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BERMUDAGRASS

(Cynodon dactylon (L.) Pers.*)*

USDA NRCS National Plant Materials Center
Beltsville, MD

Uses

Erosion control: Bermudagrass is used for critical area planting (including channels and pond banks), grassed waterways, and vegetated flumes.

Turf: This grass is suitable for lawns and public areas, and is recommended for problem soils and heavy traffic areas.

Livestock: Bermudagrass provides excellent pasture and hay with proper management. Forage quality is dependent on soil fertility and stage of growth.

Description

Bermudagrass is probably Asian in origin, and was documented as an important grass in the United States by 1807. It is a long-lived, warm season perennial that spreads by rhizomes, stolons, and seed. Stems are leafy, branched, and 4 to 6 inches tall. Under favorable conditions, stems may be 12 to 18 inches high. Stems are short jointed. Leaves are flat and spreading. The ligule is a circle of white hairs. Leaves may be hairy or smooth. Seedheads are usually in one whorl of 3 to 7 spikes, each about 1 to 2½ inches long. Some robust forms may have up to 10 spikes in 2 whorls. There are approximately 2,071,000 hulled seeds/pound.

Adaption and Distribution

Although a few hardy strains of Bermudagrass persist in areas with sub-zero winter temperatures, it has achieved importance only in areas of relatively mild winters. Once established on moderately deep to deep soils, Bermudagrass maintains dense sod with 16 inches of rainfall. It can withstand sedimentation and long periods of inundation. It prefers full sun and can grow rapidly at air temperatures exceeding 100°F.

Bermudagrass prefers deep soils but produces well on moderately shallow sites under irrigation and good management. It persists on poor soils but requires high nitrogen levels for best appearance. It withstands pH ranges from about 5.0 to 8.5 and is boron tolerant. It tolerates saline soils with up to 18 millimhos of electrical conductivity in the soil solution.

Establishment

Stands may be established by use of seed, springs, or plugs planted during mid-spring to mid-summer followed by frequent applications of fertilizer and water. Early planting is most important in areas of marginal adaptability.

Beds for seeding or planting should be firm, smooth, and free of weed seed. For turf plantings, absolute smoothness is necessary for close mowing following establishment. Seed sprigs, or plugs should be placed into moist soil.

For pasture or hay, drill 5 to 10 pounds of hulled seed per acre at ¼ inch depth or less. For turf, use 2 to 3 pounds per 1,000 square feet. Higher seeding rates are advisable if seed must be broadcast.

Management

High quality turf will require frequent mowing, fertilizer, and water for vigorous growth. Clippings must be removed. A sharp reel-type mower will avoid unsightly scalping. Good to fair quality turf can be maintained on short water and low fertilizer schedules, thereby reducing mowing frequency.

Bermudagrass will persist as a weed-free ground cover on soils of moderate to high water-holding capacity. Where desirable and permissible, mid-winter controlled burning can be used to reduce thatch. Most herbicides used at recommended rates with reasonable care can be used to control undesirable plants without destroying fully established Bermudagrass. Applications of nitrogen every 2 to 5 years will be needed to maintain vigorous stands on most sites.

Both pasture and hay require good rainfall and heavy fertilizer application for high yield and quality. 30 to 40 pounds of nitrogen should be applied in split increments for each ton of anticipated dry forage yield. Highest yields are obtained on good soils in areas of high average annual temperature with ample water. Harvest or graze at 3 to 4 week intervals for best yields of total digestible nutrients and protein.