

Title: Off-station spring wheat variety investigations.

Year: 1995

Location: Western Triangle Research Center, Conrad, MT.

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Dryland off-station spring wheat variety trials were grown near Cut Bank (Glacier County), Oilmont (Toole County), and Choteau (Teton County). Data for the three locations are presented in Tables 1-6, and include the 1995 data and five-year averages. (Emphasis should be placed more on the five-year averages when predicting which varieties are best suited for a given area. The 1994 tables reflect performance under the conditions of only one year, and therefore should not be relied on too heavily).

Growing season rainfall was approximately double the amount of normal, producing exceptionally high yields at each of the locations.

Sawfly wasps were active at Choteau, but did not cause the high level of damage that usually occurs at this site. Therefore, some of the susceptible varieties such as Newana and Pondera that have yielded medium in past years with heavy sawfly damage, were among the top yielders at Choteau in 1995 (Tables 1 & 2). It is not known at this time if weather, parasites or some other factor reduced sawfly larval survival in 1995.

Although many of the varieties tested are classified as being sawfly resistant (indicated by an * in the data tables), the level of resistance has not been fully determined on some of the newer varieties. Resistance levels may range from 50 to 90 percent.

At Oilmont, the standard height (tall) varieties ranked lower for yield in 1995 than they normally have in past years at this site (Tables 3 & 4). Standard height varieties are more adapted to semi-arid conditions, and were apparently not able to compete in the wet year of 1995 at this site.

The Cut Bank location showed signs of nitrogen deficiency, and many of the varieties were not able to produce yields in line with the high moisture conditions of 1995 (Table 5).

Table 1. **Dryland Spring Wheat variety trial grown near Choteau, 1995. Mont. Agr. Expt. Sta., Western Triangle Ag. Research Center, Conrad, MT.**

Variety		Yield bu/ac	Test wt. lbs/bu.	Plant hgt. inches	% protein
VANNA	(s. white)	84.6	60.8	38	9.9
PONDERA		79.2	59.8	38	13.2
McNEAL		78.8	56.9	38	13.9
NEWANA		78.8	57.1	35	13.3
GLENMAN	*	78.1	57.8	35	12.5
BORDER	*	77.3	61.2	36	13.2
NORLANDER (N90-700)		76.6	59.4	35	12.9
FERGUS		75.9	61.0	37	13.0
LEW	*	75.2	62.4	44	13.4
HI-LINE		74.9	61.7	34	12.9
MT 9354		74.6	61.5	40	12.8
RAMBO	*	73.9	57.8	34	12.2
SHOOFLY	*	73.7	57.7	33	12.2
MT 9360		73.3	60.2	37	13.8
FORTUNA	*	72.1	61.9	44	13.8
WESTBRED 936		71.8	58.8	33	13.6
WESTBRED 926		70.0	59.1	34	13.6
PIONEER 2375		69.6	60.8	40	13.1
MTHW9406		69.5	59.2	35	12.8
AMIDON	*	69.0	60.7	45	13.4
LEN		68.8	59.6	38	14.0
GRANDIN		67.7	60.0	39	14.3
BW 688	*	67.4	59.2	46	14.1
ERNEST (ND 677)	*	66.9	62.2	45	14.8
WESTBRED EXPRESS		63.7	59.9	30	13.4
STOA		62.9	60.0	45	14.0
AC EATONIA	*	60.3	59.3	45	14.2

Cooperator: Roy Inbody.

Location: Twelve miles northeast of Choteau. (Teton County)

Fertilizer: 100# 11-52-0 with the seed, + 60# actual 32-0-0
liquid applied in the fall on fallow.

Date seeded: April 18, 1995, Date harvested: Aug. 30, 1995.

Rainfall: From seeding to harvest was 12 + inches.

* = Sawfly resistant varieties. (Amidon, Rambo and Border
have partial resistance.)

Yield experimental mean: 72.39 Error degrees of freedom: 52.00

F test for var: 3.20, C.V. 2: 4.36, LSD (0.05): 8.95

Table 2. Five-year summary for Dryland Spring Wheat varieties grown near Choteau, MT. 1991 - 1992 - 1993 - 1994 - 1995. Mont. Agr. Expt. Station, Western Triangle Ag. Research Center, Conrad, MT.

Variety	5 - year comparable average			
	Yield bu/ac	Test wt. lbs/bu.	Plant hgt. inches	% Protein
GLENMAN *	49.4	56.6	32.0	14.1
HI-LINE	46.0	59.1	29.6	14.7
PONDERA	45.1	58.9	31.4	15.1
FORTUNA *	44.7	59.7	37.2	15.2
RAMBO *	44.3	57.2	30.0	14.0
NEWANA	43.9	56.8	30.0	14.3
LEW *	43.5	59.3	36.8	15.0
AMIDON *	41.4	57.4	36.8	15.1
WESTBRED 926	41.4	57.2	29.2	14.8
GRANDIN	39.8	58.2	32.6	15.4
LEN	39.6	57.2	31.0	15.0
STOA	37.8	57.0	36.0	15.3

Cooperator: Roy Inbody in 1994 - 1995, and Rick Corey in 1991-1992 - 1993.

Location: Northeast of Choteau, MT. (Teton County)

* = Sawfly resistant varieties. (Amidon and Rambo have partial resistance.)

Table 3. Dryland Spring Wheat variety trial grown near Oilmont, 1995. Mont. Agr. Expt. Sta., Western Triangle Ag. Research Center, Conrad, MT.

Variety	Yield bu/ac	Test wt. lbs/bu.	Plant hgt. inches	% protein
VANNA (s. white)	60.6	61.6	31	6.4
WESTBRED 936	60.5	62.1	26	10.0
McNEAL	59.5	62.4	35	10.5
WESTBRED 926	56.0	62.5	34	9.6
GRANDIN	55.9	63.9	35	10.9
MTHW9406	55.6	62.4	36	8.7
HI-LINE	54.9	62.4	32	10.4
ERNEST (ND 677) *	53.3	65.0	38	9.6
NORLANDER (N90-700)	53.1	64.1	32	9.2
BW 688 *	52.8	62.7	38	8.8
GLENMAN *	52.7	62.7	33	9.0
RAMBO *	52.7	63.9	32	8.7
WESTBRED EXPRESS	52.4	63.4	26	9.6
PIONEER 2375	52.2	64.0	33	9.1
SHOOFLY *	51.6	62.2	28	7.4
PONDERA	51.4	62.7	34	9.7
NEWANA	51.2	62.8	33	7.8
FERGUS	50.8	63.4	31	8.8
LEN	49.8	62.3	35	9.5
STOA	49.7	62.8	36	9.9
LEW *	49.7	63.9	37	9.5
AC EATONIA *	48.5	63.6	39	9.2
AMIDON *	47.1	63.1	39	9.6
MT 9354	47.0	64.0	34	9.4
BORDER *	46.3	63.8	31	9.8
MT 9360	45.4	63.4	36	9.9
FORTUNA *	44.5	63.7	41	9.4

Cooperator: Terry Alme.

Location: Eight miles east of Oilmont. (Toole County)

Fertilizer: 100# 11-52-0 with the seed.

Previous crop: Fallow.

Date seeded: April 17, 1995. Date harvested: August 22, 1995.

Rainfall: From seeding to harvest was 10 + inches.

* = Sawfly resistant varieties. (Amidon, Rambo and Border have partial resistance.)

Yield experimental mean: 52.05, Error degrees of freedom: 52

F test for var: 1.71, C.V. 2: 6.27, LSD (0.05): 9.25

Table 4. Five-year summary for dryland Spring Wheat varieties grown near Oilmont, MT. 1991 - 1992 - 1993 - 1994 - 1995. Mont. Agr. Expt. Station, Western Triangle Ag. Research Center, Conrad, MT.

5 - year comparable average					

Variety		Yield bu/ac	Test wt. lbs/bu.	Plant hgt. inches	% Protein

GLENMAN	*	47.3	59.3	30.6	12.9
HI-LINE		44.3	59.2	29.2	14.8
GRANDIN		43.9	59.2	31.8	15.1
WESTBRED 926		42.6	58.4	27.3	14.1
AMIDON	*	42.6	59.9	34.6	13.9
LEN		42.2	59.6	31.0	14.2
LEW	*	42.1	60.1	35.4	14.0
NEWANA		42.1	58.5	29.2	12.8
PONDERA		40.9	60.1	30.0	14.2
FORTUNA	*	40.1	60.3	35.2	13.5
RAMBO	*	40.1	59.8	29.0	13.5
STOA		39.6	58.7	34.6	14.5

Cooperator: Terry Alme.

Location: Eight miles east of Oilmont, MT. (Toole County)

* = Sawfly resistant varieties. (Amidon and Rambo have partial resistance.)

Table 5. Dryland Spring Wheat variety trial grown near Cut Bank, 1995. Mont. Agr. Expt. Sta., Western Triangle Ag. Research Center, Conrad, MT.

Variety		Yield bu/ac	Test wt. lbs/bu.	Plant hgt. inches	% Protein
VANNA	(s. white)	68.3	62.1	31	6.7
NORLANDER	(N90-700)	61.6	61.2	31	9.3
BORDER	*	59.7	62.9	32	10.5
LEW	*	58.7	63.4	37	9.7
FERGUS		58.1	63.3	33	10.1
AMIDON	*	56.4	61.5	38	9.2
GLENMAN	*	55.9	61.8	32	9.4
PONDERA		55.6	62.3	32	10.4
SHOOFLY	*	53.0	61.2	28	9.5
BW 688	*	53.0	61.1	42	10.1
FORTUNA	*	52.6	62.7	36	10.3
MCNEAL		52.0	62.3	32	10.9
AC EATONIA	*	51.8	62.4	38	11.1
WESTBRED 936		51.6	61.2	29	9.3
GRANDIN		51.5	62.3	32	10.0
MT 9360		50.2	61.9	35	10.9
MT 9354		49.4	62.8	34	10.9
STOA		48.8	61.0	35	9.8
HI-LINE		48.8	62.4	28	10.2
RAMBO	*	48.6	61.9	28	9.4
PIONEER 2375		48.3	62.1	35	10.4
NEWANA		47.2	62.2	32	10.2
LEN		46.4	61.5	32	10.6
WESTBRED EXPRESS		46.4	62.2	26	10.7
MTHW9406		46.2	61.5	34	9.9
WESTBRED 926		44.7	61.7	30	10.0
ERNEST (ND 677)	*	44.7	60.9	36	9.7

Cooperator: Don Bradley.

Location: Fifteen miles north of Cut Bank. (Glacier County)

Fertilizer: 100# 11-52-0 with the seed.

Previous crop: Fallow.

Date seeded: April 24, 1995. Date harvested: Oct. 16, 1995.

Rainfall: From seeding to harvest was 10 + inches.

* = Sawfly resistant varieties. (Amidon, Rambo and Border have partial resistance.)

Yield experimental mean: 52.20, Error degrees of freedom: 52

F test for var: 2.03, C.V. 2: 7.58, LSD (0.05): 11.23

Table 6. Five-year summary for dryland Spring Wheat varieties grown near Cut Bank, MT. 1991 - 1992 - 1993 - 1994 - 1995. Mont. Agr. Expt. Station, Western Triangle Ag. Research Center, Conrad, MT.

Variety	5 - year comparable average			
	Yield bu/ac	Test wt. lbs/bu.	Plant hgt. inches	% Protein
AMIDON *	45.3	58.4	37.8	10.4
GLENMAN *	44.0	58.6	31.0	9.3
PONDERA	43.0	60.5	31.2	10.9
LEW *	42.5	59.6	36.6	9.8
RAMBO *	42.5	59.1	29.6	9.9
HI-LINE	42.1	60.7	29.0	10.3
FORTUNA *	42.0	60.3	36.2	10.2
GRANDIN	41.6	60.1	33.2	11.4
STOA	41.4	60.4	35.0	10.0
LEN	41.3	58.8	31.2	11.2
WESTBRED 926	41.0	58.8	30.6	10.0
NEWANA	39.9	59.2	29.8	9.7

Cooperator: Don Bradley.

Location: Fifteen miles north of Cut Bank, MT. (Glacier Co.)

* = Sawfly resistant varieties. (Amidon and Rambo have partial resistance.)