

Grasses

STREAMBANK WHEATGRASS (Agropyron riparian)

Streambank wheatgrass is native to the northwestern United States and adjacent Canada. Despite its name, it is not restricted to riparian sites, but has good drought tolerance. It is especially suitable for use in soil and water conservation work. Its dense, low-growing sod is resistant to erosion. The top growth is relatively short and fine-leaved, and requires a minimum of maintenance.

Streambank wheatgrass is used wherever a rapid-establishing, drought-tolerant ground cover is required, such as borrow pits, spoil banks, roadsides, pond and irrigation banks and airport surfaces. The seed germinates quickly and seedlings grow rapidly. The strong rhizomes spread rapidly to give complete erosion control in a short time, but it is not weedy like reed canary grass in irrigation ditches or quackgrass in crop fields.

Little seed is produced from solid stands; so there is no danger of the grass spreading to irrigated cropland.

Streambank wheatgrass makes a permanent lawn for homes and playgrounds, and, when established, requires infrequent watering and minimum maintenance. It can also be used for parking areas and in machinery yards.

Streambank wheatgrass is easily crowded out by other grasses if the site is wet.

Description

Streambank wheatgrass is a long-lived perennial that is very drought tolerant. It is a sod former that has deep roots and very strong rhizomes that enable the grass to spread rapidly to form a good ground cover.

The plants are short with narrow, tough, smooth leaves. The grass has leaves 4 to 10 inches long and stems 16 to 36 inches high. The seed head is 2 to 4 inches long. The seed is somewhat larger than that of crested wheatgrass.

The leaves are light grayish-green and are somewhat curled at the margins.

Seed heads are mostly awnless, smooth to hairy and seeds shatter readily at maturity. Streambank wheatgrass establishes readily from seed, but does not become a weed. Mature plants are easily killed by normal tillage operations.

Adaptation

At elevations lower than 3,500 feet the minimum mean annual precipitation required for establishment and growth of streambank wheatgrass is 12 inches. Above this elevation it is performed well with 9 inches of precipitation.

Stream bank wheatgrass is adapted to soils that are moderately alkaline and have sandy to clayey texture. It will also grow on soils that range from shallow to deep. It is not tolerant to wet or poorly-drained soils.

Limitations

Stream bank wheatgrass produces a low forage yield and since it is not especially palatable, it has limited value for livestock use. It is not competitive with other grasses on wet sites. When irrigated, the plants are susceptible to leaf and stem rust.

Stream bank wheatgrass usually only produces seed for the first two harvest years with the third harvest yield not normally economic. Seed shatter is a problem. Very little seed is produced under dry land conditions.

Use for Hay

Stream bank wheatgrass is not normally recommended for forage production because the plants are short, have narrow, smooth leaves and are not especially palatable to livestock.

It is the lowest yielding of all the cultivated wheat grasses on dry land or irrigated land. The low yields are attributed to the predominantly leafy growth.

Use for Pasture

Although it is not usually recommended, stream bank wheatgrass can be used for pasture, even though the plants are short and not especially palatable. The leafy growth has a well-balanced nutrient composition.

Seed Production

Seed is normally produced under irrigation and has average seed production of about 200 pounds per year. Seeds are smooth, awnless and easily handled and processed. Seed heads are highly susceptible to shatter, and seed must be processed to break up multiple florets. Economical seed crops are usually only produced the first two harvest years and the grass then becomes "sodded in" and thereafter very few stems are formed.

Native Grass Species

Ranchers who are considering pasture establishment in Montana may want to think about using some of the native species that are adapted to our conditions and becoming increasingly available. It is important to choose species that are well adapted to a particular site and will meet the ranchers' management needs.

When considering natives for pasture, it is often best to plant a mix. Some native species don't normally occur in pure stands and may be spotty if seeded that way. Also, a mix will help take advantage of site variability within a field.

It is important to remember that native stands are slower to establish than many introduced stands; however, with proper management, once they are established, native stands are vigorous and long-lived. Stand longevity and productivity depend on a good grazing program regardless of the species chosen, native or introduced.

Some of the more available native species include:

Green needle grass: A cool-season, long-lived bunchgrass with good production. It is well adapted to a wide range of soil textures but is more abundant on heavier or clayey soils with annual precipitation of 11 inches or more. It is highly palatable and works well in a mix with western wheatgrass. Recommended cultivar: Lodorm.

Western wheatgrass or "Bluejoint": A cool-season, long-lived sod-former. It is adapted to a variety of soil types but prefers heavier textures with annual precipitation of 10 inches or more, or run-in or overflow sites. It is palatable, very drought tolerant and recovers well under grazing pressure. Having a rhizomatous nature, it provides good ground cover for erosion control and is moderately salt tolerant. Recommended cultivars: Rosana, Barton, Rodan, Arriba, Flintlock, Walsh.

Thick spike wheatgrass: A cool-season, long-lived, strongly rhizomatous native. It closely resembles western wheatgrass but is greener and more drought tolerant. Excellent seedling vigor promotes easy establishment. It is adapted to light-medium textured soils, slightly acid to moderately saline with annual precipitation of 10 inches or more. It provides excellent erosion control and has been shown to work very well in waterways. Recommended cultivars: Critana, Elbee.

Slender wheatgrass: A cool-season, short-lived bunchgrass. It is adapted to medium-light textured soils on a variety of sites. It is very easily established and although short-lived, provides quick cover when included in mixtures with other longer-lived native species. It has a high tolerance to saline-alkaline soils, is palatable and nutritious, and provides good winter forage as well. Recommended cultivars: Pryor, Revenue, San Luis.

Stream bank wheatgrass: A cool-season, long-lived native sod-former. Although the name suggests that it has high moisture requirements, it is more drought tolerant than thick spike wheatgrass. Seeds germinate slower than thick spike wheatgrass, but establish quickly, even in low rainfall areas (10- to 14-inch precipitation zones). It is adapted to a variety of soil textures, prefers medium to fine textured soils and is moderately salt tolerant. Its low-growing habit provides low-maintenance ground cover, ideal for use on small-plane grass landing fields at airports as well as ground cover for erosion control. Recommended cultivar: Sodar.

Bluebunch wheatgrass: A cool-season, long-lived bunchgrass. It is adapted to a wide range of soils and is highly drought resistant. Although found throughout Montana, it is of greatest importance in the foothill and mountain areas and on medium-course textured soils with greater than 10 inches of precipitation. It works well with western or thick spike wheatgrass, mixed with slender wheatgrass and green needle grass. The forage is palatable and it produces well. Seed is often not readily available. Beardless wheatgrass, an important bunchgrass in

western Montana, is very similar to bluebunch except that it lacks awns. Recommended cultivars: Secar, bluebunch wheatgrass, Whitmar, beardless wheatgrass.

Prairie sandreed: A warm-season, long-lived, vigorous sod-former, adapted to sandy soils. It is slow to establish but once established very drought-tolerant, and adapted to areas with less than 10-20 inches of annual precipitation. It is a good producer, is very palatable and provides excellent soil stabilization on sandy soils in a mix with Indian rice grass, thick spike wheatgrass and slender wheatgrass. Recommended cultivar: Goshen.

Indian rice grass: A warm-season, long-lived bunchgrass, adapted to sandy soils, sand dunes, exposed ridges and other sandy disturbed sites. Its forage is palatable, it cures well, providing forage on winter pastures, however, plants are slow to establish. Pure stands are difficult to establish, therefore a mix is recommended (see prairie sandreed). Birds like the seeds. Recommended cultivar: Nezpar.

Lewis flax: A native perennial forb that can be added as a minor component to range seeding mixtures to add diversity. It is very palatable to livestock and wildlife and is a prolific seed producer. The blue flowers that bloom all summer are aesthetically pleasing and the seeds are relished by upland game birds. Recommended cultivar: Appar.

Fourwing salt brush: A warm-season, long-lived perennial shrub, often slow to establish, that should be seeded in a mix with other native grasses. It is adapted to a variety of soil textures from clay to sand and it is moderately salt tolerant. It is very palatable and provides excellent winter forage (15% protein) for livestock and game. Recommended cultivar: Wytana.

The Soil Conservation Service or the Cooperative Extension Service would be able to provide more information on these and other native, as well as introduced, species that may be best suited for specific sites and particular management needs. They can also provide information on planting methods, dates and seedbed preparation.