
Turfgrass Portraits VIII: Centipedegrass

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This is the eighth in a series of nine articles on the basic traits and maintenance procedures for common turfgrasses. Next month author Schery discusses st. augustinegrass.

OF THE TURFGRASSES in our "Portrait" series, centipedegrass or "Chinese lawngrass," *Eremochloa ophiuroides*, is perhaps the most enigmatic. It has many qualities of a world beater, then erratically goes to pot because of seeming trifles (viz. minor fertility imbalances). It's not a demanding grass; indeed, it resents fertilization that strongly forces growth. Where adapted, centipede has few equals for easy-to-get-along-with lawns, which is doubtless why another of its popular names is "lazy-man's-grass."

Eremochloa ophiuroides is a Far Eastern species introduced from China by the USDA in 1916 (some references) or 1919 (other citations, including the Agricultural Yearbook, *Grass*). There are no recognized varieties, although a hardy selection is reported ready from Oklahoma. Strains are distinguished by stem color, with some authorities suggesting superiority of a red-stemmed introduction (PI 72260), and others (University of Florida) seeming to prefer green-stemmed types.

Eremochloa is a small genus

of the bluestem (*Andropogon*) tribe. It consists of a handful of species native to southeastern Asia and the East Indies. The majority are passably fine-leaved, and further search might uncover breeding stock worthy of introduction.

Adaptation and Appearance

Centipedegrass is at its best on the Coastal Plain from North Carolina south through southern Georgia, and northern Florida west into Mississippi. It has had limited success west of the Mississippi River (possibly because of increasing soil alkalinity in more arid regions), and is scarcely consequential in Arizona and southern California. A more usable western centipede might come from the pending Oklahoma release. Although centipede survives north into Tennessee, it is discolored by frost rather readily, and is seldom so useful as bermuda and zoysia in the upper South.

Much of the region where centipede is heavily used has sandy soil. Yet centipede grows on clays, too, although it prefers well-drained to waterlogged locations. A major weakness is yellowing (chlorosis) for lack of available iron, a condition often triggered by soil alkalinity. So centipede has gained a reputation for being adapted only to acid soils. Yet it flourishes without special precautions on some alkaline soils of south Florida; there's probably a lot more to it than mere tying-up of soluble iron at a pH above 7. Probably a complicated interaction of nutrients and trace elements determines centipede's peculiar sensitivity to iron (with growth stimulated by N in spring, or K in summer, it seems unable to pick up sufficient iron, especially if P is high!).

There is no question that centipede is one of the better southern grasses where low fertility prevails. In the give-and-take of ecological progression, centipede then has the advantage. With no help other than mowing, it can aggressively spread through and eventually dominate a turf (this is one reason for keeping centipede away from pastures, where

it is a poor yielder of non-nutritious forage). Though centipede responds well initially to high fertility, it often turns up its heels the next year. And it is probably not quite so good a shade grass as are St. Augustine, bahia, and zoysia, though far better than bermuda. In southern Georgia centipede delights in the open shade of pines.

As its poor reputation for forage might suggest, centipede is low growing, seldom over a few inches high even when unmowed. This can be quite an advantage for lawns only sporadically tended. Mowing need not be frequent (each 10-20 days), although with any lawn weekly mowing keeps things tidier. Mowing is not difficult, even with light equipment, which is quite a contrast with zoysia. Moreover, centipede is hardly injured by scalping, often a problem with rampantly growing species that produce abundant top growth. Centipede is usually mowed about 1½ inches tall. Seedheads are relatively low and inconspicuous, certainly not the problem we have noted with certain bermudas and bahia.

Centipede spreads by thickish, trailing stems (stolons) that stay flat against the ground. Fortunately, they have fairly short internodes and thus a dense presentation of leaves. The stolons, of course, root at the joints. The leaf blades are of medium width, finer than St. Augustine, but coarser than the better bermudas and zoysias or the famed bluegrasses or fine fescues. Speaking of bluegrasses and fescues, one is reminded that centipede grows so dense that winterseeding with these excellent wintergrasses is more difficult in centipede than in bermuda.

Performance and Care

Outstanding is centipede's ability to develop slowly into an aggressive, relatively weedfree turf, with very little attention. Yet being strictly stoloniferous, it is not hard to control at borders. In contrast with bermuda, edging once per year usu-

ally suffices. Centipede does not recover so quickly as does bermuda, nor does it wear so well as tough zoysia. Thus it is seldom recommended for heavily trafficked swards such as play fields.

The quality of centipede turf is not up to that of finer textured bermudas and zoysias. It is used chiefly where this is less important than ease of maintenance. We have remarked on centipede's adaptability to acid soils (so that liming is seldom called for), and its low fertility requirements (a single feeding in the spring often suffices). However, authorities usually recommend at least two yearly feedings, at about 1 lb. actual nitrogen each time, ordinarily employing a complete fertilizer.

Iron chlorosis can be corrected in some soils by adjusting the pH to mild acidity, as with sulphur-containing products (for alkaline soils), or perhaps by liming very acid ones. Up to 10 lbs./M of iron sulphate should give relief, and iron sulphate sprays cause immediate greening. An iron chelate such as DTPA at 1 lb./M may have a more prolonged influence than iron sulphate.

Except for the sucking, scale-like "ground pearl," centipede is relatively free of insect pests. Chinch bugs, the scourge of St. Augustine, hardly bother it. Ground pearls dwarf the roots, debilitating the grass. No practical control has yet been found, and where ground pearls are very serious, probably the easiest course is to switch to another grass. Nematodes may cause similar debilitation, though the turf should then respond to nematocides. Nor are diseases very serious on centipede. Brown patch can be checked with general fungicides, such as Thiram and mercurials.

Weed control is much the same as with St. Augustine, except that centipede is tolerant of 2,4-D. In the early stages of lawn formation, centipede may profit from preemergence crabgrass preventers (for sprigged or plugged lawns, not seeded ones), or simazine and atrazine. Don't use arsenates. Fortunately, cen-

tipede eventually forms so thick a sod that it fights many of its own weed battles. Perennial centipede will ordinarily crowd annual crabgrass into submission the second year.

Centipede endures drought reasonably well. Though turning completely brown, it recovers quickly with rain. But to be consistently attractive, lawns require occasional irrigation in dry weather. This is especially important on the prevailing sandy soils of centipede country, which hold so small a moisture reserve. Centipede is not tolerant of salt sprays, so is not for seaside plantings.

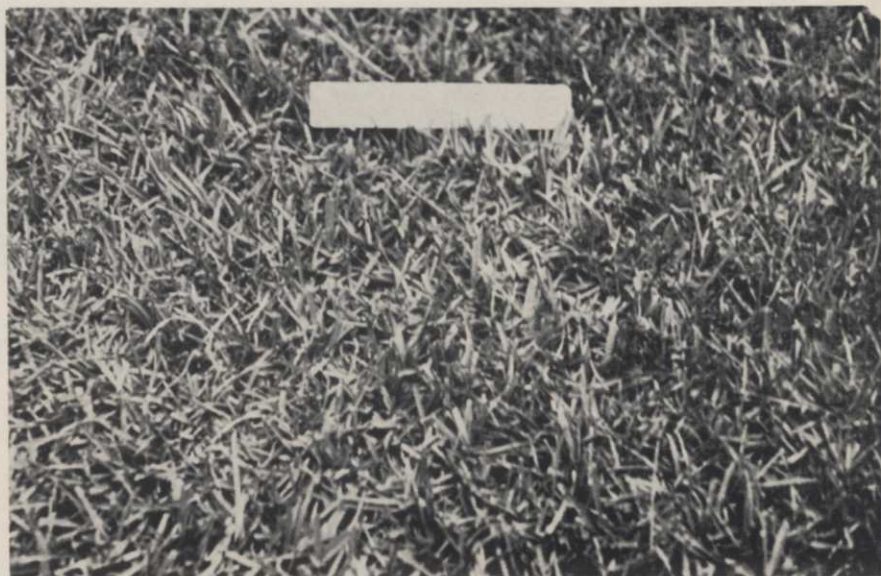
Propagation

Centipede has long been propagated vegetatively by sprigs or plugs. A cultivated and fertilized seedbed may be planted in rows about a foot apart, with individual starts 6"-12" apart in a row, sprigs buried 1"-2" deep at one end but most green leafage left above ground. Or live starts can be introduced into an old lawn, to infiltrate and eventually take over. Of course, the prepared seedbed offers a much better opportunity for quick and thorough establishment.

For some years centipede seed has been available in limited supply. Maintaining centipede

stands just for seed, plus difficulty in harvesting the low, infrequent seedheads, makes seed understandably costly (quotes run up to \$15 per pound). But there are nearly 1/2 million seeds to the pound. One might prefer sowing a pound or so/M, but cost dictates lighter sowing, only a couple of ounces (extended with inert) per M. Even very light sowings eventually dominate, although sprouting may be slow and seedling expansion deliberate. Seeding is best in spring, raked lightly into a prepared seedbed, watered consistently for several weeks. There are excellent centipede turfs in parts of Florida where the owners don't remember ever having started the grass, so seed must be effective in spreading the grass.

All in all, centipede is a distinctive grass, of great usefulness for lightly maintained turfs of the southern Coastal Plain. By and large it is of "intermediate" nature, being neither fine textured nor coarse, not without troubles but neither prone to disaster. It is also middle-of-the-road in cold hardiness, drought resistance, shade tolerance, and in most other respects. With time centipede makes a tight, weed-repressing sod that is easily tended.



Closeup of a healthy stand of centipedegrass shows typical characteristics that make it a "middle-of-the-road" species, such as its texture which is neither fine nor coarse.