

PROJECT TITLE: Evaluation of spring barley variety performance in off-station trials near Ronan, MT.

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OBJECTIVES:

To evaluate the performance of spring barley varieties in environments and cropping systems representative of west-central Montana.

RESULTS:

Harsh conditions persisted throughout the 1999 growing season. Emergence, stand, and tillering were adversely affected by dry, cold soils through June. A late frost and cereal leaf beetle infestations also inhibited yield to some extent. Plots were irrigated twice to supplement below average rainfall. Yields ranged from 68 to 84 bu/A with an 18 entry average of 76 bu/A. Test weights were excellent ranging from 52.4 to 54.6 lbs/bu under light lodging pressure and hot-dry conditions throughout grain-fill. Protein and seed plump percentages were high, averaging 15.1 and 90.2 respectively.

SUMMARY:

Despite multiple adverse growing conditions, yield met and test weights exceeded area producer expectations. The cold-dry conditions followed by a hot-dry environment resulted in little to no lodging or disease pressure. A 16 bu/A difference existed between the highest (Xena) and poorest (Harrington) yielding cultivars.

FUTURE PLANS:

Spring barley variety evaluations will continue in Lake County.

Table 1. Agronomic data from the Off-station Spring Barley Nursery at Lake Seed Inc. in Ronan, MT.

Planted: April 16, 1999

Harvested: August 26, 1999

VARIETY	Yield Bu/A	Test Wt Lbs/Bu	Height Inch	Lodge 0-9	Plump %	Protein %
XENA	83.90	53.43	30.67	1.00	92.00	14.3
HECTOR	83.43	53.90	31.73	2.00	88.00	15.6
BARONESSE	83.07	52.43	29.03	1.33	91.00	15.1
MT950186	81.93	54.60	29.27	.67	97.00	14.5
MT960228	81.80	53.10	27.30	1.00	89.00	14.2
CHINOOK	81.73	53.97	30.57	1.67	91.00	15.2
GALLATIN	77.17	53.63	29.53	1.33	87.00	15.3
MTLB 13	76.33	52.60	26.80	1.00	85.00	15.1
MT920073	76.20	53.13	28.87	1.00	97.00	15.3
MTLB 5	75.97	53.30	29.77	1.33	92.00	15.3
BOWMAN	74.93	53.43	26.77	1.67	93.00	14.7
GALENA	73.60	53.70	26.53	.67	93.00	15.6
STARK	72.90	53.87	31.33	1.33	92.00	14.8
MTLB 6	72.43	52.80	26.27	1.00	88.00	15.7
LEWIS	71.43	53.67	30.33	1.67	92.00	15.5
VALIER	69.60	53.33	29.40	.67	89.00	15.3
MENUET	68.60	52.93	29.13	1.00	86.00	15.3
HARRINGTON	68.40	53.07	30.83	1.33	82.00	15.7
Mean	76.30	53.38	29.12	1.20	90.22	15.1
C.V.	8.59	1.05	6.61	33.5		
LSD (.05)	10.87	0.93	3.20	0.67		