

NRCS Testing Range Grasses for Low Precipitation Areas  
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The USDA Natural Resources Conservation Service (NRCS) offers new forage grass data for ranchers in the Upper Snake River Plain. Several grasses – such as ‘Hycrest’ crested wheatgrass outperformed others in drought conditions.

The NRCS Plant Materials Center in Aberdeen, Idaho established a test site in 1994 to evaluate different grasses for livestock and wildlife in areas receiving 8-12 inches annual precipitation. Plant Materials Center personnel recently completed an evaluation of the test planting ten years after establishment of the site.

The site is located about 25 miles northwest of Aberdeen on land administered by the Bureau of Land Management. The soils are moderately deep, well drained, brown loam with scattered pockets of exposed bedrock. The dominant vegetation in the surrounding natural plant community is bluebunch wheatgrass and Wyoming big sagebrush.

The area used for the plant evaluation had been used previously for testing purposes. Annual weeds and grass (cheatgrass) which dominated the site were plowed in October 1993 with the intention of fallowing the site until seeding the following fall. Due to extremely dry conditions during the 1994 growing season, no cheatgrass emerged. In late October 1994 the site was packed prior to planting to prepare a firm seedbed.

Plant Materials Center personnel used a double disk drill with press wheels to plant the grasses. The trial includes 26 different grasses planted in a complete randomized block design with four replications to allow for statistical analysis. Plots were seven feet wide by 20 feet long and seed was planted at standard seeding rates to a depth of ¼ to ¾ inch deep, depending on species requirements. A display nursery was also planted to allow people to view other plants adapted to the area.

Data on stand establishment, plant density, plant height, and forage production were collected and analyzed during each growing season from 1995 to 1999 and again in 2005, the tenth growing season after planting. Precipitation during the testing period ranged from 5.67 inches in 2003 to 14.22 inches in 1997. The test planting burned in 1996 as part of the Cox Well Wildfire.

In 1999 (five years after planting), the best stand establishment was from Russian wildrye plots, ‘Vavilov’ Siberian wheatgrass and ‘Sodar’ streambank wheatgrass. The grass plots with the best plant density (plants per square foot) were ‘Bannock’ thickspike wheatgrass, Sodar streambank wheatgrass and ‘Vavilov’ Siberian wheatgrass. The highest forage yielding grasses were ‘Hycrest’ crested wheatgrass and Vavilov Siberian wheatgrass.

During the 2005 growing season, the best stand establishment continued to be from Russian wildrye plots (‘Bozoisky-Select’, ‘Mankota’ and some other non-released materials). The best plant density was from ‘Ephraim’ crested wheatgrass and the highest

forage yielding grasses were Hycrest crested wheatgrass and 'P-27' Siberian wheatgrass. Many of the native grass releases that were planted at the test site have not fared well during the last several years likely due to the drought and hot summers.

The information from this test site is valuable to landowners and land managers in the region to help them determine what grass species and varieties may be best suited to reclaim similar sites after wildfire or other disturbances. For detailed information on the plant evaluations or a copy of the evaluation reports, please contact Loren St. John at the Plant Materials Center at (208)397-4133 or by email at [Loren.Stjohn@id.usda.gov](mailto:Loren.Stjohn@id.usda.gov).

The mission of the USDA-NRCS Plant Materials Program is to develop, test, and transfer effective state-of-the-art plant science technology to meet customer and resource needs.



**'Bozoisky-Select' Russian wildrye**

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