



STOVER

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Centipedegrass

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Centipedegrass is native to China and southeast Asia. It was first introduced into the United States in 1916 from seed collected by Frank N. Meyer in South China. Centipedegrass has since become widely grown in the southeastern United States from S. Carolina to Florida and westward along the Gulf Coast states to Texas.

Its popularity as a lawn grass stems from its adaptation to low fertility conditions and its low maintenance requirements. Where centipedegrass is adapted and properly managed, it has few serious pest problems. It is particularly well adapted to the sandy, acid soils of the southeastern United States. Its westward movement is somewhat limited by severe iron deficiencies that develop in the alkaline soils of the arid regions. And, its northward movement is restricted by low temperatures. Centipedegrass is slightly more cold tolerant than St. Augustine grass, but extended periods of 5°F or less can kill centipedegrass.

Centipedegrass can be found throughout the West Indies, South America and along some areas of the west coast of Africa. It can be successfully grown in any of the areas where St. Augustine grass is adapted.

Description. Centipedegrass, *Eremochloa ophiuroides* (Munro) Hack, is a coarse-textured perennial grass that spreads by stolons. The stolons have a creeping growth habit with rather short upright stems that resemble a centipede -- thus, the name centipedegrass. Centipedegrass produces seed and is readily propagated by seed. It has a yellow green color and is particularly sensitive to iron deficiency.

Centipedegrass forms a dense turf and has a relatively slow rate of growth. It requires less mowing than bermuda or St. Augustine grasses and is often called lazy man's grass. Centipedegrass remains green throughout the year in mild climates, but leaves and young stolons are killed during hard freezes. It does not have a true dormant state and resumes growth whenever temperatures are favorable.

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The stolons of centipedegrass are slender, branching, rooting at the nodes and terminating in a slender flowering stem. Leaf blades are commonly 15-30 mm long, 2-4 mm wide, flat, lanceolate, rounded at the base, petioled, sparsely ciliate (more numerous along the margins and at the base of the flowering stem); sheaths are overlapping, pubescent at the throat, compressed; ligule a ciliate membrane and collar is pubescent. The inflorescence is a spike-like raceme, 3 to 5 inches long, purplish in color, somewhat flattened, spikelets in two rows, alternate, one sessile and perfect, the other pedicled with a very small rudimentary spikelet. Sessile spikelets are 3-3.5 mm long. Oblong glumes about equal. Caryopsis about 2.0 mm long, narrowly elliptic.

Adaptation and Use. Centipedegrass is best adapted to sandy, acid soils where annual rainfall is in excess of 40 inches. It tolerates very low soil fertility levels and thrives on moderately fertile soils. Fertilization rates should not exceed 2 pounds of nitrogen per 1,000 sq. ft. per year on heavy soils or 3 pounds of nitrogen on sandy soils.

Centipedegrass is moderately shade tolerant, but grows best in full sunlight. It is not as salt tolerant as St. Augustine or bermudagrass. Centipedegrass thrives on moderately acid soils, pH 5 to 6. Above pH 7.0 iron becomes a limiting factor and supplemental applications of iron may be required.

Centipedegrass does not enter a true dormant state during winter months and is severely injured by intermittent cold and warm periods during spring. Hard freezes kill the leaves and young stolons of centipedegrasses and the grass recovers as soon as temperatures are favorable. When this cycle occurs several times during the winter months the grass is depleted of energy reserves and is susceptible to extreme winterkill. Thus, its adaptation is limited to areas with mild winter temperatures.

Centipedegrass is used primarily for lawns, parks, golf course roughs and utility turf. Like St. Augustine grass, centipedegrass does not tolerate heavy traffic and is not suited for athletic fields. Centipedegrass is ideally suited for roadside rights-of-way and other low maintenance turf areas, but it can become a nuisance in adjoining pasture and crop land.

Varieties. A number of centipede grass selections have been made, but none have found prominent use in turf. Common centipede grass produced from seed of early introductions has been about the only available source. In 1965 Oklahoma State University released Oklawn centipede grass as an improved variety with superior drought and cold tolerance. Likewise, the University of Tennessee developed Tennessee Hardy as a variety with superior cold tolerance. Neither of these have been extensively used since they must be propagated vegetatively. In 1983, Auburn University released AU Centennial centipede grass as a semidwarf variety. AU Centennial has shorter internodes than other varieties and makes a denser, lower growing sod. Shorter seedheads also improve the appearance of AU Centennial centipede grass.

Propagation. Centipede grass can be established from sod, sprigs or seed. Success with seeded plantings is highly dependent on good seedbed preparation. The soil should be disked or rototilled, pulverized with a rotovator or rake, leveled and firmed with a roller. Seed should be broadcast with a seeder or by hand. To aid uniform distributions of seed, 1/3 pound of seed should be uniformly mixed with about a gallon of fine sand and evenly distributed over 1,000 sq. ft. of lawn area. For large plantings with a grass drill the sand is not necessary.

After planting, the site should be firmed with a roller and watered slightly. The seedbed should be kept moist, but not wet, for 14 to 21 days after planting. If the area is too large to keep watered, the site should not be planted until soil moisture is adequate. A complete fertilizer should be applied at the time of planting at a rate of 1 pound of nitrogen per 1,000 sq. ft. Seeded plantings properly managed will provide a complete cover in about three months.

Centipede grass sprigs or sod plugs can be planted in rows about 1 foot apart or on 1-foot spacings. Sprigs require almost the same amount of care as seeds for the first two weeks after planting. Sod plugs require much less attention after planting, but must be watered regularly for the first several weeks. Sod plugs and sprigs require much more labor to plant than seed. Again, with proper care a complete cover can be obtained in about three months.

Management. Centipede grass has been described as a "lazy man's grass" because of its low maintenance requirements. In general, annual fertilization, regular mowing and irrigation as needed to prevent severe wilting will meet with the requirements for a satisfactory centipede grass lawn. Too often homeowners try to push centipede grass with nitrogen to enhance color and growth. Excessive nitrogen fertilization may enhance color and stimulate growth, but it also leads to problems with centipede grass lawns.

Annual applications of nitrogen in the spring and fall at a rate of 1 pound per 1,000 sq. ft. are recommended. A summer application of nitrogen at 0 to 1 pound per 1,000 sq. ft. is optional.

Centipedegrass is naturally shallow rooted and water management is critical on heavy textured soils during summer months. Centipedegrass is not as drought tolerant as some people have been led to believe, and improper watering during drought stress can cause problems. Water should be applied when centipedegrass shows signs of water stress -- wilted and discolored turf. Light, frequent applications of water should be avoided since it promotes shallow rooting. Thoroughly wetting the soil 4 to 6 inches deep only when the grass shows signs of moisture stress is the proper procedure for watering centipedegrass lawns. Sandy soils require more frequent applications of water, but the soil should be wet 6 to 8 inches deep after each irrigation. Centipedegrass should also be watered during dry winter months to avoid desiccation. Excessive nitrogen fertilization and improper watering account for many of the problems homeowners have with centipedegrass lawns.

On sandy soils and on soils low in potassium, spring and fall applications of potassium help to promote root development and to reduce winterkill in centipedegrass. Potassium can be applied with nitrogen in a complete fertilizer such as 3-1-2 or 2-1-2 ratio. Avoid continuous use of a high phosphorous fertilizer since it contributes to iron deficiencies in centipedegrass.

Where centipedegrass develops chlorotic conditions, applications of iron sulfate or iron chelate may correct the condition temporarily. Monthly applications of iron may be required to maintain a green color. If nitrogen is applied with iron, only pound of N per 1,000 sq. ft. should be used. If soil pH is above 6.5 on a sandy soil or 7.2 on a heavy soil, elemental sulfur may help to lower pH and increase iron availability. Soil test information should be considered to determine the amount of sulfur to apply. Sulfur applications should be made in the spring and fall on heavy soils. Annual or less frequent applications may be adequate on sandy soils.

Weed Control. Weed control improves the appearance and reduces the mowing needs of centipedegrass lawns. Winter weeds are particularly unsightly since they contrast so sharply with the dormant grass. Atrazine and hormone-type herbicides such as 2,4-D and MCPP can be used to control most broadleaved weeds including clover, chickweed, henbit and thistle. Herbicides should be applied in the fall or winter before these weeds mature.

Crabgrass and other summer annuals are most effectively controlled with preemerge herbicides applied in early spring before the weeds emerge. Products containing benefin, DCPA, bensulide or simazine can be effectively used for crabgrass control when applied according to label instructions.