

- PROJECT TITLE:** Evaluation of Spring Cereals for Forage Production under Irrigated Conditions near Huntley, Montana. (Exp. 99CF99).
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- OBJECTIVES:** To provide forage producers in south central Montana with a reliable, unbiased, up-to-date source of information that will permit valid comparisons among spring cereal forage species. This information should help producers in south central Montana select forage species best suited to their particular area and growing conditions.
- METHODS:** The 1999 irrigated spring cereal forage trial had ten entries and was planted using a randomized complete block design with three replications. Test plots consisted of a 15-foot, 7-row plot with 6-inch row spacing. All rows of each test plot were trimmed 36 inches and harvested using an experimental-plot forage harvester. Plant height was measured in inches from the soil surface to the top of the head, excluding the awns if present. Reported plant height 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 spring cereal forage species tested during 1999 under irrigated conditions near Huntley is presented in Table 1. Irrigated spring cereal forage yields averaged 5.13 ton/ac and ranged from 6.19 ton/ac for 'Otana' oat to 1.45 ton/ac for 'GR 900' winter spelt. 'Haybet' barley, 'Westford' barley, 'Celsia' oat, 'Stampede' oat and 'Pronghorn' triticale produced forage yields between 6.16 and 5.50 ton/ac, which was equal to the forage production of Otana oat.
- FUTURE PLANS:** Spring cereal forage evaluations under irrigated conditions will continue in 2000 at Southern Agricultural Research Center.

Table 1. Performance of ten spring planted cereal forages tested under irrigated conditions near Huntley, Montana during 1999. Cultivars listed alphabetically. (Exp. 99CF9909).

Cultivar	Forage Yield		Plant Height inches	Heading Date	
	lb/ac	ton/ac		Julian	Calendar
91002005 (awnless triticale)	10,254	5.13	47	183	Jul 1
93-ST-5-93 (spelt wheat cross)	9,794	4.90	49	184	Jul 2
Celsia (oat)	11,010*	5.50	44	186	Jul 4
GR 900 (winter spelt)	2,894	1.45	15	-	-
Haybet (barley)	11,524*	5.76	37	186	Jul 4
Otana (oat)	12,375**	6.19	49	184	Jul 2
Pronghorn (triticale)	11,467*	5.73	48	179	Jun 27
SK3P (awnless spelt)	9,891	4.95	50	192	Jul 10
Stampede (oat)	11,113*	5.56	41	197	Jul 15
Westford (barley)	12,315*	6.16	45	185	Jul 3
Average	10,264	5.13	43	186	Jul 4
LSD (p=0.05)	2,053	1.03	1.5	<1	
CV%	11.7	11.7	2.1	0.1	

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

Irrigated Spring Cereal Forage (99CF99)

Planted: May 3, 1999
 Harvested: July 20, 1999
 July 26, 1999
 July 30, 1999
 Fertility: 18-46-00, 100 lb/ac, preplant incorporated, April 8, 1999
 Herbicide: Buctril, 1 pt/ac; Harmony Extra, 0.3 oz/ac; R-11, 1% v/v,
 June 17, 1999
 Insecticide: none
 Previous Crop: small grains
 Irrigation: profile flooded, June 17, 1999
 profile flooded, June 30, 1999
 Precipitation: 5.56 inches (May 3 through July 20, 1999)
 5.69 inches (May 3 through July 26, 1999)
 5.69 inches (May 3 through July 30, 1999)