

## GRASSES

Native to Tall Grass / Mixed Grass  
Prairie Transition Zone

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# GREEN NEEDLEGRASS

(*Stipa viridula*)

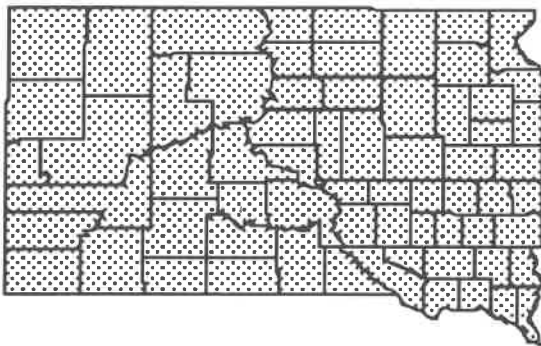
## Description

It seems as though the wind always blows in South Dakota. Have you ever wondered what purpose the wind serves? Many plants, including green needlegrass, use the wind to spread their seeds. *Stipa*, in the scientific name, comes from the Greek word "stipe," meaning "flaxen in appearance," and refers to the feathery awns that some needlegrasses have. The awns on green needlegrass help the seeds to be carried by the wind. The species name, *viridula*, means green.

Green needlegrass grows 12 to 45 inches (30 cm - 115 cm) tall. Its leaves often are rolled and reach 4 to 12 inches (10 cm - 30 cm) in length. The leaves are smooth but have prominent veins on the upper surface, with hairy margins and *ligules*.



The seedhead is somewhat compact, and each seed has an awn. This species is a bunchgrass, and therefore has several stems that grow from one set of fine, fibrous roots.



**Species Distribution**

## Distribution

Green needlegrass is native to North America in transition zones between tall grass and mixed grass prairies. In South Dakota, this zone occurs on both sides of the Missouri River. The species ranges as far south as Arizona, although it is most typical of the northern Great Plains. Green needlegrass grows on a wide variety of soils, and is especially successful on clays.

## Natural History

This species, sometimes called feather bunchgrass, is a cool season grass that grows in May and June and can remain green late into the growing season. It is a *perennial* species that reproduces only from seeds. The seeds are dispersed both by wind, and by attachment to animals that carry the seeds to new areas.

## Significance

Green needlegrass is good *forage* for cattle, sheep, horses, and big game. This species is often used in the Conservation Reserve Program to replant farmland that

has a high potential for erosion. It is also sown in mixed seed plantings for mine reclamation and in roadside ditches. Unlike the *awns* and needle-like seeds of other needlegrasses that may stick in the faces and mouths of livestock and cause swelling and infections, green needlegrass *awns* are not troublesome to livestock. The abundance of this species can significantly decrease under the influence of heavy spring grazing by livestock or wildlife. This grass is less impacted by grazing in the summer months because, as a cool season species, it slows its growth or goes dormant in the hot summer months.

## Glossary

**Awns** - the bristle-like appendages.

**Fibrous roots** - roots that have many slender fibers in contrast to a taproot such as a carrot.

**Forage** - food for animals.

**Ligule** - a small projection on the upper side and at the base of a grass leaf blade. This structure can be in the form of hairs or a membrane.

**Perennial** - a plant that can live more than two years.

## References

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- Hitchcock, A.J., 1971. Manual of Grasses of the U.S. Dover Publications, New York.
- Looman, Jan, 1982. Prairie Grasses, Pub. 1413. Canadian Government Publishing Centre, Ottawa, Canada
- VanBruggen, Theodore, 1983. Wildflowers, Grasses and Other Plants of the Northern Plains and Black Hills. Badlands Natural History Assoc., Interior, SD 57750.

## Resources for Teachers

SDSU Range Club, College of Ag. and Biological Sciences, Brookings, SD 57007, dried plant mounts.  
BHSU Herbarium, Spearfish, SD 57799, dried plant mounts.  
County Extension Agents, U.S. Forest Service and Soil Cons. Service Offices (See Natural Source Directory).

### Written by:

Misty Hays, Nebraska National Forest, Wall, SD 57790. © 1992.

### Reviewed by:

Dr. Gary E. Larson, Department of Biology & Microbiology, SDSU, Brookings, SD 57007.

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