

PROJECT TITLE: 1992 Montana Spring Oat Performance Trial

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OBJECTIVES: To determine the adaptability of new and introduced oat varieties to Montana. The Montana Spring Oat Nursery is grown throughout Montana in several locations under, irrigation, high moisture, or dryland conditions.

RESULTS: DRYLAND LOCATIONS-

Sidney and Huntley were the only dryland locations, due to hail etc. These locations had very high yields this year which were greater than 1991. Calibre had the highest mean yield (165.2 bu/a) for the dryland locations. Test weights were much higher than 1991. The high test weight over both dryland sites was Trucker (41.4 lb/bu). Plant heights were similar to 1991 and heading dates were equal to 1991.

IRRIGATED AND HIGH MOISTURE LOCATIONS-

The nursery was planted in two irrigated (Sidney and Huntley) and two high moisture (Bozeman and Kalispell) locations in 1992. Yields were much higher than in 1991 at each location with the average being just over 172 bu/a. Kalispell yields were somewhat lower than last year, while Bozeman, Sidney and Huntley had significant increases from 1991 average yields (186.7, 140.6, and 206.7 bu/a respectively). The high yielding line averaged over all locations, except Sidney due to bird damage, was Derby at 212.2 bu/A. The test weights for all locations was higher than 1991 (37.4 lb/bu). As in the dryland locations Trucker had the highest test weight (41.2). State-wide heights were taller this year at Bozeman, Huntley, and Sidney, and heading dates were later at Sidney and Huntley when compared to 1991.

FUTURE PLANS: Variety evaluation will continue in the future.

**1992 MONTANA SPRING OAT STATEWIDE REPORT**  
**YIELD (bu/ac)**

ID	Pedigree	Sidney Recrop	Sidney Dryland	Sidney Irrigated <sup>1</sup>	Kaliispell High Moisture	Huntley Dryland	Huntley Irrigated	Bozeman Irrigated	Avg	BYX	RSQ
81Ab5792	Rio Grande	141.3	170.1	194.6	196.2	139.7	209.2	186.9	176.9	0.70	0.48
82Ab1142	Ajay	132.0	170.6	178.1	193.2	116.6	180.9	191.9	166.2	0.78	0.50
CI 6611	Park	133.3	175.9	148.9	159.1	111.2	156.2	172.7	151.0	0.62	0.55
CI 8263	Cayuse	143.0	166.4	165.9	170.3	137.2	201.7	180.9	166.5	0.72	0.81
CI 9252	Otana	151.9	188.9	96.0	190.6	144.2	199.5	184.9	165.1	1.14	0.70
CI 9297	Appaloosa	156.1	178.1	189.6	175.7	162.4	219.9	178.8	180.1	0.53	0.48
CI 9401	Ogle	141.3	162.5	153.5	179.6	129.5	207.8	199.9	167.7	1.01	0.88
CI467882	Border	151.4	182.4	175.6	198.8	148.8	228.5	196.1	183.1	0.95	0.85
CI483126	Monida	160.3	187.2	143.4	175.0	145.6	229.7	181.8	174.7	1.03	0.89
DERBY	Derby	159.5	195.8	89.6	208.4	133.3	232.8	195.4	173.5	1.63	0.81
ND820603	Valley	123.0	164.4	141.9	147.9	124.8	215.3	207.7	160.7	1.25	0.82
NEWDAK	Newdak	151.4	186.4	140.2	159.4	126.4	208.0	203.7	167.9	1.10	0.89
OT 308	Calibre	166.3	199.7	99.4	185.8	130.6	241.5	165.6	169.8	1.46	0.74
SD810109	Trucker	127.7	166.7	116.4	135.9	123.3	169.4	171.1	144.4	0.79	0.81
SITMEAN		145.3	182.8	140.6	176.0	134.1	206.9	186.1	167.4	1.01	1.00
W 80474	Riel	140.1	169.8	80.7	163.1	133.9	201.5	185.9	153.6	1.28	0.76
W 82056	Robert	146.8	176.3	135.0	176.7	138.8	209.0	184.0	166.7	1.00	0.99
*****	SITE MEAN	145.3	177.9	140.6	176.0	134.1	206.9	186.7	166.8	1.00	1.00

<sup>1</sup> Blackbird damage severely affected yields and ranking.

**1992 MONTANA SPRING OAT STATEWIDE REPORT  
TEST WEIGHT (lbs/bu)**

ID	Pedigree	Sidney Recrop	Sidney Dryland	Sidney Irrigated	Kalispell	Huntley Dryland	Huntley Irrigated	Bozeman Irrigated	Avg	BYX	RSQ
					High Moisture						
81Ab5792	Rio Grande	34.2	37.3	37.5	34.2	40.6	39.1	36.7	37.1	1.08	0.93
82Ab1142	Ajay	32.3	37.3	35.3	34.7	40.7	37.2	38.0	36.5	1.16	0.83
CI 6611	Park	33.8	36.0	37.0	34.6	38.9	38.2	35.0	36.2	0.78	0.75
CI 8263	Cayuse	34.5	36.2	36.2	34.2	39.4	37.3	34.9	36.1	0.76	0.77
CI 9252	Otana	37.2	38.3	38.9	36.9	41.7	40.7	37.6	38.8	0.76	0.78
CI 9297	Appaloosa	33.2	36.0	36.0	32.4	38.3	37.2	33.1	35.2	0.89	0.67
CI 9401	Ogle	33.3	36.3	35.3	32.6	37.7	36.6	38.4	35.8	0.91	0.79
CI467882	Border	32.2	36.5	37.3	33.9	41.0	39.1	35.2	36.5	1.31	0.83
CI483126	Monida	34.5	38.3	37.7	35.9	41.9	40.4	35.3	37.7	1.07	0.68
DERBY	Derby	34.5	39.7	36.9	35.3	41.8	40.4	41.9	38.6	1.33	0.84
ND820603	Valley	38.0	38.2	38.5	35.0	41.8	40.8	41.4	39.1	1.02	0.79
NEWDAK	Newdak	35.3	35.7	35.8	33.2	38.2	37.6	39.1	36.4	0.80	0.70
OT 308	Calibre	35.2	38.7	37.4	36.6	42.7	42.4	41.4	39.2	1.35	0.90
SD810109	Trucker	38.5	40.8	41.5	38.6	43.1	42.0	42.8	41.0	0.83	0.87
SITMEAN		35.0	37.5	37.1	34.8	40.5	39.4	38.4	37.5	1.00	1.00
W 80474	Riel	38.0	37.7	37.1	35.1	40.1	40.8	41.2	38.6	0.84	0.63
W 82056	Robert	35.3	36.7	35.4	34.2	39.7	40.4	40.9	37.5	1.13	0.74
*****	SITE MEAN *****	35.0	37.5	37.1	34.8	40.5	39.4	38.3	37.5	1.00	1.00

**1992 MONTANA SPRING OAT STATEWIDE REPORT**  
**PLANT HEIGHT (inches)**

ID	Pedigree	Sidney Recrop	Sidney Dryland	Sidney Irrigated	Kalispell	Huntley Dryland	Huntley Irrigated	Bozeman Irrigated	Avg	BYX	RSQ
					High Moisture						
81Ab5792	Rio Grande	28.0	26.7	42.3	36.2	36.7	45.0	41.9	36.7	1.15	0.93
82Ab1142	Ajay	23.7	24.0	34.7	34.8	33.0	38.3	37.8	32.3	1.00	0.96
CI 6611	Park	36.7	36.3	44.7	47.5	42.7	51.0	49.4	44.0	0.96	0.96
CI 8263	Cayuse	33.0	29.3	43.3	38.3	39.7	46.3	45.6	39.4	1.02	0.91
CI 9252	Otana	38.0	36.3	47.7	46.9	44.3	50.0	50.8	44.9	0.94	0.97
CI 9297	Appaloosa	32.0	29.7	43.7	41.5	37.0	46.0	43.1	39.0	1.03	0.97
CI 9401	Ogle	30.3	27.0	38.7	36.9	38.3	43.7	42.7	36.8	0.98	0.91
CI467882	Border	32.7	31.3	43.3	41.3	38.3	45.7	42.3	39.3	0.90	0.97
CI483126	Monida	35.7	34.7	45.3	45.0	39.3	50.7	45.9	42.4	0.98	0.97
DERBY	Derby	36.3	39.3	48.3	50.0	42.7	52.7	51.6	45.8	1.04	0.94
ND820603	Valley	31.3	29.7	41.7	40.4	36.7	46.3	44.9	38.7	1.07	0.99
NEWDAK	Newdak	32.0	31.7	42.7	42.5	34.7	47.3	46.9	39.7	1.10	0.94
OT 308	Calibre	38.3	38.3	46.7	47.6	41.0	55.3	51.6	45.6	1.06	0.92
SD810109	Trucker	35.3	34.0	43.3	44.8	41.7	47.0	45.3	41.6	0.83	0.97
SITMEAN		33.4	30.9	43.6	43.2	39.1	47.8	43.6	40.2	1.01	0.98
W 80474	Riel	35.7	36.7	45.3	49.0	38.7	49.3	48.2	43.3	0.96	0.89
W 82056	Robert	35.0	36.3	46.3	48.4	41.3	49.3	46.9	43.4	0.95	0.94
*****	SITE MEAN *****	33.4	32.5	43.6	43.2	39.1	47.8	45.8	40.8	1.00	1.00

**1992 MONTANA SPRING OAT STATEWIDE REPORT**  
**HEADING DATE (Days from Jan. 1)**

ID	Pedigree	Sidney Recrop	Sidney Dryland	Sidney Irrigated	Kalispell	Huntley Dryland	Huntley Irrigated	Bozeman Irrigated	Avg	BYX	RSQ
					High Moisture						
81Ab5792	Rio Grande	175.3	171.3	174.7	167.0	163.0	163.0	176.5	170.1	0.88	1.00
82Ab1142	Ajay	176.3	172.0	176.0	170.7	165.0	164.0	180.2	172.0	0.90	0.97
CI 6611	Park	176.7	173.7	176.0	168.7	163.5	163.0	179.0	171.5	0.98	0.99
CI 8263	Cayuse	176.0	172.7	176.0	168.0	164.5	164.5	180.5	171.7	0.94	0.98
CI 9252	Otana	177.7	174.3	178.0	169.0	164.0	164.0	181.0	172.6	1.05	1.00
CI 9297	Appaloosa	178.3	175.0	178.7	170.0	165.5	165.0	181.8	173.5	1.02	1.00
CI 9401	Ogle	171.3	168.0	173.7	162.7	160.5	158.0	173.0	166.7	0.95	0.97
CI467882	Border	179.3	175.7	179.3	169.0	163.0	164.0	181.8	173.2	1.18	1.00
CI483126	Monida	177.0	175.3	179.0	171.3	161.0	164.0	180.2	172.6	1.11	0.96
DERBY	Derby	176.3	174.0	177.0	168.7	164.0	163.5	178.2	171.7	0.94	0.99
ND820603	Valley	176.3	173.0	176.0	168.3	162.5	163.0	178.0	171.0	0.98	1.00
NEWDAK	Newdak	173.0	168.0	173.7	163.0	159.0	159.5	174.2	167.2	1.01	0.98
OT 308	Calibre	179.7	175.7	179.7	170.7	164.5	164.5	182.8	173.9	1.13	1.00
SD810109	Trucker	174.7	171.0	174.0	164.3	163.0	161.5	175.5	169.1	0.90	0.97
SITEMEAN		176.3	173.4	176.7	168.2	163.1	163.0	179.5	171.5	1.02	1.00
W 80474	Riel	176.0	172.7	176.0	168.3	162.0	163.0	177.8	170.8	0.98	1.00
W 82056	Robert	177.7	175.7	179.3	171.0	165.0	164.0	181.2	173.4	1.04	0.99
*****	SITE MEAN	176.3	173.0	176.7	168.2	163.1	163.0	178.9	171.3	1.00	1.00