



United States  
Department of  
Agriculture

NATURAL RESOURCES CONSERVATION SERVICE

The cover features a green-tinted background with various plant images. On the left is a vertical strip showing a close-up of a grass seed head. On the right, a magnifying glass is positioned over a cluster of green leaves with water droplets. The title is centered within the magnifying glass's lens.

# FIELD GUIDE TO RANGE PLANTS

Eastern Oregon

*2nd Edition*



### **Cover Photos**

*Japanese Brome*, Patrick J. Alexander @ USDA-NRCS PLANTS Database; *Alfalfa*, Misty Bennett, Oregon NRCS; *Crested Wheatgrass*, Misty Bennett, Oregon NRCS

### **Interior Cover**

*Bluebunch Wheatgrass*, Patrick J. Alexander  
@ USDA-NRCS PLANTS Database

### **Opposite**

*Smooth Brome*, Patrick J. Alexander  
@ USDA-NRCS PLANTS Database

### **Back Cover**

*Kentucky Bluegrass*, Robert Soreng  
@ USDA-NRCS PLANTS Database

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**United States Department of Agriculture**  
**Natural Resources Conservation Service**

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**Field Guide to Range Plants**

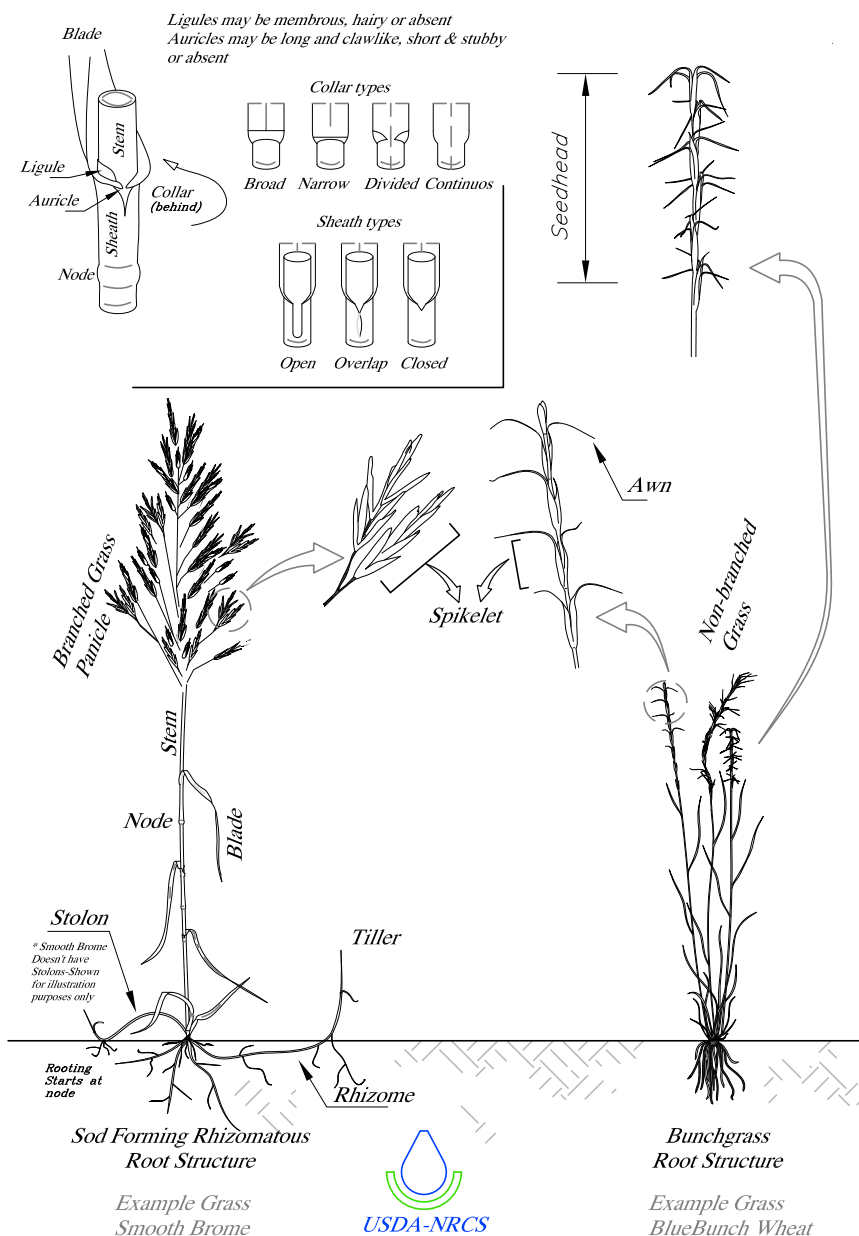
*Second Edition*

Eastern Oregon



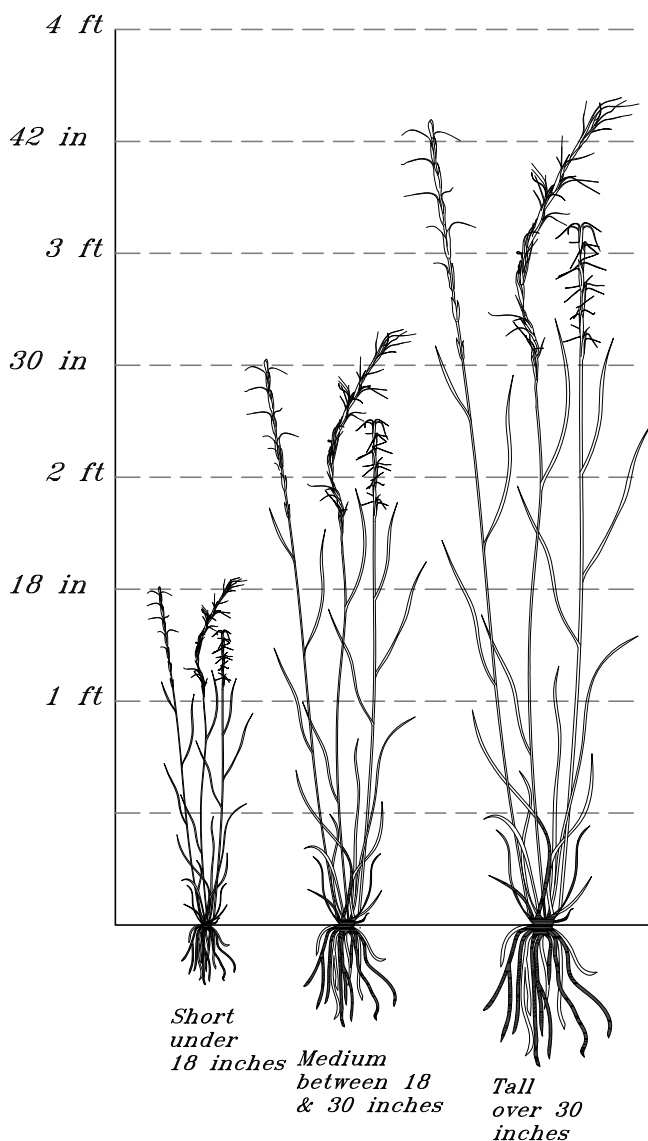
# Plant Diagram

The following illustration includes key identifying characteristics referenced throughout this guide.



## Plant Height Chart

*The following illustration serves as a height reference designating a range in inches and feet for short, medium and tall plants.*



*Illustration by Joe Collier, NRCS*



# *Alfalfa*

*Medicago sativa* L.



**(all photos this page):** Misty Bennett, Oregon NRCS

### Overview

- *Introduced*
- *Perennial*
- **Height:** *Short to medium*
- **Precipitation:** *12<sup>+</sup> inches annually*
- **Soil Type:** *Well-drained soils*

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### Description

Alfalfa is a short-to-medium height plant with leaves arranged in groups of three alternating along the stem. Flowers appear as loose clusters, and may be white, yellow or purple.

### Landscape Locale

Alfalfa is an introduced species and may be found across a broad range of landscapes where seeded. Sites that are frequently flooded or have a high water table are unfavorable for alfalfa.

### Management

It is compatible with both introduced and native species. Alfalfa is highly palatable to both livestock and wildlife, but becomes “woody” with non-use. When used for grazing, be aware of the potential for bloat. It may be grazed from late spring to summer. Heavy fall use may delay spring growth. Moderate to severe fires may top-kill alfalfa shoots, while severe fires may kill the plant entirely.

- *Similar in appearance: Sweet clover*



# *Basin Wildrye*

*Leymus cinereus*



**(top left to right):** Jacob Johansen, Oregon NRCS;  
Lorraine Vogt, Oregon NRCS

**(bottom):** Jacob Johansen, Oregon NRCS

# *Basin Wildrye*

*Leymus cinereus*

AKA: Elephant grass, Rye

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## Overview

- Native
- Perennial
- **Height:** Tall, 3 - 6<sup>+</sup> feet
- **Precipitation:** 8 - 20 inches annually
- **Soil Type:** Typically found in deep, well-drained loamy soils.

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## Description

As the largest cool-season grass native to North America, Basin wildrye may grow 3 - 6 feet tall. It is a coarse bunchgrass with an 8 - 12 inch stiff spike seed head and long, wide and flat leaf blades.

## Landscape Locale

It is found in deep, well-drained moist sites near springs, riparian areas or on terraces, flood plains, basin floors, alluvial flats or low rolling hills between elevations of 1,000 - 9,000 feet. Sites exhibit little (less than 5 percent) to no slope.

## Management

In addition to being site specific, Basin wildrye is often difficult and slow to establish. It is most palatable early in the season, remaining fair winter forage and cover above snow. It may be grazed during the spring to late fall and early winter, providing excellent upland game-bird habitat and fair livestock forage. It is intolerant of heavy, repeated grazing, especially in the spring. Defer spring grazing until the plant reaches 12 - 15 inches in height. It will be most productive if 6 inches of stubble is left after grazing. Basin wildrye is well adapted to fire, growing vigorously after burning when moisture is adequate. Older plants are more susceptible to damage if there is excess dead material.

- *Similar in appearance:* N/A



# ***Big Bluegrass***

*Poa secunda* (ampla)



**(top left and right):** Nathan James, Oregon NRCS

**(bottom):** Jacob Johansen, Oregon NRCS

# ***Big Bluegrass***

*Poa secunda (ampla)*  
AKA: Sherman big blue

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## Overview

- Native
- Perennial
- **Height:** Medium
- **Precipitation:** 9 - 20 inches annually
- **Soil Type:** Loamy sands to heavy clay loams; tolerates moderately-acidic soils

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## Description

Big bluegrass is a significant cool-season grass and one of the first to green-up in early spring, as many as four weeks earlier than crested wheatgrass. It is a distinctively blue bunchgrass that is leafy with long, flat leaves and boat-shaped leaf tips. It grows erect with numerous fine stems, abundant leaves, and a large, compactly branched and erect seed head. It grows seed heads early and produces small, abundant seeds that shatter readily and grow with the first fall rains. It is high in seed, forage and root production.

## Landscape Locale

This variety naturally grows on upland sites and in open ponderosa pine and lodgepole forests. It is drought resistant and can survive in as little as 6 inches of annual precipitation.

## Management

Big bluegrass is very palatable to cattle, sheep and big game. It is highly productive and preferred early-spring forage for livestock. It should be grazed after growth reaches 8 inches. Livestock graze big bluegrass in the vegetative state, but avoid it after the grass has gone to seed. Regrowth may be grazed after plants turn green in the fall. A 6-inch stubble should be left after grazing. Big bluegrass should be allowed to set seed once every three years to replenish the stand. Upland game birds, especially pheasants, choose bluegrass fields for nesting sites because of early spring growth. The basal leaves also provide good shade. Bluegrass competes well with cheatgrass once it is established and also endures when seeded with other native grasses or alfalfa.

- *Similar in appearance: Sandbergs bluegrass*



# *Birdsfoot Trefoil*

*Lotus corniculatus*



**(top left to right):** JPatrick J. Alexander @ USDA-NRCS PLANTS Database;  
Jacob Johansen, Oregon NRCS

**(bottom):** Steve Hurst@USDA-NRCS Plant Database

# *Birdsfoot Trefoil*

*Lotus corniculatus*  
AKA: Birdfoot Deervetch

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## Overview

- *Introduced*
- *Perennial*
- **Height:** *Short to Tall*
- **Precipitation:** *20+ inches annually*
- **Soil Type:** *Occurs on low and moderately fertile soils*

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## Description

Birdsfoot trefoil is a moderately long lived herbaceous perennial legume. It can grow to heights of 2 to 3 feet and has a well develop branching tap-like root with side shoots near the surface. Leaves are smooth and have 5 leaflets. The bloom is made up of a cluster of yellow flowers arranged in a whorl at the end of the stems. It can tolerate saline-alkaline soils and can tolerate pH ranging from 5.5 to 7.5. It performs well on soils that are shallow or poorly drained for alfalfa. There are on average 375,000 seeds per pound.

## Landscape Locale

Birdsfoot trefoil is an introduced species often used in pasture, hay, and silage production. For erosion control it has been used along roadsides. This species can become weedy or invasive in some regions or habitat types and should be monitored.

## Management

Birdsfoot trefoil is used for green chop, hay and pasture and can be planted with grass species and grazed as a non- bloating legume. It can produce up to 4 tons of hay in irrigated ground and in a dryland setting can produce up to 20% more growth after July 1st than other dryland grass legume mixes. Delayed spring grazing until plants are 8 inches tall and not grazing below a 4 inch stubble height will help ensure stand longevity. Hay harvest should also maintain 4 -6 inches of stubble to ensure good regrowth.

- *Similar in appearance: NA*

# *Bluebunch Wheatgrass*

*Pseudoroegneria spicata*



**(top left to right):** Adie Gerig-Heyerly, Oregon NRCS;  
Jacob Johansen, Oregon NRCS

**(bottom):** Lorraine Vogt, Oregon NRCS

# *Bluebunch Wheatgrass*

*Pseudoroegneria spicata*

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## Overview

- Native
  - Perennial
  - **Height:** Medium
  - **Precipitation:** 8 - 14 inches
  - **Soil Type:** Tolerates most soil textures but typically found in well-drained to excessively well-drained soils.
- 

## Description

Bluebunch wheatgrass is a cool-season bunchgrass with drooping leaves that grow from the stem. The leaves are flat or slightly rolled inward and green to blue in color. Reproductive stems are erect with a 3 - 8 inch seed spike at the head. There are awned and awnless varieties.

## Landscape Locale

Bluebunch wheatgrass is found on heavy to coarse textured soils, including sandy sites. This grass often dominates southern exposures, but may occur on all aspects. It is tolerant of moist soils, although it occurs more abundantly in dry areas.

## Management

Bluebunch wheatgrass makes good forage for both livestock and wildlife. Forage quality is highest during the spring and decreases as the plant matures. It should be grazed in the spring after 6 inches of new growth. Spring grazing, however, should occur no more than once every three years. It should be grazed using a deferred, rotational grazing system and does not tolerate continuous heavy grazing. Bluebunch wheatgrass is highly fire tolerant, and rapidly recovers after a burn. It is compatible with native grasses and forbs, but does not compete well with aggressive introduced grasses.

- *Similar in appearance: Other wheatgrasses*



## ***Blue Flax***

*Linum perenne*



**(all photos this page):** Misty Bennett, Oregon NRCS

### Overview

- *Introduced*
- *Perennial*
- **Height:** Medium
- **Precipitation:** 10<sup>+</sup> inches annually
- **Soil Type:** Well-drained soils

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### Description

Blue flax is a semi-evergreen forb. It has many small, narrow, alternating leaves directly attached to the stem. When in bloom, flowers have five petals ranging from white to blue. Each flower produces a capsule which can contain ten 1 seeded segments.

### Landscape Locale

Blue flax is an introduced species and may be found across a broad range of landscapes. It thrives on well drained porous soils ranging from moderately basic to weekly acidic, and is intolerant of poor drainage, flooding and high water tables.

### Management

The plant remains green throughout the growing season providing fair forage for livestock and wildlife during spring and winter but sheep maybe poisoned by eating blue flax. Birds also seek out its seeds during the fall and winter months. By retaining some of its green basal foliage throughout the year, blue flax does not readily burn making it useful as a vegetative fuel break. Blue flax typically thrives under heavy grazing pressure. Additionally, it is compatible with both native and introduced grass species.

- *Similar in appearance: Lewis flax*



## *Blue Wildrye*

*Elymus glaucus*



**(top left to right):** Lorraine Vogt, Oregon NRCS; Aaron Roth, Oregon NRCS  
**(bottom):** Tereasa Perkins, Oregon NRCS

# *Blue Wildrye*

*Elymus glaucus*

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## Overview

- Native
  - Perennial
  - **Height:** Tall
  - **Precipitation:** 16<sup>+</sup> inches annually
  - **Soil Type:** Well-drained soils, silt loam to sandy loam
- 

## Description

Blue wildrye is a tall (up to 5 feet), typically short-lived bunchgrass with bluish-cast leaves.

## Landscape Locale

It generally grows in close proximity to timber at elevations of 3,500 feet and higher. Blue wildrye may be found in open woodlands, wet meadows, moist well-drained sites and stream banks.

## Management

While blue wildrye readily establishes with proper management, it is generally intolerant of heavy grazing. It is highly palatable to livestock and big game early in the season, although it is avoided after seed set. It may be grazed from spring to mid-summer, although a two-to-three-year deferment is recommended to allow for reproduction of the stand. Short-lived plants require seed to reproduce over time.

- *Similar in appearance: Basin wildrye and wheatgrasses*



## *Bottlebrush Squirreltail*

*Elymus elymoides*



**(top left to right):** Adie Gerig-Heyerly, Oregon NRCS;  
Misty Bennett, Oregon NRCS

**(bottom):** Ruth Whittaker, [www.tribalnativeplants.com](http://www.tribalnativeplants.com)

# *Bottlebrush Squirreltail*

*Elymus elymoides*

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## Overview

- Native
- Perennial
- **Height:** Medium
- **Precipitation:** 8<sup>+</sup> inches annually
- **Soil Type:** Well-drained soils and can occur on all soil types

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## Description

Bottlebrush squirreltail is a cool-season bunchgrass with leaves that are flat to rolled inward. The seed head resembles a round brush when mature. Awns may be 2 - 10 cm long and often turn purple at maturity.

## Landscape Locale

The plant is often found at low-to-mid elevations and is a common component of sagebrush/grass communities of the Intermountain shrubsteppe. In eastern Oregon, bottlebrush squirreltail is found with bluebunch wheatgrass, prairie junegrass, Sandberg bluegrass, Thurber needlegrass, Idaho fescue and cheatgrass.

## Management

Bottlebrush squirreltail is considered moderately palatable to livestock. However, long sharp awns greatly reduce palatability when present and may injure grazing animals. It makes good forage for small mammals and fair forage for birds, as well as both upland game and nongame. Its leaves green-up in the spring and remain green throughout the fall and into winter. It generally increases in abundance with moderate grazing and trampling, and is considered one of the most fire resistant bunchgrasses. After a burn, it sprouts from the surviving root crown and colonizes by seed. It is most tolerant of late-summer and early-fall burns. It can replace annual weedy species following a fire, and once established may even lower the overall frequency of weedy species, allowing for native perennial growth. However, it does not establish well in already established perennial shrub or grass communities, particularly with crested wheatgrass.

- *Similar in appearance: Medusahead rye*



# *Bulbous Bluegrass*

*Poa bulbosa*



**(top left to right):** Aaron Roth, Oregon NRCS;  
Sheri Hagwood @USDA-NRCS Plant Database

**(bottom):** J. Johansen, Oregon NRCS

# ***Bulbous Bluegrass***

*Poa bulbosa*

AKA: Winter bluegrass

## Overview

- *Introduced*
- *Perennial*
- **Height:** *Short to Medium*
- **Precipitation:** *12-40 inches annually*
- **Soil Type:** *Occurs on a wide range of soil conditions and can tolerate salty and low fertility conditions*

## Description

Bulbous Bluegrass is a short-lived perennial cool-season grass. Leaf blades are narrow, flat or loosely rolled. It is the only grass known to have true bulbs which are dormant from mid-May through early October. The plant can reach heights of 6 – 24 inches. The bulblets mature in early May and can germinate after a period of dormancy lasting a few months up to 2 years.

## Landscape Locale

It is often the first invading species on disturbed shallow soil that stay moist during the winter and early spring. Often found along marginal sites or road ways with the potential to move into nearby crop, hay and range fields.

## Management

Bulbous bluegrass is currently considered a weedy species and is considered an “increaser” species when grazed heavily. In early spring when it is green and lush it can be a desirable forage species, but it matures quickly and does not provide significant forage for livestock. Deer and elk use can be prevalent in the fall and winter. Repeated spring grazing can reduce bulbous bluegrass population if high intensive grazing is applied over several growing seasons. Potential impacts to other more desirable species should be considered if considering high intensity grazing. The bulblets contain high levels of starch and fat and provide an important resource for rodents and birds.

- *Similar in appearance: Other bluegrasses until seed head formation*



# *Cheatgrass*

*Bromus tectorum*



**(top left to right):** Steven Perkins @ USDA-NRCS PLANTS Database;  
Gary A. Monroe @ USDA-NRCS PLANTS Database

**(bottom):** Shannon Roggow, Oregon NRCS

# *Cheatgrass*

*Bromus tectorum*  
AKA: Downy brome

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## Overview

- *Introduced Invasive*
  - *Annual*
  - **Height:** *Short to medium*
  - **Precipitation:** *6<sup>+</sup> inches annually*
  - **Soil Type:** *Can do well on all soil types and depths given correct timing and amount of precipitation.*
- 

## Description

Cheatgrass ranges between 4 - 30 inches in height. The leaf blades are densely covered with soft hair and appear red or purple at maturity.

## Landscape Locale

Cheatgrass may be found on disturbed sites at any elevation, but does best at elevations between 500 - 6,000 feet. On certain intermountain ranges, it is a primary source of forage, but matures early and may become a dangerous fire hazard.

## Management

Cheatgrass is extremely palatable early in the growing season, as well as late fall. Forage quality and palatability, however, decline as the plant matures. It may be grazed by wildlife, while its seeds are a common food source for upland game birds. It responds well to disturbance, such as mowing and grazing, and is especially well adapted to frequent fire regimes, acting as a strong competitor in the post-fire environment. Cheatgrass is a prolific seed producer, and the seeds remain viable until favorable conditions return. It competes well for moisture against perennial grasses because of its winter and early spring growth. It also responds well to the addition of nutrients.

- *Similar in appearance: Other annual bromes*



# *Common Yarrow*

*Achillea millefolium*



**(top left to right):** Lars Santana, Oregon NRCS (both left and right)  
**(bottom):** J.Johansen, Oregon NRCS

# *Common Yarrow*

*Achillea millefolium*

AKA: Western Yarrow

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## Overview

- *Native and Introduced*
- *Perennial*
- **Height:** *Medium to Tall*
- **Precipitation:** *10<sup>+</sup> inches annually*
- **Soil Type:** *Adapted to a wide range of soils*

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## Description

Common yarrow is a perennial herb that produces one to several stems from a fibrous underground horizontal rhizome ranging in height from 10-40 inches tall. Leaves have a fern-like appearance and are evenly distributed along the stem, with the middle and bottom being the largest. The flower head has a flattened dome shape with approximately 10-20 ray flowers. Flower color is commonly whitish and it usually flowers from May to June.

## Landscape Locale

Common yarrow is often found in mildly disturbed soils of grassland sagebrush plains, pastures, roadsides, disturbed sites, CRP fields and open forest. It is a pioneer species meaning it is often one of the first forbs to grow after disturbance and can persist on the site as succession develops. This species has the potential to become weedy or invasive to do its high seed production and rhizome reproduction potential.

## Management

Common yarrow was commonly used by several tribes of the Plains region for numerous medicinal remedies. Forage value varies greatly depending on location and seasonal weather patterns. The plant is not considered poisonous but contains toxic alkaloid and glycosides. Livestock and wildlife may eat the flower but use is rare. Sheep and goat can have a fair forage value from common yarrow. It can be a very important food supply for sage grouse and sage grouse chicks. It is also a common species in landscape and pollinator habitat seed mixes.

- *Similar in appearance: whitetop*



# *Crested Wheatgrass*

*Agropyron cristatum*



**(top left to right):** Kacee Lathrop, Oregon NRCS; Misty Bennett, Oregon NRCS  
**(bottom):** Misty Bennett, Oregon NRCS

# *Crested Wheatgrass*

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*Agropyron cristatum*

## Overview

- *Introduced*
- *Perennial*
- **Height:** Medium
- **Precipitation:** 8<sup>+</sup> inches annually
- **Soil Type:** Well-drained soils

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## Description

Crested wheatgrass is a cool-season bunchgrass with a flat seed head and seeds alternating on either side of the stem. It has short awns and a stacked, shingle-like head structure.

## Landscape Locale

Crested wheatgrass is an introduced species and may be found across a broad range of landscapes where seeded.

## Management

In addition to being highly palatable to livestock and wildlife, crested wheatgrass may be grazed 2 - 4 weeks earlier than native grasses during early growth stages in the spring. It is also highly palatable during fall regrowth. Deer, elk and antelope graze it in the early spring, while birds and small mammals feed on the seeds. Upland birds and song birds use the stands for nesting. Crested wheatgrass burns quickly, which makes it less susceptible to fire damage than some bunchgrass species. Fires typically burn the top of the plant, while the roots and underground parts survive. It competes well with annual grasses, germinating early and growing more rapidly at cool temperatures than other native grasses. However, due to its aggressive nature, it should not be seeded with natives. Crested wheatgrass has an extensive root system, making it useful for erosion control. Fields should be allowed to set seed once every four years to replenish the stand.

- *Similar in appearance: Siberian wheatgrass,  
Desert wheatgrass*



## *Elk Sedge*

*Carex geyeri*



**(all photos this page):** H. John Halverson, Oregon NRCS



# *Elk Sedge*

*Carex geyeri*

AKA: Pine sedge, Greyer's sedge

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## Overview

- Native
- Perennial
- **Height:** Short
- **Precipitation:** 12 - 20 inches annually
- **Soil Type:** Typically well-drained loamy soils

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## Description

Elk sedge is a short, sod-forming, grass-like plant that grows 6 - 12 inches in height. It is characterized by an edged stem with a triangular cross section and topped by bristle-like seed heads. Leaf blades are linear and flat with parallel veins. Flowers are yellow and typically bloom between late April and June. The plant has a low seed production and poor seed viability. It reproduces readily by rhizomes and has an extensive root system up to 5-feet wide and 6-feet deep, allowing for increased production.

## Landscape Locale

Elk sedge is drought tolerant and is often found on well-drained, loamy soils in partial sunlight. This plant may occur in warm, dry, lower-to-mid elevation forested sites, as well as cool, dry upper elevations. Sprouting occurs in early spring during periods of high soil moisture. The plant becomes dormant when soil moisture is depleted.

## Management

Elk sedge is moderately palatable to livestock and wildlife. While elk find it highly palatable, deer tend to avoid it. Known for being trample resistant, elk sedge is a significant source of forage for cattle on summer ranges in northeastern Oregon. Leaves remain green year round even under snow cover, while stands tend to decline if snow cover persists into June. Following a fire, elk sedge is quick to resprout. Nevertheless, it is slow to recover on stands affected by sustained fire pressures.

- *Similar in appearance: Pinegrass, other sedges*

# *Forage Kochia*

*Bassia prostrata*



**(top left to right):** Lorraine Vogt, Oregon NRCS (both left and right)

**(bottom):** Lorraine Vogt, Oregon NRCS

# *Forage Kochia*

*Bassia prostrata*

AKA: Prostrate summer cypress, Perennial Summer Cypress

## Overview

- Introduced
- Perennial
- **Height:** Short to tall
- **Precipitation:** 6 - 16 inches annually
- **Soil Type:** Occurs on a wide variety of soil types including areas with high salinity and sodic conditions

## Description

Forage kochia is an introduced, semi-evergreen, half shrub. Plants can reach heights ranging from 1 to 3 feet tall with a deep tap root and extensive root system. Leaves are linear and hairy. Flowers are clustered on a single or branches upper stem. Flowers bloom from July to September and the plant can live from 10-15 years.

## Landscape Locale

Forage kochia has been seeded successfully in most great basin states at elevations from 1,600 to 7,300 feet. Plants do best in medium textured soils but can grow and persist in a wide range of soil textures. Rangeland seedings have occurred to combat rangeland degradation as it competes well with exotic grass such as cheatgrass and medusahead as well as undesirable plants such as halogeton and Russian thistle. Forage kochia has also been planted for greenstrips or firebreaks throughout the Intermountain West.

## Management

Forage kochia can be used as yearlong forage under proper grazing management. Spring grazing is normally limited as other more desirable grasses are present. As the summer progress and the plant communities dry out Forage kochia becomes more desirable. Plants grazed less than two inches will show signs of less growth the next year. Forage kochia seeds lose viability rather fast only germinating well for up to 6 to 8 months after harvest and should be planted the same fall or winter they are collected. Forage kochia has been planted for livestock fall and winter feed, fire prevention, and soil stability properties.

- *Similar in appearance: Annual Kochia species*



# *Foxtail Barley*

*Hordeum jubatum*



**(top left to right):** Jennifer Anderson @ USDA-NRCS PLANTS Database;  
Lars Santana, Oregon NRCS

**(bottom):** Jacob Johansen, Oregon NRCS

# ***Foxtail Barley***

*Hordeum jubatum*

AKA: Squaretail barley, Foxtail

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## Overview

- Native
- Perennial
- **Height:** Short to Medium
- **Precipitation:** 10+
- **Soil Type:** Adapted to a broad range of soil types but does best on poorly drained soils

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## Description

Foxtail barley is a cool season short lived perennial bunch grass that reproduces by seed and tillering. The plant grows from 1 -2 feet tall and usually starts growing in late April to May and matures from June to August produce a pale green bushy spike. At maturity the heads break into 7-awned clusters consisting of 3 spikelets. Foxtail barley is a prolific seed producer and seeds are easily transported by wind or hair of grazing animals. It can grow on saline and non-saline soils and soils with a pH ranging from 6.4 – 9.5.

## Landscape Locale

The plant is often found in pasture, roadsides, meadows, alkaline/saline areas, moist soils and disturbed areas. It is often most abundant where water accumulated or collects. Seed germinate in the spring and fall producing two populations and seed set per year.

## Management

Livestock can safely graze foxtail barley prior to seed development but usually provides a poor forage value for both livestock and wildlife especially after seed development. Hay contaminated with foxtail barley is greatly reduced in value and utilization potential and can have negative health effects on livestock. Awns may cause sores in and around the nose, eyes, and mouth and can contaminate sheep wool. Seed can become easily caught in hair or fur making transpiration and spreading of the seed very easy. Late spring burns have been successful in reducing foxtail barley, but new seed sources are often not far away.

- *Similar in appearance: Medusahead rye, bottlebrush squirreltail*



# *Idaho Fescue*

*Festuca idahoensis*



**(top left and right):** Gary A. Monroe @ USDA-NRCS PLANTS Database

**(bottom):** Nathan James, Oregon NRCS



# *Idaho Fescue*

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*Festuca idahoensis*

## Overview

- Native
- Perennial
- **Height:** Medium
- **Precipitation:** 10<sup>+</sup> inches annually
- **Soil Type:** Well-drained to moderately well-drained soils often with loamy soil surfaces

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## Description

Idaho fescue is a cool-season bunchgrass. The seed head is a narrowly branched cluster. Ranging from bluish-green to green, its narrow leaves originate at the base and roll inward. The roots are black, and the plant appears fine and soft.

## Landscape Locale

While it grows on all exposures, it is typically found on cool, northern slopes in low precipitation zones.

## Management

Idaho fescue provides year-round grazing for elk and is considered good forage for small mammals. It may be grazed during the summer, and is palatable late into the growing season because it remains green longer. Palatability decreases with maturity. If heavily grazed, Idaho fescue may be replaced by invasive species, such as cheatgrass. Grazing should be deferred one in every three years so seed may set. Stubble height should be at least 2 - 3 inches at the end of the growing season. Idaho fescue may survive light-severity fires, but is typically harmed by severe fires. Following fire, protect the grass from grazing for 2 - 3 years to ensure full recovery. This grass does not compete well with aggressive introduced grasses.

- *Similar in appearance:* Thurber's needlegrass,  
Hard fescue, Sheep fescue

# *Indian Ricegrass*

*Achnatherum hymenoides*



**(top left to right):** Gary A. Monroe @ USDA-NRCS PLANTS Database;  
Cassandra Skinner @ USDA-NRCS PLANTS Database

**(bottom):** Gary A. Monroe @ USDA-NRCS PLANTS Database

# *Indian Ricegrass*

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*Achnatherum hymenoides*

## Overview

- Native
- Perennial
- **Height:** Short to medium
- **Precipitation:** 6 - 15 inches annually
- **Soil Type:** Well-drained to excessively well-drained loamy and coarser soils

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## Description

Indian ricegrass is a cool-season bunchgrass with narrow, tightly-rolled leaf blades growing primarily at the plant base. The seed panicle is open and found on branches on the main stem. The seed is pubescent and brown to black with a straight awn.

## Landscape Locale

Although drought tolerant, Indian ricegrass is only weakly tolerant of salinity and alkalinity, and is intolerant of shade. Nevertheless, it may be found in a wide range of precipitation zones at elevations above 500 feet in hot, dry southern exposures.

## Management

The high protein and fat content in the seed make it appealing for livestock and wildlife, including upland game birds. With proper establishment and management, it may be used to stabilize sandy soils prone to wind erosion. It may be grazed during the spring and summer, although it is most often used in the late fall and winter because it cures well and retains green growth long into the season. Because of its high palatability for both livestock and wildlife, stands may succumb to overgrazing. Springtime grazing should be deferred every 2 - 3 years to allow the plant to flower and produce seed before the available moisture is exhausted. The hard seed coat may delay establishment of new seedlings, and germination will increase slightly as the seed ages. Plants may be destroyed by fire, but are more tolerant during dormancy and may regenerate by seed after fire. Indian ricegrass is compatible with other native species.

- *Similar in appearance:* N/A



## *Intermediate/Pubescent Wheatgrass*

*Thinopyrum intermedium*



**(top left to right):** Patrick J. Alexander @ USDA-NRCS PLANTS Database;  
Jacob Johansen, Oregon NRCS

**(bottom):** Adie Gerig-Heyerly , Oregon NRCS

## ***Intermediate/Pubescent Wheatgrass***

*Thinopyrum intermedium*

### Overview

- *Introduced*
- *Perennial*
- **Height:** *Medium to tall*
- **Precipitation:** *10<sup>+</sup> inches annually*
- **Soil Type:** *Moderately well to well-drained loamy to clayey soils*

### Description

Intermediate wheatgrass is a long-lived, sod-forming grass with clumped basal leaves, spreading rhizomes and a massive root system. This grass may range between 2 - 4 feet in height. Seed spikes may be 4 - 8 inches long.

### Landscape Locale

It is often used in range and pasture plantings.

### Management

Intermediate wheatgrass may be mixed with other introduced species. It is most palatable to livestock and elk during the winter when green. If improperly managed, it may become stemmy, accumulating excess dead material. Fire may temporarily promote seed head production and decrease leafy vegetation. At least 8-inches of new growth should be attained prior to grazing, with a 4-inch stubble height remaining after grazing. Forage production may be restored and stand may benefit from ripping if sod bound conditions occur.

- *Similar in appearance: Other wheatgrasses*

## *Japanese Brome*

*Bromus Arvensis*



**(top left to right):** Patrick J. Alexander @ USDA-NRCS PLANTS Database;  
Bromus arvensis inflorescence J. Johansen

**(bottom):** Bromus arvensis J. Johansen



## *Japanese Brome*

*Bromus arvensis*

AKA: Field brome, Japanese chess

### Overview

- *Introduced Invasive*
- *Annual*
- **Height:** *Short to Medium*
- **Precipitation:** *10<sup>+</sup>*
- **Soil Type:** *Prefers medium textured soils that are moderately well-drained to well -drained*

### Description

Japanese brome is a winter annual and produces dense, low leafy growth in the fall. It reproduces by seed and can average 250,000 seed per pound. Leaf blades and sheaths are soft and hairy. Spikelets are ¼ inch wide and about ½ inches long, with awns that range from ¼ to ¾ inches long, and can become widely spread and twisted at maturity. Branches become droopy as seed heads matures. The most suitable soil pH for Japanese brome is between 6.0 and 7.0.

### Landscape Locale

Japanese brome can become a nuisance on depleted rangeland, hayfields, and dry soil in areas of disturbance. It does best on textured soils that are moderately well-drained to well drained. It does well on lowlands subject to flooding and on sloping gravelly soil.

### Management

Japanese brome occurs throughout the west and has the ability to aggressively out-compete desirable vegetation for water and soil nutrients, and has been used as a winter cover crop on vegetable lands and in orchards in the Northeast. It is palatable in the early stages of growth before seeds dry out in the spring, which can limit forage production and grazing performance. In the fall it can be used by cattle as well as wildlife. A vigorous cover of desirable, perennial grasses is a good method of prevention in pastures and rangeland. Seeds can remain viable in the soil for several years. Fire has the potential to reduce litter amounts and plant density for short time periods. Numerous pre and post emergent herbicides have also been used for control.

- *Similar in appearance: Cheatgrass, rattlesnake brome* 40

# *Kentucky Bluegrass*

*Poa pratensis*



**(top left to right):** Dave Powell, USDA Forest Service, Bugwood.org;  
Robert H. Mohlenbrock © USDA-NRCS PLANTS Database / USDA SCS. 1989.  
Midwest wetland flora: Field office illustrated guide to plant species. Midwest  
National Technical Center, Lincoln  
**(bottom):** Tereasa Perkins, Oregon NRCS

# *Kentucky Bluegrass*

*Poa pratensis*

## Overview

- *Introduced*
- *Perennial*
- **Height:** *Short*
- **Precipitation:** *15<sup>+</sup> inches annually*
- **Soil Type:** *Well-drained to poorly drained loamy to clayey soils*

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## Description

Kentucky bluegrass is a short, sod-forming plant with an open branched seed head. Leaves are 6 - 12 inches long and boat shaped at the tips. Seeds have a distinctive tuft of white hair at their base when pulled from the seedhead.

## Landscape Locale

It is common in moist, well-drained areas. Kentucky bluegrass is often found on spring sites, riparian areas and meadows.

## Management

Highly palatable to both livestock and wildlife, Kentucky bluegrass is tolerant of grazing and increases under heavy use and fire. It may be grazed when green, which occurs during the early spring and fall when moist. It tends to dry out during the summer. No grazing deferment period is required.

- *Similar in appearance: Sandberg bluegrass*



***Meadow foxtail***  
*Alopecurus pratensis*



**(top left to right):** Lars Santana, Oregon NRCS;  
Jacob Johansen, Oregon NRCS  
**(bottom):** Aaron Roth, Oregon NRCS

# *Meadow Foxtail*

*Alopecurus pratensis*

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## Overview

- *Introduced*
  - *Perennial*
  - **Height:** *Medium to Tall*
  - **Precipitation:** *12-70 inches annually*
  - **Soil Type:** *Grows best on deep fertile soils*
- 

## Description

Meadow foxtail is an introduced, shortly rhizomatous perennial grass. Tufts can be close or compact with erect, flat leaf blades standing 10-40 inches tall. The leaves are narrow; the plant is bisexual and flowers from May through June producing large amounts of fluffy seed. The look of the plant is similar to timothy but the seedheads are smaller, which blooms earlier in the season and has a soft single awn. The inflorescence is a spike-like panicle that is so compact it looks like a spike.

## Landscape Locale

Meadow foxtail has been cultivated for over 250 years and was brought to North America in the 1880's. It is primarily cultivated as a meadow or pasture grass and is well adapted to the Pacific Northwest. It grows well in a wide range of precipitation zones and can tolerate soil pH's ranging from 4.5 to 7.5. Meadow foxtail can endure flooding by fresh and brackish water and may be considered a facultative wetland species. It can grow in poorly drained soils in meadows, riverbanks, roadsides, fields, grasslands and wastelands.

## Management

When meadow foxtail is used as a pasture grass, a rotational grazing system is best. Where adapted it can produce and be productive over a long season. Palatability as either hay or pasture grass is good to excellent. Forage yields are typically lower than other species such as timothy. Some locations may be able to get multiple cutting due to fast regrowth of the plant. Cutting for silage is also an option, and grazing the aftermath in the fall and winter is also common.

- *Similar in appearance: Timothy*

## *Medusahead Rye*

*Taeniatherum caput-medusae*



**(top left and right):** Adie Gerig-Heyerly, Oregon NRCS

**(bottom):** Jacob Johansen, Oregon NRCS



# *Medusahead Rye*

*Taeniatherum caput-medusae*

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## Overview

- *Introduced Invasive*
  - *Annual*
  - **Height:** *Short*
  - **Precipitation:** *10<sup>+</sup> inches annually*
  - **Soil Type:** *Most commonly found on clay and clay loam soil surface textures*
- 

## Description

Medusahead rye is an extremely competitive invasive grass that crowds out natives and other desirable species. Its leaf blades are rolled inward and the seed heads have long awns. Approximately 1 - 4 inches long, the awns are twisted, stiff and finely barbed when mature. Medusahead is a prolific seed producer, and its stands form dense thatch mats that remain visible the following year.

## Landscape Locale

Medusahead is most common at elevations below 4,500 feet on rangeland in poor condition. This grass does well in disturbed areas and is an effective colonizer of fire-denuded areas.

## Management

Due to its high levels of silica, medusahead is unpalatable to wildlife and livestock. The best barrier to a medusahead invasion is a healthy stand of perennial vegetation. Once a medusahead stand is established, a combination of treatments, including burning, mechanical manipulation, herbicide, and /or reseeding are generally necessary to reduce the stand. Its standing dead biomass is highly flammable and its slow decomposition rate make it a fire hazard. Fires destroy mature plants and top-kills immature plants. Fire may also destroy many viable medusahead seeds, but a sufficient number often remain so that the decrease in plant density is typically only temporary. As with other invasive annual grasses, it is highly competitive with native perennials due to its ability to germinate early and use available soil moisture prior to perennial plants.

- *Similar in appearance: Bottlebrush squirreltail*

## *Mountain Brome*

*Bromus marginatus*



(all photos this page): Aaron Roth, Oregon NRCS

# *Mountain Brome*

*Bromus marginatus*

AKA: California Brome

## Overview

- Native
- Perennial
- **Height:** Medium to tall
- **Precipitation:** 16<sup>+</sup> inches annually
- **Soil Type:** Moderately well-drained to well-drained loams, silt-loams, and clayey soil textures

## Description

Mountain brome is a cool-season bunchgrass with a 3 - 5 year lifespan. It has broad, flat leaves with soft hairs and a loosely branched seed head that tends to droop as the seeds mature. The seeds have short awns.

## Landscape Locale

This plant is typically found in the upper reaches of the foothills to mid-elevation mountain regions. Mountain brome establishes well in deep, moist soils and is often associated with open conifer stands, aspen stands and mountain meadows.

## Management

In the spring, mountain brome is highly palatable to livestock and wildlife; however, palatability moderately decreases as the plant matures. Due to its location at higher elevations, it is often used as late spring or early summer forage for grazing livestock. Mountain brome generally responds poorly to intense disturbance, such as frequent fire, mowing, grazing, etc. Nevertheless, through seeding it can be readily re-established following fire and is frequently used in fire reclamation.

- *Similar in appearance: Smooth brome and other perennial bromes*



# *Needle-and-Thread*

*Hesperostipa comata*



**(top left to right):** Sheri Hagwood @ USDA-NRCS PLANTS Database;  
Tereasa Perkins, Oregon NRCS

**(bottom):** Misty Bennett, Oregon NRCS

# *Needle-and-Thread*

*Hesperostipa comata*

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## Overview

- Native
  - Perennial
  - **Height:** Medium
  - **Precipitation:** 7<sup>+</sup> inches annually
  - **Soil Type:** Excessively well-drained to well-drained loamy to sandy soil textures
- 

## Description

Needle-and-thread is a cool-season bunchgrass. Grass bunches are small and widely spaced. Stems are erect and smooth with slender, straight and rough-tipped awns typically 4 - 5 inches long. The area of the awn close to the seed is tightly twisted and covered in fine, soft hairs. The awn tip is rough and usually straight.

## Landscape Locale

Needle-and-thread is located in various plant communities across eastern Oregon.

## Management

Needle-and-thread is moderately palatable to wildlife and livestock and notable spring forage for mule deer and small mammals. Needle-and-thread is considered good forage during the spring prior to seed-awn development and again in the fall after the seeds are dropped. Grazing during seed-awn development may result in injury. Needle-and-thread is subject to overgrazing during the early spring, and is particularly sensitive to defoliation from June 1 - July 31. There is a higher potential of mortality with severe fires. Nevertheless, heavy grazing before a burn may reduce dead material and thereby decrease plant mortality. This grass does not compete well with other species.

- *Similar in appearance:* N/A

# Orchardgrass

*Dactylis glomerata*



**(top left to right):** Doug Goldman @ USDA-NRCS PLANTS Database - USDA-NRCS-NPDT; Robert H. Mohlenbrock @ USDA-NRCS PLANTS Database / USDA NRCS. 1995. Northeast wetland flora: Field office guide to plant species. Northeast National Technical Center, Chester.

**(bottom):** Jennifer Wilson, Oregon NRCS



# *Orchardgrass*

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*Dactylis glomerata*  
AKA: Cocks foot

## Overview

- *Introduced*
- *Perennial*
- **Height:** Medium
- **Precipitation:** 16<sup>+</sup> inches annually
- **Soil Type:** Well-drained soils

---

## Description

Orchardgrass is a long-lived, cool-season perennial bunchgrass. It has an abundance of basal leaves, as well as leafy, erect stems. The leaf blade appears folded, and the stems flatten at the base. The seed head is characterized by dense clusters along compact branches.

## Landscape Locale

Orchardgrass is shade tolerant and requires high precipitation levels or irrigation to thrive. For successful stands, annual precipitation should be 16 inches or more.

## Management

Because it has a dense root system in the upper 8 inches, orchardgrass is useful for reducing the potential for soil erosion. Orchardgrass may be used as a forage species and is palatable to all livestock, as well as many species of wildlife, including migratory birds and song-birds. Because orchardgrass may lose vigor and decline under heavy grazing conditions, management should include moderation of grazing pressures. Grazing should not commence until grass is 8 inches or higher and should discontinue when stubble reaches 4 inches. Livestock grazing management should include 20 - 30 days of rest between rotations. However, be aware that undergrazed orchardgrass may become tough and unpalatable. This can be an aggressive, competitive grass that may dominate rangeland areas over time. Orchardgrass either increases or remains stable after burning.

- *Similar in appearance:* N/A

# *Pinegrass*

*Calamagrostis rubescens*



**(top left to right):** Dave Powell, USDA Forest Service, Bugwood.org;  
Lance Burton, Oregon NRCS

**(bottom):** Dave Powell, USDA Forest Service, Bugwood.org

# *Pinegrass*

*Calamagrostis rubescens*

AKA: Pine reedgrass

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## Overview

- Native
- Perennial
- **Height:** Short to medium
- **Precipitation:** 16<sup>+</sup> inches annually
- **Soil Type:** Loamy, well-drained soils.

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## Description

Pinegrass is a sod-forming grass that flowers infrequently and has a tightly-branched seed head. Pinegrass primarily reproduced by lateral expansion of the rhizomes. It can tolerate moist to dry site, and can grow on all aspects. It is a shade tolerant species even under heavy cover.

## Landscape Locale

An understory species, pinegrass may be found in dense-to-open forested sites. It can grow in open areas and under forest canopies from the valley bottoms to sub alpine fir forests. Pinegrass is a major competitor of conifers seedlings and can create thick sod mats.

## Management

Pinegrass greens early in the spring and remains green late into the fall. It may be grazed during the summer. It is utilized by wildlife across it range and can provide a forage for livestock throughout the year although it is less palatable as the season goes along and under shaded conditions. It is resistant to fire, and growth generally improves following burning.

- Similar in appearance: Elk sedge,  
Prairie junegrass (seed head)



# *Prairie Junegrass*

*Koeleria macrantha*



**(all photos this page):** Jacob Johansen, Oregon NRCS

# *Prairie Junegrass*

*Koeleria macrantha*

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## Overview

- Native
  - Perennial
  - **Height:** Medium
  - **Precipitation:** 12 - 20 inches annually
  - **Soil Type:** Moderately well-drained to well-drained loamy to clayey soil surfaces
- 

## Description

Prairie junegrass is a cool-season, perennial bunchgrass ranging from 1 - 3 feet in height. Fine hairs may cover the lower half of the stem and in some cases extend the entire length. Leaf blades are ribbed and either flat or rolled inward. The seedheads are dense contracted panicles that have the appearance of spikes.

## Landscape Locale

This grass naturally occurs in deep, loamy soils in prairies, sagebrush steppe and open woodland areas.

## Management

Prairie junegrass grows during early spring and summer. It is not likely to make up a large portion of the stand composition. The short leaves restrict forage production, and it dries out before most other perennial bunchgrasses. Prairie junegrass provides good early-spring and fair late-spring forage for both livestock and wildlife. Grazing should occur early in the season. While junegrass does not tolerate overgrazing, it will recover when rested. It exhibits little to moderate damage from fire.

- *Similar in appearance:* Pinegrass



## *Rattail Fescue*

*Vulpia myuros*



All photos this page: Aaron Roth, Oregon NRCS



# *Rattail Fescue*

*Vulpia myuros*

AKA: *Rattail six weeks grass, Silvergrass, Foxtail fescue*

## Overview

- *Invasive Introduced*
- *Annual*
- **Height:** *Short*
- **Precipitation:** *10+*
- **Soil Type:** *Most dry soil types including soils that are acidic and alkaline*

## Description

Rattail fescue is a cool season winter annual grass with tightly folded leaf blades less than 1/16th inches wide. The narrow compact panicles usually emerge from May to June. Height can range from 18 inches on productive sites and as low as 1 or 2 inches on poor sites. Rattail fescue is distinguished by a narrow, many flowered panicle with long awns. Rattail fescue can be found in soils with high and low pH as well as compacted and low fertility soils

## Landscape Locale

Rattail fescue tolerates a wide range of moisture regimes but is most often found on dry soils where some kind of disturbance has occurred. Rattail fescue becomes more abundant on degraded rangelands but can also be found on old mine tailings, landfills, post fire, high elevation woodlands, and as facultative wetland species.

## Management

Rattail fescue is considered a weedy species in western rangelands, agricultural systems and cereal crop fields. It has been shown to inhibit the growth of desirable native species. It can be a seasonally good forage for cattle and horses but produces little total forage. When grazed closely during the spring the total long term coverage can be reduced, but overall heavy grazing of the pasture can result in increased densities over time. Rattail fescue has been used in reclamation efforts and in the past has been found in commercial seed mixes. Late spring fires can reduce population densities but often seed in the soil bank can persist and new plants can grow.

- *Similar in appearance: Sixweeks fescue*

## *Redtop*

*Agrostis gigantea*



**(top left to right):** Lars Santana, Oregon NRCS (both left and right)  
**(bottom):** Lars Santana, Oregon NRCS

## *Redtop*

*Agrostis gigantea*

AKA: Redtop bentgrass, Redtop bent, Black bent, Carpet bentgrass

### Overview

- *Introduced*
- *Perennial*
- **Height:** Tall
- **Precipitation:** 18+
- **Soil Type:** Performs best on clay loam to loamy soils

### Description

Redtop is an introduced perennial cool season sod-forming grass. It reproduces by rhizomes and has a semi-flat to the ground growth form. The plant can grow up to 4 feet tall with leaves that are flat, folded or curled and 1/8 to 3/8 inches wide with a prominent ligule at the junction of the leaf blade and sheath. The arrangement of flowers is an open panicle with ascending branches. Redtop will grow on nearly any soil types with the exception of limestone based soils. It can grow in soils with a pH of 4.5 to 8.0, but does not tolerate salinity. There are approximately 4,850,000 seeds per pound.

### Landscape Locale

Redtop occurs in wet to moist meadows, grasslands, riparian areas, and some open forested communities. It is best adapted to moist and wet soils and can tolerate poorly drained, sub-irrigated sites, and sites that are frequently flooded.

### Management

Redtop is planted primarily as livestock forage or for hay as the plant can stay green and palatable throughout the growing season under the right conditions. Palatability decreases as seeds set and mature. Redtop has good grazing resistance and will often decrease in a mix seeded field if little to no grazing occurs. Plants should be eight inches tall before grazing and not grazed lower than a three inch stubble height. Wildlife can use Redtop for both forage and cover. It has been used for erosion control and planted for revegetation on mine tailings.

- *Similar in appearance:* Tufted hair grass, Kentucky bluegrass



# *Reed Canarygrass*

*Phalaris arundinacea*



**(top left to right):** Jacob Johansen, Oregon NRCS (both left and right)  
**(bottom):** Aaron Roth, Oregon NRCS

# *Reed Canarygrass*

*Phalaris arundinacea*

AKA: Canary grass

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## Overview

- Native
- Perennial
- **Height:** Tall
- **Precipitation:** 18+
- **Soil Type:** Saturated soils

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## Description

Reed canarygrass is a stout perennial that regenerated from large rootstocks, rhizomes and seed, with stems 2 to 7 feet tall that are covered with a waxy coating that look blue-green in color. The hollow stems can reach ½ inch in diameter, and often has some reddish coloration near the top. Leaf blades are flat and hairless, ¼ to ¾ of an inch wide. The panicles can range in size from three to six inches in length and often flower in June through August.

## Landscape Locale

This highly aggressive plant species can be found on wet ground, along streams and in marshes and wetlands and often produces monocultures by crowding out and replacing native vegetation. It can become an issue along irrigation ditches and canals. While it may be useful in bank stabilization and soil erosion applications, reed canarygrass often does not allow native species to develop on these sites.

## Management

Reed canarygrass has numerous reproductive abilities and can quickly dominate a site. Livestock use can occur and the plant has been used for hay production in a number of states. Wildlife value for forage is usually considered low but may provide important cover. Management options for control are numerous and a combination of treatments or multiple applications are typically required.

- *Similar in appearance:* N/A

## *Russian Wildrye*

*Psathyrostachys juncea*



**(all photos this page):** Tereasa Perkins, NRCS



# ***Russian Wildrye***

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*Psathyrostachys juncea*

## Overview

- *Introduced*
- *Perennial*
- **Height:** *Tall*
- **Precipitation:** *10 - 20 inches annually*
- **Soil Type:** *Silty to clay soils*

---

## Description

Russian wildrye is a deep-rooted, cool-season bunchgrass with densely-tufted, relatively coarse basal leaves. Leaves range from green to blue-green and are between 6 - 18 inches long. Stems are leafless and between 30 - 40 inches long. The seed head is short and dense with seeds alternating on the end of the stem.

## Landscape Locale

Russian wildrye tolerates salinity and some alkalinity. However, the plant does not thrive if flooded or in high water table areas.

## Management

Russian wildrye is palatable to both livestock and wildlife. Grass growth starts in early spring and continues into summer, greening up quickly again in the fall. This grass cures well and is often used for late-summer-to-winter grazing. Stands decrease if overgrazed. Mature plants should be grazed in late spring after adequate growth has established. Grazing deferment is recommended until after seed set one in every three years. Pure stand plantings are recommended due to poor seedling vigor and slow establishment; as a result stands spread little outside the original planting. A large root mass lends— to open spacing of the plant. Immature plants tend to be slow growing and weak. Russian wildrye is adapted to survive fire by tillering.

- *Similar in appearance:* *N/A*

# *Saltgrass*

*Distichlis spicata*



**(top left to right):** Sheri Hagwood @ USDA-NRCS PLANTS Database;  
Jacob Johansen, Oregon NRCS (both left and right)  
**(bottom):** Jacob Johansen, Oregon NRCS

# *Saltgrass*

*Distichlis spicata*

AKA: Inland saltgrass

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## Overview

- Native
- Perennial
- **Height:** Short
- **Precipitation:** 12 - 18 inches annually
- **Soil Type:** Occurs on poorly drained to well-drained sodic/saline flats

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## Description

Saltgrass is a warm season, sod forming, low growing, native perennial grass. Growth can range from 6 to 18 inches but is generally less than 12 inches. It starts growing in early summer, has a very slow growth rate and can stay green into the fall. It produces few seed and primarily reproduces from rhizomes. Plants can be dioecious which produces unisexual flower on separate plants. The spikelets have 5 to 13 flowers, staminate spikelets that are straw colored while the pistillate spikelets are green. Leaf blades are flat, sharp pointed, with rolled edges on the tips, have no hairs and are stiffly spreading.

## Landscape Locale

Saltgrass grows under harsh conditions ranging from changing temperature, drought, and salt stress or in tidal salt marshes where plants can be covered by sea water. In the Great Basin saltgrass tends to occur near salt playas, saline flats with shallow water tables, and near saline seeps. Soils are generally fine textured and subject to flooding.

## Management

Forage value and palatability is low for both livestock and wildlife grazing. Grazing seldom occurs unless other grasses are unavailable or forced to use by heavy grazing pressure. Rumen compaction can occur in cattle that are allowed to only graze dry saltgrass in the fall or winter. Salt grass is considered an “increaser” under grazing pressure due to its rhizome reproductive potential. Saltgrass has been used to control wind and water erosion. Burning saltgrass has had mixed positive or negative results depending on site conditions and locations.

- *Similar in appearance:* N/A



# *Sandberg Bluegrass*

*Poa secunda*



**(top left to right):** Gary A. Monroe @ USDA-NRCS PLANTS Database;  
Cassandra Skinner @ USDA-NRCS PLANTS Database

**(bottom):** Robert Soreng @ USDA-NRCS PLANTS Database

# *Sandberg Bluegrass*

*Poa secunda*  
AKA: June grass

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## Overview

- Native
- Perennial
- **Height:** Short
- **Precipitation:** 6 - 12 inches annually
- **Soil Type:** Found on all moderately well to well-drained soil textures

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## Description

Sandberg bluegrass is shallow-rooted and grows between 8 - 12 inches in height. It has many small, tightly-bunched leaves with a densely-branched seed head. Like other bluegrasses, the leaves have boat-shaped tips.

## Landscape Locale

It is often found on shallow, rocky and droughty soils.

## Management

Sandberg bluegrass competes with annual grasses for moisture and nutrients. It is palatable to livestock, elk and deer, although it does not produce reliable quantities of forage. It tends to increase under grazing pressure, although heavy grazing may lead to invasion by cheatgrass. Because it produces little forage during drought years, it is less dependable as a food source than other perennial bunchgrasses. Maturing early in the spring, it becomes dormant by summer. Due to the short growth form and early maturation, few restrictions apply to management. It is generally unharmed by fire and produces little litter.

- *Similar in appearance: Sheep fescue, Idaho fescue, other bluegrasses*



# *Sand Dropseed*

*Sporobolus cryptandrus*



**(all photos this page):** Lorraine Vogt, Oregon NRCS



# *Sand Dropseed*

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## *Sporobolus cryptandrus*

### Overview

- Native
- Perennial
- **Height:** Medium
- **Precipitation:** 6 - 12 inches annually
- **Soil Type:** Found in somewhat excessively drained to well-drained coarse loams to sandy soils.

---

### Description

Sand dropseed is a warm-season bunchgrass with flat, narrow leaves that roll inward with maturity. The seed head is loosely branched, occasionally drooping, densely-flowered, with extremely small seeds, and purplish-gray in color. Seed head emerges from a leaf sheath that bends and forms a flag leaf (see image at top right on opposite page).

### Landscape Locale

Sand dropseed is most common in sandy soils at lower elevations, but can be found on coarse soils at elevations up to 8,000 ft.

### Management

Sand dropseed is moderately palatable when green; however, palatability declines with maturation making it better suited for summer grazing. While it provides fair forage for livestock, it is poor forage for wildlife. Small mammals and birds use it more often than large mammals. While it is generally tolerant of drought, fire will typically kill or top-kill the grass. Nevertheless, post-fire regeneration and seed establishment remains viable after a burn. Generally this grass is found as a component of a stand, but also may be found in pure stands.

- *Similar in appearance:* N/A

# *Sheep Fescue*

*Festuca ovina*



**(top left to right):** Steve Hurst @ USDA-NRCS PLANTS Database; Tereasa Perkins, Oregon NRCS

**(bottom):** Misty Bennett, Oregon NRCS

# *Sheep Fescue*

*Festuca ovina*

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## Overview

- *Introduced*
- *Perennial*
- **Height:** *Short*
- **Precipitation:** *12<sup>+</sup> inches annually*
- **Soil Type:** *Well-drained soils*

---

## Description

Sheep fescue forms dense tufts with numerous, wiry, bluish-grey leaves. The seeds have awns and the seed head is tightly-branched and protrudes well above the basal leaves. It is extremely drought and cold tolerant, although it does not do well in the shade.

## Landscape Locale

Sheep fescue is an introduced species and may be found across a broad range of landscapes. Historically, it was used in many conservation seedings.

## Management

Sheep fescue is not preferred forage for most livestock. It provides minimal early-season grazing for sheep and is seldom used by cattle or horses. Sheep fescue provides very little cover for hiding or nesting habitat for wildlife. It tolerates cool fires but may take several years to fully recover. It develops a large root system making it competitive with weeds or other grasses and very useful for erosion control. Once established, it can prevent the invasion of most weeds.

- *Similar in appearance: Idaho fescue*



# *Siberian Wheatgrass*

*Agropyron fragile*



**(top left and right):** Misty Bennett, Oregon NRCS

**(bottom):** Dan Ogle © USDA-NRCS PLANTS Database

# *Siberian Wheatgrass*

*Agropyron fragile*

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## Overview

- *Introduced*
- *Perennial*
- **Height:** Medium
- **Precipitation:** 6 - 12 inches annually
- **Soil Type:** Sandy soils

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## Description

Siberian wheatgrass is a long-lived, cool-season bunchgrass. In general, it matures later than crested wheatgrass making it available for later forage use. It has long, narrow, awnless seed heads, fine stems and blue-green leaves.

## Landscape Locale

Siberian wheatgrass is an introduced species and may be found across a broad range of landscapes. It has high salinity tolerance.

## Management

Siberian wheatgrass is highly palatable to livestock and wildlife during the spring and following the fall green-up. However, palatability decreases during the summer. Following establishment, it may withstand heavy grazing, although spring grazing should be deferred until there is at least 6 inches of new growth. At minimum, 3 inches of stubble should remain at the end of the grazing season to retain healthy stands and promote growth in the spring. Rodents and birds use the stands for food and habitat. Siberian wheatgrass is an aggressive grass and should not be included in native grass plantings. Additionally, it is competitive with annual grasses due to early-season growth. It has excellent seedling vigor, but requires seed-soil contact for good emergence, and therefore does not re-seed itself well.

- *Similar in appearance: Crested wheatgrass*

## *Sixweeks Fescue*

*Vulpia octoflora*



**(left and right):** Jacob Johansen, Oregon NRCS



# *Sixweeks Fescue*

*Vulpia octoflora*

AKA: Sixweeks grass

## Overview

- Native
- Annual
- **Height:** Short
- **Precipitation:** 10+
- **Soil Type:** Most common on course-textures soils

## Description

Sixweeks fescue is a native winter or spring annual which usually grows in early spring and may mature in 6 weeks or less. It only reproduces from seed and plant height and density can be variable due to time and amount of available moisture. The plant grows in a tuft or numerous stems in close proximity. The inflorescence is a narrow, compact panicle, usually 1 to 6 inches long. The spikelet have 5 to 17 flowers which are numerous and closely arranged in a herringbone pattern.

## Landscape Locale

Sixweeks fescue can be found in prairies, plains, mesas, open ground, waste areas and disturbed sites. It is adapted to a wide range of soil conditions but is most common on course-textured soils. It often occupies less than 5% of a sites plant composition but can have higher percentages on sites that have been disturbed. Reproduction is solely by seed, and seeds may not germinate all in the same year allowing seed to build up in the soil seed bank.

## Management

Sixweeks fescue provides little forage value for livestock other than a couple of weeks in early spring, when livestock commonly pull the entire plant from the soil when grazed. Palatability is rated as poor to fair. Wildlife species included rodents and birds have been observed eating seeds and may provide important forage during certain portions of the year. Presence and density can increase post fire but is usually short lived and tend to occur on sites that have bare or open ground. Moderate to heavy grazing can favor sixweeks fescue and some have used its presence on a site as an to indicate improper use.

- *Similar in appearance:* Rattail fescue

## *Small Burnet*

*Sanguisorba minor*



**(top left to right):** Shannon Hoehna, Oregon NRCS; Joe F. Duff @ USDA-NRCS PLANTS Database / USDA NRCS. 1992. Western wetland flora: Field office guide to plant species. West Region, Sacramento.

**(bottom):** Shannon Hoehna, Oregon NRCS

# *Small Burnet*

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*Sanguisorba minor*

## Overview

- *Introduced*
- *Perennial*
- **Height:** *Short to medium*
- **Precipitation:** *12<sup>+</sup> inches annually*
- **Soil Type:** *Well-drained soils*

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## Description

This cold and drought-tolerant forb is a hardy and relatively long-lived variety with 4-inch long, oval to oblong leaflets with serrated edges. It has pink flowers that are closely packed in short-to-elongated clusters.

## Landscape Locale

Small burnet establishes well in a wide range of locations.

## Management

Small burnet is highly palatable providing a valuable food source in late winter and early spring for livestock and wildlife. It also provides cover for some small bird species. Small burnet is considered fire resistant because its leaves and stems stay green throughout the growing season and into winter, retaining a high-moisture content during the fire season. Once established, small burnet can spread quickly through seed distribution. Though generally not considered an invasive species, under ideal conditions this variety may spread into adjoining vegetative communities. Small burnet should be allowed to set seed one out of every three years to ensure stand regeneration.

- *Similar in appearance:* N/A



# *Smooth Brome*

*Bromus inermis*



**(top left to right):** Larry Allain@ USDA-NRCS PLANTS Database;  
Dave Powell, USDA Forest Service, Bugwood.org.

**(bottom):** Lance Burton, Oregon NRCS

# *Smooth Brome*

*Bromus inermis*

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## Overview

- *Perennial*
- *Introduced*
- **Height:** *Medium to tall*
- **Precipitation:** *14<sup>+</sup> inches annually*
- **Soil Type:** *Deep silty and clayey soils*

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## Description

Smooth brome is a sod-forming plant with an open-branched seed head growing between 2 - 4 feet tall. The seed, which is approximately 1/3 inch long, is flat, compressed, awnless, and smooth. Leaf blade develops a distinctive 'M' or 'W' shaped crimp.

## Landscape Locale

Smooth brome may be found at elevations between 1,000 - 5,000 feet in dry areas along irrigation ditches, irrigated meadows, and in higher precipitation zones along borrow pits and mountain rangelands.

## Management

Early-growth smooth brome is highly palatable to livestock and elk, although palatability and nutritional quality drops rapidly after flowering. It may be grazed during the spring and early summer before seed set. Smooth brome may provide cover for birds and small mammals. Early spring or fall burning may increase productivity, while late spring or summer burning may damage the plant.

- *Similar in appearance: Mountain brome, other perennial bromes*

# *Snake River Wheatgrass*

*Elymus wawawaiensis*



**(all photos this page):** Adie Gerig-Heyerly, Oregon NRCS



# *Snake River Wheatgrass*

*Elymus wawawaiensis*

AKA: Secar

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## Overview

- Native
- Perennial
- **Height:** Medium
- **Precipitation:** 8<sup>+</sup> inches annually
- **Soil Type:** Well-drained soils

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## Description

Snake River wheatgrass is a native, cool-season bunchgrass. Seeds have an awn, and the stems are erect, slender and sometimes wiry. The leaves are lax, flat to rolled inward, and are green to blue in color.

## Landscape Locale

Snake River wheatgrass may be found where seeded or on similar sites as bluebunch wheatgrass.

## Management

It provides good forage for livestock and wildlife. It is palatable throughout the year and provides high-quality forage during spring growth. Six inches of new growth should be maintained prior to grazing. While Snake River wheatgrass is more tolerant of grazing pressure than bluebunch wheatgrass, it is vulnerable to overgrazing, especially during spring growth. Snake River wheatgrass is compatible with native perennials but does not compete well with aggressive introduced species.

- *Similar in appearance: Bluebunch wheatgrass*

# *Tall Wheatgrass*

*Thinopyrum ponticum*



**(top left and right):** R.L. Hamblen, Bugwood.org  
**(bottom):** Jacob Johansen, Oregon NRCS

# *Tall Wheatgrass*

*Thinopyrum ponticum*

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## Overview

- *Introduced*
  - *Perennial*
  - **Height:** *Tall*
  - **Precipitation:** *10<sup>+</sup> inches annually*
  - **Soil Type:** *Well-drained soils; tolerant of alkaline and saline soils*
- 

## Description

Tall wheatgrass is a cool-season bunchgrass with multiple stiff stems originating from the base of the plant that each contain a single elongated, wheat-like seed head.

## Landscape Locale

Tall wheatgrass is an introduced species and may be found across a broad range of landscapes.

## Management

Tall wheatgrass is mildly palatable forage for livestock and wildlife during the spring prior to the onset of seeding. The plant's coarse structure provides escape and thermal cover for wildlife, as well as critical fawning habitat for mule deer. Every 2 - 3 years, tall wheatgrass should be allowed to reach maturity and set seed so it can reseed. As long as soil-moisture remains sufficient, rapid re-growth typically occurs following disturbances, such as fire, mowing or grazing. It establishes rapidly from seed and will out-compete most native plants. If left undisturbed, excess plant material may choke out other species.

- *Similar in appearance: Intermediate wheatgrass*



# *Thickspike Wheatgrass*

*Elymus lanceolatus*



**(top left to right):** Cassandra Skinner @ USDA-NRCS PLANTS Database;  
Nick Sirovatka, Oregon NRCS

**(bottom):** Jennifer Wilson, Oregon NRCS

# *Thickspike Wheatgrass*

*Elymus lanceolatus*

AKA: Streambank wheatgrass

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## Overview

- Native
- Perennial
- **Height:** Medium
- **Precipitation:** 8 - 20 inches annually
- **Soil Type:** Dry, medium to coarse soils with a high pH

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## Description

Thickspike wheatgrass is a cool season, sod-forming grass with a smooth, erect, medium-height stem and a narrow spike seed head between 1 - 9 inches long. Spacing of the head is tight, appearing overlapped, especially at the end of the seed head. Its leaves are narrow and may appear either flat or rolled. It can reproduce from both rhizomes and seed.

## Landscape Locale

This plant is drought tolerant and may be used to stabilize soils susceptible to wind erosion.

## Management

During establishment, thickspike wheatgrass does not compete well with aggressive introduced species and may be more suited to a moderate development rate with other native species. It tends to decrease in a mixed stand over time. It may serve as a good source of forage for livestock and wildlife from mid spring to early summer when green. Stands may be heavily grazed from spring to fall, although moderate grazing is recommended to promote spreading and stand density. Allow stand to set seed at least once every 3 years and leave 4 - 6 inches of stubble after grazing. This grass is tolerant to both fire and drought.

- *Similar in appearance: Other wheatgrasses*



# *Thurber's Needlegrass*

*Achnatherum thurberianum*



**(top left and right):** Lorraine Vogt, Oregon NRCS

**(bottom):** Tereasa Perkin, Oregon NRCS



# *Thurber's Needlegrass*

*Achnatherum thurberianum*

## Overview

- Native
- Perennial
- **Height:** Medium
- **Precipitation:** 8 - 20<sup>+</sup> inches annually
- **Soil Type:** Well-drained soils with loamy surfaces, typically not clayey soil surfaces.

## Description

Thurber's needlegrass is a cool-season bunchgrass. It has fine and narrow, rolled leaves and seed heads are narrow and purplish in color. The seeds are sharply pointed, with a twice bent awn approximately 2-inches long. Tiny hairs cover the seed and segments of the awn closest to the seed.

## Landscape Locale

It is commonly found in sagebrush steppe and open juniper woodland habitats.

## Management

It is preferred forage in the spring prior to seed / awn development and acceptable forage the rest of the year following seed drop. As the seed matures, wildlife tend to avoid it. It cures well and provides fair-to-good winter forage. It does not do well under heavy grazing. Therefore, a deferred rotational grazing system is recommended. Thurber's needlegrass has low seedling vigor and competes poorly with annuals and more vigorous grasses. It is moderately fire tolerant, and burning in the fall minimizes plant damage.

- *Similar in appearance: Idaho fescue*

# *Timothy*

*Phleum pratense* L.



**(top left to right):** Jacob Johansen, Oregon NRCS; James R. Johnson @ USDA-NRCS PLANTS Database / USDA NRCS. 1992. Western wetland flora: Field office guide to plant species. West Region, Sacramento;

**(bottom):** Jacob Johansen, Oregon NRCS

### Overview

- *Introduced*
  - *Perennial*
  - **Height:** *Medium to tall*
  - **Precipitation:** *18<sup>+</sup> inches annually*
  - **Soil Type:** *Prefers finer textured soils, such as clays and clay loams*
- 

### Description

Timothy is a short-lived, cool-season bunchgrass. The leaves vary in length from a few inches to more than a foot with the seed stems growing well above the leaves.

### Landscape Locale

Timothy is best adapted to cool, moist sites, including wet meadows, riparian areas and forested sites.

### Management

Timothy is highly palatable to livestock and wildlife from early spring through mid-summer. It is most palatable in the early spring becoming less so as it matures. Timothy should be grazed before seed production. It is extremely sensitive and recovers slowly from close or early grazing and trampling during moist conditions. A 28 - 35 day recovery period is recommended between grazing and haying cycles. This grass does not tolerate drought or prolonged high temperatures and is prone to stem rust. Timothy can establish quickly and volunteers on sites with preferred conditions. It is commonly seeded in mixtures with legumes.

- *Similar in appearance: Meadow foxtail*



# *Ventenata*

*Ventenata dubia*



**(top left to right):** Nick Sirovatka, Oregon NRCS;  
Jacob Johansen, Oregon NRCS

**(bottom):** Jacob Johansen, Oregon NRCS

# *Ventenata*

*Ventenata dubia*

AKA: Wire grass

## Overview

- *Introduced Invasive*
- *Annual*
- **Height:** *Short*
- **Precipitation:** *12<sup>+</sup> inches annually*
- **Soil Type:** *Moderately well-drained to well-drained shallow, rocky, clay-loam or clayey soils, or deep clayey soils.*

## Description

Ventenata is a short, winter annual grass that germinates in the fall in moderate to high temperatures. This species tends to be weedy and invasive. Stem growth ranges between 4 - 18 inches. Narrow leaves are rolled lengthwise or folded. The seed head is open and branched, appearing silvery green but rapidly maturing to a yellow-tan color. While actively growing, stems form reddish-black bands (nodes), and ligules are long (up to 8mm).

## Landscape Locale

Ventenata is often found on south-facing hillsides with shallow, rocky, clay, or clay-loam soils.

## Management

This plant may be grazed early in the spring, although there is little forage value to livestock and wildlife. Once the seed head begins to emerge, the stems harden and become unpalatable. Control of ventanata is difficult. Mowing during heading is not an effective control method because plants tend to bend over or tangle in the swather cutter bar. However, an aggressive and continuous mowing regime prior to heading until soil moisture is unavailable may control seed bank additions. Seed is considered viable for 2 - 3 years, so an aggressive management system may help eliminate infestations. Fire alone does not work as a successful system-wide control method because Ventenata increases with disturbance.

- *Similar in appearance: Six weeks fescue, Cheatgrass and Medusahead prior to seedhead development*

# *Western Wheatgrass*

*Pascopyrum smithii*



**(top left to right):** Mark Majerus, NRCS; Robert H. Mohlenbrock @ USDA-NRCS PLANTS Database / USDA SCS. 1989. *Midwest wetland flora: Field office illustrated guide to plant species*. Midwest National Technical Center, Lincoln.

**(bottom):** Susan R. Winslow; NRCS Agronomist/Range Management; Bridger PMC, Bridger, MT.



# *Western Wheatgrass*

*Pascopyrum smithii*

AKA: *Bluestem wheatgrass*

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## Overview

- Native
- Perennial
- **Height:** Medium
- **Precipitation:** 10 - 20 inches annually
- **Soil Type:** Clay to clay loam soils

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## Description

Western wheatgrass is a cool-season, long-lived, rhizomatous grass. It is cold tolerant and will grow in partial shade. Stem height ranges from 1-3 feet and has a distinctive blue-green color. Fine hairs cover the sheath. Its coarse, strongly-veined leaves are rigid and taper to a point. Western wheatgrass reproduces from seeds and rhizomes, and is known as an aggressive sod-former.

## Landscape Locale

Grasses in regions receiving 20 inches or more of precipitation will increase in density. However, in regions receiving less than 20 inches, it will decrease with over-use in rangelands. Western wheatgrass thrives in fine and very fine soil types (clay to clay loams). As soil progresses to coarse texture, western wheatgrass will give way to thickspike wheatgrass. While it is weakly tolerant of acidic soils, it demonstrates a strong tolerance to saline soils. It is found in multiple locations, including basin floors, floodplains, alluvial flats, plateaus with deep soils, and intermittent drainage ways.

## Management

Growth occurs in the spring between March and April. When moisture is available, it may green-up in late summer. Forage quality is high for both pasture and range seedings. Palatability for cattle and elk is year-round, although quality decreases in late summer. Deer use it as forage in the spring. There is a higher selection rate by cattle than sheep. It responds well to timely nitrogen application. Western wheatgrass is a slow establisher and may take multiple growing seasons to completely establish. This grass will survive spring flooding and high water tables. Western wheatgrass can recover from fire, however, if in the dormant state, recovery will be slow.

- *Similar in appearance: Other wheatgrasses*

# *Yellow Salsify*

*Tragopogon dubius*



**(both left to right):** Jacob Johansen, Oregon NRCS  
**(bottom):** Steve Hurst @ USDA-NRCS Plant Database

# *Yellow Salsify*

*Tragopogon dubius*

AKA: yellow goatsbeard, western salsify, western goatsbeard

## Overview

- *Introduced*
- *Annual, occasionally biennial*
- **Height:** 8-40 inches
- **Precipitation:** 10+
- **Soil Type:** *Grows successfully on a wide variety of soil types, but does not tolerate saturated or anaerobic soils.*

## Description

Yellow salsify grows as an annual, biennial, or monocarpic (plant that may live for years but dies once flowers have been made) perennial that reproduced only by seed. Plants can grow grass like leaves that when broken release a milky latex sap. Alternate leaves are narrow and are tapered from the base to the tip. The flower heads can measure up to 2 inches and are comprised of only ray flower. The plant produces seeds up to 1.5 inches long that form a dandelion-like ball of fruits, and carry the seed off by wind. Seeds do not survive more than 1 or 2 years in the soil.

## Landscape Locale

Yellow salsify can be found at elevations ranging from 30 feet up to 8,200 feet and can tolerate soil texture from sand to clay loams. It has also been found growing on mineral dump sites. It is most often found on disturbed sites but is frequently found on sites with little or no disturbances due to the long distance seeds can travel in the wind.

## Management

Yellow salsify can make up a substantial part of elk and deer diets during the March through July time frame. It is also an important plant for juvenile and adult sage grouse. Cattle and sheep readily eat it and in drought years the amount consumed in the diet can go up. Fire may kill individual plant in the burn area but often windblown seed will recolonize the site rapidly. Yellow salsify is rarely abundant in any vegetation type and provides benefits to a long list of species. Limiting disturbance is the best way to reduce or control plant numbers although total control is not practical.

- *Similar in appearance:* N/A



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# Glossary

|                                                 |                                                                                   |
|-------------------------------------------------|-----------------------------------------------------------------------------------|
| <b><i>Alkaline:</i></b><br><i>(alkinity)</i>    | <i>A soil with high pH, and high sodium content</i>                               |
| <b><i>Annual:</i></b>                           | <i>Not lasting more than one year</i>                                             |
| <b><i>Awn:</i></b>                              | <i>A slender bristle at the end</i>                                               |
| <b><i>Basal:</i></b>                            | <i>Located at or near the base of a structure</i>                                 |
| <b><i>Bunchgrass:</i></b>                       | <i>Grasses that grow in a clump or tuft as opposed to forming a sod or mat</i>    |
| <b><i>Elongated:</i></b>                        | <i>Narrow with the length many times the width or thickness</i>                   |
| <b><i>Introduced:</i></b>                       | <i>Not native to North America</i>                                                |
| <b><i>Invasive:</i></b>                         | <i>Grows aggressively in an area and suppresses the growth of existing plants</i> |
| <b><i>Native:</i></b>                           | <i>Occurring in North America before settlement by Europeans</i>                  |
| <b><i>Panicle:</i></b>                          | <i>Seed head with a main axis and rebranched branches</i>                         |
| <b><i>Perennial:</i></b>                        | <i>Lasting more than two years</i>                                                |
| <b><i>Pubescent:</i></b>                        | <i>Covered with short, soft hairs</i>                                             |
| <b><i>Rhizomes:</i></b><br><i>(rhizomatous)</i> | <i>An underground stem capable of producing aerial shoots from nodes</i>          |



|                                                    |                                                                                       |
|----------------------------------------------------|---------------------------------------------------------------------------------------|
| <b><i>Saline:</i></b><br><b><i>(salinity)</i></b>  | <i>A nonsodic soil containing sufficient soluble salts to impair its productivity</i> |
| <b><i>Serrated:</i></b>                            | <i>Saw-toothed margins, with teeth pointing towards the tip</i>                       |
| <b><i>Sheath:</i></b>                              | <i>The lower part of a leaf that encloses the stem</i>                                |
| <b><i>Sod-forming:</i></b>                         | <i>Rhizomatous plant that creates a dense mat of vegetation</i>                       |
| <b><i>Spike:</i></b>                               | <i>An unbranched seed head, with florets (seeds) attached directly to the stem</i>    |
| <b><i>Tiller:</i></b><br><b><i>(tillering)</i></b> | <i>A shoot from a bud at the base of the plant</i>                                    |
| <b><i>Tuft:</i></b><br><b><i>(tufted)</i></b>      | <i>Cluster or bunch</i>                                                               |

## ***Oregon NRCS Eastern Field Office Contact Information***

| <b><i>Service Center</i></b> | <b><i>Address</i></b>                                                                | <b><i>Phone</i></b>   |
|------------------------------|--------------------------------------------------------------------------------------|-----------------------|
| <i>Baker City</i>            | <i>3990 Midway Lane<br/>Baker City, Oregon 97814-1453</i>                            | <i>(541) 523-7121</i> |
| <i>Condon</i>                | <i>PO Box 106<br/>333 Main, Dunn Brothers Building<br/>Condon, Oregon 97823-0106</i> | <i>(541) 384-2671</i> |
| <i>Enterprise</i>            | <i>401 NE First St., Suite E<br/>Enterprise, Oregon 97828</i>                        | <i>(541) 426-4521</i> |
| <i>Heppner</i>               | <i>430 Linden Way<br/>P.O. BOX 127<br/>Heppner, Oregon 97836-0127</i>                | <i>(541) 676-5021</i> |
| <i>Hines</i>                 | <i>P O Box 848<br/>530 Hwy 20 South<br/>Hines Oregon 97738-0848</i>                  | <i>(541) 573-6446</i> |
| <i>John Day</i>              | <i>721 S Canyon Blvd<br/>John Day, Oregon 97845-1084</i>                             | <i>(541) 575-0135</i> |
| <i>Klamath Falls</i>         | <i>2316 South 6th Street<br/>Klamath Falls, Oregon 97601</i>                         | <i>(541) 883-6924</i> |
| <i>La Grande</i>             | <i>1901 Adams Avenue, Suite 6<br/>La Grande, Oregon 97850</i>                        | <i>(541) 963-4178</i> |
| <i>Lakeview</i>              | <i>17612 Hwy. 395<br/>Lakeview, Oregon 97630</i>                                     | <i>(541) 947-2367</i> |
| <i>Misson</i>                | <i>46411 Timine Way<br/>Pendleton Oregon 97801</i>                                   | <i>(541) 429-7250</i> |
| <i>Moro</i>                  | <i>302 Scott Avenue<br/>P.O. Box 405<br/>Moro, Oregon 97039-0405</i>                 | <i>(541) 565-3551</i> |
| <i>Ontario</i>               | <i>2925 SW 6th Avenue, Suite 2<br/>Ontario, Oregon 97914-2446</i>                    | <i>(541) 889-9689</i> |
| <i>Pendleton</i>             | <i>1 SW Nye Ave, Suite 130<br/>Pendleton OR 97801</i>                                | <i>(541) 278-8049</i> |
| <i>Redmond</i>               | <i>625 SE Salmon Avenue, Suite 4<br/>Redmond, Oregon 97756-9580</i>                  | <i>(541) 923-4358</i> |
| <i>The Dalles</i>            | <i>2325 River Road, #3<br/>The Dalles, Oregon 97058</i>                              | <i>(541) 298-8559</i> |
| <i>Warm Springs</i>          | <i>PO Box C<br/>4223 Holiday Street<br/>Warm Springs, Oregon 97761</i>               | <i>(541) 553-2009</i> |

## ***Additional Resources***

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### *NRCS Plant Database:*

<http://plants.usda.gov>

### *Oregon NRCS*

[www.or.nrcs.usda.gov](http://www.or.nrcs.usda.gov)

### *Oregon Dept. of Agriculture, Oregon Noxious Weeds*

<http://www.oregon.gov/ODA/programs/Weeds/OregonNoxiousWeeds>

### *Soil Survey (NRCS Web Soil Survey)*

<http://websoilsurvey.nrcs.usda.gov/app/>

### *Pullman (Washington) Plant Materials Center*

[www.nrcs.usda.gov/wps/portal/nrcs/main/plantmaterials/  
pmc/west/wapmc/](http://www.nrcs.usda.gov/wps/portal/nrcs/main/plantmaterials/pmc/west/wapmc/)

### *Aberdeen (Idaho) Plant Materials Center*

[www.nrcs.usda.gov/wps/portal/nrcs/main/plantmaterials/  
pmc/west/idpmc/](http://www.nrcs.usda.gov/wps/portal/nrcs/main/plantmaterials/pmc/west/idpmc/)

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