PROJECT TITLE: Evaluation of winter and spring cereals under a no-till recrop environment at Moccasin.

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OBJECTIVES:
To evaluate the agronomic performance of winter wheat, spring wheat, durum, barley and oat varieties under no-till recrop conditions at Moccasin.

RESULTS:
The 2000 no-till recrop winter wheat, barley and oat trials were seeded into barley stubble. Soil moisture was fair to good for seeding both in the fall and in the spring. The surface soil was almost mud due to the shade and shelter provided by the standing stubble and chaff. Crop year (Sept.99-Sept 00) precipitation was low, but three inches of precipitation received in August 1999 was conserved in the no-till environment. Volunteer barley was a problem in the winter wheat and late germinating volunteer oats (shatter from 1998 crop) was a problem in the spring cereal nurseries. Otana and other tame oats have post harvest seed dormancy that can cause problems more than a year after the oat crop.

Data tables for wheat, barley and durum information is presented with the off-station cereal variety trials in the "Cereal Variety Investigations under Conventional Conditions" section as more producers are adapting no-till recrop methods at our off-station sites. The data was presented in a manner we hoped would be more useable to the reader. We chose not to duplicate the data tables.

The spring oat yields were slightly below average with low test weights contributing to the reduced yield. The high evaporation demand contributed to low test weight.

SUMMARY:
The no-till recrop yields were slightly reduced due to the low precipitation levels during the 2000 crop year. The combination of good vegetation control and the water conservation provided with no-till provided for good yields in a dry year.

FUTURE PLANS:
The no-till recrop variety nurseries will be continued at CARC. More of the off-station variety trials will be no-till recrop, also.

Table 1. 2000 Moccasin oat variety performance under no-till recrop after barley.
Exp 0407 Central Agricultural Research Center, Moccasin, Montana.

	VARIETY	Plant Height inches	Heading Date days	Grain Yield lbs/a	Test Weight lbs/bu	Grain Protein %
95A11633	(95ab11633)87Ab5932/83Ab3	28	192	1594	30.7	**21.5**
90Ab1322	80Ab1322/Monida	28	188	2391	30.4	15.2
ABSP 9-2	83/Ab3119/Monida	28	186	2401	31.3	14.8
ABSP19-9	83Ab3083/Monida	28	190	2410	35.3	15.3
BELMONT	AC Belmont	29	190	1684	31.8	18.7
82Ab1142	Ajay	23	187	2100	31.7	17.4
CELSIA	Celsia	31	190	2231	33.0	14.0
86AB1616	Lamont	27	192	1434	32.0	20.0
CI483126	Monida	29	190	**2602**	35.1	15.4
ND930122	ND930122	33	185	2263	32.9	14.8
87AB5125	Ogle/75Ab861	29	189	2318	29.3	13.3
CI 9252	Otana	35	188	2305	31.9	14.9
ND862915	Paul	34	190	1626	**37.0**	17.2
88Ab3073	Provena	26	190	1553	34.2	20.7
81Ab5792	Rio Grande	30	**184**	2596	32.4	14.3
ND870258	Whitestone	30	189	2321	30.6	14.9
MEAN		29.3	188.7	2114.3	32.48	16.4
F TEST FO			25.23	28.46	0.84	
C.V. 1			0.41	6.07	11.89	
LSD (0.05)			1.29	214.08	6.44	

Table 2. Moccasin Re-Crop Spring Oat Multi-Year Yield Summary of Selected Varieties, 1992-1999. Central Agricultural Research Center. Moccasin, MT.

Variety	1992	1993	1994	1995	1996	1997	1998	1999	2000	Avg.	Otana Same yr.
						----------lbs/a----------					
Otana	3521	2917	1838	3402	2102	3262	2507	2372	2305	2692	-
RioGrande	3318	3098	1860	3405	2211	3156	2084	2547	2596	2697	2692
Ajay	3295	2378	1483	3322	1846	2978	2031	2184	2100	2402	2692
Monida	3728	3251	1809	3360	1850	3570	2827	2249	2602	2805	2692
90Ab1322			1935	3366	2016	3682	2516	2217	2391	2589	2541
Whitestone				3373	1850	3519	2515	2248	2321	2638	2658
Celsia				3152		3119	2288	2146	2231	2587	2886
87AB5125						3415	2236	2449	2318	2605	2714
ABSP 9-2						3556	1983	2455	2401	2599	2714
Nursery Mean	3426	2800	1926	3041	1799	3396	2361	2149	2114	2557	

Table 3. Moccasin Re-Crop Spring Oat Multi-Year Test Weight Summary of Selected Varieties, 1992-1999. Central Agricultural Research Center. Moccasin, MT

Variety	1992	1993	1994	1995	1996	1997	1998	1999	2000	Avg.	Otana Same yr.
						----------lbs/bu----------					
Otana	36.8	31.1	37.1	35.5	35.4	39.3	39.0	32.8	31.9	35.4	-
RioGrande	38.0	32.3	35.3	35.8	31.3	36.3	35.5	27.5	32.4	33.8	35.4
Ajay	37.8	30.5	33.7	36.6	33.9	37.4	37.6	28.0	31.7	34.1	35.4
Monida	36.0	31.3	35.4	33.1	31.5	37.9	36.5	27.4	35.1	33.8	35.4
90Ab1322			36.1	34.8	30.4	38.5	37.6	28.7	30.4	33.8	35.6
Whitestone				34.9	34.3	37.8	37.8	27.3	30.6	33.4	35.6
Celsia				35.5		36.2	36.5	27.9	33.0	33.8	35.7
87AB5125						37.2	38.2	28.1	29.3	33.2	35.7
ABSP 9-2						38.4	36.4	30.1	31.3	34.1	35.7
Nursery Mean	36.1	31.8	35.6	34.5	34.7	37.4	37.0	30.7	32.5	34.5	