



# Guide to common grasses in Central Oregon

## **Guide to Common Grasses in Central Oregon**

This non-technical guide to some common grasses of Central Oregon is the result of an awkward situation I experienced several years ago. I was a volunteer at the OSU Master Gardener desk in the Deschutes County Extension office. A client new to the area came in to ask if the grasses she had in her hand were “good” or “bad” ones to have around her place. I couldn’t tell one grass from another and I had a hard time trying to identify them for her due to the terminology used to describe grasses and the need for microscopic observation. I thought there must be a way for gardeners, hikers and general nature lovers to learn some of the common grasses in this area; but my search for information on grasses led to technical descriptions or to grasses that don’t typically grow in this area. So I decided to write a layman’s guide to some of the common Central Oregon grasses; but I could only do so with the help of local botanists who understood my concern. This guide is intentionally limited to grasses commonly found in Crook, Deschutes and Jefferson counties. It does not begin to include all the grasses in Central Oregon and it does not include the sedges or rushes. For more information on grasses, sedges and rushes go to the Oregon Flora website: [www.oregonflora.org](http://www.oregonflora.org)

*Paul MacMillan*, OSU Master Gardener Volunteer and primary author wrote the descriptive material for each grass, developed the key, and assembled materials.

### **ACKNOWLEDGMENTS:**

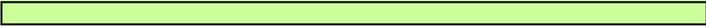
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Oregon Flora Project [www.oregonflora.org](http://www.oregonflora.org)

[Weeds of the West](#) (1992). T.D. Whitson, *et al.* Eds. Univ of  
Wyoming, 630 pp.

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**Glossary of terms:**

**Annual:** A plant that completes its life cycle in one year.

**Awn:** A slender bristle, commonly found on parts of florets.

**Biennial:** A plant that completes its life cycle in 2 growing seasons then dies.

**Bunchgrass:** A tufted perennial.

**Cauline:** Pertaining to the stem.

**Culm:** The aerial stem or flowering stalk of a grass.

**Floret:** A single grass flower, within a spikelet.

**Growth Form:** The way the grass grows; either a tufted bunchgrass, a rhizomatous root system, or an annual.

**Glume:** A reduced or highly modified leaf subtending a spikelet.

**Habitat:** The locale where a plant is commonly found. The natural setting of a plant; generally specified as a plant community or a set of environmental features.

**Inflorescence (Inflor) :** A flower cluster or the arrangement of flowers on a floral axis. In grasses they are typically either a panicle or a spike.

**Introduced (Intro):** A plant that is not part of the Central Oregon natural ecosystem; often from another country.

**Native:** A plant that is part of the Central Oregon natural ecosystem.

**Node:** The point at which a grass leaf attaches to the culm.

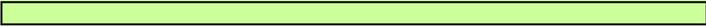
**Panicle:** The branched inflorescence of some grasses; florets are stalked.

**Pedicel:** The stalk of a single flower or floret.

**Perennial:** A plant that grows for 3 or more years, usually flowering each year.

**Pubescent:** Bearing hairs.

**Rhizomatous:** A grass with creeping underground stems or rhizomes.



**Sessile:** Attached directly by the base, without a stalk.

**Sheath:** A leaf base which surrounds the stem.

**Spike:** A firm elongated inflorescence with sessile florets.

**Spikelet:** The floral unit of a grass; any number of florets subtended by 2 glumes.

### **Primary references:**

Barkworth, Mary E., Kathleen M. Capels, et al., (Editors). 2007. Flora of North America, North of Mexico. Oxford Univ. Press, NY. Vol. 24, 911 pp., Vol. 25, 783 pp.

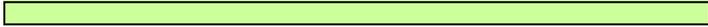
Cronquist, Arthur, et al., (1977). Intermountain Flora, Vascular Plants of the Intermountain West, U.S.A., Vol. 6 The Monocotyledons. New York Botanical Garden, NY. 584 pp.

DiTomaso, Joseph M. and Evelyn A. Healy. (2007). Weeds of California and Other Western States, Vol. 2. Univ. of California Publication 3488. 1808 pp.

Hitchcock, C. Leo and Arthur Cronquist (1973). Flora of the Pacific Northwest. Univ. of Washington Press, Seattle and London. 1973. 730 pp.

### **Using the Key**

The following key to some of the common Central Oregon grasses is not technical and not specific. It uses terms most gardeners know, and for clarity there is a glossary of terms. The key used in this guide is a dichotomous key, meaning each numbered step has two branches: “a” and “b.” Be sure to read both branches (the alternatives) before going on to the next numbered step. Always choose between “a” and “b” of the same number; read the two descriptions carefully; after choosing between “a” and “b” proceed to next numbered dichotomy or the Group indicated. The key is intended to separate groups of grasses with similar features; you then need to look at the illustrations to identify the grass. A hand lens will be very helpful when looking at the grasses.



**Key to common Central Oregon grasses**

1a. Perennial bunchgrass . . . . . go to 2

1b. Annual, biennial or rhizomatous grass . . . . . go to 4

2a. Bunchgrass, inflorescence a spike ..... **Group A** (pg. 8)

(Bottlebrush squirreltail, Bluebunch wheatgrass, Crested wheatgrass, Foxtail barley, Great Basin wildrye, Perennial ryegrass, Timothy, Western or blue wildrye).

2b. Bunchgrass, inflorescence a panicle . . . . . go to 3

3a. Bunchgrass with panicle, awns absent or <1/4 inch . . . . . **Group B** (pg. 24)

(Bentgrass, Bulbous bluegrass, California brome, Cusick’s bluegrass, Idaho fescue, Indian ricegrass, Junegrass, Orchard grass, Sandberg bluegrass, Tufted hairgrass, Velvet-grass).

3b. Bunchgrass with panicle, awns >1/4 inch. . . . . **Group C** (pg. 46)

(Common brome, Needle-and-thread, Thurber’s needlegrass, Western needlegrass, Tall oatgrass, Western fescue).

4a. Annual, biennial or rhizomatous grass, inflorescence a spike . . . . . **Group D** (pg. 56)

(Annual or common ryegrass, Green foxtail, Barley, Medusahead, Quackgrass, Rye, Wheat).

4b. Annual, biennial or rhizomatous grass, inflorescence a panicle . . . . . go to 5

5a. Rhizomatous grass, inflorescence a panicle . . . . . **Group E** (pg. 70)

(Kentucky bluegrass, Pinegrass, Reed canarygrass, Smooth brome).

5b. Annual or biennial, inflorescence a panicle . . . . . **Group F** (pg.78)

(Barnyard grass, Cheatgrass, Crab grass, Oats, Rabbitsfoot grass, Stinkgrass or lovegrass, Wiregrass, Witchgrass or Panicgrass).



Diagram of two spikes.

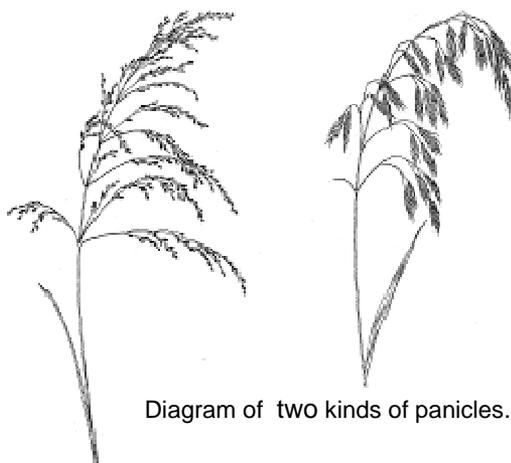
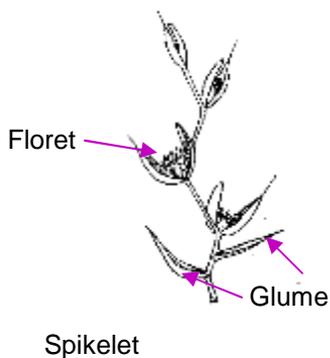


Diagram of two kinds of panicles.



**Group A** (Bunchgrasses with spike-like inflorescences)

**Bottlebrush squirreltail (*Elymus elymoides*) Native**

**Growth Form:** Perennial bunchgrass, with erect spikes on short culms.

**Inflor:** Spikes up to 8 in. long, 2 – 4 in. wide, breaks apart when dry.

**Awns:** 1/2 – 5 in. long, straight when young, spreading at maturity.

**Plant height:** Up to 2 ft.; leaves narrow and evenly distributed.

**Spikelets:** 2-4 florets per spikelet, 2 spikelets per node.

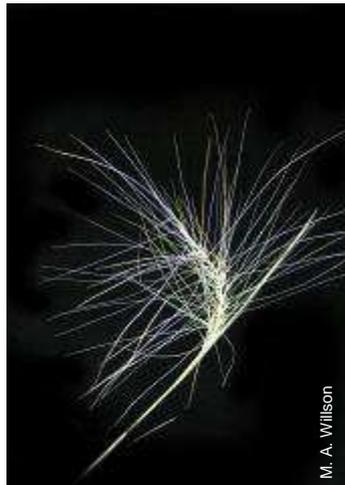
**Habitat:** Sagebrush deserts, dry open woods, grasslands and disturbed areas; may be dominant in over-grazed juniper woodlands; tolerates dry alkaline soils.

**Quick ID:** Bunchgrass of dry habitats; pubescent foliage; mature panicle with wide-spreading awns (i.e., a squirreltail). Compare with foxtail barley (p. 14) and medusahead (p. 62).

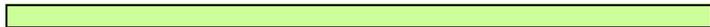
**Use:** Palatable early.



Immature seed head



Mature seed head



J. M. DiTomaso



J. M. DiTomaso



M. A. Willson



**Bluebunch wheatgrass (*Pseudoroegneria spicata*) Native**

**Growth Form:** Perennial bunchgrass; may become rhizomatous in moist habitats.

**Inflor:** Spikes up to 6 in. long, <1/2 in. wide; 2-ranked.

**Awns:** Strongly divergent when mature; up to 1 in. long.

**Plant height:** Up to 3 ft.; leaves basal and lower cauline.

**Spikelets:** 4-9 florets per spikelet; each <1 in. long, ca. as long as internodes, usually upright.

**Habitat:** Grasslands to sagebrush steppe, open woodlands; often found with Sandberg bluegrass, Idaho fescue and cheat grass.

**Quick ID:** Mid-to-tall bunchgrass with many cauline leaves; sheaths open; slender spikes usually with widely spreading awns.

**Use:** Forage grass; also planted for range land restoration.





## **Crested wheatgrass (*Agropyron cristatum*) Introduced**

**Growth Form:** Perennial bunch grass, occasionally rhizomatous.

**Inflor:** Spike up to 4 in. long; <1 in. wide; flattened on each side, dense.

**Awns:** very short.

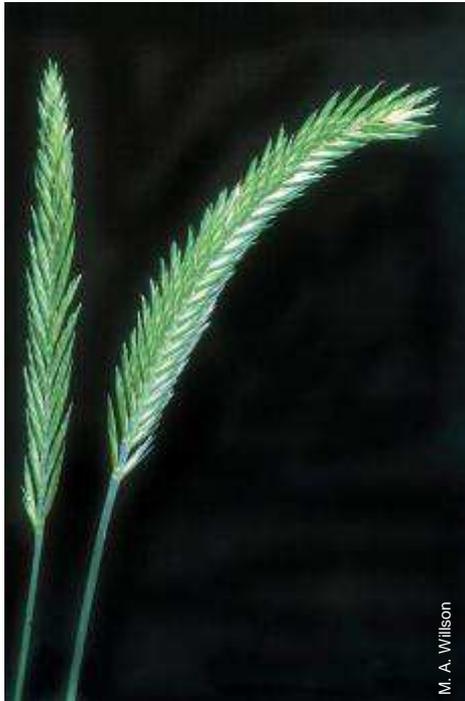
**Plant Height:** Up to 4 ft.; short basal leaves.

**Spikelets:** 8-10 florets per spikelet, divergent when mature.

**Habitat:** Sagebrush deserts (does not tolerate wet areas or long snow-cover).

**Quick ID:** Coarse bunchgrass; short basal leaves remain green when panicle ripens; spike dense and flat-sided.

**Use:** Easily established on disturbed sites; used for range rehabilitation and forage.



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**Foxtail barley (*Hordeum jubatum*)**    **Introduced**

**Growth Form:** Perennial bunchgrass.

**Inflor:** Spikes up to 6 in. long (excluding awns), usually nodding; lavender before maturity, breaks apart at maturity.

**Awns:** 1/2 – 3 1/2 in. long, straight.

**Plant height:** Up to 2 1/2 ft.; leaves up to 6 in. long.

**Spikelets:** 1 floret per spikelet; 3 spikelets per node, spreading at maturity.

**Habitat:** Moist meadows, prairies and hay fields; tolerates saline habitats and disturbed sites.

**Quick ID:** Bunchgrass with mostly basal leaves and open leaf sheaths; a dense spike with straight spreading awns (i.e., a foxtail). Compare with bottlebrush squirreltail (p. 8) and medusahead (p. 62).

**Use:** A roadside weed; usable for forage when young.



Mature seed head



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**Great Basin wildrye (*Leymus cinereus*) Native**

**Growth Form:** Perennial bunchgrass forming large clumps; weakly rhizomatous.

**Inflor:** Spikes up to 11 in. long, <1 in. wide.

**Awns:** very short.

**Plant height:** Up to 9 ft. ; leaves up to 18 in. long and <1/2 in. wide.

**Spikelets:** 3-7 florets per spikelet; 2-7 spikelets per node.

**Habitat:** Sagebrush steppe and open woodlands; common along roadsides, gullies and where moisture is near the surface.

**Quick ID:** Our tallest native bunchgrass; often appearing bright green with long ribbed leaves; inflorescence a spike.

**Use:** Livestock forage, historically it was used for hay.



Immature seed heads



Mature seed heads



**Perennial ryegrass (*Lolium perenne*) Introduced**

**Growth form:** Long lived perennial bunchgrass.

**Inflor:** Spikes up to 12 in. long; zig-zag appearance.

**Awns:** None or <1/4 in. long.

**Plant height:** Up to 3 ft.; leaves 4-12 in. long and <1/4 in. wide.

**Spikelets:** 2-10 florets per spikelet; spikelets <3/4 in. long.

**Habitat:** Lawns and forage areas.

**Quick ID:** Perennial bunchgrass; narrow spikes; spikelets are flat and attached parallel (edgewise) to the stem; short awns.

**Use:** Erosion control and lawn mixes.



Immature seed heads



Dry seed heads



## Timothy (*Phleum pratense*) Introduced

**Growth Form:** Short-lived perennial bunchgrass with shallow roots.

**Inflor:** Spikes up to 4 in. long, <1/2 in. wide; dense, cylindrical, not tapering.

**Awns:** None

**Plant height:** Up to 5 ft.; leaves up to 18 in. long and <1/2 in. wide.

**Spikelets:** 1 floret per spikelet; laterally compressed.

**Habitat:** Pastures, rangelands, meadows, stream banks, moist woodlands and disturbed sites.

**Quick ID:** Mid-height bunchgrass with dense, cylindrical spike; open leaf sheaths; leaves rough to touch.

**Use:** Pasture and hay grass, often grown with clover or alfalfa.



Immature seed heads



Mature seed head



L. M. Landry



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**Western or blue wildrye (*Elymus glaucus*) Native**

**Growth Form:** Perennial bunchgrass; in small, loose, open bunches; few panicles per plant.

**Inflor:** Spikes up to 8 in. long (excluding awns), <3/4 in. wide; erect to slightly nodding; does not break apart at maturity.

**Awns:** ca. 1 in. long, straight.

**Plant height:** Up to 4 ft.; leaves evenly distributed.

**Spikelets:** 2-4 florets per spikelet; 2 spikelets per node, loose below and overlapping above.

**Habitat:** Open woods and moist meadows <10,000 ft; may be found with asters, cinquefoils and bitterbrush.

**Quick ID:** Tall bunchgrass of meadows and hillsides; stem leaves drooping; inflorescence spike-like with 2 spikelets per node.

**Use:** Good early forage; used to re-vegetate abandoned fields and after logging or burning.



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**Group B.** (Bunchgrasses, inflorescence a panicle, awns none or <1/4 in.)

**Bentgrasses (*Agrostis* spp.) Native and Introduced**

**Growth form:** Perennial bunchgrasses, may become rhizomatous in moist habitats.

**Inflor:** Panicles, cylindrical and dense, to open and diffuse.

**Awns:** None or short and bent.

**Plant height:** Up to 4 ft.; leaves typically basal.

**Spikelets:** 1 floret per spikelet; <1/4 in. long.

**Habitat:** Moist soils, stream sides and pastures.

**Quick ID:** Low to mid bunchgrasses with +/- open panicles; open sheaths.

**Use:** Planted in pastures for forage in Central Oregon high desert area.



*Agrostis stolonifera*  
mature seed head



*Agrostis avenacea*

## **Bulbous bluegrass (*Poa bulbosa*) Introduced**

**Growth Form:** Weedy perennial bunchgrass; culms bulbous at base. Bright green in early spring, turning purplish at maturity.

**Inflor:** Panicles up to 4 1/2 in. long; usually compact and crowded; branches ascending when young and drooping at maturity; florets develop into leafy, purple bulblets.

**Awns.** None.

**Plant height:** Up to 2 ft.; leaves short and soon withering.

**Spikelets:** 3-7 florets per spikelet; bulbous, laterally compressed.

**Habitat:** Moist pastures, roadsides and disturbed areas at low to mid elevations; often found with cheatgrass.

**Quick ID:** Low densely tufted bunchgrass with bulbous culm bases; panicles of purple to black bulblets in spikelets; mature bulblets sprout in spikelets; leaf tips prow-shaped.

**Use:** An aggressive weed; can be used for early spring forage.



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**California brome (*Bromus carinatus*) Native**

**Growth Form:** Perennial bunchgrass (may be annual or biennial); not rhizomatous.

**Inflor:** Panicle up to 16 in. long, spreading at maturity, upper branches ascending.

**Awns:** ca. 1/4 in. long.

**Plant height:** Up to 4 ft.; leaves up to 1 ft. long.

**Spikelets:** 6-10 florets per spikelet.

**Habitat:** Moist sagebrush valleys to coniferous forests with >16 in. rainfall.

**Quick ID:** Tall bunchgrass; culms uniformly leafy; panicles long loose cylinders.

**Use:** Excellent forage; seeded for soil stabilization.



Mature seed head



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**Cusick's bluegrass (*Poa cusickii*) Native**

**Growth Form:** Densely tufted perennial bunchgrass, many basal leaves; small rootstock.

**Inflor:** Panicles up to 4 in. long, <2 in. wide, erect, branches ascending.

**Awns:** None.

**Plant height:** Up to 2 ft.; many basal leaves, folded, tip prow-shaped.

**Spikelets:** 2 florets per spikelet; spikelets <1/2 in long.

**Habitat:** Meadows, sagebrush steppe, montane forests; often found with bluebunch wheatgrass, squirreltail and junegrass.

**Quick ID:** Low to mid-sized, erect, blue-green bunchgrass; leaves mostly basal; panicle compact and ovoid; leaf tips prow-shaped. Spikelets more robust than Sandberg bluegrass (p. 40); and typically in more moist sites.

**Use:** Good spring forage.





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**Idaho fescue (*Festuca idahoensis*) Native**

**Growth Form:** Densely tufted perennial bunchgrass.

**Inflor:** Panicles up to 6 in. long; loosely contracted to open; often 2 spreading branches per node; branches with 2-3 spikelets each.

**Awns:** <1/4 in. long.

**Plant height:** Up to 3 ft.; leaves folded or rolled, mostly basal.

**Spikelets:** 4-8 florets per spikelet.

**Habitat:** Grasslands, open forests and sagebrush steppe; grows with bluebunch wheatgrass, bluegrasses, squirreltail and prairie junegrass.

**Quick ID:** Densely tufted bunchgrass; leaves blue-green, mostly basal; panicle loosely compressed; culm bases below soil surface are black.

**Use:** Important forage grass, often abundant.



Immature seed heads



Mature seed heads



**Indian ricegrass (*Achnatherum hymenoides*) Native**

**Growth Form:** Perennial bunch grass.

**Inflor:** Panicle up to 8 in. long, widely branched and spreading 3-5 in.

**Awns:** Short and deciduous, often appear awnless.

**Plant height:** Up to 2 ft.; leaves mostly basal.

**Spikelets:** 1 floret per spikelet.

**Habitat:** Most commonly found in sandy, well-drained soils; grows with sagebrush.

**Quick ID:** Bunch grass with mostly basal leaves; widely spreading panicle (dichotomously branched) with 1 plump floret per spikelet. Seeds are hard, round and black.





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## Junegrass (*Koeleria macrantha*) Native

**Growth Form:** Perennial bunchgrass, small bunches.

**Inflor:** Panicle up to 10 in. long, <1 in. wide; interrupted at the base; spike-like with short branches spreading slightly at maturity.

**Awns:** None

**Plant height:** Up to 3 ft.; most leaves basal, up to 8 in. long.

**Spikelets:** 2-4 florets per spikelet; laterally compressed.

**Habitat:** Sagebrush steppe, dry open forests and grassy woods; common but not in pure stands; often with Idaho fescue.

**Quick ID:** Low bunchgrass with softly pubescent, mostly basal leaves; panicle pubescent and spike-like.

**Use:** Good forage when young.



Immature seed heads



Mature seed heads



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## Orchard grass (*Dactylis glomerata*) Introduced

**Growth Form:** Perennial bunchgrass with short rhizomes.

**Inflor:** Panicle up to 8 in. long, initially spike-like maturing to open pyramidal form with lower branches spreading, upper branches erect.

**Awns:** Very short.

**Plant height:** Up to 6 ft.; leaves mostly basal.

**Spikelets:** 2-6 florets per spikelet in crowded 1-sided clusters.

**Habitat:** Moist shaded areas with >15 in. rainfall; fields, fence rows, roadsides, drainages.

**Quick ID:** Tall bunchgrass; leaves mostly basal with closed sheaths; panicles laterally compressed and slightly open.

**Use:** Grown for hay and forage in forests and croplands.





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## Sandberg bluegrass (*Poa secunda*) Native

**Growth Form:** Perennial bunchgrass, densely tufted with basal leaves that wither and disappear early; plants often purple-tinged.

**Inflor:** Panicles up to 10 in long; erect to lax, narrow with short ascending branches, often one-sided; contracted early then more open at maturity; often tinged with purple.

**Awns:** None

**Plant height:** Up to 4 ft.; leaves up to 4 in. long, tip prow-shaped.

**Spikelets:** 3-5 florets per spikelet.

**Habitat:** High deserts, meadows, dry forests, mountain grasslands; the common early season desert bunchgrass, well adapted to shallow, rocky, droughty soils. May be found with bluebunch wheatgrass, sagebrush and cheat grass.

**Quick ID:** The most common grass in Central Oregon; a bunchgrass with short, mostly basal leaves; it is often the first to green up in spring and may green up again in fall if there's enough moisture; culms nearly leafless; leaf tips narrowly prow-shaped; panicles narrow with short ascending branches, often one-sided.

**Use:** Important spring forage; often planted to reduce erosion.



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**Tufted hairgrass (*Deschampsia caespitosa*) Native**

**Growth Form:** Perennial bunchgrass; densely clumped with many basal leaves.

**Inflor:** Panicle up to 12 in. long, 2 – 12 in. wide, open and pyramidal at maturity; branches straight and strongly divergent.

**Awns:** Very short.

**Plant height:** Up to 5 ft.; leaves mostly basal, up to 12 in. long.

**Spikelets:** 2 florets per spikelet.

**Habitat:** Wet, open meadows and stream sides above 4,000 ft.

**Quick ID:** 1-5 ft. tall bunchgrass of moist environments; long basal leaves with open sheaths; panicles open and pyramidal; often purplish.

**Use:** Important forage grass; used in riparian restoration projects.



Immature seed heads



Mature seed heads



## Velvet-grass (*Holcus lanatus*) Introduced

**Growth Form:** Perennial bunchgrass with soft, dense grayish pubescence.

**Inflor:** Panicles up to 6 in. long, 1–3 in. wide with short, hairy ascending branches.

**Awns:** very short and hooked (use a hand lens).

**Plant height:** Up to 3 ft.; leaves up to 8 in. long, pubescent.

**Spikelets:** 2-3 florets per spikelet, < 1/2 in. long.

**Habitat:** Moist waste places at low elevations, occasionally in lawns and pastures.

**Quick ID:** Leaves velvety-hairy; a mid-height bunchgrass found in moist waste places (i.e., seeps and stream sides) at low elevations; leaves mostly basal; panicle pyramidal to columnar with short ascending branches.

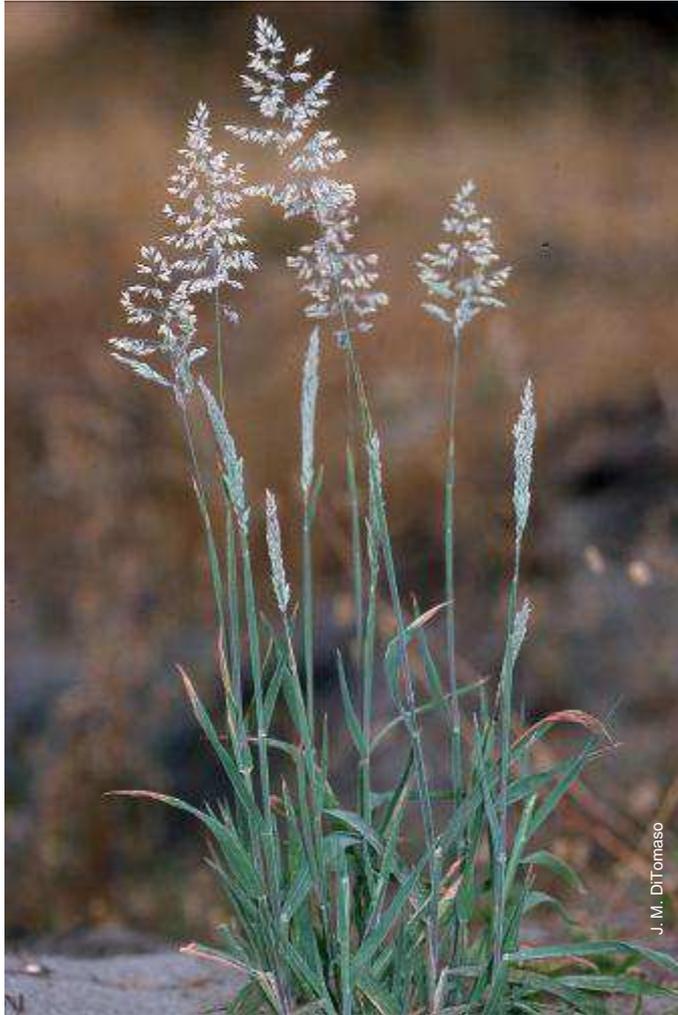
**Use:** An aggressive weed in Central Oregon.



Immature seed head



Mature seed head



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**Group C.** (Bunchgrasses, inflorescence a panicle, awns >1/4 in long).

**Common brome (*Bromus vulgaris*) Native**

**Growth Form:** Perennial bunchgrass; not rhizomatous.

**Inflor:** Panicle up to 6 in. long, open; branches ascending to drooping.

**Awns:** <1/2 in. long, straight.

**Plant height:** Up to 4 ft.; leaves up to 10 in. long.

**Spikelets:** 4-9 florets per spikelet.

**Habitat:** Shaded, damp montane coniferous forests.

**Quick ID:** Bunchgrass with long cauline leaves; panicle of open drooping branches; common in damp montane forests. Resembles Cheatgrass (p. 80) but common brome is usually much taller.

**Use:** Important forage.





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**Needle-and-Thread (*Hesperostipa comata*) Native**

**Growth form:** Tall perennial bunchgrass.

**Inflor:** Loose panicle up to 12 in. long.

**Awns:** 2 1/2 - 8 in. long; may be twisted at maturity.

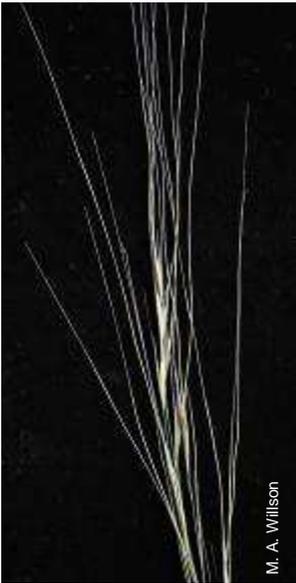
**Plant height:** Up to 3 1/2 ft.; leaves short and basal.

**Spikelets:** 1 floret per spikelet.

**Habitat:** Generally sandy soils, grasslands, cool deserts to juniper forests.

**Quick ID:** Tall bunchgrass with loose panicles with very long awns. Compare with Needlegrass (p. 50).

**Use:** Range grass.



Immature seed head



Mature seed head



**Western needlegrass (*Achnatherum occidentale*) and  
Thurber's needlegrass (*Achnatherum thurberianum*)  
Natives**

**Growth form:** Perennial bunchgrass often with deep root systems.

**Inflor:** Panicles up to 12 in. long, <2 in. wide; relatively few-flowered.

**Awns:** <1/2 - 2 in. long; twice bent.

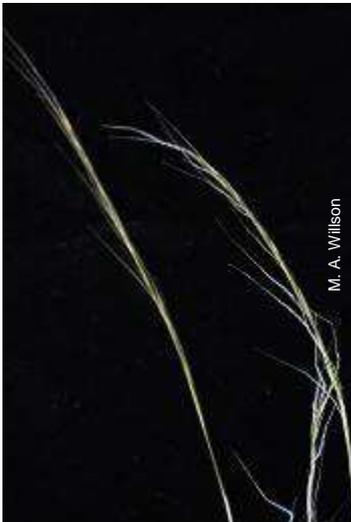
**Plant height:** Up to 4 ft.; leaves narrow and basal.

**Spikelets:** 1 floret per spikelet.

**Habitat:** Open dry sites, juniper-sagebrush shrublands to ponderosa pine forests.

**Quick ID:** Bunchgrasses with mostly short basal leaves; long narrow panicles with awns twice bent. Compare with Needle-and-thread (p. 48).

**Use:** Important range grasses.



Immature seed heads



Mature seed heads



## Tall oatgrass (*Arrhenatherum elatius*) Introduced

**Growth Form:** Perennial bunchgrass (may be rhizomatous along stream-sides).

**Inflor:** Panicle up to 10 in. long, <2 in. wide; short branches spreading at maturity.

**Awns:** 1/4 - 1/2 in. long with 1 bend.

**Plant height:** Up to 4 ft.; leaves up to 1 ft. long.

**Spikelets:** 2 florets per spikelet on short pedicels; laterally compressed.

**Habitat:** Roadsides, meadows, stream sides, fence rows, edges of woods, disturbed areas.

**Quick ID:** Bunchgrass 2-4 ft. tall; culm bases may be swollen; leaf sheaths open; panicle of laterally compressed spikelets.

**Use:** Forage grass, but doesn't stand heavy grazing; planted along roadsides; can be aggressive.





M. A. Wilson

**Western fescue (*Festuca occidentalis*) Native**

**Growth Form:** Perennial bunchgrass; densely tufted.

**Inflor:** Panicle up to 8 in. long, open and spreading, 2 branches per node, branches spreading, lower branches drooping at maturity.

**Awns:** <1/2 in. long.

**Plant height:** Up to 3 ft.; leaves folded or rolled, mostly basal.

**Spikelets:** 3 - 6 florets per spikelet.

**Habitat:** Dry to moist open woodlands and rocky slopes.

**Quick ID:** Mid-height bunchgrass of open woodlands; long leaves mostly basal; panicle loose and spreading with 2 - 3 spikelets per branch.

**Use:** Good forage grass but not usually abundant.





**Group D.** (Annuals, biennials or rhizomatous grasses [not perennial bunchgrasses]; inflorescences a spike).

**Annual or Common ryegrass (*Lolium multiflorum*)** Introd.

**Growth form:** Annual.

**Inflor:** Spikes up to 18 in. long; zig-zag in appearance.

**Awns:** <1/2 in. long.

**Plant height:** Up to 5 ft.; leaves 4-12 in. long and <1/2 in. wide.

**Spikelets:** 10-20 florets per spikelet; spikelets ca. 1/2 in. long.

**Habitat:** Disturbed areas and a weed in turf.

**Quick ID:** Tall annuals; narrow spikes with short awns; spikelets are flat and attached parallel (edgewise) to the stem.

**Use:** Cover crops and erosion control





J. M. Di Tomaso

## Green foxtail (*Setaria viridis*) Introduced

**Growth form:** Annual.

**Inflor:** Spikes up to 8 in. long, 1 in. wide; often green.

**Awns:** None, but with long reddish bristles.

**Plant height:** Up to 8 ft. tall; leaves up to 8 in. long and 1 in. wide.

**Spikelets:** 2 florets per spikelet; bristles arise below spikelets.

**Habitat:** Disturbed sites; cultivated fields.

**Quick ID:** Tall, coarse, invasive weedy annual; long green soft to touch spikes. Similar in appearance to Rabbitsfoot grass (p. 86).





J. M. DiTomaso



J. M. DiTomaso

## Barley (*Hordeum vulgare*) Introduced

**Growth form:** Annual grain crop.

**Inflor:** Spikes up to 4 in. long, <1 in. wide.

**Awns:** None, or awns up to 6 in. long.

**Plant height:** Up to 3 ft.; leaves up to 12 in. long and 1/2 in. wide.

**Spikelets:** 1 floret per spikelet, 3 spikelets per node.

**Habitat:** Crop fields and roadsides.

**Quick ID:** Cultivated crop, mid-height, sheaths open; long stiff awns.

**Use:** Edible grains and beer.



M. A. Willson



M. A. Wilson



**Medusahead (*Taeniatherum caput-medusa*) Introduced**

**Growth Form:** Weedy annual.

**Inflor:** Short spikes up to 2 in. long (excluding awns).

**Awns:** In 2 lengths, 1 - 4 in. long, stiff and divergent.

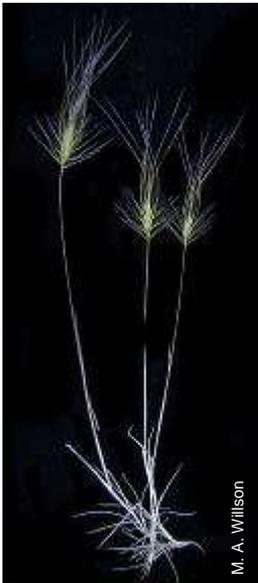
**Plant height:** Up to 2 ft.; leaves mostly basal and sparse.

**Spikelets:** 2-3 florets per spikelet.

**Habitat:** Often in clay soils of fields, roadsides and disturbed sagebrush steppes.

**Quick ID:** Invasive weedy annual with long twisted awns (but not bent); small root system; high silica content of inflorescence slows their deterioration and may build up a mat of dead vegetation. Awns of 2 lengths distinguishes this from Bottlebrush squirreltail (p. 8) and Foxtail barley (p. 14).

**Use:** A noxious weed that invades disturbed areas; a strong competitor that excludes more desirable forage grasses.





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**Quackgrass (*Elymus repens*) Introduced**

**Growth form:** Rhizomatous perennial with narrow spikes.

**Inflor:** Spikes up to 6 in. long and 1/2 in. wide.

**Awns:** None or very short.

**Plant height:** Up to 3 ft.; leaves wide and mostly basal.

**Spikelets:** 1 spikelet per node; 4-7 florets per spikelet, up to 1 in. long.

**Habitat:** Disturbed sites; drought tolerant.

**Quick ID:** Spreading rhizomatous perennial; narrow spikes; very wide often lax leaves.

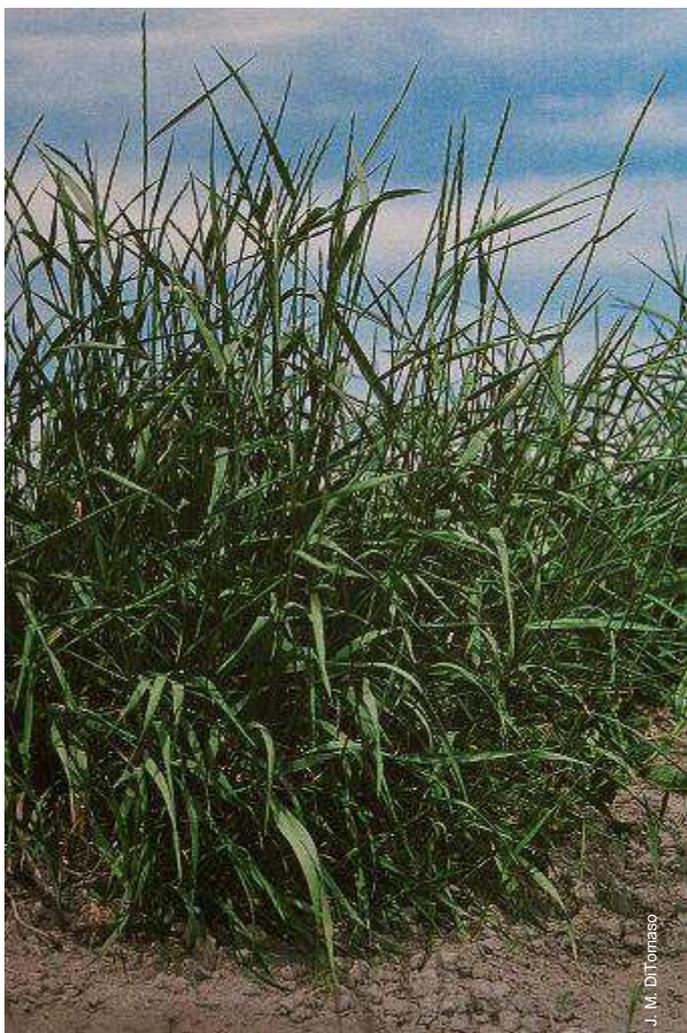
**Use:** Used as forage but an aggressive weed.



Immature seed heads



Mature seed head



J. M. DiTomaso

## Rye (*Secale cereale*) Introduced

**Growth Form:** Annual or biennial bunchgrass.

**Inflor:** Spikes 2-ranked (laterally compressed), up to 5 in. long, nodding when mature, generally not breaking apart.

**Awns** straight, up to 2 in. long.

**Plant height:** Up to 4 ft.; leaves basal and cauline.

**Spikelets:** 2-3 florets per spikelet; <1 in. long.

**Habitat:** A cultivated crop, and used to control erosion on slopes and roadsides.

**Quick ID:** A cultivated annual or short-lived perennial, 1-4 ft. tall; both basal and cauline leaves, sheaths open; spikes 2-ranked with long straight awns.

**Use:** An important cereal crop, also fermented to make whiskey, and used for erosion control.





## Wheat (*Triticum aestivum*) Introduced

**Growth form:** Annual.

**Inflor:** Spikes up to 7 in. long.

**Awns:** None, or awns up to 4 in. long.

**Plant height:** Up to 5 ft. tall; leaves long and narrow.

**Spikelets:** 2-9 florets per spikelet; spikelets <1/2 in. long.

**Habitat:** Crop lands.

**Quick ID:** Tall annual, spikes with large spikelets, may have long awns; open sheaths.

**Use:** Breads and pastas.



M. A. Wilson



M. A. Willson

**Group E.** (Rhizomatous grasses, inflorescence a panicle).

**Kentucky bluegrass (*Poa pratensis*) Introduced**

**Growth Form:** Rhizomatous perennial forming a dense sod or turf.

**Inflor:** Panicles up to 6 in. long, <3 in. wide; open, often pyramidal; 4 - 5 branches spreading or ascending.

**Awns.** None.

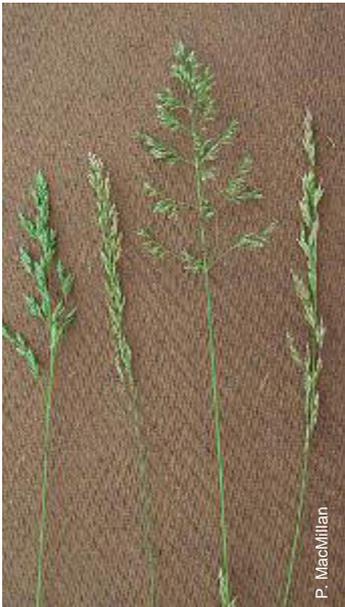
**Plant height:** Up to 2 ft.; leaves up to 4 in. long, tip prow-shaped.

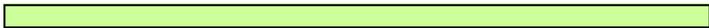
**Spikelets:** 2 - 5 florets per spikelet, laterally compressed.

**Habitat:** Moist to dry meadows, lawns, roadsides and open woods.

**Quick ID:** Rhizomatous sod-forming perennial; leaves mostly basal, leaf tips prow-shaped; webbing in florets when gently pulled apart.

**Use:** Widely planted as lawn and pasture grass.





## **Pinegrass (*Calamagrostis rubescens*) Native**

**Growth Form:** Rhizomatous perennial with some sterile culms.

**Inflor:** Panicles erect up to 6 in. long; compressed to slightly open; branches to 1 1/2 in. long.

**Awns:** Very short and bent.

**Plant height:** Up to 3 ft.; leaves up to 16 in. long.

**Spikelets:** 1 floret per spikelet.

**Habitat:** Ponderosa pine/grand fir/Douglas-fir forests; shade tolerant; grows with huckleberry, Oregon grape, Idaho fescue and strawberry.

**Quick ID:** Rhizomatous perennial with unbranched culms 2-3 ft. tall; leaves mostly basal with purplish hairs on collar; panicle a short tight cylinder, often reddish color.

**Use:** Important summer forage; forms a tough sod; used to reduce erosion.





**Reed canarygrass (*Phalaris arundinacea*) Introduced**

**Growth Form:** Strongly rhizomatous perennial; can create a monoculture in wet areas.

**Inflor:** Panicle up to 14 in. long, 1/2 - 1 1/2 in. wide; compact, cylindrical and branching at the base; branches to 2 in. long spreading at maturity.

**Awns:** None.

**Plant height:** Up to 7 ft.; leaves up to 12 in. long and 1/2 in. wide.

**Spikelets:** 3 florets per spikelet, borne singly.

**Habitat:** Wet meadows, stream banks and moist grasslands.

**Quick ID:** Tall coarse rhizomatous perennial; blades long flat and wide; sheaths open; panicle slightly open at base with short ascending branches.

**Use:** Hay grass in moist meadows, aggressive and invasive.



J. M. DiTomaso



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## Smooth brome (*Bromus inermis*) Introduced

**Growth Form:** Rhizomatous perennial, with a few tall culms.

**Inflor:** Panicle up to 8 in. long, branches spreading or ascending.

**Awns:** None or very short.

**Plant height:** Up to 4 ft.; leaves up to 14 in. long.

**Spikelets:** 8-10 florets per spikelet

**Habitat:** Well-drained fields and meadows, moderately moist waste places, irrigation ditches and roadsides.

**Quick ID:** Rhizomatous with a few tall culms; long leaves mostly cauline; panicles open, oblong and erect.

**Use:** Forage and for re-vegetation after fires.



P. MacMillan



M. A. Willson



P. MacMillan



M. A. Willson

**Group F.** (Annuals or biennials; inflorescence a panicle).

**Barnyard Grass (*Echinochloa crus-galli*) Introduced**

**Growth form:** Tall weedy annual, large hairy panicle.

**Inflor:** Panicles up to 10 in. long, 1/2 - 4 in. wide; often hairy and appear to be coarse.

**Awns:** 1-2 in. long.

**Plant height:** To 6 ft; leaves up to 25 in. long and 1 in. wide.

**Spikelets:** 2 florets per spikelet, the lower one sterile; spikelets <math>< \frac{1}{4}</math> in. long.

**Habitat:** Irrigated fields and irrigation ditches.

**Quick ID:** Tall, coarse, weedy annual; culms decumbent to erect; sheaths open.

**Use:** A tall invasive weed.





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## Cheatgrass (*Bromus tectorum*) Introduced

**Growth Form:** Weedy annual.

**Inflor:** Panicle, open and lax, up to 8 in. long, 1–3 in. wide, usually 1-sided; branches 1–1½ in. long, drooping.

**Awns:** ½ - ¾ in. long, straight.

**Plant height:** Up to 3 ft.; leaves up to 6 in. long, sheaths hairy.

**Spikelets:** 4-8 purplish florets per spikelet, <1 in. long.

**Habitat:** Disturbed/waste places, overgrazed fields, roadsides, etc.; spreads rapidly after disturbances.

**Quick ID:** Soft hairy annual; <3 ft. tall; pyramidal panicle of drooping branches with straight awns which often stick in your socks. Very weedy, very flammable; a forage grass when young. Resembles Common brome (p. 46) but brome is usually much taller.



Immature seed heads



Mature seed heads



## Crabgrass (*Digitaria ischaemum*) Introduced

**Growth form:** Weedy annual.

**Inflor:** Panicles with 3-5 spike-like branches; axillary panicles in lower sheaths.

**Awns:** None.

**Plant height:** Up to 2 ft.; leaves to 3 1/2 in. long and 1/4 in. wide.

**Spikelets:** 2-3 florets per spikelet; spikelets <1/4 in. long

**Habitat:** Weedy in lawns and gardens.

**Quick ID:** Coarse weedy annual; stiff spike-like panicles; open sheaths with secondary panicles.





C. Elmore

**Cultivated oats (*Avena sativa*) and wild oats (*Avena fatua*)**  
**Introduced.**

**Growth form:** Annuals.

**Inflor:** Panicles up to 16 in. long; 2-8 in. wide.

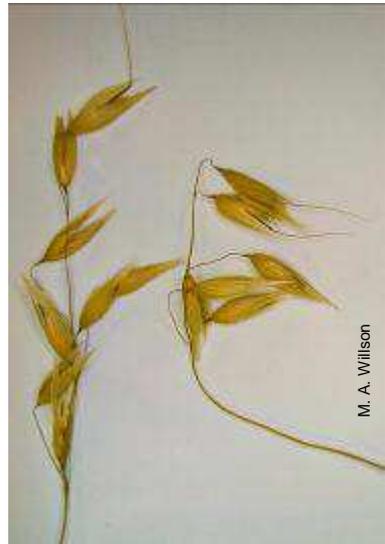
**Awns:** None or up to 1 in. long and strongly bent.

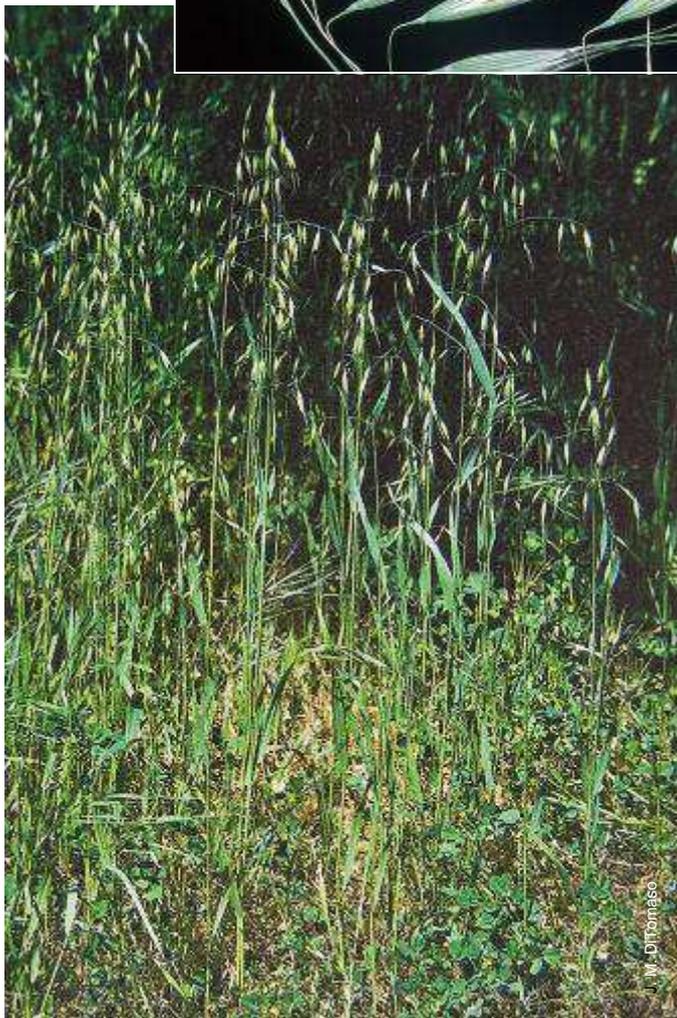
**Plant height:** Up to 5 ft; leaves up to 18 in. long and 1/2 in. wide.

**Spikelets:** 2-3 florets per spikelet; spikelets 1/4 - 1 in. long; glumes longer than, and enclose, florets.

**Habitat:** Cultivated oats in fields; wild oats in disturbed areas and waste ground; wild oats are weeds in grain fields.

**Quick ID:** Large open panicle; glumes larger than florets; may have bent awns; florets drop at maturity.





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**Rabbitsfoot grass (*Polypogon monspeliensis*) Introduced**

**Growth form:** Annuals with leafy culms.

**Inflor:** Narrow dense panicle up to 7 in. long, soft to touch.

**Awns:** <math>\frac{1}{2}</math> in. long.

**Plant height:** Up to 2 ft. tall; leaves up to 8 in. long.

**Spikelets:** 1 floret per spikelet.

**Habitat:** Damp to wet waste areas, near vernal pools, in alkaline soils.

**Quick ID:** Weedy annual; sheaths open; name describes feel of young panicles. Similar in appearance to Green foxtail (p. 58).



J. M. DiTomaso



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**Stinkgrass or Lovegrass (*Eragrostis ciliaris*) Introd.**

**Growth form:** Weedy annuals with pyramidal inflorescence.

**Inflor:** Panicle up to 6 in. long, 1-3 in. wide;

**Awns:** None.

**Plant height:** Up to 1 1/2 ft.; leaves up to 8 in. long & 1/4 in. wide.

**Spikelets:** 10 to 40 florets per spikelet; spikelets <1/4 in. long.

**Habitat:** Disturbed areas, roadsides, pond & stream sides

**Quick ID:** Mid-height weedy annuals with pyramidal Inflorescences, sheaths open



Mature seed head



## Wiregrasaas (*Ventenata dubia*) Introduced

**Growth Form:** Short tufted invasive annual.

**Inflor:** Panicles up to 8 in. long, 5-6 in. wide; open, pyramidal; lower nodes with 2-5 branches.

**Awns:** Up to 1/2 in. long and bent.

**Plant height:** Up to 2 1/2 ft.; leaves up to 3 in. long.

**Spikelets:** 2-3 florets; <1 in. long, laterally compressed.

**Habitat:** Open, dry areas (common in Ochoco NF).

**Quick ID:** Loosely tufted annual with short basal and cauline leaves, sheaths open; panicle open and spreading; long bent awns. Nodes red and black in May and June; whole plant appears shiny in summer. An invasive weed.



Immature seed head



**Witchgrass or Panicgrass (*Panicum capillare*) Introduced**

**Growth form:** Bluish or purplish annual with broad panicle.

**Inflor:** Panicles up to 20 in. long, 3-9 in. wide; feathery appearance.

**Awns:** None.

**Plant height:** Up to 4 ft. tall; leaves up to 16 in. long & 1/2 in. wide.

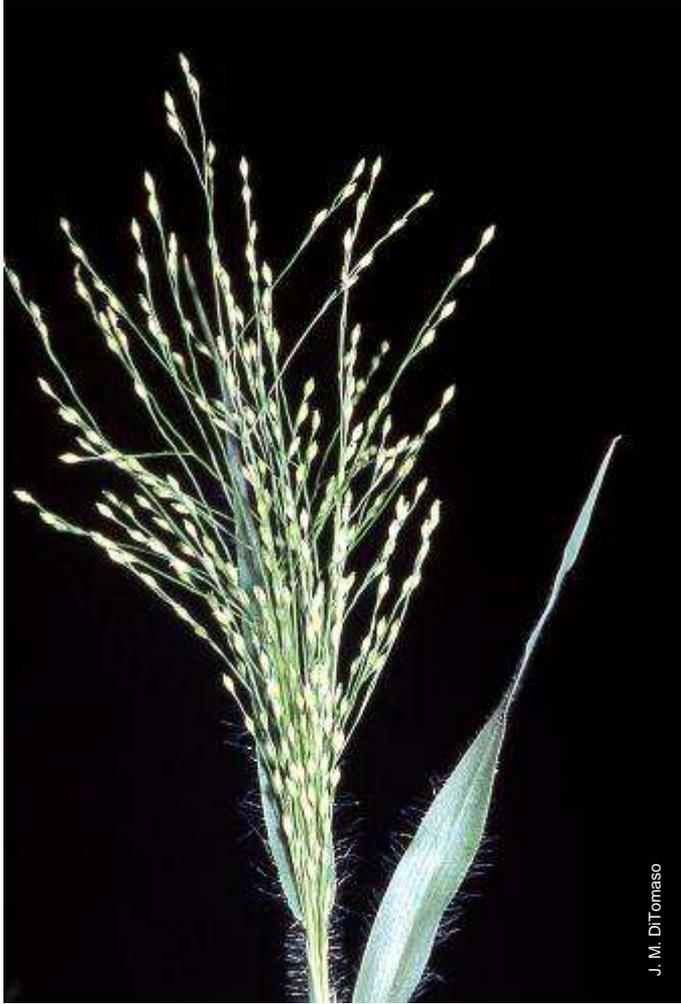
**Spikelets:** 2 florets per spikelet, lower floret sterile and very small.

**Habitat:** Disturbed moist sites, roadsides & stream sides.

**Quick ID:** Mid-height bluish annuals; sheaths open & hairy; panicle long & wide; mature plants have a feathery appearance.



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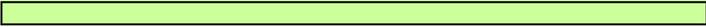
J. M. DiTomaso

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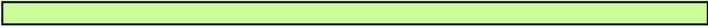
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