

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

and

WASHINGTON AGRICULTURAL RESEARCH CENTER

and

OREGON AGRICULTURAL EXPERIMENT STATION

and

IDAHO AGRICULTURAL EXPERIMENT STATION

and

MONTANA AGRICULTURAL EXPERIMENT STATION

and

WYOMING AGRICULTURAL EXPERIMENT STATION

NOTICE OF RELEASE OF 'SECAR' BLUEBUNCH WHEATGRASS

The United States Department of Agriculture, Soil Conservation Service; the Washington Agricultural Research Center; the Oregon Agricultural Experiment Station; the Idaho Agricultural Experiment Station; the Montana Agricultural Experiment Station; and the Wyoming Agricultural Experiment Station announce the release of 'Secar' bluebunch wheatgrass, *Agropyron spicatum* (Pursh) Scribn. and Sm.. Secar was developed at the Soil Conservation Service Plant Materials Center, Pullman, Washington.

'Secar' is a selection from a native plant collection made on the Lewiston grade in the Snake River gorge near Lewiston, Idaho. 'Secar' was evaluated as P-6409. It was selected for its superiority in drought tolerance, forage production in precipitation zones under 35 cm annually, spring recovery, the ability to establish and provide groundcover, root and crown production, dryland seed yield potential, and irrigated seed yield potential. 'Secar' bluebunch wheatgrass is P.I. 440,921.

Bluebunch wheatgrass is a perennial cool-season bunchgrass native throughout the western United States. Its natural distribution ranges from Alaska to northern California and New Mexico. It is abundant in parts of Montana, Wyoming, Idaho, and eastern Washington and Oregon.

'Secar' is a densely tufted bunchgrass with abundant, narrow leaves, numerous fine stems, small seeds, and divergent awns. It is early maturing, drought tolerant, and persistent under adverse conditions. It is adapted alone or with understory grasses at low elevations in the 20-35 cm precipitation zones of the Pacific Northwest.

Proposed uses include rangeland seeding on dryland sites, critical area stabilization, particularly if seeded in a mixture with a drought-tolerant understory plant such as canby bluegrass, *Poa canbyi* (Scribn.) Piper; for reestablishment of native plant communities; and for mine spoil reclamation.

Two hundred fifty-five accessions of bluebunch wheatgrass have been evaluated at the Pullman PMC since 1939. Testing sites included Aberdeen and Tetonia, Idaho; Pendleton and Union, Oregon; Bridger, Montana; and Pullman, Lind, and Central Ferry, Washington. Field-sized and problem site plantings have been evaluated in Washington, Oregon, Idaho, Montana, and Wyoming. 'Secar' is a product of this testing.

The name 'Secar' was selected to reflect drought tolerance. Seca in Spanish is the feminine for dry.

Breeder seed of 'Secar' will be maintained by the Soil Conservation Service Plant Materials Center, Pullman, Washington. Breeder, Foundation, Registered, and Certified classes are recognized.



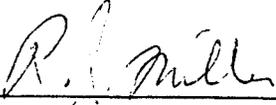
Director of Research
Washington Agricultural Research Center
Washington State University
Pullman, Washington

April 29, 1980
Date



Director, Oregon Agricultural Experiment Station
Oregon State University
Corvallis, Oregon

May 2, 1980
Date



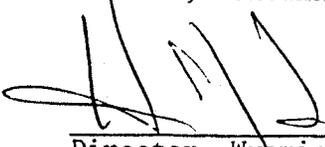
Director Idaho Agricultural Experiment Station
University of Idaho
Moscow, Idaho

5/8/80
Date



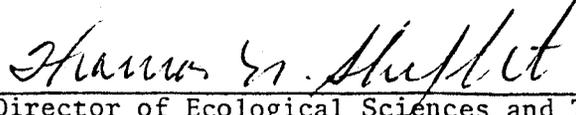
Director, Montana Agricultural Experiment Station
Montana State University
Bozeman, Montana

5/19/80
Date



Director, Wyoming Agricultural Experiment Station
University of Wyoming
Laramie, Wyoming

5/28/80
Date



Director of Ecological Sciences and Technology
Division
United States Department of Agriculture
Soil Conservation Service
Washington, D.C.

6/10/80
Date



United States
Department of
Agriculture

Soil
Conservation
Service

SUBJECT: ECOL SCI - Plant Materials: Variety Release
'Secar'

DATE: June 23, 1980

TO: Guy W. Nutt, STC, SCS, Portland SO
Amos I. Garrison, Jr., STC, SCS, Boise SO
Van K. Haderlie, STC, SCS, Bozeman SO
Frank S. Dickson, Jr., STC, SCS, Casper SO

Attached are copies of the signed Notice of Release of 'Secar' bluebunch wheatgrass for your files.

LYNN A. BROWN
State Conservationist

Attachments: 2 ea.

cc: Jack Carlson, PMS, SCS, Portland TSC
Clarence Kelley, PMCM, SCS, Pullman PMC
Jack Peterson, PMCM, SCS, Corvallis PMC
Charles Howard, PMCM, SCS, Aberdeen PMC
John Scheetz, PMCM, SCS, Bridger PMC



File Secar
with release data

Recommendation For The Release Of A Variety
Of
Bluebunch Wheatgrass

Introduction

Scientific Name: *Agropyron spicatum* (Pursh) Scribn. & Sm.

Common Name: Bluebunch wheatgrass

Varietal Name: 'Secar'*

Other Identification Used: P-6409, 2951T, BN-5690, BN-6107

Origin: A selection from a native plant collection on the Lewiston Grade in the Snake River Gorge, near Lewiston, Idaho on July 5, 1938. Due to existing location of the Lewiston Grade it is assumed the site of collection was a southern exposure. More detailed information is not existent.

Description: A low-elevation, dryland ecotype. A densely tufted bunchgrass with abundant, narrow leaves, numerous fine stems, small seeds and divergent awns; early maturing. It is drought tolerant and persistent under adverse conditions. Is adapted alone or with understory grasses at low elevations in the 8-14 inch precipitation zones of the Pacific Northwest. It is a tetraploid ($2N = 28$). Plants are seldom over 100 cm. tall; stems very numerous, very fine with narrow lax heads; leaves narrow, flat, basal, abundant, glabrous pale green and lax; seed production good (better than other strains).

Culms, tufted, often in large bunches, erect 60 to 100 cm tall; sheaths glabrous; blades flat to loosely involute, 1 to 2 mm., sometimes to 4 mm., wide, glabrous beneath, pubescent on the upper surface. The spike is slender, mostly 8 to 15 cm. long; spikelets distant, not as long (excluding the awns) as the internodes or slightly longer, mostly 6 to 8 flowered. Glumes are rather narrow, obtuse to acute, rarely short-awned; lemmas about 1 cm. long, the awn strongly divergent, 1 to 2 cm. long; palea about as long as the lemma, obtuse.

Method of Development: Selection and direct increase from field collection.

Since 1939 P-6409 (Secar) has been compared with 255 strains representing native collections from Washington, Oregon, Idaho, California,

*Not confirmed

New Mexico, Montana, Wyoming, Nevada, Nebraska, Arizona, Colorado, Utah, Alaska and Canada.

Superior Characteristics: P-6409, 'Secar', generally proved equal or superior to other strains in drought tolerance, forage production in precipitation zones under 14 inches annually, spring recovery, the ability to establish and provide ground cover, root and crown production, dryland seed yield potential and irrigated seed yield potential. In nearly all phases of testing below 14 inches of rainfall, its performance exceeded that of Whitmar, beardless bluebunch wheatgrass, *Agropyron inerme*.^{1/}

Proposed Uses:

1. Rangeland seeding on dryland sites 8-14" rainfall.
2. Critical area stabilization, particularly if seeded in a mixture with a drought tolerant understory plant such as 'CANBAR' *Poa canbyi* (Scribn.) Piper.
3. For reestablishment of native plant community.
4. Mine spoil reclamation.

Area of Adaptation: P-6409 'SECAR' bluebunch wheatgrass is a typical perennial bunchgrass. The species is widely distributed, ranging from Alaska to northern California and New Mexico. It is abundant in parts of Montana, Wyoming, Idaho and eastern Washington and Oregon. It is the most abundant long-lived perennial grass in Washington. Bluebunch wheatgrass usually occurs on medium textured loamy soils over 10 inches deep and may also be present on moderately coarse textured sandy loam soils with native needlegrasses. It is most common on the loamy, shallow, and sandy loam range sites in Major Land Resource Areas (MLRA's) 6, 7, 8, and 9. It is an important species on the north exposure range sites in MLRA 8 and open south slopes and droughty timber sites in MLRA's 43 and 44. Palatability is rated from good to excellent. However, where not grazed for a period of years, an excessive accumulation of old growth within the bunches becomes unpalatable, rank and tough. The leafage remains green throughout the grazing season and is nutritious and palatable after growth ceases.

^{1/} The name *Agropyron inerme* is used throughout this document. Wherever it occurs herein it is to be interpreted as *Agropyron spicatum* f. *inerme* (Scribn. & Sm.) Beetle--beardless wheatgrass.^{2/}

^{2/} Edward E. Terrell. A Checklist of Names for 3,000 Vascular Plants of Economic Importance. Agr. Hdbk. No. 505, Agr. Res. Service, USDA, Washington D.C.

Bluebunch wheatgrass provides forage in the summer, fall, and winter for cattle, sheep, and horses. Elk, white-tailed deer, and mule deer graze it extensively during the winter and spring; antelope grazes it moderately in the spring. It is a decreaser plant on all range sites when grazed by cattle or horses, but is an aggressive increaser on range grazed by sheep.

Disease Problems: P-6409 'SECAR' is susceptible to stripe rust and mildew but the degree of susceptibility seems no greater than other strains.

Increase and Distribution: Breeder, Foundation, and Certified seed classes are recognized. Certified seed production shall be limited to not more than two generations from foundation seed. Foundation seed will become available through the Washington State Crop Improvement Association. Breeder seed is maintained by the Soil Conservation Service, Plant Materials Center, Pullman, Washington. Three hundred (300) pounds of Breeder seed is available for immediate seed increase. It is anticipated by the spring of 1981 one thousand (1000) pounds of Foundation will be available.

Submitted by: This recommendation for the release of P-6409 'SECAR' bluebunch wheatgrass, *Agropyron spicatum*, was prepared and submitted by Clarence A. Kelley, Pullman Plant Materials Center Manager, Soil Conservation Service, U.S.F.A., Pullman, Washington for joint release by the Soil Conservation Service and the Washington Agricultural Research Center.