Testing Forage Winter Wheat

Western SARE

Phil Rasmussen, Coordinator
Utah State University
Agricultural Science Building
Room 305
4865 Old Main Hill
Logan, Utah 84322-4865
phone: (435) 797-2257
fax: (435) 797-3344

Professional Development Program

Dennis Cash
Montana PDP Coordinator
Montana State University
235 Linfield Hall
Bozeman, MT 59717-2820
(406) 994-5688
dcash@montana.edu

...

Western SARE Grant Categories

- Research & Education
- Professional Development
- Farmer/Rancher
- Professional + Producer
- Graduate Student
- Sustainable Farm Tours

Go to http://wsare.usu.edu
Click on: Apply for a Grant

Situation

Hay and grassland producers must periodically renovate their lands for replanting perennial grasses and alfalfa, controlling weeds and restructuring flood irrigation ditches. However, the process of rotating hayfields to small grain can impact profitability and sustainability.

Rotating hay fields to grain can result in:

- Loss of hay base while the land is in small grains
- Excessive workload in the spring to prepare beds and seed grain
- The expense of owning machinery for both hay and grain production
- Nitrate accumulation in the small grain

Farmer/Rancher Grant

Title: Forage Winter Wheat Production for Hay or Grain in Gallatin County

Project Number: FW04-018

Project Coordinator:
George Reich
P.O. Box 195
Willow Creek, MT 59760
(406) 285-6675
(406) 285-4304 fax
reichbros@theglobal.net

Technical Advisor:
Ron Carlstrom
Gallatin County Extension Agent
901 N. Black
Bozeman, MT 59715
(406) 582-3280
(406) 582-3273
carlstrom@montana.edu

Amount Funded: $5,370

Seed depth and seeds per foot are measured in Pass Creek plots.

Many Montana producers currently plant spring forage barleys, which grow well but have drawbacks, including planting challenges in wet spring weather and demand for equipment by other farm activities.

Replacing spring barley with a forage winter wheat variety, yielding as hay or small grain, could overcome most of those drawbacks. No recommended varieties of beardless winter wheat were available to Montana producers. But two test plots of two promising varieties had been established on farms and research stations.

Forage winter wheat planted in 2004 grew only vegetatively.

Objectives

1. Twenty producers will tour both the Willow Creek and Pass Creek test sites
2. Producers will gain knowledge in how two varieties grow in each area
3. Producers will see the varieties growing throughout the growing season
4. The Montana State University agronomist will disseminate information on the project to the general public through the popular press and grower meetings
5. One thousand agricultural newsletters will disseminate information on the project and study results

...continued on page 2

Testing Forage Winter Wheat

6. Eight producers will learn about the economics of growing forage winter wheat, in rotation for hay land, during the annual crop school in the spring 2004 and 2005
7. A pre and post survey will examine the attitudes of six producers involved in the program before and after the trials

Forage winter wheat at Willow Creek irrigated plots (background) averaged 5 feet tall. Barley and winter triticale are in the foreground. Below, the forage winter wheat was planted with grower equipment.

Actions

Test plots were planted at in the Gallatin Valley at two sites representing most of Montana's precipitation zones and growing seasons:

- Willow Creek, elevation 4,200 feet, annual precipitation 10-12 inches, growing season 100-1005 days
- Pass Creek, elevation 5,400 feet, annual precipitation 14-16 inches, growing season 75-80 days

A tour of the sites, planned in conjunction with the Gallatin Beef Producers summer educational tour, was rained out, but the county agent met with several producers, who expressed strong interest in the project and new varieties that might be released from Montana State University.

Extension agronomist Dennis Cash taught workshops on annual forage production to producers throughout Montana, discussing the forage winter wheat project in each.

Results

Sixty producers gained knowledge of the project and observed the crops during the Central Agriculture Research Station Forage Field Day. Interest generated by field days and news releases led to distribution of remaining seed to eight Montana counties.

County agents, research station personnel and producers selected sites and planted 4- to 5-acre plots using producer equipment.

(A Western SARE Farmer/Rancher Grant, FW05-012, "Forage Winter Wheat Production for Grazing and Hay Production in Eight Montana Counties," was received to expand this project.)

During a meeting at Willow Creek, where growers and technical advisors reviewed test plot information, Lot 03-02 was identified as the hay of choice, owing to its winter hardiness. The grower input stimulated the process for releasing Lot 03-02 as a forage winter wheat variety from the Montana Agricultural Experiment Station.

An insert explaining the project, its findings and its future was incorporated into the Gallatin County Extension Agriculture newsletter, distributed to 1,300 agricultural producers, landowners and interested agriculture businesses.

Potential Benefits

The crops tested in this project have several impacts on agriculture in Gallatin County and Montana:

- They can provide growers with a viable winter forage.
- They will not cause dockage in winter wheat grown for cereal production, unlike winter barley, triticale and rye.
- Producers can save labor costs by planting a forage crop in the fall instead of the spring.
- In arid and semi-arid parts of Montana, producers can capitalize on late fall and early spring moisture to increase forage yields.
- Using a spring planting program that mixes forage winter wheat with forage barley and oats can save growers money by distributing seeding costs over two years.
- The fall-seeded forage winter wheat is expected to reduce soil erosion during critical winter months.

Western SARE, a USDA organization, funds grants for research and education that develop or promote some aspect of agricultural sustainability, which embraces

- *profitable farms and ranches*
- *a healthy environment*
- *strong families and communities.*

The Western Region, one of four SARE regions nationwide, is administered through Utah State University.

Western SARE:
http://wsare.usu.edu

National SARE
www.sare.org