

Evaluating Range Plants

The choice of plant materials to protect the soil and to provide food and cover for livestock and wildlife is limited in the intermountain west on lands where annual precipitation is limited. The Plant Materials Center at Aberdeen, Idaho which is operated by the United States Department of Agriculture - Natural Resources Conservation Service is evaluating plant materials for use in areas which receive less than 12 inches of annual precipitation.

During the fall of 1994, the Aberdeen Plant Materials Center established 2 test sites to evaluate plant materials for use in areas with limited precipitation. One site is located near Grantsville, Utah which is approximately 30 miles southwest of Salt Lake City. This site normally receives 10-12 inches of annual precipitation and is heavily infested with cheatgrass, a weedy, annual grass which destroys the productivity of rangeland. The other site known locally as Coffee Point is located about 25 miles northwest of Aberdeen on the Snake River Plain. This area receives 8-10 inches of annual precipitation.

Both test sites include trials to test the performance of grasses for revegetation and forage production and display nurseries to allow landusers to view examples of varieties of grasses, forbs and shrubs that are adapted to the general area. The Grantsville test site includes a trial to test the performance of winterfat and fourwing saltbush, 2 shrubs native to the intermountain west.

The test sites are evaluated twice during the growing season for plant height, stand establishment, plant density, and vigor. Forage production data is also gathered once the plants have established, usually beginning the second growing season.

The top five forage producing grass varieties at Coffee Point in 1996 which are commercially available were; 'Hycrest' crested wheatgrass (957 pounds per acre), 'Vavilov' Siberian wheatgrass (836 pounds per acre), 'Nordan' crested wheatgrass (781 pounds per acre), 'P-27' Siberian wheatgrass (669 pounds per acre) and 'Ephraim' crested wheatgrass (650 pounds per acre). The Coffee Point test site received approximately 5.3 inches of precipitation from October, 1995 to September, 1996.

The top five forage producing grass varieties at Grantsville in 1996 were; Vavilov (957 pounds per acre), Nordan (846 pounds per acre), Hycrest (753 pounds per acre), Ephraim crested wheatgrass (725 pounds per acre) and 'Bannock' thickspike wheatgrass (697 pounds per acre). Grantsville received approximately 9.8 inches of precipitation from October, 1995 to September, 1996.

Although these trials are examining forage production from each variety in pure stands, it should be noted that multiple species seedings may increase overall production and will provide more favorable wildlife habitat. The inclusion of two or more grasses, forbs, and shrubs in a seed mixture is highly recommended.

Evaluations at the test sites will continue for the next three years to observe how well the plants perform under various weather conditions from year to year.

A detailed report for each of the sites is available upon request and tours of the test sites may also be arranged. Please contact the Plant Materials Center at (208) 397-4133 for further information.

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Submitted to Aberdeen Times, Capital Press, Intermountain Farm and Ranch and Magic Valley AG WEEKLY, April 2, 1997.

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