



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

'Earl'

Big Bluestem

Andropogon gerardii Vitman

A Conservation Plant Release by USDA NRCS James E. "Bud" Smith Plant Materials Center, Knox City, TX



USDA-NRCS James E. "Bud" Smith PMC

'Earl' big bluestem, *Andropogon gerardii* Vitman, was released from the James E. "Bud" Smith Plant Materials Center in Knox City, Texas in 1996.

Description

Earl big bluestem is a warm-season, native, perennial grass. It can be distinguished from other warm-season grasses by the blue coloration at the base of the culm and purplish, 3-parted flower clusters that resemble a turkey's foot. Like other big bluestems, it has short scaly rhizomes.

It was selected for its moderate forage and good seed production. Earl has a deep fibrous root system. The plant grows to an average height ranging from 3 to 6 feet tall. Stands of Earl normally take two years to establish and produce seed. Studies conducted at the James E. "Bud" Smith PMC showed that Earl will yield 4,000-6,000 pounds of biomass each year. There are approximately 145,000 seeds per pound.

Source

Earl was collected from a native stand located nine miles northeast of Weatherford, Texas, in Parker County.

Conservation Uses

Earl can be used in pure stands for grazed pastures and hay production or as a component in seed mixtures for range seeding. Its forage value is good for livestock. Average crude protein in early, mid-summer and late fall is 12.9%, and 7% respectively. Average digestibility ranged from 65% in early spring to 55% in late fall. It provides good ground nesting cover for quail and the seed is utilized by songbirds and small mammals. It can also be planted for filter strips, field borders, mine reclamation, and erosion control.

Area of Adaptation and Use

Earl big bluestem is adapted to areas in Texas and Oklahoma where big bluestem is commonly found. It is best adapted to deep fertile soils, but will grow well on calcareous, shallow or gravelly soils when adequate moisture is present. Earl is not tolerant to saline sites, but will survive on moderately wet bottomlands. Earl can provide forage and ground cover with as little as 18 inches of annual precipitation.

Establishment and Management for Conservation Plantings

The full seeding rate for Earl is 6 pounds of pure live seed per acre. When planting this as a component of a seed mixture, the seeding rate should be adjusted to the desired percent of the mix. Seed should be planted ¼ to ½ inch deep.

Seedbed preparation should begin the year prior to spring planting to reduce weed problems during the first year of establishment. Work the site as necessary during the summer or early fall prior to establishment to create a firm, weed-free seedbed. Work should be completed in the fall to allow time for the soil to settle and accumulate moisture. Minimum and no-till operations should use herbicide applications to control weeds.

Plantings should be well established before livestock grazing is permitted. Twelve months of grazing

deferment should give plants enough time to become established. Established stands of Earl should not be grazed lower than 6-8 inches, depending upon the prescribed grazing system. Contact your local U.S. Department of Agriculture-NRCS field office for assistance in planning and applying prescribed grazing plans.

Soil tests should be conducted to determine the amount of fertilizer applied to sustain a medium level. Nitrogen should not be used during the establishment year because it will encourage weed growth. Weeds may be controlled by mowing or with herbicides. Consult your local extension weed specialist for recommendations on herbicides for big bluestem.

Seed and Plant Production

Earl big bluestem seed is harvested with either a seed stripper or by direct combining. Average seed yield at the Knox City PMC is 150 pounds per acre.

Availability

For conservation use: Commercial seed is available from several commercial seed companies.

For seed or plant increase: Breeder seed will be maintained by the USDA-NRCS James E. "Bud" Smith Plant Materials Center, Knox City, Texas and is available to seed growers through the Texas Foundation Seed Service in Vernon, Texas, phone number (940) 552-6226.



USDA-NRCS James E. "Bud" Smith PMC

Citation

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