

United States Department of Agriculture
Agricultural Research Service

and

United States Department of Agriculture
Soil Conservation Service

and

The North Dakota Agricultural Experiment Station
North Dakota State University
Fargo, North Dakota

RELEASE OF 'RODAN' WESTERN WHEATGRASS, AGROPYRON SMITHII RYDB.

The Agricultural Research Service, U.S. Department of Agriculture, in cooperation with the Soil Conservation Service and North Dakota Agricultural Experiment Station announce the release of 'Rodan' western wheatgrass, Agropyron smithii Rydb. Rodan has been tested widely in the Northern Great Plains and western United States under the designation Mandan 456.

Rodan originated from a 70 acre field of western wheatgrass of unknown origin grown in the Missouri River bottoms near Mandan, North Dakota. Individual plants were established from a random seed sample taken from the 1936 bulk harvest of the 70 acre field. One plant was selected from among 50 individual plants and progeny tested in a spaced-plant nursery with other western wheatgrass accessions. Thirteen plants from a 40 plant progeny row were selected and intercrossed in isolation. Selection among plants in early generations was for disease resistance, sward density, and fineness of leaves. Seed from the 13 plants was bulked and grown under isolation for approximately seven open-pollinated seed increase generations with field size ranging from one-half to one acre. Natural selection for upland types and drought tolerance and minor selection by roguing undesirable plants was practiced during this time. Seed was distributed for testing from the latter three generations under the designation Mandan 456. In 1982, 300 ramets were dug from an acre increase field to establish an isolated breeder seed plot that would maintain integrity of the tested materials and assure adequate supply of breeder seed stock.

Rodan is moderately rhizomatous and forms a dense blue-green sward. Leaves are thinner and less heavily veined than other western wheatgrass cultivars. In 58 replicated trials, Rodan has yielded an average of 178 lbs/acre more forage than other western wheatgrass cultivars. Rodan is similar to Rosana in area of adaptation but is more productive than Rosana on coarse-textured soils. Primary area of use will be the northern Plains located in the western Dakotas and eastern Montana and Wyoming. Rodan seed has a short awn that detracts from its seed quality but it is similar to Rosana in seed yield. Rodan has moderate to good resistance to stem rust incited by races of Puccinia graminis currently infecting western wheatgrass in the northern Great Plains.

Breeder seed of Rodan will be maintained by the Agricultural Research Service, Northern Great Plains Research Center, Mandan, North Dakota 58554. Two generations of seed increase, foundation and certified, beyond breeder seed is authorized. Foundation seed will be available from USDA, Soil Conservation Service, Plant Materials Center, Bismarck, North Dakota 58501.

Release date for publicity purposes shall be effective on the date of final signature of the release notice.

Administrator

Date

Agricultural Research Service
United States Department of Agriculture
Washington, D. C.



Director



Date

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



State Conservationist



Date

United States Department of Agriculture
Soil Conservation Service
Bismarck, ND



Director



Date

North Dakota Agricultural Experiment Station
North Dakota State University
Fargo, ND