

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF AGRICULTURE/PLANT MATERIALS CENTER
... PRACTICAL PLANT TECHNOLOGY FOR THE NORTH

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Notice of Naming and Release of 'Reeve' Beach Wildrye

Scientific Name: Elymus arenarius L.

This collection was obtained as Elymus arenarius. The species is also referred to as Elymus mollis Trin., and most recently, Leymus arenarius. The Alaska Plant Materials Center has chosen to use the traditional nomenclature for genetic material of European origin.

Common Name: Beach Wildrye.

Often, a plant may have more than one common name. This species is no exception; as many as thirteen common names, including dune grass and lyme grass, have been reported. Beach wildrye seems to be the most widely accepted name in Alaska.

Cultivar: 'Reeve'.

This cultivar name was selected to honor Robert (Bob) Campbell Reeve, a pioneer in Alaska's aviation history. Beach wildrye is common throughout the coastal areas of Alaska, especially the Aleutian Islands and the Pribilof Islands. Robert Reeve started commercial airline service to these remote areas in 1942. This airline, known for extremely skilled pilots, still bears his name.

Other Identifying Names: PI 345978

Origin: The parent seed for this accession was received from the National Plant Introduction System located in Beltsville, Maryland. The original collection was made by the University of Oslo Botanical Garden, Oslo, Norway. The collection was received by the U. S. Plant Introduction System on September 10, 1969.

Description and Occurrence: Reeve Beach wildrye is a perennial, erect, strongly rhizomatous, sod-forming grass. At Palmer, the cultivar grows 40 inches tall with occasional seed heads reaching 50 inches. The foliage of Reeve is more rigid with a blue color which makes it distinguishable from Alaskan Beach wildrye collections. At maturation, the seed heads are straw-colored.

The taxonomic complex of Elymus arenarius has a circumpolar range. However, a distinct phenotypic race exists in Northern Europe, Scandinavia, Great Britain and Ireland. Reeve was developed from this group.

Typically, the species is found on sandy, coastal beaches, spits and mud flats. Beach wildrye usually forms nearly homogenous vegetative zones along coastal areas, and tends to form isolated stands as distance from the shoreline increases.

Development: Reeve Beach wildrye has been evaluated at the Alaska Plant Materials Center at Palmer, Alaska since 1979. This accession has proven superior to 18 other accessions tested at Palmer. Reeve, however, has one very distinct advantage over the other evaluated accessions. It is capable of producing viable seed in commercially acceptable quantities. Stands of this species, particularly those found in Alaska, do not produce large quantities of viable seed; instead they rely primarily on vegetative reproduction.

Off-site evaluation began in 1983. Localized coastal site evaluation started in 1984 on the remote Aleutian Island of Shemya. Additional plantings have occurred on St. Paul Island, Adak and the Chukchi Coast north of Kotzebue. To date, 116 plot years of data have been collected on this accession. While much of the data has been obtained from coastal evaluation plots, the accession has shown potential in more interior sites, provided sandy soil conditions exist.

Initial seed increase of Reeve occurred in 1982. The first large-scale planting occurred in 1983 with a one half-acre field at Palmer. A one-acre field was established in 1989.

Use: Part of the responsibilities of the North Latitude Revegetation and Seed Production Project is to develop new cultivars for erosion control, reclamation and habitat enhancement. Therefore, during the development of Reeve Beach wildrye, testing was limited to these potential uses. Grazing value and forage production were not considered.

This release is intended to provide seed of an adapted species to be used in coastal restoration and reclamation. However, since this species develops and grows slowly, this cultivar should be seeded only on coastal areas where wind erosion and sand accumulation are not severe. If windy conditions exist, transplants would be the preferred revegetation method. However, when conditions allow the use of Reeve, good performance at a reasonable cost can be expected.

This cultivar may also find a market in the landscape sector for accent and border plantings.

Areas of Adaptation: This cultivar is adapted for use on all coastal areas, from Prince William Sound westerly through the Aleutian chain and slightly north of Kotzebue. Within this region, best results can be expected on sandy sites.

Continued evaluation of this cultivar is scheduled for southeast Alaska and coastal Arctic regions.


Seed Characteristics and Production: Reeve Beach wildrye was brought into commercial production because the accession is adapted for use in coastal areas, and it is the only collection that produced significant amounts of viable seed. Seed production for this accession differs from other grasses because three years are required after planting for seed to be produced. Reeve, however, does not decline in production over time, as many other perennial grasses do. Another important factor for seed production, is poor seedling vigor, which probably occurs in most production fields because the percentage of sand in the soil is low. Poor seedling vigor requires that weed control is practiced during the first two years. Once established, the cultivar can overcome weed competition.

The seed of Beach wildrye is very large compared to other revegetation grasses. In fact, the species is being evaluated as a potential perennial grain crop by other institutions. The large seed and erect seed heads cause this species to shatter easily. If harvest is not completed immediately when seed is mature, the losses from shatter could be total.


Harvesting and cleaning can be accomplished with standard equipment. At Palmer, Reeve Beach wildrye is generally harvested during the second week in August. Yields of clean seed can be expected to be between 200 to 300 pounds per acre.

Increase and Distribution: Reeve Beach wildrye seed will be recognized in breeder, foundation, registered and certified seed classes. Breeder and foundation seed will be grown and maintained for the present time at the Alaska Plant Materials Center. Foundation class seed will be available to seed growers through the Alaska Seed Growers, Inc. (formerly the Alaska Crop Improvement Association). Interested growers should contact either the Alaska Plant Materials Center or Alaska Seed Growers, Inc.


Approved By:



Frank Mielke, Director
Division of Agriculture



Date



Harold C. Heinze, Commissioner
Alaska Department of Natural Resources



Date