



United States Department of Agriculture  
Natural Resources Conservation Service  
Plant Materials Program

# 'Goldar' Bluebunch Wheatgrass

*Pseudoroegneria spicata* (Pursh) A. Löve

A Conservation Plant Release by USDA NRCS Aberdeen Plant Materials Center, Aberdeen, Idaho



Goldar bluebunch wheatgrass (*Pseudoroegneria spicata*)

'Goldar' is a cultivar selected from a native plant collection made in Asotin County, Washington in 1934.

## Description

Goldar bluebunch wheatgrass is a perennial cool-season native bunchgrass growing to 18 to 40 inches tall. The abundant leaves are green to blue in color. Spikes are generally loose, open with spikelets about the same length as the rachis internodes at maturity. The lemma awns are prominent and divergent.

## Source

Goldar bluebunch wheatgrass was selected from seed collected on Mallery Ridge of the Umatilla National Forest in Asotin County, Washington. The collection site was on a ponderosa pine-grassland plant community at an elevation of about 4,000 feet. Detailed collection site information is not available. It was released by Idaho and Utah Agricultural Experiment Stations, Agricultural Research Service and the PMC in 1989. 'Goldar' is noted for rapid establishment, high forage production, and the ability to survive and thrive under dry conditions at or above 12 inches rainfall. It is best adapted for use on higher rainfall foothill and mountain rangelands for re-establishment of native plant communities, vegetative

firebreaks, and critical area stabilization and reclamation purposes.

Goldar was selected for superior total yield and basal area, superior stand, vigor and seed production in comparison with 'Whitmar' beardless wheatgrass and 'Secar' Snake River wheatgrass. It is particularly well adapted to areas above 12 inches annual precipitation and elevations greater than 3,300 feet elevation. It was compared to more than 1,000 accessions of bluebunch wheatgrass at the Aberdeen and Pullman, WA Plant Materials Centers.

## Conservation Uses

Goldar can be used for native hay production and will make nutritious feed, but is better suited to grazing use. Bluebunch wheatgrass is palatable to all classes of livestock and wildlife. It is preferred forage for cattle and horses year-round, but it is considered coarse in summer. It is preferred forage for sheep, elk, deer, and antelope in spring. It is considered desired forage for elk in summer. It is desirable forage for sheep in summer, desirable feed for sheep, elk, deer, and antelope in fall and desirable forage for sheep, elk, and deer in winter. In spring, the protein levels can be as high as 20 percent decreasing to about 4 percent protein as the forage matures and cures. Digestible carbohydrates remain about 45 percent throughout the active growth period.

Bluebunch wheatgrass is very drought resistant, persistent and adapted to stabilization of disturbed soils. It is very compatible with slower developing native species, such as thickspike wheatgrass, western wheatgrass, and needlegrass species. It does not compete well with aggressive introduced grasses. Its drought tolerance, combined with extensive root systems and good seedling vigor, make this species ideal for reclamation in areas receiving 12 to 20 inches annual precipitation.

## Area of Adaptation and Use

Goldar is adapted to the Northwest and Intermountain regions of the United States where annual precipitation averages above 12 inches and elevation above 3300 feet. It prefers light to medium-textured well drained soils. Goldar can be planted in big sagebrush communities as well as on mountain slopes with antelope bitterbrush, mountain big sagebrush and Idaho fescue. It can also survive in shallow rocky soils with Wyoming big sagebrush.

### **Establishment and Management for Conservation Plantings**

Goldar should be seeded in late fall with a drill to a depth of ¼ to ½ inch in a firm, weed-free seedbed. The full seeding rate is 8 pounds Pure Live Seed (PLS) per acre. For critical area stabilization, double the seeding rate to 16 pounds PLS/ac. When used as a component of a seed mix, adjust to the percent of mix desired.

Stands may require weed control measures during establishment. Application of 2,4-D should not be made until plants have reached the four to six-leaf stage. Mowing the stand when weeds are beginning to bloom will reduce weed seed development. Grasshoppers and other insects may also damage new stands and pesticides may be needed.

Stands of bluebunch wheatgrass should not be grazed until they are firmly established (usually two growing seasons) and have headed out. Six inches of new growth should be attained in spring before grazing is allowed in established stands. The growing point of bluebunch wheatgrass is fairly high and stands can easily be overgrazed. It is recommended that this grass be grazed under a rest or deferred rotation grazing system to ensure that plants remain healthy. Spring grazing should occur no more than one out of three years and no more than 40 percent utilization should occur during rapid growth. Heavy early spring grazing is especially damaging and should be delayed until at least mid-boot stage. No more than 60 percent utilization should occur after seed ripens.

Once established, Goldar is competitive with weedy species, but it can be crowded out by aggressive introduced species.

No detrimental disease symptoms or insect problems have been observed in plantings of Goldar. It may be susceptible to stripe rust and mildew if conditions are favorable for these pathogens.

### **Ecological Considerations**

Goldar is native to the Western United States and has no known negative impacts on wild or domestic animals. Goldar is not considered a weedy or invasive species but can spread to adjoining vegetative communities under ideal environmental conditions.

### **Seed and Plant Production**

Seed production of bluebunch wheatgrass has been very successful under cultivated conditions. Row spacing of 24 to 36 inches are recommended under irrigation and 36 inches under dryland conditions. Seeding rates of 3 to 4 PLS per acre are recommended. Cultivation is needed to maintain rows and weed-free conditions. Seed fields are productive for three to four years. Average production of 75 to 100 pounds per acre under dryland conditions and 150 to 250 pounds per acre under irrigated conditions can be expected. Harvesting is best completed by swathing, followed by combining of the cured rows. The seed heads readily shatter and require close scrutiny of maturing stands.

### **Availability**

*For conservation use:* Seed is widely available from commercial seed vendors.

*For seed or plant increase:* Breeder and Foundation seed is maintained by the Aberdeen PMC. Foundation seed is available through the University of Idaho Foundation Seed Program and Utah Crop Improvement Association. Certification of seed shall be limited to not more than two generations from Foundation seed (Registered and Certified).

*For more information, contact:*  
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### **Citation**

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