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Ornamental Grasses in Nebraska Landscapes

This NebGuide discusses the selection of and care for ornamental grasses.

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Although grasses are an important component of Great Plains flora, Midwesterners have only recently incorporated them into landscape plantings. Many homeowners are acquiring plants such as ornamental grasses because they tolerate or even benefit from lower application rates of nitrogen and pesticides. Ornamental grasses tolerate drought, wetness, and fluctuating winter temperatures. They are resistant to most diseases and insect pests and require minimum inputs of fertilizer. Because of these characteristics they are useful to gardeners interested in a low-input or sustainable landscape.

True grasses belong to a specific plant family. However, from a landscape point of view most grasslike plants, such as sedges and rushes, are included as ornamental grasses and serve the same function in the landscape. Ornamental grasses, which are not mowed, are used primarily as a contrast with mowed turf-type grasses.

Ornamental grasses vary in size, shape, color and texture in both foliage and inflorescence (seed head). Mature plants range in height from 6 inches (blue sedge, *Carex glauca*) to 14 or more feet (hardy pampas, *Erianthus ravennae*). Grass forms vary from low mounding to fountain shaped to tall vertical. Foliage color includes shades of green, yellow, blue, red, brown and variegated (green and white mixed). A number of grasses change in foliage color in the fall to displays of straw yellow, orange, red or purple. Foliage texture varies from fine to coarse (blade width from 1/8 to 1/2 inch). The inflorescence also varies in size and color, and may change color in the fall as well. Specific attributes of grasses recommended for Nebraska are indicated in *Table I*.

Ornamental grasses can serve many functions in the landscape. Ornamental grass foliage provides a surface to catch the wind. This movement adds a sense of motion to the landscape. For this reason the prairies were often visually described as an inland sea. This movement also creates rustling sound adding another dimension to your design. Thus, ornamental grasses aren't a static landscape element. Instead, they add life, motion and sound to plantings. In a border, grasses can be either edging or background plants while larger specimens can be accent plants or screens. Rhizome (blue lymegrass, *Leymus*) or stolon (buffalograss) forming grasses will stabilize banks or serve as ground cover. Some diminutive species can be utilized in a rock garden. Combine grasses with either woody or herbaceous perennial plants, such as shrub roses or black-eyed susan, to create a low input or sustainable landscape.

Unlike herbaceous perennials the foliage of most ornamental grasses don't disappear in late fall, but remain throughout the winter months. Grasses add life to a winter scene otherwise devoid of foliage.

Planting and Cultural Requirements

Although a few tolerate shade, most grasses require full sun. Some grasses or grasslike plants are adapted to wet soils, but most require a well-drained soil. To become drought and pest resistant, plants require a suitable root zone. In compacted soils, even the root systems of drought-tolerant plants will not develop. Incorporate organic matter into the root zone to improve water-holding capacity and oxygen levels. Adequate organic matter will develop a soil with sufficient pore size to readily release water. The improved root zone area will allow for maximum root expansion and water extraction from the soil. Improving the soil will reduce irrigation frequency. Dollars invested in soil improvement will be returned in fewer maintenance problems and fewer unattractive, short-lived plants.

Directly seed annual grasses in the spring. However, if you want an early display of "flowers", set out plants you have either purchased or have grown indoors. Container and bare root plants of many perennials are also available. If irrigation is available, you can plant container grown ornamental grasses throughout the summer. In Nebraska, plant bare roots or divisions in the spring.

Maintenance

In contrast to other flowering perennials, ornamental grasses require minimum maintenance and many species are both insect and disease resistant. However, improperly sited plants may become diseased because of poor air movement, high nitrogen soils or inadequate light. As ornamental grasses becomes more common, pest problems may develop. At that point, cultivar selection for pest resistance will be important.

Fertilization

Before you plant in a new site, test the soil. The soil test will determine the soil's phosphorous and potassium levels, the pH and the soluble salts content. Adjust these as needed before you plant and then retest every five years. If your soil needs phosphorous, potassium, calcium or sulfur, incorporate them thoroughly into the future root zone before planting. These nutrients will not move into the root zone if applied only to the soil surface.

Micronutrient deficiencies vary geographically. Check with county extension staff for guidelines in your area.

Use foliar appearance as a guide to nitrogen requirements. To prevent lodging, flopping or the need for staking, keep soil nitrogen levels low. However, if a leaf blade isn't a normal green color, nitrogen or a

micronutrient may be needed. Unsatisfactory foliar color could also indicate low soil oxygen levels, inadequate drainage or excess watering.

Irrigation

Until a mature root system develops, newly planted grasses require a moist root zone. Only a mature root system can extract sufficient water to maintain itself during drought periods. To reduce the likelihood of foliar disease, consider drip irrigation on specimen plants. Be careful not to overwater drought-tolerant grasses. Once grasses mature, frequency and quantity of water required varies with grass species and site characteristics (soil, heat from the sun, wind, etc.) The amount of water applied also depends on quality desired, growth rate and desired size.

Weed Control

Broad-leaved weeds are more readily controlled than grass or grasslike weeds. Select an appropriate herbicide to eliminate dandelions, plantain and other broad leaved weeds.

Because selective herbicides are not available for grassy weeds among ornamental grass plantings, you must eliminate weedy grasses before the site is planted. Then, after planting, mulch to suppress weed growth and to reduce the need for chemical controls.

Winter Preparation

Adapted ornamental grasses don't require winter mulch. Leaving the foliage on the plant provides some protection from crown tissue (the part of the grass plant near soil line) desiccation. Fall planted grasses and less hardy grasses may require additional mulching.

Preparation for Growing Season

In early spring before new growth begins, remove the previous year's foliage. You can use hand clippers, a mechanical weed whip or other power equipment. Your choice depends on the toughness of the foliage, as well as the number of ornamental grasses you manage.

Grasses will begin growing earlier if foliage is removed. Also, the plant is more attractive when dead foliage is not interspersed with living tissue.

Plant division depends on the spacing and visual appearance you desire and your need for additional plants. If the center of the clump shows little or no growth, the plant should be divided. Separate and replant the vigorous growth on the outer edge of the clump.

Native and Exotic Ornamental Grasses

There are many grass or grasslike plants suitable as ornamentals. Both native (ex. big bluestem, *Andropogon gerardii*) and exotic (ex. fountaingrass, *Pennisetum alopecuroides* 'Hameln') grasses are listed in *Table I*.

Native grasses were members of the state's flora before European settlers arrived. Exotic grasses, some of which can and have escaped and have become part of the state's flora, are introduced plants from other states or countries. Both groups provide plants suitable for Nebraska. Choose a cultivar adapted to your specific planting site. Some grasses, such as little bluestem and annual pennisetums, can reseed in

your garden.

The most popular groups of ornamental grasses are *Festuca* (fescue), *Miscanthus*, *Panicum* (switchgrass) and *Pennisetum* (fountaingrass). Examples of each are listed in *Table I*.

Fescue — This cool season, clump-forming grass requires protection from the hot afternoon sun. Blue foliage forms are the most popular. Division in the early spring is often required to restore vigor.

Miscanthus — Considered the showiest group of warm season, clump-forming grasses, it has very showy flowers. A large group of grasses with considerable variability in height, blade width, etc. Select cultivars carefully to insure adequate hardiness and adaptation to your site.

Switchgrass — This warm season, clump-forming group is becoming more popular as new cultivars become available. Cultivars with red fall color and blue foliated upright cultivars are popular.

Fountaingrass — Most members are warm season, clump forming grasses. Some grasses can become weedy, especially south of Nebraska. Both annual and perennial cultivars are valuable in landscapes. Flowers are showy and are foxtail-like in their appearance.

Table I lists grasses useful in Nebraska landscapes. For a more extensive list, see the references.

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Table 1 - Ornamental Grasses								
Perennials								
Common Name	Scientific Name	Height Spread	Flowers	Foliage color	Plant Form	Adaptability	Site Requirement	Remarks
Big bluestem	<i>Andropogon gerardii</i>	4'-6'	August to September; purplish	Grayish green silvery to blue; In fall copper, red	Upright open to arching clump form	Zone 4-10	Full sun; well-drained soils; tolerates heavy clay soil	Screen - tall background; plant drought tolerant
Blue lyme grass	<i>Leymus arenarius</i>	2'-3'	Not showy	Blue	Irregular; Loosely to	Zone 4-10	Full sun; well-drained soil	Plant in sunken container; soil

					densely tufted; invasive			drought tolerant
Blue Oat Grass	<i>Helictotrichon sempervirens</i>	12"-18"	Late May; blue aging to wheat color	Blue	Tufted mound	Zone 4-9	Well-drained soil; good air circulation	Accent plant
Feather reedgrass	<i>Calamagrostis</i> × <i>acutiflora</i> 'Karl Foerster'	2'-4'	Mid June; Pink	Green; In fall gold	Erect narrow stiff clump forming	Zone 5-9	Full sun; tolerates clay soil	Specimen, multiple uses
Fescue	<i>Festuca cinerea</i> 'Solling'	8"-10"	None	Blue-gray; In fall reddish-brown	Tufted mound	Zone 4-9	Full sun; well-drained, moist soil	Needs good air circulation
Flame Grass	<i>Miscanthus purpurascens</i>	4-5'	White	Fall color red		Zone 4-9		
Fountaingrass	<i>Pennisetum alopecuroides</i> 'Hameln'	1 1/2'-2 1/2'	White turning to creamy tan	Dark green	Upright mounded clump former	Zone 5-8	Full sun; moist, well-drained soil	Doesn't become weedy
Japanese Grass, Blood	<i>Imperata cylindrica</i> 'Red Baron'	1'-1 1/2'	Now showy	Only tip red early Spring; leaf blade deep red in Fall; brown after frost	Upright; spreads slowly	Zone 5-9	Full sun to half shade; moist soil	Group planting; tips of blade may turn brown if stressed; short-lived in exposed sites.
Japanese Grass, Silver	<i>Miscanthus sinensis</i>						Full sun; prefers moist soil	Specimen plant
---Cultivar	'Bitsy Ben'	4'-5'	White			Zone 4-9		Early flowering
---Cultivar	'Graziella'	4'-5'	White	Fall color reddish brown		Zone 5-9		
---Cultivar	'Jailbird Ben'	4'-5'	White	Horizontal vegetation		Zone 4-9		Large inflorescence
---Cultivar	'Kaskade'	5'-7'	Pink	Fall deep purple pendant flowers; summer purple tinted green		Zone 5-9		
---Cultivar	'Morning Light'	4'-5'	Red-bronze	Silver margin		Zone 5-9		Not prone to lodging
---Cultivar	'Nippon'	5'	Buff	Green silver stripe		Zone 5-9		Early flowering
---Cultivar	'Sarabande'	4'-5'	Silvery	Green silver stripe		Zone 5-9		
---Cultivar	'Strictus'	6'-8'	Golden	Deep green, gold bands upright		Zone 5-9		
Little Bluestem	<i>Schizachyrium scoparium</i>	2'-5'	July to fall yellow fluffy plumes	Green to blue; fall-bronze to orange	Upright; clump former; subject to lodging	Zone 3-10	Full sun; avoid high nitrogen soils	Mass planting; drought tolerant; several cultivars with various foliage colors available
Moorgrass	<i>Molinia caerulea</i>	1'-2'	Brown, yellow; purplish on emergence; fade to tawny color June-early July	Light green	Upright foliage	Zone 4-9	Moist, fertile, acid soil in full sun	Accent plant; foliage and flowers in late fall
Palm Sedge	<i>Carex muskingumensis</i>	1 1/2'-2'	Not showy	Light green; turns yellow at first frost	Arching	Zone 4-9	Moist; shaded light	Good erosion control for moist banks, ground cover, mass plantings, showy tropical appearing

								plant
Ravennagrass (Hardy Pampas)	<i>Saccharum ravennae</i>	4'-5'; In flower, up to 10'	Silvery white September to October	Gray-green; in Fall orange, brown, purple	Erect to upright, clump former	Zones 5-10	Full sun; prefers moist soil	Specimen is drought tolerant; careful site selection required to avoid water injury
Red Switchgrass	<i>Panicum virgatum</i> 'Haense Herms'	3'-3 1/2'	Pink to reddish; mature grayish-white	Purplish red highlights on tips. Fall foliage reddish orange	Tight vertical in full sun	Zone 5-9	Full sun; moist	Mass planting or specimen
Ribbongrass	<i>Phalaris arundinacea</i> 'Feeseys form'	1 1/2'-2 1/2'	White turning to pale brown	White striped blushed with pink in Spring	Upright, open, invasive	Zone 4-9	Moist soils; hot climates; avoid full sun exposure	May need shearing in midsummer
Silver Variegated Japanese Sedge	<i>Carex morrowii</i> 'variegata'	1'	Not showy	Silver-edged variegated	Arching	Zone 5-9	Moist; high organic loam in partial shade	Ground cover, mass planting

Annuals

Common Name	Scientific Name	Height Spread	Flowers	Foliage color	Plant Form	Adaptability	Site Requirement	Remarks
Squirreltailgrass	<i>Hordeum jubatum</i>	1-2'	Fine textured, light green foliage	Green to beige	Pale fluffy seedheads 2-4" long		Full sun, moist	Can be invasive - self seeds
Feathertop	<i>Pennisetum villosum</i>	1-2'	Fluffy, creamy white flowers 2-5" long	Blue-green			Full sun	
Purple Fountaingrass	<i>Pennisetum setaceum</i> 'Atrosanguineum'	3-4'	Long purple flowers 8-12" long	Deep maroon	Upright arching habit		Full sun	
Rubygrass Pink Crystals	<i>Rhynchelytrum nerviglume</i>	20-24"	Bright ruby and silver	Green	Upright		Full sun	

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