

PROJECT TITLE:

Evaluation of Winter Annual Cereals for Forage Production under Dryland Conditions near Huntley, Montana. (Exp. 99WWFT08).

PROJECT LEADER:

Kenneth D. Kephart, Agronomist, SARC, Huntley

PROJECT PERSONNEL:

Peggy F. Lamb, Research Associate, SARC, Huntley
David M. Wichman, Agronomist, CARC, Moccasin
Tom A. Fischer, Research Specialist and Farm Foreman, SARC, Huntley, MT

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 winter 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 dryland winter cereal forage trial had eight entries and was planted using a randomized complete block design with four 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 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 winter cereal forage species tested during 1999 under dryland conditions near Huntley is presented in Table 1. Dryland winter cereal forage yields averaged 4.31 ton/ac and ranged from 5.06 ton/ac for 'Cardinal' to 2.11 ton/ac for '97SEG30'. 'Neeley', '97SEG316', 'SROB632' and 'SROB633' also produced between 5.01 and 4.84 ton/ac, which was equal to the forage production of Cardinal. One cutting of dryland winter cereal forage produced more dry matter than two cuttings of dryland alfalfa. However, without protein analysis from both crops, valid relative feed value comparisons cannot be made.

FUTURE PLANS:

Winter cereal forage evaluations under dryland conditions will continue in 2000 at Southern Agricultural Research Center.

Table 1. Performance of eight fall planted cereal forages tested under dryland conditions near Huntley, Montana during 1999. Cultivars listed alphabetically. (Exp. 99WWFT08).

Cultivar	Forage Yield		Plant Height inches	Heading Date	
	lb/ac	ton/ac		Julian	Calendar
97SEG30	4,210	2.11	32	164	Jun 12
97SEG316	9,950*	4.98	41	158	Jun 6
Cardinal (soft red winter)	10,119**	5.06	31	154	Jun 2
Neeley	10,020*	5.01	33	158	Jun 6
PI191303	6,907	3.45	37	168	Jun 16
SROB632	9,736*	4.87	36	161	Jun 9
SROB633	9,671*	4.84	41	163	Jun 11
SROB637	8,294	4.15	39	162	Jun 10
Average	8,613	4.31	36	161	Jun 9
LSD (p=0.05)	1,041	0.50	2.4	<1	
CV%	8.2	8.2	4.6	0.1	

** Indicates highest yielding cultivar.

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

Dryland Winter Cereal Forage Evaluation (Exp. 99WWFT08)

Planted: September 25, 1998
 Harvested: July 1, 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: 9.68 inches