

PROJECT TITLE: Evaluation of irrigated spring barley varieties offstation at Bridger, MT.

PROJECT LEADER: G.F. Stallknecht

PROJECT PERSONNEL: K.M. Gilbertson, SARC; USDA Plant Material Center personnel; Darrell Krum, Carbon Co. Agent

OBJECTIVES: The offstation trials are conducted to evaluate cereal crop varieties grown under various environmental conditions. The offstation sites allow for new promising selections to be compared directly with present varieties under commercial farming managements. These trials are used not only for demonstration of new or potential releases, they also provide a significant data base for use by the plant breeders when evaluating cultivar response to various environments.

RESULTS: The yields were excellent and the agronomic data for the nursery is shown in Table 1. Yields ranged from 175 to 109 Bu/Ac. Excel, BA 2601, and Harrington were the highest yielding named varieties. Test weights were low, with MT 860756 having the highest test weight. Excel, and Morex were the tallest, while BA 2601 and BA 1215 were the shortest.

SUMMARY: Yields were quite good, while test weights were low, possibly due to moisture stress, then an overabundance.

FUTURE PLANS: We plan to continue this nursery, as it is one of the few irrigated offstation nurseries, and has a high yield potential. It is also one of the few areas where both Coors and Busch Ag. Resources contract, so we will continue to give the growers a look at other alternatives to malt barley.

TABLE 1 . 1993 SOUTHERN AG RESEARCH CENTER IRRIGATED OFF STATION 168
 SPRING BARLEY NURSERY - BRIDGER, MT.

VARIETY		YIELD BU/AC	TESTWT LB/BU	PLANTHT INCHES
MN52	EXCEL	174.99	46.60	39.33
BA2601	BA2601	171.75	46.80	34.00
SK76333	HARRINGTON	159.14	48.20	35.00
BA1614	BA1614	158.27	45.40	37.33
MT851032	MT851032	156.41	49.70	35.33
BA1215	BA1215	155.85	49.30	34.00
WPB921	MEDALLION	152.08	45.40	34.67
NS78054	BARONESSE	151.72	49.40	35.33
MT890008	MT890008	149.90	48.50	35.00
BA1202	BA1202	145.90	49.20	35.67
MT860756	MT860756	143.02	50.80	37.67
PI483127	RUSSELL	140.78	43.80	38.33
CI15478	KLAGES	138.26	45.50	34.67
BA885133	BA5133	138.07	48.40	35.33
MT851195	MT851195	137.86	49.10	36.67
BA885648	BA5648	137.19	49.10	35.67
MT140523	MT140523	136.57	49.60	35.33
CI15856	LEWIS	134.70	49.40	36.67
CI15773	MOREX	124.91	47.00	40.33
MT81161	MT81161	124.60	47.80	35.33
CO3	MORAVIAN III	114.57	50.40	37.00
CI15514	HECTOR	108.95	48.70	36.00

***** STATISTICAL TABLE *****

	YIELD	PLANTHT
EXPERIMENTAL MEANS	143.43	36.12
TOTAL OBSERVATIONS	66.00	66.00
NO. OF REPLICATIONS	3.00	3.00
NO. OF VARIETIES	22.00	22.00
REP. MEAN SQUARE	1243.47	14.65
VAR. MEAN SQUARE	822.19	8.21
ERROR MEAN SQUARE	237.39	4.27
ERROR DEGREES OF FREEDOM	42.00	42.00
F TEST FOR REPS.	5.24	3.43
F TEST FOR VAR.	3.46	1.92
STANDARD ERROR	15.41	2.07
STANDARD ERROR OF THE MEAN	8.90	1.19
C.V. 1: (S/MEAN)*100	10.74	5.72
C.V. 2: (S OF MEAN/MEAN)*100	6.20	3.30
LSD (0.05)	25.39	3.41

DATE PLANTED: 4/02/93 DATE HARVESTED: 8/12/93

FB370993.SBD
 BRIDGER.STT