

Kansas State University
Agricultural Experiment Station
Manhattan, Kansas

and

United States Department of Agriculture
~~Soil Conservation Service~~
Plant Sciences Division
Washington, D. C.

and

United States Department of Agriculture
Agricultural Research Service
Crops Research Division
Beltsville, Maryland

Notice of the Release of a Variety of Western Wheatgrass

Name: Barton western wheatgrass (Agropyron smithii)

Accession Numbers: PM-K-402, PM-K-27, and KG-2036

Origin: A field collection of seed from natural grassland on clay bottom-land along Walnut Creek near Heizer, Barton County, Kansas. The first collection was by SCS in 1947. Subsequent collections were made by commercial seedsmen. Annual precipitation in this area is about 23 inches.

Method of breeding or selection: No Selection. Increase of the field seed collection. Generations of increase limited to three classes: Foundation, Registered; and ~~Certified~~

Description: A strongly rhizomatous leafy ecotype in intermediate in growth between the northern and southern types. It shows little evidence of rust when grown in western Kansas and is relatively free of rust at Manhattan. In plot evaluations at the Manhattan Plant Center it was superior in forage production and disease resistance to accessions representing three areas where western wheatgrass seed is frequently harvested for the commercial seed trade; namely, the Milk River Basin in Montana; Sturgis, South Dakota; and Dalhart, Texas. At the Hays Experiment Station, in comparison with 16 other accessions, Barton western wheatgrass ranked first in seed culm development and herbage yield.

Seed yields at the Manhattan Plant Center have been low; but a seed field on Colby soil near Okley, Kansas, irrigated and fertilized, produced 261 pounds of 50 percent PLS seed per acre for four consecutive years. With fall application of 4 acre and two irrigations (spring and heading), the average yield for three years (1962-1964) was 300 pounds of clean seed per acre on experimental plots in this field.

Conservation use or potential: For use in mixtures for range seeding or alone for cool-season pasture or hay, and alone or in mixtures for seeding waterways, earth fills, bank stabilization, and other plantings where the establishment of natural vegetation is the objective. This is an excellent ecotype for use in western Kansas and central and western Nebraska, and has limited use in adjoining areas of Oklahoma and Colorado.

Availability of seed or planting stock: Limited seed from a Foundation planting at Manhattan Plant Materials Center will not be available for distribution to seed growers before the fall of 1970.

Director
Kansas Agricultural Experiment Station

Date

Director
Plant Sciences Division, SCS
U. S. Department of Agriculture

Date

Director
Crops Research division, ARS
U. S. Department of Agriculture

Date