

PROJECT TITLE: Early Yield Spring Barley Evaluation: Lodging and Disease resistance.

PROJECT LEADERS: Bob Stougaard and Doug Holen, NWARC, Kalispell, MT. Tom Blake and Pat Hensleigh, PS&ES, Bozeman, MT

OBJECTIVE: To evaluate spring barley varieties for yield, quality, and improved resistance to foliar diseases in consideration for future release to Montana grain growers.

RESULTS: Yields were lower than average with only seven of the 64 entries above 100 bu/A. 11 Montana lines yielded above the six check cultivars included in the nursery. Test weights and percent plump were fair in comparison to previous years. A slow spring caused by continual cool and wet weather along with dry conditions during grain fill resulted in less than ideal growing conditions. Reduced overall vegetative growth led to a lodge-free nursery. Scald was present in moderate levels on most cultivars.

SUMMARY: Poor growing conditions at critical growth stages resulted in low yields with fair test weights and plumps.

FUTURE PLANS: Cultivars will continue to be evaluated at Kalispell through cooperative testing in an attempt to identify cultivars best adapted to District 1 growing conditions.

Table 1. Agronomic data from the Early Spring Barley Nursery grown at the Northwestern Agricultural Research Center in Kalispell, MT.

Planted: April 25, 1996

Harvested: August 26&28, 1996

VARIETY	YIELD BU/A	TEST WT LB/BU	PLUMP PERCENT	HEIGHT INCHES	HEADING DATE
MT950063	110.43	51.70	93.00	29.67	185.67
MT950074	105.63	51.00	96.00	28.47	184.67
MT950031	105.03	51.70	95.00	34.90	184.00
MT950098	104.37	49.40	94.00	28.47	190.33
MT950062	103.43	51.20	89.00	29.27	185.00
MT950081	102.27	51.20	97.00	28.87	186.33
MT950057	101.37	52.00	94.00	32.80	183.33
MT950064	99.73	50.20	87.00	24.70	189.00
MT950154	99.23	52.50	96.00	31.77	184.67
MT950148	99.13	51.60	94.00	34.37	184.33
MT950185	99.03	51.60	97.00	31.77	184.33
Steptoe	98.80	46.80	93.00	29.80	179.00
MT950213	98.07	45.00	86.00	30.30	183.00
Harrington	98.07	49.80	95.00	28.33	185.33
MT950211	96.97	46.10	98.00	37.00	185.33
Optic	96.80	48.90	96.00	24.53	188.00
MT950102	96.67	49.90	97.00	29.63	185.67
MT950151	96.17	51.80	87.00	31.87	181.67
MT950122	96.03	51.40	92.00	29.77	184.00
MT950107	96.00	50.70	96.00	26.93	187.33
MT950055	95.87	51.20	92.00	29.93	181.33
MT950209	95.83	45.20	88.00	30.03	180.33
Gallatin	95.83	51.00	91.00	32.03	183.67
MT950195	95.80	50.80	95.00	32.30	185.00
MT950201	95.57	48.10	93.00	30.43	181.00
MT950205	95.07	46.70	83.00	29.40	183.33
Baronesse	94.67	49.70	93.00	26.27	187.33
MT950035	94.57	52.20	96.00	35.67	184.00
MT950060	94.40	51.00	89.00	28.20	185.00
MT950174	94.03	51.10	98.00	29.27	187.67
MT950237	94.00	57.10	64.00	32.30	187.00
MT950208	92.83	46.90	90.00	32.93	185.33
MT950137	92.10	51.60	93.00	31.63	185.33
MT950077	91.83	49.80	94.00	29.00	187.67
MT950207	91.73	46.70	90.00	32.57	183.00
MT950065	90.97	51.70	95.00	31.90	183.33
MT950155	90.90	50.00	90.00	28.23	182.00
MT950173	90.70	49.70	95.00	27.70	187.33
MT950170	90.60	50.40	89.00	24.40	184.67
MT950181	90.50	51.10	89.00	30.70	183.67
MT950175	90.40	50.70	94.00	29.77	185.00
MT950156	90.13	49.80	89.00	27.20	181.33
MT950168	89.60	49.70	95.00	29.00	190.00
MT950059	88.33	51.20	91.00	25.20	186.33
MT950121	87.93	49.80	95.00	28.07	184.67
MT950214	87.60	45.60	75.00	28.87	179.67
MT950091	87.53	50.20	93.00	26.93	189.00
MT950206	86.60	45.80	88.00	24.54	180.00
MT950215	86.57	45.50	89.00	28.97	126.00
MT950217	85.80	53.40	62.00	25.07	188.33
MT950030	85.67	51.70	94.00	29.77	184.67
MT950186	85.57	52.20	95.00	29.13	184.67
MT950203	85.47	46.10	87.00	27.97	181.00
MT950210	85.33	47.00	97.00	35.27	184.00

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Table 1 (Cont'd). Agronomic data from Early Spring Barley Nursery.

VARIETY	YIELD BU/A	TEST WT LB/BU	PLUMP PERCENT	HEIGHT INCHES	HEADING DATE
MT950012	84.87	50.10	96.00	27.57	185.00
MT950169	83.93	49.90	95.00	24.93	186.33
Morex	83.33	49.60	85.00	39.00	180.33
MT950220	82.53	58.40	63.00	26.23	188.67
MT950192	82.23	49.50	91.00	27.70	185.33
MT950076	81.77	50.40	88.00	26.38	186.33
MT950199	81.47	51.60	96.00	30.70	184.67
MT950069	78.30	50.90	92.00	27.17	183.33
MT950146	74.37	50.10	94.00	29.80	185.00
MT950221	72.50	54.20	49.00	27.60	184.33
MEAN	92.17	50.15	90.19	29.54	183.80
C.V.	11.16	NA	NA	6.45	6.39
LSD (.05)	16.63	NA	NA	3.08	18.98