Watering Restrictions in Florida

Turf Grasses: The Quest for the Ideal Lawn Continues

BARTOW -- After several months of dry weather, St. Augustine lawns are becoming stressed, particularly in areas that can only be watered once per week.

St. Augustine grass should grow adequately with two irrigations per week of approximately one-half to three-quarters of an inch of water. I don't believe irrigating once per week, with no rainfall, will be enough to sustain a St. Augustine lawn.

The reason that St. Augustine grass is so sensitive to drought is that it has above ground stems called stolons. Bahia grass, Bermuda grass, Zoysia grass and Centipede grass, meanwhile, have below ground stems called rhizomes. When the above ground stems in St. Augustine grass dry out, the grass dies in that spot and has to be replaced with sod or plugs. However, grasses with underground stems turn brown above ground, but below ground rhizomes survive extended periods of drought and grow back with rainfall or irrigation.

There are a few new cultivars of St. Augustine grass, including Classic, Amerishade, Delta Shade and Sapphire. A few of them appear to have improvements that older cultivars such as Floratam, Bitter Blue, Palmetto, Delmar and Seville do not have, but no improvement in drought tolerance has been demonstrated at this point.

Amerishade is the slowest growing of the new St. Augustine cultivars. It needs mowing only once every two to three weeks during the summer months. It is also is the most shade-tolerant of the St. Augustine cultivars. Unfortunately, it is very susceptible to turf grass diseases, particularly brown patch and at this time is not being recommended by the University of Florida.

Empire Zoysia grass, which is a new cultivar of Zoysia grass, is currently being used in the landscape in Florida with some success. It is low growing and dense and holds it green color well, however this cultivar of Zoysia grass is not shade tolerant and rather than being susceptible to chinch bugs it's susceptible to hunting billbugs - a type of white grub. It is also susceptible to a few diseases.

Empire Zoysia grass is somewhat more drought-tolerant than St. Augustine because of its rhizomes (underground stems), but most likely will require just as much maintenance as St. Augustine grass to keep its green appearance. On the bright side, it may turn brown with once- per-week watering under drought conditions, but it should grow back from its underground rhizomes with renewed rainfall or irrigation, similar to Bahia grass. St. Augustine grass under similar drought conditions probably would die and need resodding or sprigging. In any case, Empire Zoysia's improved drought tolerance may make it an acceptable replacement for St. Augustine grass in areas that receive adequate sunlight -- at least six to seven hours of sunlight per day.

UF is currently evaluating 300 different cultivars of Zoysia grass as well as many other turf cultivars at the new Turf and Ornamental Research Center in Citra, south of Gainesville.

A new cultivar of Bermuda grass is called Celebration. It has good wear tolerance, good quality and color ratings. Shade tolerance research is ongoing. It may be another possible replacement for St. Augustine grass, but like Empire Zoysia grass it has a moderately high level of maintenance. On the down side, it browns after several winter frosts.

Centipede grass has not been commonly grown in central Florida due to its susceptibility to nematodes and its intolerance to hot weather. A new cultivar has been developed by the University of Florida called Hammock. This cultivar was particularly selected for South Florida as it has a high tolerance for heat. However, it has low tolerance to cold weather. This cultivar will probably turn brown in Central Florida during the winter months following frosts and, or freezes, so it may not be an acceptable replacement for St. Augustine grass.

Bahia grass still requires less maintenance and is more drought tolerant than any other warm season turf grass commercially available in Central Florida. There is ongoing research at Citra on crosses of Bahia grass (Paspalum notatum) and Seashore Paspalum (Paspalum virgatum), and the hope is to combine the positive characteristics of each species - drought tolerance and good appearance.

There isn't any university data to indicate that the new cultivars of St. Augustine are any more drought-tolerant or require less management than the old cultivars. It seems that once-per-week watering of any St. Augustine grass cultivar will not be enough during periods of drought to sustain the lawn; therefore sections may die and need replacement. Either Empire Zoysia grass or the new cultivar Ultimate Flora may be a better choice than St. Augustine grass. Both cultivars have human appeal as toe ticklers. Ultimate Flora has shade tolerance similar to the dwarf St. Augustine cultivars while Empire Zoysia requires full sun. Management practices for Zoysia grass, such as mowing height, fertilization and insect pest control, differ from St. Augustine grass, therefore the success of the lawn will depend on homeowners and landscape management companies making necessary adjustments.

Celebration Bermuda grass may also be a replacement choice for St. Augustine grass, but frosts and freezes cause temporary dieback during winter months.
Hammock Centipede grass will probably work well in South Florida, but due to its susceptibility to cold weather may not be a good choice for Central Florida.
The university continues to search for a good-looking, drought-tolerant turf grass that requires low maintenance. At this time a silver bullet is not available.
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