PROJECT TITLE: The evaluation of awnless spring triticale for forage, irrigated and dryland production.

PROJECT LEADER: G.F. Stallknecht

PROJECT PERSONNEL: K.M. Gilbertson, SARC, Don Salmon, Ag. Canada, LaCombe, Canada

OBJECTIVES: To compare awnless triticale genetic selection to hay barley and oats for yield and quality when grown for forage (hay) under dryland and irrigated cropping.

RESULTS: Yield, heading date, and plant height data are given in Tables 1 and 2. An experimental hay barley selection (MT 910207) from MSU was included in the study as well.

The standard cereal crops and varieties (Haybet, and Westford barley, and Otana oats) out yielded all the awnless triticale selections evaluated. However, there was no significant differences in yield between Haybet and 3 of the triticale selections. The major factor in the lower yields of the triticale selections was due to the low number or absence of tillering. Quality data, percent protein, NDF and ADF has not been evaluated at the time of the writing.

SUMMARY: Future studies of triticale for forage must include increased seeding rates for the triticale selections. The advantage of awnless triticale types, is that these selections can be harvested in the soft dough stage, as opposed to the awned types which must be harvested in the boot stage for hay. Preliminary data indicate that triticale forage does not accumulate nitrates as readily as oats or barley forage.

TABLE 1 . 1995 DRYLAND SPRING AWNLESS TRITICALE FORAGE TRIAL, SARC, HUNTLEY, MT.

SEEDING RATE 60#/ACRE

	VARIETY	YIELD TA/DM	PLANTHT INCHES	HEAD DATE	HARV DATE
11	HAYBET BARLEY	3.40	37.67	176.00	7/17
13	MT 910207 BARLEY	3.20	37.00	174.00	7/17
12	WESTFORD BARLEY	3.03	40.00	177.50	7/17
7	88L012003	2.73	43.67	175.50	7/28
6	88L011008	2.67	42.67	173.00	7/28
8	88L012013	2.63	41.67	175.00	7/28
2	88L003008	2.57	41.33	172.00	7/28
5	88L011006	2.53	42.33	173.50	7/28
1	88L003007	2.47	38.33	172.50	7/28
4	88L010003	2.43	39.33	174.00	7/28
9	88L023002	2.30	36.67	178.00	7/28
3	88L010002	2.27	39.00	173.50	7/28
10	*OTANA OAT	1.93	---	185.00	7/28

***** STATISTICAL TABLE *****

	YIELD TA/DM	PLANTHT INCHES	HEAD DATE
EXPERIMENTAL MEANS	2.58	36.89	175.46
TOTAL OBSERVATIONS	36.00	36.00	24.00
C.V. 1: (S/MEAN)*100	13.07	4.23	.35
C.V. 2: (S OF MEAN/MEAN)*100	7.55	2.44	.25
LSD (0.05)	.57	2.64	1.35

*SPRAY DAMAGE

PLANTING DATE: 4/19/95

TABLE 2 . 1995 IRRIGATED SPRING AWNLESS TRITICALE FORAGE TRIAL
SARC, HUNTLEY, MT.

SEEDING RATE 100#/A

	VARIETY	YIELD T/A DM	PLANTHT INCHES	HEAD DATE	HARV DATE
11	* HAYBET BARLEY	4.80	37.33	174.50	7/21
12	WESTFORD BARLEY	4.70	39.33	177.50	7/21
10	OTANA OAT	4.63	42.00	177.50	7/28
7	88L012003	4.60	43.33	174.50	7/28
13	MT 910207 BARLEY	4.50	36.00	173.00	7/21
5	88L011006	4.47	44.00	173.00	7/28
8	88L012013	4.30	43.33	174.00	7/28
9	88L023002	4.20	36.33	177.50	7/28
3	88L010002	4.17	38.33	172.50	7/28
1	88L003007	4.00	38.33	172.50	7/28
4	88L010003	3.90	38.67	173.00	7/28
6	88L011008	3.80	43.67	172.00	7/28
2	88L003008	3.60	38.33	172.00	7/28

***** STATISTICAL TABLE *****

	YIELD T/A DM	PLANTHT INCHES	HEAD DATE
EXPERIMENTAL MEANS	4.26	40.25	174.21
STANDARD ERROR OF THE MEAN	.29	1.00	.40
C.V. 1: (S/MEAN)*100	11.80	4.29	.32
C.V. 2: (S OF MEAN/MEAN)*100	6.81	2.48	.23
LSD (0.05)	.85	2.92	1.23

*= Slight lodging

DATE PLANTED: 4/21/95