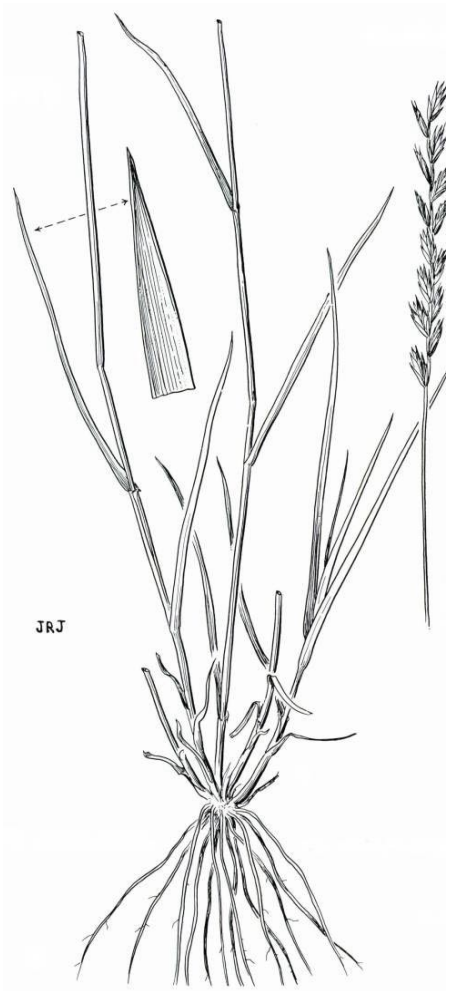
Plant Guide

SLENDER WHEATGRASS

Elymus trachycaulus (Link) Gould ex Shinners

plant symbol = ELTR7

Contributed By: USDA, NRCS, National Plant Data Center



Jeanne R. Janish
Cronquist et al. (1977)

Alternative Names

Agropyron trachycaulum; *Elymus trachycaulus* is recognized as having two subspecies: ssp. *subsecundus* (Link) A. & D. Love [symbol=ELTRS] and ssp. *trachycaulus* [symbol=ELTRT]; bearded wheatgrass; Cronquist et al. (1977) has a good discussion of this species and its relationship to other wheatgrasses.

Uses

Grazing/rangeland/pasture: Slender wheatgrass is palatable and nutritious for livestock. It also makes good quality hay.

Wildlife: It is among the preferred wheatgrasses for elk and bighorn sheep at higher elevations.

Erosion control: Slender wheatgrass is recommended for inclusion in reclamation mixes because of its good seedling vigor and establishment qualities. It is also somewhat tolerant of saline soils.

Reclamation: Slender wheatgrass seedlings are vigorous and provide good initial plant cover in seed mixtures. Plants tend to be short-lived, thus giving other plants a chance to become established.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status, such as, state noxious status and wetland indicator values.

Description

General: Grass Family (Poaceae). Slender wheatgrass is an erect, tufted bunchgrass ranging in height from 2 to 2-1/2 feet. It is a relatively short-lived cool season perennial species (3 to 4 years) native to the mountain and intermountain areas of the western United States. It has very short rhizomes and the seed-stalks and sterns have a characteristic reddish to purplish tinge at the base.

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Distribution

For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

Establishment

Adaptation: Slender wheatgrass is a widely distributed species and can be found growing at elevations from 4500 to 12,000 feet. It prefers loams and sandy loams in areas receiving at least 14 inches

annual precipitation. Slender wheatgrass grows on moist to dry sites and has moderate to good tolerance of alkaline conditions (pH = 8.8). Salinity tolerance ranges from 1 to 16 mmhos/cm depending on environmental conditions and ecotype. It is surpassed in this quality only by tall wheatgrass.

It is less drought tolerant than either crested or western wheatgrass and may succumb to drought since it sometimes matures late in the season. It does not tolerate excessive soil moisture and is shade tolerant. Considerable genetic variability is present in slender wheatgrass populations and some ecotypes may be rather specific to their original sites due to self-pollination.

Planting: It is recommended by Smith & Smith (1996) to plant in a field where weeds have been controlled by summer fallow or a broad spectrum herbicide during the previous 1 to 2 years. Seeding with a conventional drill is not difficult. Drilling depths should be 1/4 to 3/4 inches. Medium textured, well-drained soils are preferred. The recommended drill-seeding rate of 6 pounds PLS per acre will apply approximately 20 seeds per square foot. Seeding rates should be doubled for critical areas and broadcast seedings.

During establishment, apply enough water to get the stand established. Keep surface moist to avoid crusting and bring soil moisture up to field capacity in early September (Smith & Smith 1996). Seedling vigor is excellent during the first year of growth. New stands increase in size by vigorous tillering. This is a fast growing grass, which can establish quickly on critical sites.

Management

Slender wheatgrass is best suited as a filler in seed mixtures containing slower establishing, longer-lived species for use on mountain and foothill sites. It is only moderately tolerant of grazing and requires good management to maintain stands. It performs best for hay and pasture when grown in combination with a legume.

Seed production is relatively easy with conventional equipment. Slender wheatgrass is noted for good seed production. Average seed yield of 'San Luis' at Meeker, Colorado was 375 pounds/acre. Seed counts on four irrigated lots of 'San Luis' averaged 140,000 seeds per pound.

Irrigated seed production should be maintained in 30 to 38 inch rows with a seeding rate of 30 to 40 seeds per linear foot (3 to 4 pounds/acre). At Meeker, established stands were irrigated twice, once in late June and again in July. Dicambium and 2, 4 - D were applied in the spring to control broadleaf weeds. Fields were fertilized in the fall and spring with ammonium nitrate (30 pounds/acre active nitrogen). Seed is harvested in early to mid-August by direct combining.

Smith & Smith (1996) provide a good outline of establishment and management needs for this species from planting dates, row spacing, weed control, fertilization, and irrigation, to harvesting dates, yield, and storage requirements.

Cultivars, Improved and Selected Materials (and area of origin)

Please check the Vendor Database, expected to be on-line through the PLANTS Web site in 2001 by clicking on Plant Materials. Cultivars available include the following: 'Pryor', 'Revenue', and 'San Luis'. 'Pryor' was selected by the Bridger, Montana Plant Materials Center for its drought and saline tolerance, and seedling vigor. 'Revenue' is a 1970 release from Canada. 'San Luis' slender wheatgrass has good adaptation and is long-lived at elevations of 4,500 to 12,000 feet.

Foundation seed of 'San Luis' is available through the Colorado Seed Growers Association, the Upper Colorado Environmental Plant Center, or NRCS Plant Materials Centers. Other seed sources can be found in Smith & Smith (1996) and USDA, NRCS & Ducks Unlimited Canada (1996).

References

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For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS <http://plants.usda.gov> and Plant Materials Program Web sites <http://Plant-Materials.nrcs.usda.gov>.