

**GRAMA, SIDEOATS:** A native, warm-season bunch grass which grows one to three feet high. Leaves grow 2 to 8 inches long. Turns a brownish-red color in fall. Adapted to wide range of soils.

*Use for Hay:* Quantity is fair, quality is good.

*Use for Pasture:* Palatable when green to all livestock. Does not take heavy grazing well. Leave stubble height of three to four inches; six to eight inches if continuously grazed. Fair winter forage.

*Planting Rate:* 3-4 pounds pure live seed per acre

*Varieties:* 'Pierre', 'Butte': from Nebraska; earlier maturing, 'Vaughn': from New Mexico; good seedling vigor; drought tolerant; low palatability, 'Niner': winter hardy, 'El Reno': from Oklahoma; good leafiness, 'Coronado': from New Mexico.

**GRASS, ALKALAI:** A bunchgrass suitable to salty sites. Grows 8 to 24 inches tall; leaves from one to four inches long.

*Planting Rate:* 2-3 pounds pure live seed per 1,000 square feet

*Variety.* 'Fulfs'

**NEEDLEGRASS, GREEN:** A native, cool-season bunchgrass which often is associated with blue grama on tight, dryland soils. It is nutritious and palatable. Although having awns (beards), they are not troublesome to livestock. Seed dormancy percentage can be high, with some germinating two to three years after planting. Seed stalks grow two to three feet high. Leaves are 3 to 12 inches long. A relatively early spring grower.

*Use for Hay:* Provides good quality hay.

*Use for Pasture:* Can maintain palatability through the summer when moisture is available. Manage for a stubble height of four inches; four to six inches if continuously grazed. More palatable to cattle and horses than to sheep and goats. Let developed awns fall before continuing grazing.

*Planting Rate:* 8-10 pounds pure live seed per acre

*Varieties:* 'Lodorm': less seed dormancy; released from Mandan, North Dakota, 'Green Stipagrass'

**ORCHARDGRASS:** An excellent cool-season grass which originated in Europe. Best known as an irrigated grass. Grows two to five feet tall; leaves from 4 to 16 inches long. Combines well with legumes since it is a bunchgrass. Needs good moisture to grow and survive winters. Seed 3 to 10 pounds per acre if with a legume. Wetness and flood tolerance are poor. Recovers rapidly from grazing.

*Use for Hay:* An excellent hay grass. Quality and palatability are high. Solo yields can be one to two tons per acre; two to four tons per acre with alfalfa.

Cut hay when plants are fully headed to first bloom.

*Use for Pasture:* Very palatable to all livestock classes. Graze eight- to nine-inch tall plants down to four-inch stubble. Prevent development of seed stalks. Provides excellent regrowth in summer, unlike most other grasses. Does not tolerate close and continuous grazing, but is adapted to frequent grazing. Rotational grazing is needed to prevent grubbing out. Low trampling tolerance.

*Planting Rate:* 2-3 pounds pure live seed per acre

*Varieties:* 'Paiute': can have very poor stand longevity of about three years, 'Latar': leafy; recovers quickly after cutting; good winter hardiness, 'Paiute': better than Potomac; responds well to irrigation, 'Potomac': earlier maturing, lower producer; seed with clover, 'Dawn': newer variety; 3 to 4 days later maturity than Latar. Hardier than Potomac. Good yielder, 'Akaroa': mid-maturity.

**SACATON, ALKALI:** A warm-season, native bunchgrass which is adapted to salty sites. Can grow where the soil electrical conductivity is more than 12 mmhos/cm and less than about 25 mmhos/cm. It is long lived and grows two to three feet tall. It can form wide bunches. Prefers fine textured soils. Withstands high water tables (four to eight feet) or frequent flooding. Stands can be hard to establish. Very difficult to establish; broadcasting seed has worked best.

*Use for Hay:* Produces hay of fair quality if cut at early heading.

*Use for Pasture:* Grazed freely by cattle and horses. As it matures, plants become coarse, tough and unpalatable. Keep grazed down to maintain quality. Does not cure into good winter feed.

*Planting Rate:* 2-3 pounds pure live seed per acre

**SALTGRASS, INLAND:** A native, warm-season, vigorous sod-former. Grows 4 to 16 inches tall; leaves from 2 to 6 inches long. Leaf blades are stiff and sharp. It is adapted to the margins of salty sites and roadsides. Will experience a 50 percent decline in yield on salty soils with an electrical conductivity of 18 mmhos/cm.

*Use for Hay:* Can be harvested for hay on good sites. Quality is fair.

*Use for Pasture:* Has little forage value because of harsh and tough leaves. Is grazed in absence of better forage. Graze during early growth stages.

*Planting Rate:* 1-1½ pounds pure live seed per acre (purchase by mix, seed by itself is difficult to find)

**SANDREED, PRAIRIE:** A native, warm-season grass which does well only on sandy sites. A sod-