
Turfgrass Portraits IX

St. augustinegrass

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This is the last of a series of nine articles on the basic traits and maintenance procedures for common turfgrasses.

ST. AUGUSTINEGRASS, *Stenotaphrum secundatum*, is a rarity among turfgrasses, being, as far as we know, a native to subtropical America, where it has been most used. All other grasses reviewed in our Portrait series have been naturalized from Old World continents or islands.

Stenotaphrum is a small genus, currently thought to embrace but three species, two of them found in southern Asia, and *S. secundatum* along the southern Atlantic and Gulf Coasts in America (introduced into Arizona and California). All are fairly low, creeping grasses, spreading well by stolons. Their preferred habitat is moist climate and mucky soil. St. augustinegrass has been one of the better performing southern turfgrasses near seashores.

Adapted as it is to humid conditions, st. augustine is a "natural" for lawns of the low-lying Coastal Plain, Florida especially. Its comparative hardiness near salt spray, and its ability to recover quickly in the nearly year-round growing weather there, help, too. Although st. augustine will survive in the higher, drier, colder environments north to the Piedmont, Little Rock and Dal-

las, its uncontested domain has long been the more tropical environments farther south.

Appearance And Growth

St. augustine is not what would be called an elegant turfgrass, being too coarse and of too loose texture for that. Leaf blades may be as much as 1/2 inch wide, though newer selections have finer texture much like centipede. The leaves exhibit a curious constriction and "half twist" where the blade joins the sheath, a distinguishing feature in telling st. augustine from similar turfgrasses such as centipede or bahia. The leaf blades are smooth except for a cluster of hairs at juncture of the sheath, blunt tipped, in most selections attractively dark green. Leaves (and side branches) occur in groups at the nodes, overlapping the relatively bare internodes. Stems (stolons) are flat, thickish.

Compared to bahia and most bermudas, even zoysia and centipede, st. augustine produces relatively few seedheads, often a mowing nuisance in turfgrasses. The seedheads themselves are rather thick, with the individual flowers (spikelets) embedded in a corky, sinuous rachis, actually the source of the name *Stenotaphrum* (from the Greek meaning "narrow trench," referring to the cavities in the rachis in which the spikelets are embedded). The low frequency of seedheads, combined with apparent sterility of many spikelets, and no established means for collecting seed, limits propagation of st. augustine to live starts.

St. augustinegrass grows with fair rapidity, and is easily established from sod, plugs of rooted grass, or sprigs (individual stolons of several-node length). With fertilization and some weed control it is not difficult to knit a lawn from starts approximately a foot apart in a matter of a few months of suitable growing weather.

Probably the most notable attribute of st. augustinegrass is its ability to grow well in shade. Perhaps more so than any other southern grass, st. augustine is

shade-tolerant. In most other respects st. augustine is a moderate, ranking neither best nor poorest.

St. augustine is widely tolerant of soils and pH (usually a pH near neutral is recommended). It is vigorous, and the leaves of lawn varieties lie low to the ground, making mowing easier than might be supposed for such coarse vegetation. In southern Florida it is green nearly year-round, and is off color only briefly in winter in northern Florida.

The ease with which st. augustine is propagated on the immense sod farms of the muck lands near Lake Okeechobee makes this species one of the least expensive turfgrasses of the South.

Difficulties

However, the economy of starting a st. augustine lawn is overbalanced these days by the expense of maintaining it. Not too many years ago st. augustine was considered relatively undemanding. With wider use and better fertilization (yielding "softer" grass), problems arose.

Most serious has been chinch bugs, species of *Blissus*, which have a predilection for st. augustine. They have wiped out many a st. augustine lawn in Florida, and now seem moving westward into Texas. Chinch bugs are small sucking insects, which, if not quickly controlled, "bleed the turf white" in irregular patches, causing it to brown and die. Unfortunately, these southern chinch bugs are a mean lot; no sooner is a good insecticide discovered, than they breed populations resistant to the chemical. Early control with DDT, chlordane and other chlorinated hydrocarbons now fails in most areas, and even some of the newer phosphatic insecticides find chinch bug populations building resistance to them. Recent recommendations by the University of Florida for chinch bug control are sprays of Trithion, Ethion, and Aspon (at 7-10 lbs./A), Diazinon (at 4-8 lbs./A), and V7-C 13 (17-35 lbs./A), every 6-8 weeks. Such sprays will also control webworm, armyworm, and other

insects often a problem. Nematodes, too, may bother st. augustine, dwarfing the root system; if present, a nematocide should yield greener grass.

Not only has the "chinch bug problem" made repeated spraying of insecticide necessary, but diseases, too, have made serious inroads in recent years. Brown patch has wiped out a lot of st. augustine in Texas (where PCNB-Terraclor at $\frac{3}{4}$ lb./M is said to arrest the disease best), and farther east brown patch is reported controlled with mercurials, Thiram and Kromad as well as PCNB. At least two sprayings about 14 days apart are suggested. Other diseases, such as gray leafspot, make serious inroads, too, and though most are preventable with regular fungicidal sprays, adding disease spray bother to the chinch bug burden is enough to encourage many a homeowner to switch from st. augustine to some more self-reliant grass such as bahia.

A final problem with st. augustine is not uncommon with any luxuriant tropical ground cover — the buildup of spongy thatch that insulates growing parts from the soil. In older, unthinned turfs, such thatch may be several inches thick, the grass shallow rooted and tending to wilt easily. The thatch may harbor various weeds and pests (including chinch bug), to contribute to st. augustine's delinquency; it surely impedes penetration of water and pest remedies.

Care

Obviously, from the foregoing, st. augustine cannot be considered a low-maintenance grass. To protect it properly against pests requires equipment, chemicals, and know-how usually beyond the capacity of the average homeowner. As a result there has arisen in Florida a technical lawn service industry more voluminous than in any other part of the nation.

Otherwise, st. augustine is not

a difficult grass. It mows rather well with reel mowers (a heavy machine is suggested, for light ones "ride" high on the thatch); it is moderately fast growing, but not so rampant as bermuda; it flourishes in both shade and sun; and it is moderate in its fertility requirements. Of course it wants its fair share of moisture, by irrigation if rain long defaults.

Regular feeding of st. augustine heightens its deep green color. A fertilization schedule suggested by the University of Florida calls for a complete fertilizer spring and autumn, organic nitrogen in summer, as the minimum, about 1 lb./M rate each time. Better kept swards may have two or three additional one-pound fertilizations spread through the year. Tests have shown that organic fertilizers (which don't stimulate so sudden a surge of "soft" growth as do soluble nitrogen sources) may reduce chinch bug damage.

Although lawn varieties of st. augustine may be mowed as close as 1 inch, a tighter, more weed-resistant cover occurs when mowed about two inches. Mowing should be approximately weekly, any time growth reaches twice customary mowing height. A scalping (and raking) in spring, when recovery will be quick, is said to hold down thatch. Clipping removal should also help.

St. augustine is not tolerant of many familiar weed killers, such as 2,4-D and related phenoxy's. But it will withstand Simazine and Atrazine. These are usually suggested for new plantings, to

control weeds while the st. augustine spreads to what is usually a relatively weed-resistant turf. Of course new plantings do best in a cultivated, fertilized seedbed, watered consistently until thoroughly rooted. Favored planting season is spring or early summer.

Varieties and Selections

As with centipede, there have been relatively few commercial varieties of st. augustine developed. A flourishing sod industry still produces "common," and the tall-growing pasture variety "Roselawn," both coarse and comparatively open (few branches, lengthy internodes).

An early lawn selection was "Bitter Blue," relatively dense, low, dark colored, and reportedly well adapted to coastal environments. Although Bitter Blue is still offered, identity is not always certain, and it sometimes becomes difficult to distinguish pure Bitter Blue from the general run of st. augustine offered in the trade.

More recently the University of Florida has released "Floratine," grown under certification, now widely handled by major sod growers. This selection is even denser and somewhat finer textured than Bitter Blue. It tolerates low mowing well.

In addition to these releases, scores of different-appearing st. augustine clones have been isolated, some dwarf, others exceptionally vigorous, in many shades of color. While some selections have looked quite promising, more testing is needed to confirm performance under a wide range of field conditions.



St. augustine grass tends to be coarse bladed although newer selections show finer texture.