb/Bu.	Inches
CI 17902 WINRIDGE	54.4	62.7	36
MT 88065 CST/VT1230//ID745101	52.4	63.0	33
QT 542 HYBRITECH	51.6	63.7	37
MT 8003 TIBER	50.4	64.2	36
MT 88003 POLO/TURG//WRR	50.0	62.3	28
CI 17879 ROCKY	49.4	63.7	36
MT 88064 CST/VT1230//ID745101	49.2	60.0	35
MT 8039 JUDITH	48.8	62.3	34
MT 88002 POLO/TURG//WRR	48.2	61.1	28
CI 13190 WARRIOR	47.9	63.6	36
CI 17735 NORSTAR	47.2	65.1	42
CI 17441 VONA	46.7	64.0	29
CI 17860 NEELEY	46.1	64.3	34
PI491532 CREE	46.0	64.6	40
CI 17727 WESTON	45.9	65.7	38
MT 88062 CST/VT1230//ID745101	45.4	62.6	36
CI 8885 CHEYENNE	45.2	64.3	40
CI 15075 CENTURK	45.0	63.0	35
MT 79125 UT755079/CST56//TX65	44.7	63.0	33
CI 17846 MANNING	44.0	63.7	32
CI 13670 WINALTA	43.5	65.4	39
CI 17844 REDWIN	43.2	64.3	36
MT 88001 SMT/TD//YGSS	42.8	64.9	26
PI491533 NORWIN	41.6	65.1	25
MT 88006 WSC/YOGO//RSC/3/TD25	40.9	62.7	40
MT 88008 WSC/YOGO//RSC/3/WRR1	39.9	65.1	38
MT 88005 WSC/YOGO//RSC/3/TD25	39.1	62.6	39
EXPERIMENTAL MEANS	46.3		
F TEST FOR VAR.	3.84		
C.V. 1: (S/MEAN)*100	7.3		
LSD (0.05)	5.5		

Grain yield based on 60 lb/bu as standard test weight.
Planting date: Sept. 27, 1988.
Growing Season Precipitation: 10.55
Fertilizer: 0-30-0 with seed.
Previous crop: Fallow

TABLE 2. OFF-STATION WINTER WHEAT VARIETY TEST - GERALDINE.
Central Agricultural Research Center - Moccasin, MT. 1989

Variety	Grain Yield	Test Weight	Plant Height
	Bu/Ac	Lb/Bu.	Inches
CI 17844 REDWIN	69.5	61.7	39
CI 17879 ROCKY	66.2	60.8	38
QT 542 HYBRITECH	65.7	61.5	36
CI 17735 NORSTAR	64.4	62.3	42
CI 13670 WINALTA	63.7	63.3	41
CI 8885 CHEYENNE	62.8	61.3	45
CI 13190 WARRIOR	62.6	59.1	38
CI 15075 CENTURK	61.2	59.4	39
CI 17860 NEELEY	60.5	59.7	35
MT 88003 POLO/TURG//WRR	59.8	58.1	27
CI 17441 VONA	59.5	60.5	27
MT 8039 JUDITH	57.8	56.8	37
MT 88005 WSC/YOGO//RSC/3/TD25	57.3	53.6	43
PI491532 CREE	56.8	61.5	39
MT 8003 TIBER	56.7	62.2	38
MT 88065 CST/VT1230//ID745101	55.5	61.8	33
CI 17846 MANNING	55.4	58.2	33
MT 88001 SMT/TD//YGSS	55.2	60.3	25
MT 88002 POLO/TURG//WRR	55.0	55.9	26
PI491533 NORWIN	53.9	59.2	25
MT 88062 CST/VT1230//ID745101	52.7	56.6	34
MT 88008 WSC/YOGO//RSC/3/WRR1	52.7	62.4	40
MT 79125 UT755079/CST56//TX65	52.3	57.5	29
MT 88006 WSC/YOGO//RSC/3/TD25	52.1	60.1	42
CI 17902 WINRIDGE	48.9	56.1	38
CI 17727 WESTON	48.0	60.9	38
MT 88064 CST/VT1230//ID745101	43.0	56.0	33
EXPERIMENTAL MEANS	57.4		
F TEST FOR VAR.	3.34		
C.V. 1: (S/MEAN)*100	10.1		
LSD (0.05)	9.5		

Grain yield based on 60 lb/bu as standard test weight.
Planting date: Sept. 29, 1988.
Growing Season Precipitation: 8.45
Fertilizer: 0-30-0 with seed, 60-0-0 topdressed.
Previous crop: Fallow

TABLE 3. OFF-STATION WINTER WHEAT VARIETY TEST - DENTON.
Central Agricultural Research Center - Moccasin, MT. 1989

Variety	Grain Yield	Test Weight	Plant Height
	Bu/Ac	Lb/Bu.	Inches
QT 542 HYBRITECH	71.6	62.9	38
CI 17879 ROCKY	67.2	62.6	35
MT 88065 CST/VT1230//ID745101	65.2	62.7	35
PI491533 NORWIN	64.8	62.2	25
MT 8039 JUDITH	64.4	62.0	35
CI 13190 WARRIOR	63.7	61.7	40
CI 17844 REDWIN	62.5	62.2	38
CI 17902 WINRIDGE	59.5	60.2	37
CI 17735 NORSTAR	59.4	62.7	45
MT 8003 TIBER	59.1	62.2	38
CI 17846 MANNING	56.6	62.1	30
PI491532 CREE	55.8	62.4	40
CI 13670 WINALTA	55.2	62.7	40
MT 88001 SMT/TD//YGSS	55.2	61.4	23
MT 88002 POLO/TURG//WRR	53.9	60.0	25
MT 88003 POLO/TURG//WRR	53.6	60.2	26
MT 79125 UT755079/CST56//TX65	52.8	60.3	36
CI 15075 CENTURK	52.6	61.7	35
CI 17860 NEELEY	52.0	62.9	37
MT 88005 WSC/YOGO//RSC/3/TD25	50.6	60.8	38
CI 17441 VONA	50.2	62.2	33
CI 8885 CHEYENNE	49.7	61.9	41
MT 88008 WSC/YOGO//RSC/3/WRR1	45.0	62.5	40
MT 88006 WSC/YOGO//RSC/3/TD25	44.8	60.0	40
MT 88062 CST/VT1230//ID745101	44.8	62.0	34
MT 88064 CST/VT1230//ID745101	41.0	59.3	33
CI 17727 WESTON	40.4	63.7	40
EXPERIMENTAL MEANS	55.3		
F TEST FOR VAR.	2.65		
C.V. 1: (S/MEAN)*100	15.6		
LSD (0.05)	14.2		

Grain yield based on 60 lb/bu as standard test weight.
Planting date: Sept. 27, 1988.
Growing Season Precipitation: 10.47
Fertilizer: 0-30-0 with seed, 50-0-0 preplant as anhydrous ammonia.
Previous crop: Fallow

TABLE 4. OFF-STATION WINTER WHEAT VARIETY TEST - HIGHWOOD, NO-TILL
Central Agricultural Research Center - Moccasin, MT. 1989

Variety	Grain Yield	Test Weight	Plant Height
	Bu/Ac.	Lb/Bu.	Inches
CI 17860 NEELEY	82.6	62.8	39
QT 542 HYBRITECH	81.0	63.0	38
CI 17441 VONA	76.7	62.3	32
MT 8003 TIBER	75.8	62.0	41
CI 17879 ROCKY	75.3	62.9	39
MT 88003 POLO/TURG//WRR	75.3	61.7	31
CI 8885 CHEYENNE	75.0	62.4	44
CI 17902 WINRIDGE	73.9	61.2	40
CI 17735 NORSTAR	73.8	62.5	45
MT 79125 UT755079/CST56//TX65	73.8	59.8	33
CI 17844 REDWIN	73.1	61.2	41
CI 13190 WARRIOR	72.4	62.5	40
PI491532 CREE	72.0	62.6	43
MT 88064 CST/VT1230//ID745101	70.9	60.1	39
CI 17727 WESTON	70.4	63.0	38
MT 88065 CST/VT1230//ID745101	70.1	62.2	34
MT 8039 JUDITH	70.1	61.8	36
MT 88062 CST/VT1230//ID745101	69.8	61.2	35
CI 17846 MANNING	69.2	62.1	31
CI 15075 CENTURK	68.0	62.1	36
MT 88002 POLO/TURG//WRR	66.2	59.6	27
PI491533 NORWIN	65.6	63.8	26
MT 88005 WSC/YOGO//RSC/3/TD25	65.2	61.4	43
MT 88001 SMT/TD//YGSS	64.9	63.2	25
CI 13670 WINALTA	64.9	62.5	44
MT 88008 WSC/YOGO//RSC/3/WRR1	61.0	63.4	43
MT 88006 WSC/YOGO//RSC/3/TD25	56.1	61.5	45
EXPERIMENTAL MEANS	70.9		
F TEST FOR VAR.	4.60		
C.V. 1: (S/MEAN)*100	6.6		
LSD (0.05)	7.7		

Grain yield based on 60 lb/bu as standard test weight.
Planting date: Sept. 29, 1989.
Growing Season Precipitation:
Fertilizer: 15-20-0 with seed
Previous crop: Spring wheat

TABLE 5. OFF-STATION HARD RED SPRING WHEAT NURSERY VARIETY TEST,NO-TILL.
Central Agricultural Research Center - Moccasin, MT. 1989

	Variety	Grain Yield	Test Weight	Plant Height	Heading Date
		Bu/Ac.	Lb/Bu.	Inches	
CI 17904	OWENS	47.7	63.8	27	184
WA 6920	PENAWAWA	44.7	63.5	27	186
NK 751	NK 751	44.2	62.1	27	183
PI483235	GLENMAN	43.1	63.5	27	185
CI 17430	NEWANA	41.6	64.0	24	185
MT 8182	YDING "S"/PCI "S"-28	40.8	62.4	27	184
CI 17920	MARSHALL	40.3	62.0	24	186
WPB 906R	WESTBRED 906R	40.2	62.9	27	181
ND 582	STOA	40.0	63.3	31	185
ND 606	AMIDON	39.2	63.4	29	184
CI 17910	ALEX	39.2	63.8	30	185
CI 15930	OLAF	39.2	62.8	28	183
CI 17828	PONDERA	39.0	63.7	27	183
MT 8402	MT7336/SHORTANA	39.0	63.3	27	183
C982-324	RAMBO	39.0	62.5	26	185
CI 17429	LEW	36.4	63.7	32	185
NDCUT	CUTLESS	35.6	63.1	28	184
CI 13596	FORTUNA	35.2	62.5	31	183
CI 17790	LEN	34.3	63.4	26	181
CANLANC	LANCER	32.8	62.5	30	185
EXPERIMENTAL MEANS		39.6	63.1	28	184
F TEST FOR VAR.		3.22	6.00	1.71	23.69
C.V. 1: (S/MEAN)*100		8.9	.68	10.4	.28
LSD (0.05)		5.8	.7	5	1

Grain yield based on 60 lb/bu as standard test weight.
Planting date: April 19, 1989
Growing Season Precipitation: 10.16
Fertilizer: 90-30-0, P w/seed, N broadcast in front of furrow opener while seeding.
Previous crop: Barley

TABLE 6. OFF-STATION HARD RED SPRING WHEAT VARIETY TEST - DENTON
Central Agricultural Research Center - Moccasin, MT. 1989

Variety	Grain Yield	Test Weight	Plant Height
	Bu/Ac	Lb/Bu.	Inches
ND 606 AMIDON	47.6	62.2	34
CI 17904 OWENS	45.8	60.6	28
WA 6920 PENAWAWA	44.1	60.1	26
NK 751 NK 751	44.1	60.5	27
CI 17430 NEWANA	43.5	63.5	28
CI 15930 OLAF	43.0	62.2	29
MT 8182 YDING "S"/PCI "S"-28	41.9	59.5	28
C982-324 RAMBO	41.7	61.9	27
MT 8402 MT7336/SHORTANA	41.3	62.4	26
CI 17910 ALEX	41.2	63.0	33
CI 17920 MARSHALL	41.2	61.3	25
CI 17790 LEN	40.3	62.2	28
ND 582 STOA	40.3	61.4	33
CI 17429 LEW	40.0	63.3	34
CI 17828 PONDERA	39.7	62.5	30
WPB 906R WESTBRED 906R	38.5	61.6	28
PI483235 GLENMAN	38.5	61.3	28
CI 13596 FORTUNA	37.9	63.0	34
CANLANC LANCER	36.0	62.3	34
NDCUT CUTLESS	35.7	62.6	31
EXPERIMENTAL MEANS	41.1	61.9	
F TEST FOR VAR.	1.32	6.68	
C.V. 1: (S/MEAN)*100	11.2	1.2	
LSD (0.05)	N.S.	1.2	

Grain yield based on 60 lb/bu as standard test weight.
Planting date: April 19, 1989
Growing Season Precipitation: 10.47
Fertilizer: 0-30-0 with seed.
Previous crop: Fallow

TABLE 7. OFF-STATION HARD RED SPRING WHEAT VARIETY TEST - GERALDINE
Central Agricultural Research Center - Moccasin, MT. 1989

Variety		Grain Yield	Test Weight	Plant Height
		Bu/Ac	Lb/Bu.	Inches
NK 751	NK 751	39.9	51.2	27
WPB 906R	WESTBRED 906R	39.9	54.9	27
ND 582	STOA	39.6	53.4	32
CI 17828	PONDERA	38.8	55.9	29
CI 17910	ALEX	37.6	57.0	34
MT 8402	MT7336/SHORTANA	37.1	54.5	27
CI 13596	FORTUNA	37.0	56.2	37
NDCUT	CUTLESS	37.0	55.6	32
CI 15930	OLAF	36.8	54.4	27
CI 17904	OWENS	36.4	52.3	29
CI 17920	MARSHALL	36.3	52.6	26
PI483235	GLENMAN	35.9	53.5	31
WA 6920	PENAWAWA	35.9	51.5	27
CI 17430	NEWANA	35.0	53.4	29
CI 17790	LEN	34.8	53.4	27
MT 8182	YDING "S"/PCI "S"-28	34.7	52.3	29
CI 17429	LEW	33.6	56.0	35
C982-324	RAMBO	33.2	55.6	27
ND 606	AMIDON	33.0	54.7	32
CANLANC	LANCER	30.9	55.2	33
EXPERIMENTAL MEANS		36.2	54.2	
F TEST FOR VAR.		1.53	7.62	
C.V. 1: (S/MEAN)*100		9.3	1.9	
LSD (0.05)		N.S.	1.7	

Grain yield based on 60 lb/bu as standard test weight.
Planting date: May 18, 1989
Growing Season Precipitation: 8.45
Fertilizer: 0-30-0 with seed, 50-0-0 pre-plant incorporated.
Previous crop: Fallow

TABLE 8. OFF-STATION TRITCALE VARIETY TEST, NO-TILL.
Central Agricultural Research Center - Moccasin, MT. 1989

Variety	Grain Yield	Test Weight	Plant Height	Heading Date
	Bu/Ac	Lb/Bu.	Inches	
TRITJUAN JUAN	50.0	52.5	34	185
TRITOSUN SUNLAND	49.3	55.3	31	185
TRITOT44 WAPITI	49.1	51.9	35	184
TRITOT61 IRA/BGL//DRIRA/KANG	48.2	54.8	32	181
TRITOT54 7431A-154B/7634-292B	47.3	51.3	34	183
TRITKARL KARL	45.2	50.1	29	181
TRITWELS WELSH	42.9	48.6	37	183
TRITCARM CARMAN	42.8	48.8	33	183
TRITBEAG BEAGLE 82	42.4	49.0	34	184
TRITMARV MARVAL	40.9	47.3	35	183
TRITKRAM KRAMER	40.8	46.5	32	182
CI 17430 NEWANA	29.2	58.8	26	186
EXPERIMENTAL MEANS	44.0	51.3	33.0	183
F TEST FOR VAR.	3.84	76.1	3.48	32.68
C.V. 1: (S/MEAN)*100	11.6	1.4	8.7	.24
LSD (0.05)	8.6	1.2	5.0	1.0

Grain Yield based on 50 lb/bu as standard test weight.
Planting date: April 19, 1989
Growing Season Precipitation: 10.16
Fertilizer: 60-30-0, P w/seed, N broadcast in front of the furrow openers while seeding.
Previous crop: Barley

TABLE 9. OFF-STATION TRITCALE VARIETY TEST - DENTON
Central Agricultural Research Center - Moccasin, MT 1989

Variety		Grain Yield	Test Weight	Plant Height
		Bu/Ac.	Lb/Bu.	Inches
TRITOT61	IRA/BGL//DRIRA/KANG(	58.0	53.7	36
TRITOT54	7431A-154B/7634-292B	57.2	52.1	36
TRITOT44	WAPITI	56.9	51.9	38
TRITJUAN	JUAN	56.1	52.4	39
TRITKRAM	KRAMER	54.0	47.5	36
TRITCARM	CARMAN	53.7	49.9	38
TRITBEAG	BEAGLE 82	51.4	50.0	37
TRITOSUN	SUNLAND	51.2	55.9	36
TRITKARL	KARL	50.5	51.5	29
TRITWELS	WELSH	49.6	49.0	40
TRITMARV	MARVAL	47.6	46.6	42
CI 17430	NEWANA	46.6	62.7	28
EXPERIMENTAL MEANS		53.0	52.0	
F TEST FOR VAR.		2.35	113.22	
C.V. 1: (S/MEAN)*100		8.2	1.3	
LSD (0.05)		7.3	1.2	

Grain yield based on 50 lb/bu as standard test weight.
Planting date: April 19, 1989.
Growing Season Precipitation: 10.47
Fertilizer: 0-30-0 with seed.
Previous crop: Fallow

TABLE 10. OFF-STATION TRITICALE VARIETY TEST - GERALDINE
Central Agricultural Research Center - Moccasin, MT 1989

Variety	Grain Yield	Test Weight	Plant Height
	Bu/Ac	Lb/Bu.	Inches
TRITOT44 WAPITI	46.9	48.8	41
TRITKRAM KRAMER	46.4	45.2	32
TRITOT54 7431A-154B/7634-292B	45.8	47.6	41
CI 17430 NEWANA	43.5	53.6	29
TRITKARL KARL	41.3	44.8	28
TRITOT61 IRA/BGL//DRIRA/KANG(	39.9	48.8	38
TRITMARV MARVAL	38.3	41.1	41
TRITBEAG BEAGLE 82	37.9	46.3	41
TRITCARM CARMAN	37.8	46.2	40
TRITOSUN SUNLAND	37.2	55.0	36
TRITJUAN JUAN	35.7	48.1	38
TRITWELS WELSH	35.4	44.5	41
EXPERIMENTAL MEANS	40.5	47.5	
F TEST FOR VAR.	1.26	18.13	
C.V. 1: (S/MEAN)*100	13.1	3.0	
LSD (0.05)	NS	2.8	

Grain yield based on 50 lb/bu as standard test weight.
Planting date: April 19, 1989
Growing Season Precipitation: 8.45
Fertilizer: 50-30-0, P w/seed, N preplant incorporated.
Previous crop: Fallow

TABLE 11. OFF-STATION SPRING BARLEY VARIETY TEST, NO-TILL
Central Agricultural Research Center - Moccasin, MT. 1989

VARIETY	Grain Yield	Test Weight	Plant Height	Head Date
	Bu/Ac	Lb/Bu.	Inches	
MT 81161 Lewis//Kgs/Smt	52.7	49.3	24	184
CI 15514 Hector	47.9	50.7	26	186
CI 15229 Steptoe	46.1	44.2	27	181
BA 1202 Busch Agr 1202	46.0	48.0	24	186
SK 76333 Harrington	45.0	49.0	26	186
CI 9558 Piroline	44.8	51.4	24	184
MT 81616 Bearpaw	44.5	49.1	23	188
MT140523 Hector/Klages	42.7	50.6	25	187
CI 15856 Lewis	40.6	50.7	24	186
CI 15857 Clark	40.5	49.9	26	186
PI483237 Bowman	40.3	51.0	26	183
PI491534 Gallatin	38.6	51.6	26	185
EXPERIMENTAL MEANS	44.1	49.6	25.0	185
F TEST FOR VAR.	3.08	24.68	2.21	11.82
C.V. 1: (S/MEAN)*100	8.8	1.4	5.5	.51
LSD (0.05)	6.6	1.2	2.3	1.6

Grain yield based on 48 lb/bu as standard test weight.
Planting date: April 19, 1989
Growing Season Precipitation: 10.16
Fertilizer: 60-30-0, P w/seed, N broadcast in front of furrow opener while seeding.
Previous crop: Barley

TABLE 12. OFF-STATION SPRING BARLEY VARIETY TEST - DENTON
Central Agricultural Research Center - Moccasin, MT. 1989

VARIETY	Grain Yield	Test Weight	Plump	Thin	Pan
	Bu/Ac	Lb/Bu.	%	%	%
CI 15229 Steptoe	74.0	45.2	80	15	5
CI 9558 Piroline	72.8	51.5	70	26	4
MT 81161 Lewis//Kgs/Smt	68.5	52.5	67	25	8
CI 15514 Hector	68.0	51.1	82	14	4
MT140523 Hector/Klages	61.5	50.3	58	31	11
BA 1202 Busch Agr 1202	60.9	47.5	52	32	4
CI 15856 Lewis	59.3	53.2	84	14	2
PI491534 Gallatin	59.1	51.2	69	25	6
MT 81616 Bearpaw	58.9	48.1	67	27	6
PI483237 Bowman	55.7	50.7	90	7	3
SK 76333 Harrington	52.8	48.5	73	20	7
CI 15857 Clark	52.0	50.0	85	12	3
EXPERIMENTAL MEANS	62.0	50.0			
F TEST FOR VAR.	3.63	4.58			
C.V. 1: (S/MEAN)*100	10.7	3.7			
LSD (0.05)	11.3	3.1			

Grain yield based on 48 lb/bu as standard test weight.
Planting date: April 19, 1989
Growing Season Precipitation: 10.47
Fertilizer: 0-30-0 with seed.
Previous crop: Fallow

TABLE 13. OFF-STATION SPRING BARLEY VARIETY TEST - GERALDINE
Central Agricultural Research Center - Moccasin, MT. 1989

VARIETY	Grain Yield	Test Weight	Plant Height	Plump	Thin	Pan	Lodging
	Bu/Ac	Lb/Bu.	Inches	%	%	%	%
CI 15229 Steptoe	74.1	41.7	25	86	11	3	5
PI491534 Gallatin	70.5	47.7	27	84	13	3	5
MT140523 Hector/Klages	69.5	45.8	27	77	19	4	20
PI483237 Bowman	68.5	47.4	27	98	2		10
CI 15856 Lewis	68.4	45.9	26	91	7	2	10
CI 9558 Piroline	67.3	48.5	25	88	11	1	15
BA 1202 Busch Agr 1202	66.6	42.4	26	75	21	4	5
MT 81616 Bearpaw	66.4	43.2	26	93	6	1	10
SK 76333 Harrington	64.7	44.0	27	96	3	1	5
CI 15514 Hector	62.9	48.0	28	88	10	2	80
MT 81161 Lewis//Kgs/Smt	62.0	42.7	27	89	9	2	15
CI 15857 Clark	62.0	44.0	26	91	8	1	15
EXPERIMENTAL MEANS	66.9	45.1					
F TEST FOR VAR.	3.29	44.05					
C.V. 1: (S/MEAN)*100	5.2	1.4					
LSD (0.05)	5.9	1.1					

Grain yield based on 48 lb/bu as standard test weight.
Planting date: May 18, 1989
Growing Season Precipitation: 8.45
Fertilizer: 0-30-0 with seed, 50-0-0 preplant incorporated.
Previous crop: Fallow

TABLE 14. WINTER BARLEY VARIETY TEST, NO-TILL.
Central Agricultural Research Center - Moccasin, MT. 1989

Variety	Test Weight	Grain Yield
	Lb/Bu.	Bu/Ac
88WYT 7 ROCKY WINTER WHEAT	62.37	48.10
88WYT 4 MAL	46.53	40.83
88WYT 1 SCHUYLER	47.23	35.73
88WYT 2 KAMIAK	46.53	32.10
WB89 9 Wintermalt	46.47	31.33
88WYT 3 HESK	46.60	30.30
88WPT 25 1986-87 WB PLANT ROW	48.17	28.63
88WYT 8 IGRI	48.90	28.07
88WYT 5 SCIO	46.47	27.80
88WPT 19 1986-87 WB PLANT ROW	50.13	25.57
88WPT 2 1986-87 WB TWO ROW H	49.00	22.13
88WPT 24 1986-87 WB PLANT ROW	47.03	22.07
88WPT 22 1986-87 WB PLANT ROW	47.07	20.50
88WYT 6 SPRINTER	46.90	19.37
EXPERIMENTAL MEANS	48.5	29.5
F TEST FOR VAR.	41.27	5.02
C.V. 1: (S/MEAN)*100	2.3	21.1
LSD (0.05)	2.0	10.4

Grain yield based on 48 lb/bu as standard test weight.
Planting date: October 6, 1988
Growing Season Precipitation: 10.16
Fertilizer: 80-30-0, P w/seed, N deep banded below seed while seeding.
Previous crop: Barley