



GRASSES

Native to Shortgrass Prairie
Native to Mixedgrass Prairie

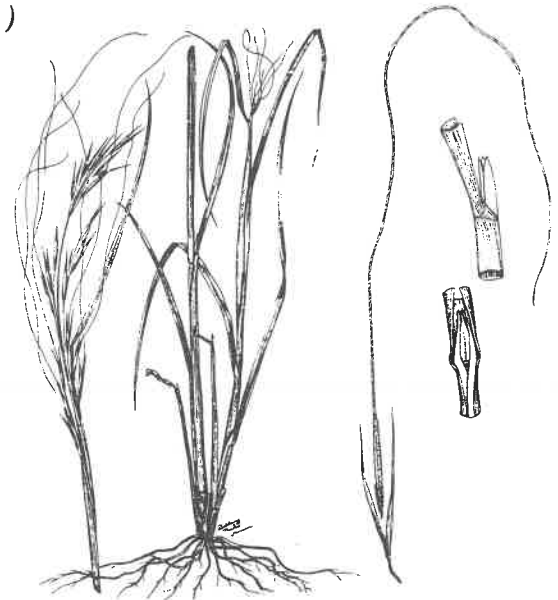
NEEDLEANDTHREAD GRASS

(*Stipa comata*)

Description

Have you ever wondered about the long needles that get stuck in your clothes when you are walking in the prairie? That needle could be from needleandthread. The common name, needleandthread, comes from the exceptionally long, twisted *awn*, tipped by the sharp, needle-like seed, which suggest a threaded sewing needle.

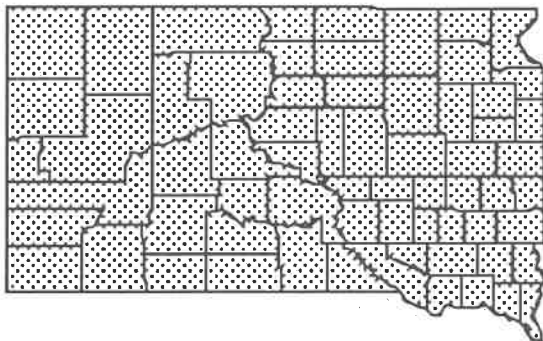
Stipa, in the scientific name, comes from the Greek word "stipe" meaning "flaxen in appearance." This term refers to the shiny, feathery *awns* that some needlegrasses have. The species name *comata* comes from the Latin word *coma*, meaning "head of hair," referring to the appearance of the tangled seed head. Porcupine grass, a close relative of needleandthread grass, is called *Mika-hi* by the Omaha-Ponca Indians, meaning "comb plant". The Pawnee Indians called it *Pitsuts*, meaning "hairbrush". In Lakota, this grass is called, *Mi'capeca*. Lakota children have a game, "mi'capeca on kiciopi" in which they throw the grass heads at people to see the grass stick.



Needleandthread grows 1 to 3 feet (30-91 cm) tall. The leaves are 8 to 12 inches (20-30 cm) long, rough on the surface, and mostly *basal*. With maturity, the leaves roll inward, giving them a thread-like appearance. When needleandthread dries out, the tips of the leaves die back about an inch. Needleandthread has a noticeably split, membranous *ligule*, which helps in identifying the plant.

Distribution

Needleandthread is a *perennial* native to the midgrass prairie, and is found from the Yukon to California and Texas to Illinois. It is found throughout South Dakota on dry hills, upland prairies, silty-sandy areas, and well drained soils. In South Dakota, needleandthread is primarily associated with blue grama and our state grass, western wheatgrass. An abundance of needleandthread often indicates a silty soil below.



Species Distribution

Natural History

Needleandthread is a *bunchgrass* with *fibrous roots* that reproduces by seed and by *tillers*. A *tiller* is a plant that rises from the base of another plant of the same species. Being a *cool season grass*, needleandthread starts its growth in early spring, or when moisture is available, and produces a seedhead in early summer. The needles drop off the seedhead in middle to late summer. The sharp point at the base of the long *awn* contains the actual seed of the grass. Wind helps to scatter and plant the seeds. The wind turns the twisted *awn* into the ground, allowing the *awn* to plant the seed. Another way needleandthread can plant its seeds occurs when the soil gets wet and then dries. The ground expands and contracts causing the *awn* to twist and untwist, driving the seed into the ground.

This grass is valuable as *forage* for animals because it is one plant that begins growth early in the spring when other grasses are still dormant and dry. If sufficient moisture is available in late summer or early fall, needleandthread will regain its spring green color and produce new growth when other plants are starting to dry up.

Significance

Needleandthread is important both to wildlife species and livestock. Elk extensively graze needleandthread in the winter and deer graze it in the spring. The *forage* value of needleandthread to domestic livestock is dependent upon the time at which it is grazed. This grass provides good *forage*, and the injury to animals is reduced, if the plant is grazed before the *awns* appear and/or after they drop off. If grazed during the time the *awns* are prominent, the long, sharp *awns* may cause physical injuries to the eyes, mouth, tongue, ears, and flesh of wildlife and livestock, especially sheep. The long *awns* also may contaminate the wool.

Needleandthread can produce about 2,400 to 3,200 pounds (1091 to 1455 kg) of forage per acre. Because needleandthread can increase under grazing pressure, its abundance is difficult to reduce by grazing management. This grass cures well as hay for livestock in the fall and winter. American Indians used porcupine grass, a close relative of needleandthread, as a hair brush. The seeds were burned off and the stiff *awns* were bound together to form a brush.

Glossary

Awn - bristle-like appendages.

Basal - coming from the base of the plant.

Bunchgrass - type of grass that has many stems arising from one crown.

Cool season grass - a grass that begins to grow early in the spring and seeds in early summer.

Fibrous roots - a root system that consists of many fine branches.

Forage - food for animals.

Ligule - a small projection on the upper side and at the base of the leaf blade where it joins the sheath. This projection can be in the form of hairs or a membrane.

Perennial - a plant that can live for more than 2 years.

Tiller - a shoot, arising from the base of a plant, which produces another plant.

References

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Illustration by Bellamy Parks Jansen provided by University of Nebraska Press.

Publication of the *Needleandthread Grass* fact sheet was funded through a Natural Resource Conservation Education Grant, USDA, Forest Service.

Needleandthread