PROJECT TITLE: Dryland Statewide Winter Triticale Trial near Huntley, Montana. (Exp. 99SWTR08).

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OBJECTIVES: To provide cereal growers in south central Montana with a reliable, unbiased, up-to-date source of information that will permit valid comparisons among winter triticale varieties. This information should help cereal growers in south central Montana select winter triticale varieties best suited to their particular area and growing conditions.

METHODS: The 1999 dryland statewide triticale trial contained 16 entries including one winter wheat check. The trial was planted using a randomized complete block design with three replications. Test plots consisted of a 15-foot, 4-row plot with 12-inch row spacing. All rows of each test plot were trimmed 36 inches and harvested using an experimental-plot combine. Recorded grain yields were adjusted to 13% grain moisture content, and are reported in pounds per acre because of differences in crop bushel weights. Test weight (pounds per bushel) and percent grain moisture content were obtained for each plot using a Dickey-john GAC 2100 grain analyzer. Plant height was measured in inches from the soil surface to the top of the head, excluding the awns if present. Reported values have been rounded to the nearest inch. Heading date was noted when 50% of the heads in a plot had extended above the flag leaf collar. Heading dates were recorded in Julian days (number of days from January 1) for statistical purposes. Corresponding calendar dates also are presented.

RESULTS and SUMMARY: Agronomic performance of the triticale cultivars and lines tested during 1999 under dryland conditions near Huntley is presented in Table 1. Dryland triticale yields averaged 3821 lb/ac and ranged from 4655 lb/ac for 'Ugo' to 2625 lb/ac for 'SR95710'. 'Almo', 'RHA371-F93', '92E005' and '91T113-C12-5' yielded between 4510 and 4298 lb/ac, which was equal to Ugo. These triticale entries also yielded significantly more than the winter wheat check. All entries in the trial had test weights greater than 50 lb/bu. Several lines in this trial display good yield potential and may find a niche in the Montana cereal market as growers continue to explore production of alternative feed crops.

FUTURE PLANS: Statewide dryland triticale evaluations will continue in 2000 at Southern Agricultural Research Center.

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Table 1. Performance of 15 triticale cultivars and experimental lines tested under dryland conditions near Huntley, Montana during 1999. Cultivars listed alphabetically. (Exp. 99SWTR08).

Cultivar	Grain Yield 1/	Test Weight	Grain Moisture	Plant Height	Grain Protein	Heading Date	
						Julian	Calendar
	lb/ac	lb/bu	%	inches	%		
91T113-C12-5	4,510*	56.7	9.5	40	14.2	152	May 31
92E005	4,298*	53.6	9.1	41	15.2	152	May 31
Almo	4,355*	52.1	8.9	40	14.6	153	Jun 1
B0010	3,671	50.7	8.8	33	15.7	158	Jun 6
KT941289	3,979	54.9	9.2	39	15.8	154	Jun 2
KT941776-5002	3,783	54.2	9.0	37	17.1	156	Jun 4
KT941864-5002	3,878	54.0	9.2	39	15.7	154	Jun 2
KT943322-6003	3,498	54.9	8.9	28	15.1	156	Jun 4
RAH173-F93	4,057	52.7	8.9	37	15.2	154	Jun 2
RAH371-F93	4,349*	51.8	8.8	39	15.2	153	Jun 1
SR94710	2,625	53.6	9.1	35	17.3	162	Jun 10
SR94717	3,082	53.3	8.5	30	17.3	165	Jun 13
SR94719	3,107	52.8	8.7	37	16.5	158	Jun 6
SR94721	3,152	54.5	8.7	32	16.0	159	Jun 7
Tiber (HRWW check)	4,131	62.5	7.7	37	15.7	157	Jun 5
Ugo	4,655**	51.7	9.1	38	14.2	153	Jun 1
Average	3,821	54.0	8.9	36	15.7	156	Jun 4
LSD (p=0.05)	420	0.6	0.2	2.8		<1	
CV%	6.6	0.7	1.2	4.6		0.3	

1/ Yields are in pounds per acre adjusted to 13.0 percent moisture content.

** Indicates highest yielding cultivar.

* Indicates cultivars yielding equal to highest yielding cultivar based on Fisher's protected LSD (p=0.05).

Huntley Dryland Statewide Triticale (Exp. 99SWTR08)

Planted:	September 25, 1998
Harvested:	July 26, 1999
Fertility:	18-46-00, 100 lb/ac, preplant incorporated, September 15, 1998
	34-00-00, 88 lb/ac, broadcast, April 26,1999
Herbicide:	none
Insecticide:	none
Previous Crop:	summer fallow
Precipitation:	10.13 inches