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# Available Grass Varieties for South Dakota

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Extension Circular 890

# Available Grass Varieties for South Dakota

Big bluestem | Buffalograss | Basin wildrye | Creeping foxtail | Green needlegrass

Cooperative Extension Service / South Dakota State University / U.S. Department of Agriculture

# Available Grass Varieties for South Dakota

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## Introduction

Grasslands of South Dakota total approximately 30 million acres and comprise an important source of agricultural income in the state. When adapted varieties of the most productive species are combined with proper management, grassland yields can be increased greatly.

This publication is designed to assist producers in the selection of grass species and varieties for South Dakota pastures, rangelands, and conservation plantings. A short description of each species is followed by a listing of available varieties within that species. The origin, description, date of release, and recommended area of adaptation for each variety are given. Other variety within a species, that also may be available but are either not adapted or for which a limited amount of seed exists, also are listed. Areas of adaptation are shown in Figure 1. Information on the yield potential of the grass cultivars is included if available.

Although several species or cultivars may be listed as adapted to your area, base your selection on production and management goals, soil type, and climate adaptability. The areas of adaptation given in this publication are broad geographic areas. Many species are adapted only to a certain soil type. They also may be more productive in one part of the zone than another. For these reasons, the authors recommend that you consult your county Extension or Soil Conservation Service office for further details before selecting a species or variety for planting.

# Selecting Certified Seed

Selecting varieties is an important first step in establishing a grass seeding; however, using certified seed of the selected variety is of equal importance. In order to carry the blue certification label, seed must be produced and conditioned according to strict and exacting standards of an official certification agency. The state certification agency monitors and makes inspections during planting, growing, harvesting, conditioning, and testing to help assure that standards have been met before the seed can be labeled as certified.

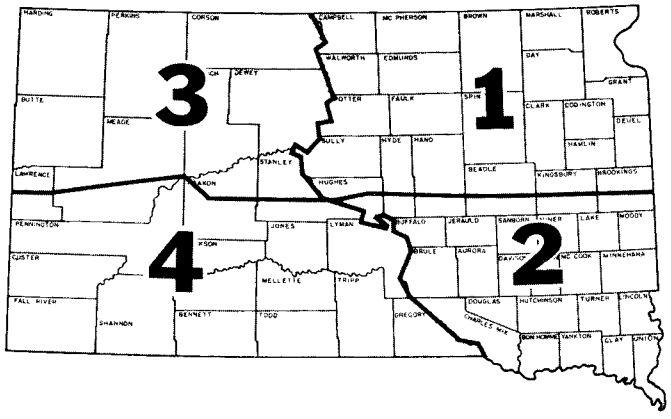
The certification tag, when attached to the bag, identifies a variety as to its genetic identity, purity, and origin. In addition, the seed must meet high mechanical purity standards.

The impact and importance of the decision made when selecting seed of a perennial crop is multiplied over the years of useful life of the stand. This can vary from several to many years as opposed to selecting seed for an annual crop. The initial seed cost may be higher; however, when one takes into account the useful life of the stand, the premium paid for certified seed is usually minimal when considering the extra assurance carried with the certification label. Planting seed of questionable or unknown origin and performance is a gamble that most farmers cannot afford.

# Releasing Agencies

The varieties described in this publication have been released by various state Agricultural Experiment Stations, Soil Conservation Service Plant Materials Centers, and private industry. In many cases the successful release of a variety has been accomplished through the cooperation of several agencies within a state or region.

# Regions of adaptation for recommended grass species and varieties



# Cool-season Grasses

These grasses grow rapidly during the spring months, often using most of the soil moisture and nitrogen that is readily available. They generally are dormant in the summer, and consequently, forage production is low. Regrowth in the late summer and fall occurs as cool temperatures return. These grasses, therefore, offer the optimum amount of forage production during the cooler periods of the growing season.

Smooth bromegrass

## SMOOTH BROMEGRASS

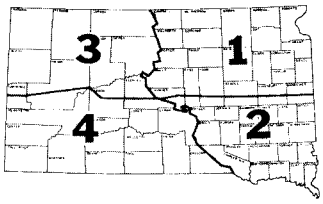
Smooth bromegrass is an introduced, leafy, sod-forming perennial with jointed stems. Plants grow to a height of 3 to 4 feet and produce an abundance of basal and stem leaves. Smooth bromegrass is excellent for erosion control and for mixing with alfalfa in a hay crop or pasture mixture. Yield data from regional trials indicate only minor yield differences among available smooth bromegrass cultivars. Differences in adaptation, growth habit, seed production, and other agronomic characteristics are noted in the individual variety descriptions.

### Lincoln

**Where selected:** Nebraska
**Description:** Lincoln provides an abundance of early spring forage and fall regrowth under favorable conditions. It is a rhizomatous, sod-forming type well-adapted for conservation purposes. It exhibits good seedling vigor and is relatively easy to establish on critical planting sites.
**Released:** 1942
**Adaptation:** Regions 1 and 2

### Rebound

**Where selected:** South Dakota
**Description:** Rebound was selected and released for its fast regrowth after cutting. It produces high yields of top quality forage. Rebound is able to use available soil moisture more efficiently than Lincoln and usually will out-yield it.
**Released:** 1978
**Adaptation:** Regions 1 and 2




**Cottonwood**
**Where selected:** South Dakota
**Description:** This variety was developed by selecting for drought tolerance from genotypes that persisted in western South Dakota. Limited production information is available on the performance of this variety in South Dakota. Recommended for the western portion of the state.
**Released:** 1979
**Adaptation:** Statewide, with emphasis on regions 3 and 4

**Carlton**
**Where selected:** Canada
**Description:** This variety is typical of a northern type of smooth bromegrass. It has hay yields 5 to 10 percent and seed yields 20 to 30 percent above unimproved northern common types.
**Released:** 1961
**Adaptation:** Regions 1 and 2

**Blair**
**Where selected:** Iowa
**Description:** Blair is a high-yielding, disease-resistant southern type. It is vigorous, hardy, and leafy. It has good stand establishment characteristics and is a good seed producer. Blair has larger seed than standard southern cultivars.
**Released:** 1964
**Adaptation:** Region 2

**Magna**
**Where selected:** Canada
**Description:** Magna is intermediate in type between northern and southern cultivars. This variety is characterized by high seed quality and higher seed yields than southern cultivars.
**Released:** 1968
**Adaptation:** Regions 1 and 2

**Barton**
**Where selected:** Iowa
**Description:** This variety has improved forage yield and recovery capacity compared to southern cultivars such as Lincoln. It also has larger seed, improved seedling vigor, better seedling blight resistance, and easier stand establishment than Lincoln.
**Released:** 1973
**Adaptation:** Regions 1 and 2

**Other varieties**, either not well-adapted or for which a limited amount of seed exists, are Fisher, Manchar, Achenbach, Lancaster, Lyon, Homesteader, Southland, Elsberry, Saratoga, Baylor, Sac, Redpatch, Polar, Fox, Beacon, Signal, and Tempo.

## MEADOW BROMEGRASS

This species is similar to smooth bromegrass, except that it has pubescence (fine, short hairs) on the leaves and stems and is generally less rhizomatous. It has been used for hay and pasture in western states such as Montana and Wyoming. Limited information is available on the performance of this species in South Dakota. Forage yield should be similar to that of smooth bromegrass. This species will not cross with smooth bromegrass.

**Regar**
**Where selected:** Idaho
**Description:** Regar has rapid germination and seedling establishment. It has numerous, lax, dominantly basal, mildly pubescent, light green leaves. It has some vegetative spreading, good drought tolerance, and excellent winter hardiness. Regar has good regrowth and is adapted for use as hay or pasture.
**Released:** 1966
**Adaptation:** Statewide

**Other culitvars** none

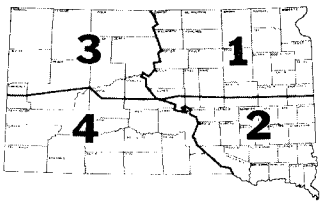
Mountain bromegrass

## MOUNTAIN BROMEGRASS

This species is a short-lived, cool-season, native bunchgrass with large seed and good seedling vigor. It develops a deep, well-branched root system which is important in providing protection on erodible slopes.

**Bromar**
**Where selected:** Washington
**Description:** Bromar is a rapid-developing, late-maturing variety. Plants are tall, erect, and vigorous, with medium-coarse stems and abundant, broad, well-distributed leaves. It is a good seed and forage producer.
**Released:** 1946
**Adaptation:** Specifically recommended only in the Black Hills area.

**Other varieties** none




## INTERMEDIATE WHEATGRASS

This is an introduced, sod-forming perennial with jointed stems. Plants grow to a height of 3 to 4 feet. They produce an abundance of basal and stem leaves. It is excellent for erosion control and for mixing with alfalfa in hay crop or pasture mixtures. Cultivars differ in the amount of pubescence on seedheads and leaves. The pubescent-type variety (Mandan 759) is reported to be more drought tolerant than intermediate wheatgrass cultivars. Forage yields of the two types should be similar.

### Chief

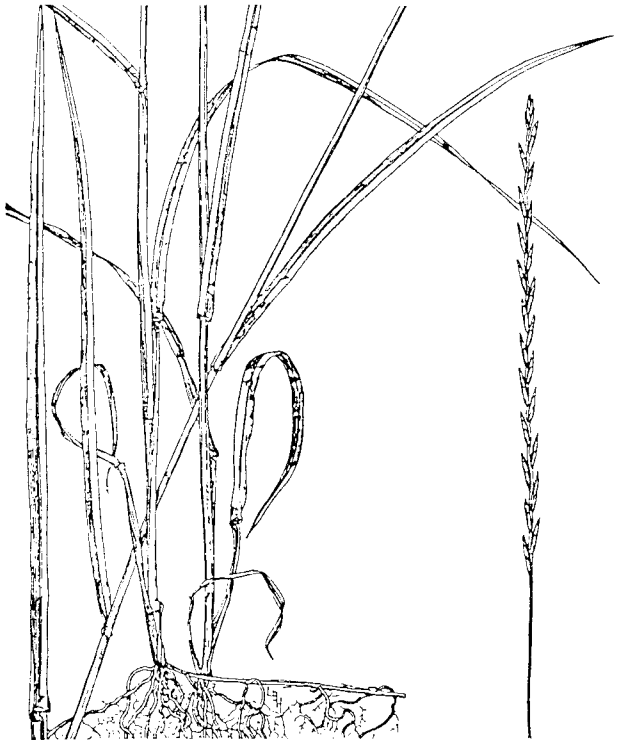
**Where selected:** Canada
**Description:** Plants are grayish-green with forage and seed yields similar to, or better than, most other cultivars.
**Released:** 1961
**Adaptation:** Statewide

### Oahe

**Where selected:** South Dakota
**Description:** Foliage is uniformly blue green, and plants are vigorous and rhizomatous. Plants of Oahe are approximately 44 inches high under normal conditions at Brookings. It produces good yields of seed and forage.
**Released:** 1961
**Adaptation:** Statewide

### Slate

**Where selected:** Nebraska.
**Description:** Plants are strongly spreading and erect at maturity. Leaves are broad and flat with a slate-green color (intermediate between bright green and gray blue-green of other cultivars). It can be grown in Central Plains states.
**Released:** 1969
**Adaptation:** Statewide



Intermediate wheatgrass

Western wheatgrass

**Clarke**
**Where selected:** Canada
**Description:** Clarke was selected to combine winter hardiness, drought tolerance, establishment vigor, resistance to aphid-virus attack, good seed quality, and high forage and seed yield. Clarke's main attributes are drought tolerance, winter hardiness, and high seed yield. It is well adapted for hay or pasture use.
**Released:** 1980
**Adaptation:** Statewide

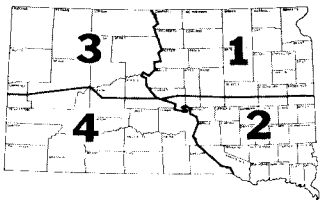
**Mandan 759**
**Where selected:** North Dakota
**Description:** This variety is a pubescent type with good forage and seed production. It spreads rapidly under favorable conditions.
**Released:** Never been officially released
**Adaptation:** Statewide

**Other varieties,** either not well-adapted or for which a limited amount of seed exists, are Greenar, Ree, Amur, Topar, Luna, Greenleaf, and Tegmar.

## WESTERN WHEATGRASS

This species is a long-lived, native, sod-forming, drought-resistant perennial with jointed stems. Plants grow to a height of 2 to 3 feet. This grass is recommended for use in controlling erosion, as a haycrop, or for grazing in late May, June, and early July.

**Rodan**
**Where selected:** North Dakota
**Description:** Rodan is rhizomatous and forms a dense, blue-green turf. Leaves are less heavily veined and thinner than other cultivars. It is a good forage producer. Seeds of Rodan have short awns that detract from its seed quality. Rodan has good resistance to stem rust.
**Released:** 1983
**Adaptation:** Statewide




**Rosana**
**Where selected:** Montana
**Description:** This variety is adapted for irrigated hay or pasture in out-wash plain sites and for range seedings in the northern Rocky Mountains and adjacent Great Plains.
**Released:** 1972
**Adaptation:** Statewide

**Flintlock**
**Where selected:** Nebraska
**Description:** Flintlock is adapted for dryland hay or pasture and soil conservation, particularly in lower elevations of the Central Plains.
**Released:** 1975
**Adaptation:** Statewide

**Other varieties**, either not well-adapted or for which a limited amount of seed exists, are Barton, Arriba, and Walsh.

Slender wheatgrass

## SLENDER WHEATGRASS

This is a short-lived, perennial, native bunchgrass with a fibrous root system and jointed stems. Plants grow to a height of 3 feet. Slender wheatgrass is not recommended in South Dakota except for occasional use in a mixture with other native grasses where quick growth and/or protection of a critical area is needed. It should not exceed 15 percent of the mixture.

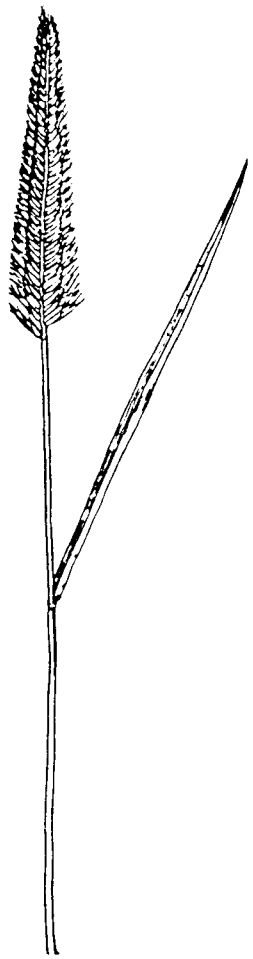
**Primar**
**Where selected:** Washington
**Description:** It is vigorous, early-growing, semi-erect, and long-lived. Leaves and stems are gray-green and moderately coarse. Plants are high in vegetative production. Primar is resistant to leaf, stem, and stripe rust. Seed production is moderately heavy. Plants are alkalai tolerant and adapted to short-lived dryland seedings in areas with a minimum of 14 inches of rainfall.
**Released:** 1946
**Adaptation:** Statewide

**Other varieties,** either not well-adapted or for which a limited amount of seed exists, are Revenue and San Luis.

## CRESTED WHEATGRASS

This is an introduced perennial bunchgrass with a fibrous root system. Stems are fine and plants develop into dense tufts 2 to 3 feet high. It is recommended for use as a hay crop or for pasture during early spring or late fall. It can be used in mixtures with alfalfa for hay production or pasture.

There are two different types of crested wheatgrass, standard and fairway. Standard types are generally taller, thicker-stemmed, and more productive than the fairway types. The fairway type is more suited for dryland lawns and general-purpose turf uses and erosion-control practices. Standard types are bunchgrasses while fairway types spread by rhizomes.

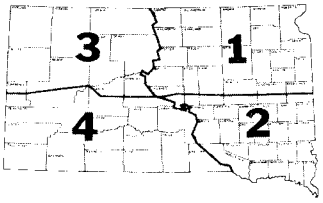


Crested wheatgrass

**Parkway**
**Where selected:** Canada
**Description:** Parkway is a fairway type having hay and seed yields 7 to 10 percent above common fairway-type crested wheatgrass. Plants are 2 to 3 inches taller, slightly less leafy, and have much greater lodging resistance than common fairway. It is recommended for hay or pasture but not as turfgrass.
**Released:** 1969
**Adaptation:** Regions 3 and 4

**Ruff**
**Where selected:** Nebraska
**Description:** Ruff is a fairway type that is early maturing, very leafy, and produces high yields of forage and seed. It also has good sod production which makes it adapted as a turfgrass.
**Released:** 1972
**Adaptation:** Regions 3 and 4

**Nordan**
**Where selected:** North Dakota
**Description:** Nordan is a standard type having uniform and erect growth. Seeds are mostly awnless and large in size. Seedheads are dense and compact. Nordan has good seedling vigor and forage yield as good as or better than other cultivars.
**Released:** 1953
**Adaptation:** Regions 3 and 4




**Summit**
**Where selected:** Canada
**Description:** Summit is a standard type fairly similar to other standard crested wheatgrass strains grown in the United States. Summit has good seed yield, seed quality, and uniformity of plant type.
**Released:** 1953
**Adaptation:** Regions 3 and 4

**HyCrest**
**Where selected:** Utah
**Description:** HyCrest is the first interspecific hybrid of crested wheatgrass to be released. It has excellent stand establishment. Its forage is palatable to grazing cattle during the mid-summer.
**Released:** 1984
**Adaptation:** Regions 3 and 4

**Other varieties,** either not well adapted or for which a limited amount of seed exists, are P-27 and Ephraim.

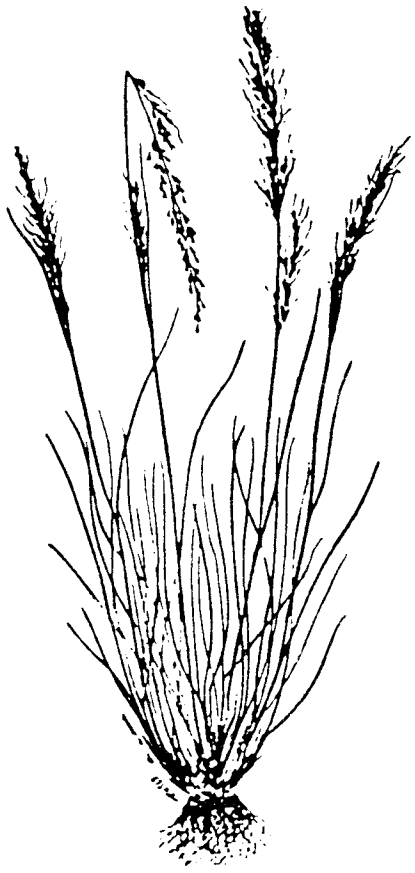
Thickspike wheatgrass

## THICKSPIKE WHEATGRASS

This species is a widely distributed native grass found in the northern part of the intermountain region and northern Great Plains. It is a long-lived, cool-season grass with an extensive root system combined with a few deep roots. It grows up to 3 feet tall with long, narrow, deep-green leaves. This species is related closely to western wheatgrass but is more drought tolerant. It has good spring and fall recovery. Seedling vigor is good, but not equal to, that of intermediate wheatgrass. It is best used for late-spring or early -summer grazing and for soil stabilization.

**Critana**
**Where selected:** Montana
**Description:** Critana can be used to revegetate and reduce erosion on disturbed sites such as mined lands, roadsides, recreation areas, and construction sites. It is excellent for reseeding range sites that are severely eroded or have low fertility. Critana is strongly rhizomatous and grows to a height of 2 to 3 feet on good sites. It is extremely drought tolerant with excellent seedling vigor. Critana is adapted to medium- to coarse-textured soils and soils derived from granulated shales and clays.
**Released:** 1971
**Adaptation:** Regions 3 and 4

**Other varieties** none



Green needlegrass

## GREEN NEEDLEGRASS

This species is a leafy, native perennial with a deep-penetrating root system. Plants grow to a height of 3 feet. Green needlegrass is recommended for use as hay or pasture during late May, June, and early July. It has the same season of growth as western wheatgrass but is more drought tolerant.

### Green Stipagrass

**Where selected:** North Dakota
**Description:** Green stipagrass is superior to common green needlegrass in forage and seed yields and in seedling and regrowth characteristics.
**Released:** 1946
**Adaptation:** Statewide

### Lodorm

**Where selected:** North Dakota
**Description**: Lodorm is superior to Green Stipagrass in level of dormancy exhibited by newly-harvested seed. It also has comparable forage and seed yields. Lodorm and Green Stipagrass are morphologically indistinguishable.
**Released:** 1969
**Adaptation:** Statewide

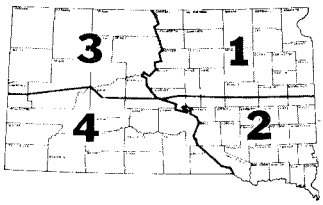
**Other varieties** none

## REED CANARYGRASS

This is a tall, coarse, sod-forming perennial with strong rhizomes. It grows in clumps often 3 feet across and 7 to 8 feet tall. Reed canarygrass is recommended as a pasture or hay crop for low, wet areas. Recent advances in breeding reed canarygrass cultivars for low alkaloid content make these newer cultivars superior in feeding value to older cultivars. Both types have similar forage yields.

### Palaton

**Where selected:** Iowa
**Description:** Palaton is similar in forage yield and leaf disease resistance to Rise and Venture. It exhibits excellent winter hardiness and persistence and responds to good management practices. In addition to its improved shattering resistance, Palaton shows good seedling vigor and stand establishment ability. It is lower in total alkaloid content. It contains only gramine and no




tryptamine and carboline, which cause digestive upsets in cattle and sheep. Palaton also has improved palatability.
**Released:** 1985
**Adaptation:** Statewide

### Venture

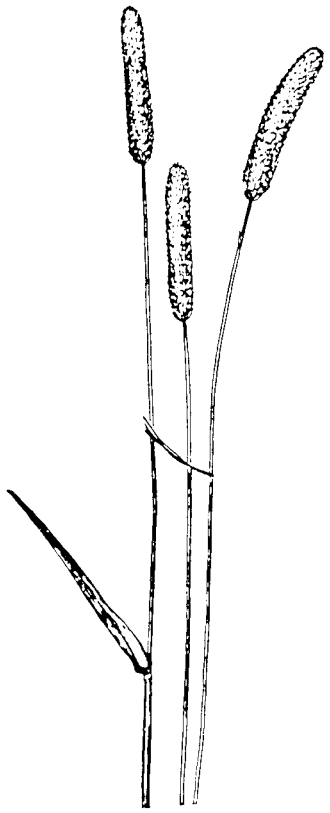
**Where selected:** Iowa
**Description:** Venture is similar to Rise in forage yield and leaf-disease resistance. It exhibits excellent winter hardiness and persistence and responds to good management practices. Venture shows good seedling vigor and stand establishment ability. Venture differs from Palaton in seed protein structure and has averaged somewhat higher in crude fiber, acid detergent fiber, and neutral detergent fiber in second- and third-cut forage. This implies that the forage quality of Venture is lower than that of Palaton. Venture is similar to Palaton in that it contains only gramine and no tryptamine or carboline.
**Released:** 1985
**Adaptation:** Statewide

Reed canarygrass

### Vantage

**Where selected:** Iowa
**Description:** Vantage was released because it has improved seed retention, and it heads two to three days earlier than Rise in Iowa trials.
**Released:** 1972
**Adaptation:** Statewide

**Other varieties,** either not well-adapted or for which a limited amount of seed exists, are Ioreed, Frontier, Rise, Grove, and Castor.



Creeping foxtail

## CREEPING FOXTAIL

This species is an introduced, sod-forming perennial grass. Flowering stems usually are about 3 feet tall but may reach a height of 6 feet. Creeping foxtail is recommended for use as hay or pasture in low, wet areas, much the same as reed canarygrass. The primary advantage of creeping foxtail over reed canarygrass is its higher-quality forage.

**Garrison**
**Where selected:** North Dakota
**Description:** Garrison resembles common meadow foxtail but has more vigorous rhizomes and broader leaves. Seed is black at maturity with spikelets that fall away easily making seed harvest somewhat difficult because of uneven maturity. It is well adapted to wetland sites and produces good yields of high-quality forage under these conditons.
**Released:** 1963
**Adaptation:** Statewide

**Retain**
**Where selected:** South Dakota
**Description:** Retain is similar to Garrison with the exception that it retains its seed better. Forage yields of the cultivars are similar, but seed yields of Retain usually are much higher.
**Released:** 1979
**Adaptation:** Statewide

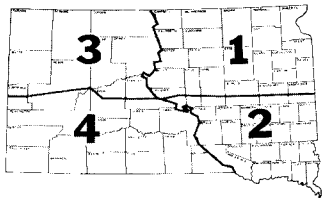
**Other varieties** none

Tall wheatgrass

## TALL WHEATGRASS

This is an introduced, tall, late-maturing, vigorous, stemmy bunchgrass with coarse, long, blue-green leaves and large seeds. It commonly grows to a height of 5 to 7 feet. Tall wheatgrass is a special-purpose grass recommended for use in alkaline areas where other species do not produce well.

**Alkar**
**Where selected:** Washington
**Description:** Alkar is a tall, very late-maturing variety. It is relatively stemmy and has coarse, blue-green leaves. Alkar has large seeds and good seedling vigor. It is very tolerant to wet, alkaline conditions.
**Released:** 1951
**Adaptation:** Statewide




**Orbit**
**Where selected:** Canada
**Description:** Orbit cannot be distinguished from other cultivars on the basis of visual characteristics. Orbit is superior to Alkar and other cultivars in terms of winterhardiness. It is similar in forage and seed yields to other cultivars. Orbit withstands flooding for 3 to 4 weeks in the spring.
**Released:** 1966
**Adaptation:** Statewide

**Platte**
**Where selected:** Nebraska
**Description:** Platte is adapted to alkaline sites, particularly to lower valleys of Platte River drainage.
**Released:** 1966
**Adaptation:** Statewide

**Other varieties,** either not well-adapted or for which a limited amount of seed exists, are Largo and Jose.

Orchardgrass

## ORCHARDGRASS

This is an introduced, relatively long-lived, perennial bunchgrass. It has a few jointed, flowering stems that grow to a height of 2 to 4 feet. Most of the foliage is produced by basal leaves. Extensive variety yield and persistence trials have not been conducted in South Dakota. A trial was planted near Watertown in September 1989 and all of the cultivars winterkilled. However, several orchardgrass seedings have been identified in eastern South Dakota which have remained productive for a considerable period of time. Based on these conflicting results, the authors cannot predict the success of orchardgrass seedings at this time. The cultivars Kay, Avon, and Chinook are winterhardy but have not been adequately tested in South Dakota.

Russian wildrye

## RUSSIAN WILDRYE

This species is an introduced, non-jointing, perennial bunchgrass with a deep, fibrous root system. Plants grow to a height of 2 to 3 feet. Its main assests are early growth, high nutritive qualities over a long season, late-summer regrowth, and good drought tolerance.

**Vinall**
**Where selected:** North Dakota
**Description:** Forage yields of Vinall are equal to those of other cultivars.
**Released:** 1960
**Adaptation:** Regions 3 and 4

**Swift**
**Where selected:** Canada
**Description:** Swift has no visual characteristics that distinguish it from other cultivars of Russian wildrye. Its main attributes are excellent establishment vigor and ability to emerge from deep seedings.
**Released:** 1978
**Adaptation:** Regions 3 and 4

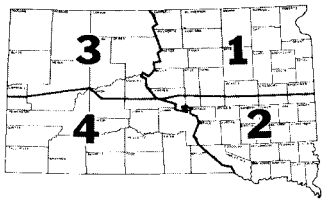
**Other varieties,** either not well-adapted or for which a limited amount of seed exists, are Sawki, Mayak, Cabree, and Bozoisky-Select.

## ALTAI WILDRYE

This is a long-lived, drought-tolerant, winter-hardy, perennial bunchgrass with coarse, erect leaves. It is a special purpose grass used to extend the grazing season into late fall and winter. It has good tolerance to saline or alkalai soils.

**Prairieland**
**Where selected:** Canada
**Description:** Selected for high seed yield, high forage yield, freedom from leaf spot diseases, and good seed quality. It tolerates salinity as well as tall wheatgrass.
**Released:** 1976
**Adaptation:** Regions 3 and 4

**Other varieties** none




## BASIN WILDRYE

This is a cool-season, slightly spreading native grass. It is distributed throughout much of the western United States and is common on alkaline soils. It is tall, coarse, and long lived but relatively poor in palatability and seed production.

**Magnar**
**Where selected:** Canada
**Description:** Magnar has a broad soil-texture adaptation, but it does not do well on coarse-textured or shallow soils. It has good tolerance to salt or alkalai soils. It is a good erosion control plant in gullies. Magnar is used as a mixture to reseed rangelands, mine spoils, and other disturbed areas.
**Released:** 1979
**Adaptation:** Regions 3 and 4

**Other varieties** none

Basin wildrye

Beardless wildrye

## BEARDLESS WILDRYE

This is a cool-season, sod-forming native grass. It is distributed at low and medium elevations from Montana to Washington and south to west Texas and California.

**Shoshone**
**Where selected:** Wyoming
**Description:** Shoshone beardless wildrye is a perennial grass primarily being used for the reclamation of wet, saline soils. It can be used on both saline-affected irrigated cropland and pastureland and saline-seep discharge areas on dry cropland. It also can be used for forage, stabilization, and wildlife cover plantings. It is palatable to all livestock.
**Released:** 1980
**Adaptation:** Regions 3 and 4

**Other varieties** none

# Warm-season Grasses

Warm-season grasses begin growth about one month later than cool-season grasses. Growth is rapid in late spring and early summer as temperatures begin to increase. These grasses are more efficient growing at high temperatures than are cool-season grasses, and they produce abundant forage during the summer months. Growth generally ceases by early fall, although live tissue usually remains until a hard freeze kills all top growth.

Switchgrass

## SWITCHGRASS

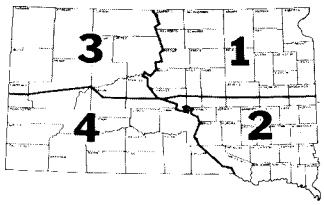
This species is a tall, sod-forming, perennial grass with short rhizomes. It has coarse stems, broad leaves, and grows from 3 to 5 feet in height. Switchgrass is recommended for use from mid-July to September when cool-season grasses are less productive. The available switchgrass cultivars listed below are, in many cases, adapted to specific areas of the state only, so follow the recommended areas of adaptation closely.

### Nebraska 28

**Where selected:** Nebraska
**Description:** Nebraska 28 is a relatively early maturing strain of switchgrass that is representative of Nebraska sandhill types. It is well adapted to diverse soils and is used successfully for pasture and soil conservation purposes.
**Released:** 1949
**Adaptation:** Regions 2 and 4

### Pathfinder

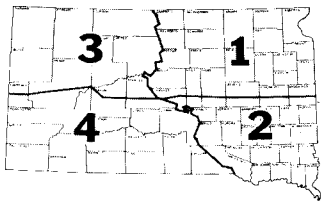
**Where selected:** Nebraska
**Description:** Pathfinder is a winter-hardy, vigorous, leafy, late-maturing, rust-resistant variety. It has good stand establishment and forage production for late-spring and summer grazing. It is used in pure stands or in mixtures with other warm-season prairie grasses.
**Released:** 1967
**Adaptation:** Regions 2 and 4




**Trailblazer**
**Where selected:** Nebraska
**Description:** Trailblazer is similar to Pathfinder in terms of maturity, appearance, and area of adaptation which is primarily the central Great Plains and the western Corn Belt. In comparison to Pathfinder, its primary distinguishing characteristic is its higher digestibility, which is approximately 2 percentage units.
**Released:** 1984
**Adaptation:** Regions 2 and 4

**Dacotah**
**Where selected:** North Dakota
**Description:** Dacotah is one of a few cultivars capable of consistently producing mature seed at northern sites in North Dakota and Minnesota. It will push the area of adaptation of switchgrass cultivars farther north. It is hardy and persistent and can reproduce itself in low-maintenance stands. It is used for stabilization of critical areas and seeding in mixtures for some range situations and warm-season pastures. Its early maturity, shorter height, and high density of residual vegetation provides excellent wildlife cover and nesting habitat.
**Released:** 1989
**Adaptation:** Northern counties in Regions 1 and 3

**Forestburg**
**Where selected:** South Dakota
**Description:** It is early maturing and also extends the latitudinal range for planting switchgrass farther north. It has demonstrated excellent winter hardiness and persistence. Except for slightly lower forage yields, Forestburg has demonstrated good seed-yield potential and appears similar in other characteristics and in adaptation to Sunburst. The primary area of use for Forestburg is on sites where switchgrass is recommended for range and pasture seedings, wildlife habitat, natural area development, revegetation of surface mines, critical areas, and transportation corridors in North Dakota, South Dakota, and Minnesota.
**Released:** 1987
**Adaptation:** Statewide

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**Released:** 1987
**Adaptation:** Statewide

Indiangrass

**Sunburst**
**Where selected:** South Dakota
**Description:** Sunburst is a large-seeded, vigorous, winterhardy, medium-tall, medium-maturity, leafy, upland-type switchgrass selected from collections of southeastern South Dakota ecotypes. The main advantage of Sunburst over other cultivars is its large seed and superior seedling vigor which greatly increases the chances for good stand establishment.
**Released:** 1983
**Adaptation:** Statewide

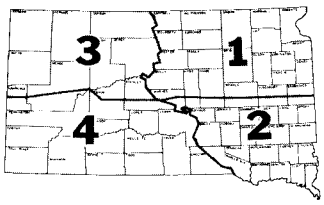
**Other varieties,** either not well adapted or for which a limited amount of seed exists, are Blackwell, Summer, and Cave-In-Rock.

## INDIANGRASS

This species is a tall, sod-forming perennial. Plants grow to a height of 2 to 5 feet. Indiangrass is high-yielding and palatable with good nutritional qualities. It is recommended for use as a pasture from mid-July to September when cool-season grasses are less productive. As with switchgrass, follow recommendations on areas of adaptation.

**Holt**
**Where selected:** Nebraska
**Description:** Holt is moderately early maturing and superior in leafiness and yield to early-maturing strains from the northern and western sandhill region of Nebraska. It is well suited for revegetation either in pure stands or in mixtures with other warm-season grasses.
**Released:** 1960
**Adaptation:** Regions 2 and 4

**Tomahawk**
**Where selected:** North Dakota
**Description:** Tomahawk is a rather fine-leaved, upland type, medium in height, and earlier in maturity than other cultivars. In its area of adaptation, seed maturity can be expected from August 30 to September 15. It is up to 33 days earlier in maturity than Holt. Tomahawk can not be visually distinguished from other cultivars.
**Released:** 1988
**Adaptation:** Regions 1 and 3




**Other varieties,** either not well adapted or for which a limited amount of seed exists, are Osage, Oto, and Rumsey.

## BIG BLUESTEM

This is a tall, sod-forming perennial that has short rhizomes. Plants usually grow 6 feet tall under favorable conditions of soil and moisture. Although short rhizomes are present, big bluestem usually makes a bunch-type growth. It is recommended for use as a pasture from mid July to September when cool-season grasses are less productive. As with switchgrass and Indiangrass, follow recommendations on areas of adaptation closely.

Big bluestem

### Champ

**Where selected:** Nebraska
**Description:** Champ is moderately late maturing but ordinarily is 7 to 10 days earlier in seed maturity than Pawnee. It is leafy and variable in awn length, glume color, and foliage color. It has seed set and seed quality superior to those of other bluestem cultivars.
**Released:** 1963
**Adaptation:** Regions 2 and 4

### Pawnee

**Where selected:** Nebraska
**Description:** Pawnee is typical of big bluestem of the central prairie region. It has moderately long, dark-green leaves and tall-flowering stalks, with forked, green to purplish inflorescences. There is considerable variation in the amount of pubescence in seed heads. It is a late-maturing variety.
**Released:** 1963
**Adaptation:** Regions 2 and 4

### Bison

**Where selected:** North Dakota
**Description:** Bison is early-maturing, hardy and persistent, and it reproduces itself in low-maintenance stands. It extends the latitudinal range farther north than with previously available cultivars. It can be used for erosion control, upland game bird cover, and pasture. High forage yields are not always possible.
**Released:** 1989
**Adaptation:** Northern counties in Regions 1 and 3

**Bonilla**
**Where selected:** South Dakota
**Description:** Bonilla is early maturing and has superior winter hardiness that also extends the latitudinal range farther north than with previously available cultivars. It has good seed-yield potential. The primary area of use for Bonilla is on open sites where big bluestem is reommended for range and pasture seedings, wildlife habitat, natural area development, revegetation of surface-mined land, erosion control structures, and transportation corridors in North Dakota, South Dakota, and Minnesota.
**Released:** 1987
**Adaptation:** Statewide

**Other varieties,** either not well adapted or for which a limited amount of seed exists, are Kaw and Rountree.

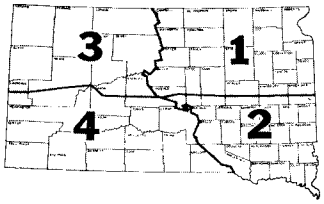
Sand bluestem

## SAND BLUESTEM

Sand bluestem is a close relative of big bluestem. It can be distinguished most easily by the dense, white hairs on the seed heads. Leaves and stems tend to be more straw-colored than those of big bluestem. Sand bluestem is not as palatable as big bluestem, but it does provide excellent grazing. In South Dakota it is most abundant on sandy soil, but it is seldom a major component of the vegetation where overgrazing has been common.

**Garden**
**Where selected:** Nebraska
**Description:** Garden is a vigorous, tall, leafy type. It is well adapted throughout the sandhills of Nebraska and in adjacent South Dakota. Garden produces good seed yields.
**Released:** 1957
**Adaptation:** Region 4

**Goldstrike**
**Where selected:** Nebraska
**Description:** The primary area of adaptation and use extends throughout central and northern Nebraska and southern South Dakota. The best area for seed production is centered in valleys of the Central Platte River, the lower reaches of its tributaries, and certain adjacent uplands.
**Released:** 1973
**Adaptation:** Region 4




## LITTLE BLUESTEM

This species is an erect, mid-tall, perennial bunchgrass. Plants usually grow 1 to 3 feet tall. Little bluestem is less productive than switchgrass, indiangrass, or big bluestem. It is, therefore, recommended only for use in a mixture with other native, warm-season grasses for erosion control on low -fertility sites, range seedings, and mid-summer pasture.

Little bluestem

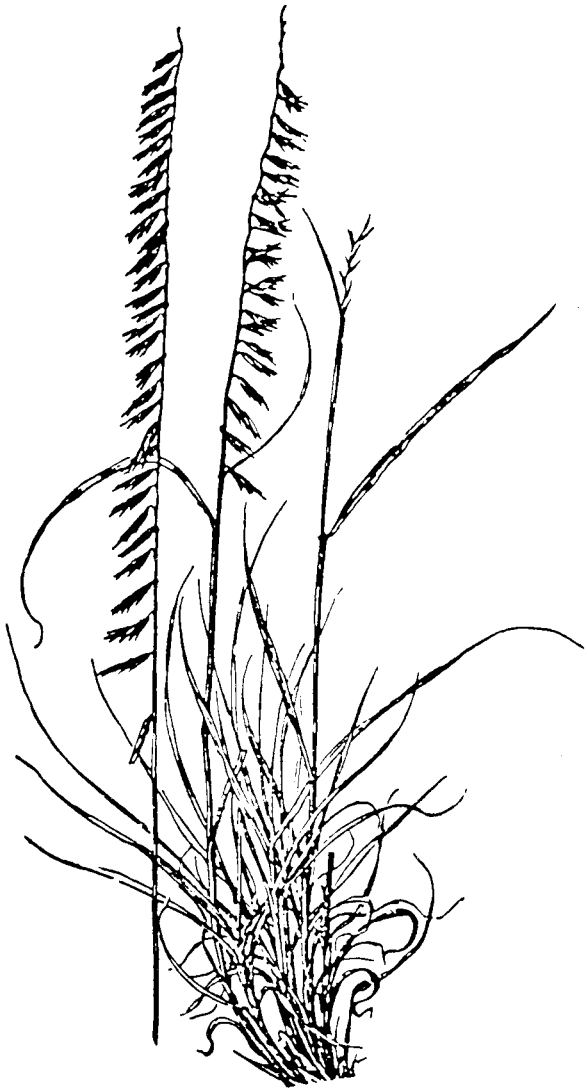
**Blaze**
**Where selected:** Nebraska
**Description:** Blaze is a leafy, mid-tall, late-maturing variety adapted to central latitudes. It has foliage that is bright to dull green, turning red in fall. It is recommended for conservation plantings and permanent pasture mixtures of warm-season prairie grasses. It is not recommended for seed production in South Dakota.
**Released:** 1967
**Adaptation:** Statewide

**Camper**
**Where selected:** Nebraska
**Description:** Camper's moderately late maturity from diverse parentage extends its primary area of adaptation and use throughout Nebraska and southern South Dakota. Seed maturity is rather late in the season. Camper is recommended primarily in mixtures with other warm-season grasses for range, non-irrigated pasture, and roadside plantings.
**Released:** 1973
**Adaptation:** Statewide

**Other varieties,** either not well adapted or for which a limited amount of seed exists, are Aldous and Cimarron.

## SIDEOATS GRAMA

This is a native, warm-season bunchgrass with short rhizomes that sometimes spread to form a sod. The flowering stalks are 2 to 3 feet tall. Side-oats grama is recommended for use in a mixture of warm-season grasses for erosion control on low -fertility sites, range seedings, and mid-summer pasture.



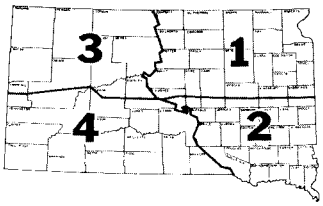
Sideoats grama

**Butte**
**Where selected:** Nebraska
**Description:** Butte is a winterhardy, long-lived, and relatively early-maturing variety. It makes its best growth response under long days and is best adapted to areas with relatively short growing seasons. Butte exhibits excellent seedling vigor for establishment.
**Released:** 1958
**Adaptation:** Regions 2 and 4

**Pierre**
**Where selected:** South Dakota
**Description:** Pierre is outstanding in vigor, leafiness, and disease resistance. It compares well with other varieties in forage and seed production. It is used for range seedings in South Dakota and in bordering states.
**Released:** 1965
**Adaptation:** Statewide

**Killdeer**
**Where selected:** North Dakota
**Description:** Killdeer was selected for early maturity, vigor, forage production, and disease resistance. It is a fair seed producer.
**Released:** 1968
**Adaptation:** Regions 1 and 3

**Other varieties,** either not well adapted or for which a limited amount of seed exists: Trailway



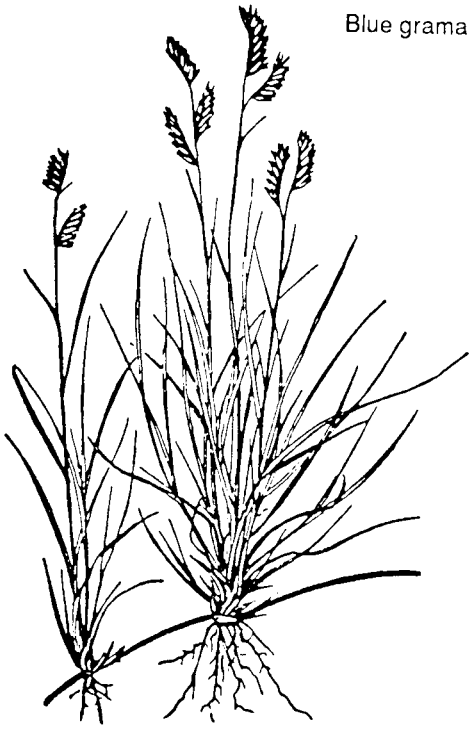

Blue grama

## BLUE GRAMA

This species is a short, sod-forming, native, perennial grass that spreads by means of short rhizomes. The flowering stems are 12 to 18 inches tall. Blue grama is palatable and nutritious, but it does not produce enough forage to make it useful to plant in a pasture or hay mixture. At the present time, only seed from native stands is available. Currently, no varieties of this species adapted to South Dakota are being marketed.

## BUFFALOGRASS

This is a fine-leaved, native, sod-forming perennial. It spreads by both rhizomes and stolons. It is the dominant species on large areas of upland in the short-grass region of western South Dakota. Plants generally grow 4 to 6 inches in height. Though it is palatable and highly nutritious, it does not produce enough forage to make it worthwhile to plant in a pasture or hay mixture. At the present time only seed from native stands is available. Currently no varieties of this species adapted to South Dakota are being marketed.



Buffalograss

## PRAIRIE SANDREED

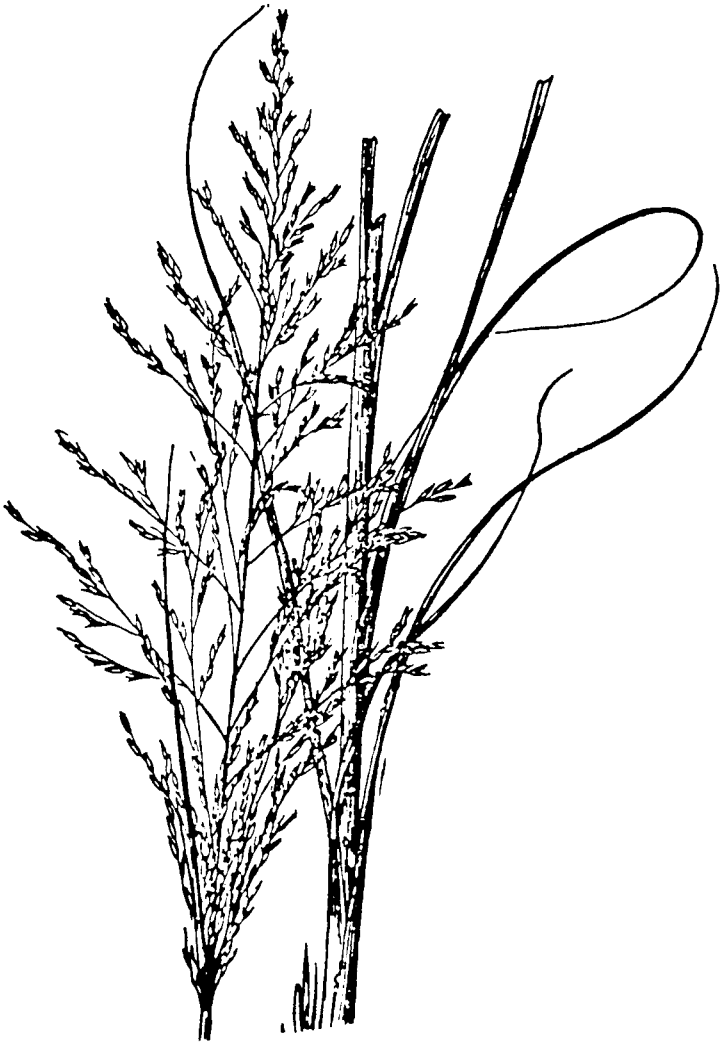
This species is a warm-season grass found primarily on sands from Ontario to Alberta to New Mexico, and eastward to Indiana. It has numerous rhizomes and is drought tolerant. In South Dakota it commonly occurs in large patches on coarse- textured soils and on some shales. It is not particularly palatable during the growing season, but it has good productivity.

### Goshen

**Where selected:** Montana
**Description:** Goshen is a variety well adapted to sandy sites receiving more than 12 inches of annual precipitation. It was released for stabilization and range revegetation on sandy soils in its area of adaptation. Stand establishment, plant vigor, forage production, ability to spread, and winter hardiness of Goshen have been equal or superior to other varieties tested in Montana.
**Released:** 1978
**Adaptation:** Regions 3 and 4

**Pronghorn**
**Where selected:** Nebraska
**Description:** Pronghorn is a variety with a broad genetic base that has a high degree of rust tolerance. It is adapted to and recommended for use in revegetating sandy sites in the Nebraska sandhills and northwest Kansas. Limited information is available on the performance of this variety in South Dakota.
**Released:** 1988
**Adaptation:** Region 4

**Other varieties** none



Prairie sandreed

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Hafewrichter, A.L., S.L. Schwendiman, H.L. Harris, R.S. MacLauchican, and H.W. Miller. *Grasses and Legumes for Soil Conservation in the Pacific Northwest and Great Basin States.* Soil Conservation Service Agriculture Handbook 339. 1968. USDA.

*Key to the Native Perennial Grasses.* Soil Conservation Service Publication No. SCS-TP-151. 1973. USDA.

Hitchcock, A.S. *Manual of the Grasses of the United States.* Publication No. 200. Second edition revised by Agnes Chase. 1950. USDA.

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