



United States Department of Agriculture  
Natural Resources Conservation Service  
Plant Materials Program

# 'Pronghorn' Prairie Sand Reed

*Calamovilfa longifolia* (Hook.) Scribn.

A Conservation Plant Release by USDA NRCS Manhattan Plant Materials Center, Manhattan, KS



**Figure 1. Inflorescence of Pronghorn prairie sandreed in a field setting. Photograph by R. Alan Shadow, ETPMC.**

'Pronghorn' prairie sandreed (*Calamovilfa longifolia*) is a cultivar released in 1988 in cooperation with the USDA Agriculture Research Service and the Nebraska Agricultural Experiment Station.

## Description

Prairie sandreed is a tall, coarse, stemmy, open sod forming warm-season grass typically found on sandy soil sites in low precipitation zones. Its coarsely fibrous root system is augmented by scaly, spreading rhizomes which produces an effective sand binding species. The plants stems are 3 to 5 feet tall and arise singly from its stout, spreading rhizomatous crown. Its linear leaf blades are pale green to straw colored. Leaf blades are long (12 inches or greater), narrow (1/4 inch), rigid, hairless, and tapered to a drawn out tip. Its inflorescence is a panicle 6 to 12 inches long and semi-open. It flowers from August to September and is cross pollinated by the actions of the wind.

## Source

'Pronghorn' was originally collected in 1968 within materials from an assembly containing 48 accessions from Kansas, Nebraska, and South Dakota. Individual plants from each collection were grown out in a rod row planted nursery in Manhattan, Kansas. The top ranked accessions from this nursery were provided to L.C. Newell, ARS Agronomist in Lincoln, NE, for additional evaluations. Selections were evaluated for vigor, forage production, and rust tolerance. Comparison trials comparing Goshen to Pronghorn revealed that the lines compared favorably for overall forage yield, but that Pronghorn was significantly superior with respect to leaf rust resistance.

## Conservation Uses

Prairie sandreed is a native, sod forming grass species that provides fair to good forage for cattle and horses early in the growing season. The plants forage importance increases in late fall and winter due to its ability to cure well on the stem and provide standing forage during the winter months. Prairie sandreed is generally included in rangeland seeding mixture especially on sandy planting sites. Wildlife species are also known to use the plants forage for food, as well as the seed is used by songbirds and small rodents. Its rhizomatous growth habit and extensive fibrous root system make it an ideal species for planting on erosive sandy sites with control problems due to wind action.

## Area of Adaptation and Use

Pronghorn is adapted to and recommended for use in revegetating sandy sites in the Nebraska sandhills and northwestern Kansas. It is drought tolerant and its broad genetic base offers resistance to leaf rust infections. It is equivalent in forage production to other prairie sandreed cultivars.

## Establishment and Management for Conservation Plantings

Pronghorn is commonly used in warm-season grass mixtures that provide forage and cover for erosive, coarse soils. It is drought tolerant and adapted to mean annual precipitation of 10 to 20 inches. It will predominantly be found growing in colonies on coarse or sandy type soil sites. It will grow on soils that are somewhat alkaline, but it does not tolerate saline sites. Weed control also becomes important especially with species with low seedling vigor and slow establishment rates. Mowing is a relatively safe means of encouraging certain slower establishing species and discouraging the vigorous, weedy annual species.

## Ecological Considerations

Prairie sandreed does not pose any known negative concerns to the environment. It can form dense colonies on coarse soils where it is well adapted. However, this attribute is seen as a positive trait for increasing ground cover which tends to reduce both wind and water erosion at these typical sites. Grasshopper infestations can damage seedling stands. Leaf rust has been identified as an anti-quality factor in forage producing situations. Leaf mold and leaf spot can also negatively affect the vigor and biomass production of this plant. Despite its heavy rhizomatous nature it proves to be susceptible to livestock trampling and will tend to disappear from sites where livestock congregate.

## Seed and Plant Production

Propagation of Pronghorn is best accomplished by seed. Depth of seeding is extremely important and should be accomplished utilizing a drill with depth bands to ensure proper seed placement. Seed should be planted at a depth of 1 inch on coarse textured soils and ½ inch on medium to fine textured soil types. Seedbed preparation should provide a weed free, firm surface on which to plant. Plantings designed for seed production should be established in 2 to 3 foot width rows. Seedling vigor is only fair and stand development is rather slow. In fact stands may require 2 to 3 years to fully develop. Seeding rates vary and may be influenced by the amount of processing the seed was subjected to by the selling vendor. Pronghorn is estimated to have 274,000 seeds per pound. Irrigation during flowering is not recommended and little or no irrigation after flowering. Pronghorn can be harvested with a conventional combine. However, Pronghorn is difficult to harvest due to its late maturity, seed shattering, lodging, and hairy seed units. Combining should be carried out during hard dough stage of seed development. Seed processing should begin with hammer milling and then re-cleaning with a fanning mill. A good seed quality is 85 percent purity with a 75 percent germination which would produce a 64 percent pure live seed (PLS).

## Availability

*For conservation use:* Pronghorn is commercially available, but not as widely available as are the more main stream and broadly adapted warm-season grass species. It may be difficult to find certified seed of this species.

*For seed or plant increase:* Breeder or foundation seed are available from the Manhattan Plant Materials Center. There is no registered class of seed for this variety

*For more information, contact:*  
Manhattan Plant Materials Center  
3800 South 20<sup>th</sup> Street  
Manhattan, KS 66502  
(785) 539-8761 FAX (785) 539-2034  
<http://www.plant-materials.usda.nrcs.gov>

## Citation

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For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <<http://www.nrcs.usda.gov/>>, and visit the PLANTS Web site <<http://plants.usda.gov/>> or the Plant Materials Program Web site <<http://www.plant-materials.nrcs.usda.gov/>>

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