

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
IDAHO, NEVADA, OREGON, UTAH

and

IDAHO AGRICULTURAL EXPERIMENT STATION
UNIVERSITY OF IDAHO
MOSCOW, IDAHO

NOTICE OF RELEASE OF 'BANNOCK' THICKSPIKE WHEATGRASS.

The United States Department of Agriculture, Natural Resources Conservation Service and the Idaho Agricultural Experiment Station announce the naming and release of 'Bannock' thickspike wheatgrass, *Elymus lanceolatus* ssp. *lanceolatus* (Hook.) Scribn. Synonym *Agropyron dasystachyum*. Official identification of this material was made by Dr Karl Holte, Director, Idaho State University Herbarium, Pocatello, Idaho.

'Bannock' thickspike wheatgrass was developed at the Natural Resources Conservation Service Plant Materials Center, Aberdeen, Idaho through selection and direct increase from field plots. 'Bannock' has been compared with other released cultivars of thickspike wheatgrasses at sites throughout the Intermountain region and at locations in other western states.

Origin 'Bannock' thickspike wheatgrass is a composite of P-1822, P-3751, P-4567, P-4702, P-6291, and P-7803. P-1822 was collected in 1934, east of the Dalles, OR and was received from the Pullman PMC in 1939. P-3751 and P-6291 were collected near Pocatello, ID. P-4567 was collected near Grandales, WA. P-4702 was collected near Quincy, WA. P-7803 was collected near North Dalles, WA. Dates of collection and specific locations are not available, all were collected prior to 1948.

Description: The 'Bannock' cultivar of *Elymus lanceolatus* ssp *lanceolatus* is a long lived, leafy, cool-season grass. The culms are medium-coarse, soft, erect, and 45 - 60 cm tall, (up to 100 cm irrigated). The leaves, stems, and seed heads have little or no pubescence. The leaves extend 20 - 30 cm up the stems, (45 - 60 cm irrigated). The leaves are abundant, 17 - 25 cm long, 3 - 4 mm wide (4 - 6 mm wide irrigated) and flat with a pale green to bluish cast, (somewhat bluer than 'Critana'). 'Bannock' is rhizomatous, with vigorous sod-producing qualities. Rhizome growth is about 10 cm per year, (up to 25 cm per year irrigated). This rapid rhizome growth does not represent a weed problem as the plants are easily controlled with cultivation or chemicals. Seed heads are 6 - 12 cm long, (15 - 25 cm under irrigated seed production conditions). Spikelets are 10 - 12 mm long, (18 - 20 mm irrigated), with glumes 8 - 10 mm long, often turning reddish at maturity. There are no awns. 'Bannock' forms a protective sod faster than 'Sodar' in the 8 - 10 inch precipitation zone.

Superior Characteristics: Rapid establishment and formation of sod. High forage production and ability to survive and thrive under dry conditions.

Other Characteristics: In seed production fields at the Aberdeen PMC, 'Bannock' has produced 280 - 450 Kg/Ha (250 - 400 lb/ac) for 2 to 3 years, before seed production levels dropped off. This is similar to production levels for other thickspike wheatgrasses.

Proposed Uses: 'Bannock' would be one component of a mix for the following uses;

1. Rangeland seeding on the 8 to 16 inch precipitation zones for erosion control, forage, and cover.
2. Mine spoil reclamation to provide sod formation for soil protection.
3. Critical area stabilization where a sod forming, rhizomatous perennial is needed as in road stabilization and rehabilitation.
4. Filter strips to trap sediment at field edges or across long sloping fields.
5. Competition with aggressive annuals such as cheatgrass and medusahead, in precipitation zones above 8 inches, because of its ability to establish sod.

Area of Adaptation: 'Bannock' is adapted to the Northwest and Intermountain regions where precipitation averages above 8 inches. No upper precipitation limit has been established for 'Bannock'. The area where it may be adapted extends into the northern Great Plains. It prefers moderately deep, loamy soils, but can grow on sandy and clayey soils. Suitable dryland sites will be found in Major Land Resource Areas; A3, A5, B6, B8-B13, D21, D22, D25, D28a, and E43-51. On low precipitation sites, it will have a shorter stature. Under irrigation, it will grow in all A, B, D, and E regions.

Disease Problems: No detrimental disease symptoms have been observed in plantings of 'Bannock'.

Environmental Consideration: This release is from a species native to the intermountain region with three previous releases, made over a 40 year period. This new cultivar represents an incremental improvement in performance within a well documented species. This species is well documented as having beneficial qualities, and no negative impacts on wild or domestic animals. The test plots supporting this release were made in close proximity to natural and induced plant ecosystems. There was no evidence of negative impacts or invasion into these ecosystems. The release of 'Bannock' Thickspike wheatgrass is the result of a data gathering process and is thus exempt from 7 CFR 650.6.

Increase and Distribution: Breeder, Foundation, Registered, and Certified seed classes are recognized. Certification of seed shall be limited to not more than two generations from Foundation seed. Foundation seed will be made available through the Idaho Crop Improvement Association, Utah Crop Improvement Association, and Soil Conservation Districts in Idaho, Utah and Nevada beginning in 1995. Breeder and Foundation seed will be maintained by the Natural Resources Conservation Service, Plant Materials Center, Aberdeen, Idaho.

Protection will be applied for under the Plant Variety Protection Act of 1970. Conditions of this application specify that 'Bannock' seed can be marketed only as a class of certified seed.

Submitted by: This Notice of Release of 'Bannock' Thickspike wheatgrass, was prepared by Gary Young, Manager, Aberdeen Plant Materials Center, and Dan Ogle, Plant Materials Specialist, USDA Natural Resources Conservation Service, Boise Idaho, for joint release by the Natural Resources Conservation Service in Idaho, Nevada, Oregon, and Utah; and the Idaho Agricultural Experiment Station, University of Idaho.

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