



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

'Arlington' blue wildrye

Elymus glaucus Buckl. ssp. *glaucus*

A Conservation Plant Release by USDA NRCS Corvallis Plant Materials Center, Corvallis, Oregon



'Arlington' blue wildrye (*Elymus glaucus* ssp. *glaucus*) is a grass cultivar released in 1995 in cooperation with the Oregon Agricultural Experiment Station and the Washington Agricultural Research Center.

Description

Arlington blue wildrye is an erect, medium-coarse, short-lived (3-5 years), cool season perennial bunchgrass that grows to an average height of 40 inches. The blue-green foliage is basal early in the growing season, but occurs primarily at the joints along the stem when mature. The stems have a white waxy coating in summer adding to the bluish color. Seedheads are in the form of long, narrow, bearded spikes (with awns), that turn purple at the onset of ripening. Arlington flowers in early to mid-June and matures seed by early July in most years. The leaves are lax, ¼ – ½ inch wide, and 4–9 inches long. This species is primarily self-pollinated (60–95%).

Source

Seed for this cultivar was originally collected in 1979 from a population growing at an elevation of 200 ft near the city of Arlington in Snohomish County, Washington.

Arlington blue wildrye (PI 527333, reg. no. CV-187, 9019633) was not intentionally bred or hybridized, but was selected from a common garden study of 128 blue wildrye populations at the Corvallis Plant Materials Center (PMC). It was chosen for having good plant vigor, fewer visual disease symptoms on the foliage, shorter culm height, and good seed yields. Arlington was also noted for its later maturity and weaker awns compared to most other populations evaluated.

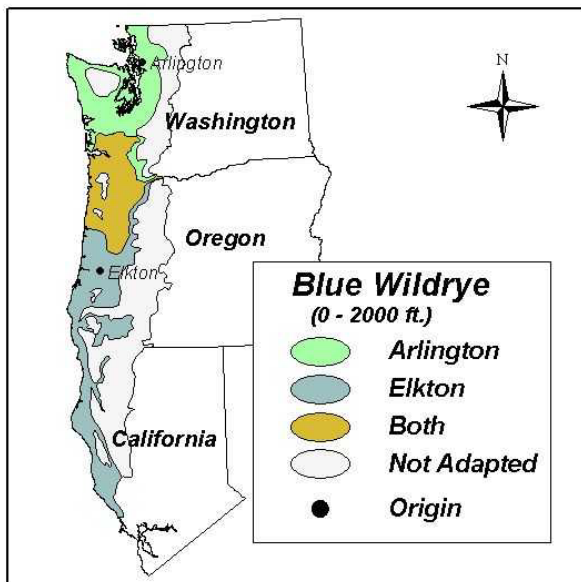
Conservation Uses

Arlington blue wildrye is recommended for erosion control, quick, self-perpetuating cover, and site rehabilitation on logging roads, cut-over timberland, burned areas, steep hillsides, and upland prairies. Establishment is rapid and it may be used as a pioneer grass on recently disturbed areas. Other uses include cover under trees in open woods or along the upper bank of riparian zones, wildlife habitat, and promotion of native plant diversity. Prior to maturity, blue wildrye is considered fair to good forage for cattle, deer and elk, and poor forage for sheep. Arlington is a moderate forage producer. It can yield 2.5 to 4.6 tons of dry matter/acre under fertilized dryland conditions west of the Cascades in Oregon and Washington (based on single annual clippings of above ground biomass). However, the palatability and nutritional value of this variety for livestock is not fully established.

Area of Adaptation and Use

Arlington blue wildrye grows best on moderately acid to neutral, well-drained soils that are coarse to moderately fine textured (clay loam to silt loam, loamy sand, and gravelly sandy loam). However, it will tolerate somewhat poorly-drained soils that are not inundated in winter. The mean annual precipitation should exceed 30 inches. This species does best in full sun to intermediate shade and is not considered saline tolerant.

Arlington is primarily recommended for use in the Puget lowlands, Cascade and Olympic Mountains, and Coast Range of Washington. However, it has also performed moderately well in western Oregon. The suggested elevation range is 0 to 2,000 ft. 'Elkton' blue wildrye, another release from the Corvallis PMC, is recommended for the Cascade and Coast Ranges of Oregon and northwestern California, the Willamette Valley and other western interior valleys of Oregon, as well as the Siskiyou-Trinity region (see map below). Elkton is taller, earlier to initiate spring growth, earlier maturing, and lacks the bluish colored stems found on Arlington in summer. For more information on this cultivar please see the release brochure for Elkton blue wildrye.



Area of adaptation and recommended use for the cultivars 'Arlington' and 'Elkton' blue wildrye. Map by Ian Reid.

Establishment and Management for Conservation Plantings

Seed of Arlington blue wildrye has no dormancy; therefore it can be fall or spring sown without special treatment. There is an average of 160,000 seeds/lb, so each pound of seed sown per acre is equivalent to 3 to 4 seeds/ ft². The recommended drilled seeding rate for most uses when planted alone is 8–10 lb/acre at a depth of no more than ½ inch. A broadcast rate of 20 lb/acre should be used on steeper slopes, for weed suppression, and for erosion control immediately following soil disturbance or fire. In mixtures with slower establishing native grasses and forbs, blue wildrye should not exceed 10 to 20% of the mix by weight.

If planted for forage, blue wildrye does not withstand heavy grazing. Use by livestock should be restricted to allow plants to produce some seed at least every other year. A system of rotation-deferred grazing is required. Eight to ten inches of stubble should remain after grazing. Close mowing in the spring should be avoided as it will eliminate most stands in two to four years.

Ecological Considerations

Signs and symptoms of leaf and stem rust (*Puccinia* sp.) vary from year to year, but levels are generally considered too minor to warrant a control program for this disease. Arlington is not considered weedy within the intended area of use. Toxicity to livestock has not been reported.

Seed and Plant Production

Plants should be grown on 8 to 18-inch rows for seed production. Mechanical cultivation for weed control may necessitate wider rows. Fall or early spring sowing can

result in partial seed crops the first growing season, but production usually peaks in the second and third growing seasons, then declines steadily. The recommended seeding rate is 8–10 lb/acre in narrow rows (30–55 seeds per foot of row) and 3–4 lb/acre in wide rows (28–51 seeds per foot of row). Seed of Arlington and other blue wildrye populations shatter readily when mature. To reduce losses, fields can be swathed during soft dough stage or at the onset of ripening when the seedheads turn purple. The seed is left in windrows to dry before combining. Awns should be detached from the seed with a brush machine or debearder during processing in order to reduce volume and improve flow through seeding equipment. Seed yields of Arlington averaged approximately 400 lb/acre at Corvallis, Oregon.

For established stands, apply 20-30 lb N/acre in the fall and 75-100 lb N/acre in the spring using a single or split application that includes at least 50 lb/acre in March. Sulfur should be applied each spring at the rate of 15 lb/acre. Recommended soil pH is 5.2 to 6.8. Burning is not needed for post-harvest residue management, but crop aftermath should be removed with a baler or forage harvester equipped with a trailing wagon.

Availability

For conservation use: Certified (preferred) and non-certified seed of Arlington blue wildrye is periodically available from select seed growers and vendors.

For seed or plant increase: Breeder and/or Foundation seed of Arlington blue wildrye is available to commercial growers from the NRCS Corvallis PMC.

For more information, contact:
 USDA-NRCS Corvallis Plant Materials Center
 3415 NE Granger Ave
 Corvallis, OR 97330
 Phone: 541-757-4812
 Fax: 541-757-4733
<http://plant-materials.nrcs.usda.gov/orpmc/>

Citation

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For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <<http://www.nrcs.usda.gov/>>, and visit the PLANTS Web site <<http://plants.usda.gov/>> or the Plant Materials Program Web site <<http://www.plant-materials.nrcs.usda.gov/>>

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