

Stop #10: Have You Considered Zoysiagrass?

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Overview

Zoysiagrass is a warm-season turfgrass with texture, density, uniformity, durability and pest resistance that make it a desirable choice for use on sports fields and golf courses, home lawns, parks and playgrounds. It is well adapted to southern California and can be grown in all areas of California where the summers are warm and the winters mild. De Anza (*Zoysia spp.*) is a hybrid cultivar from the UC Riverside breeding program and was patented in 1995. Considered to be a grass with maintenance requirements that are lower than those of most other turfgrasses, zoysiagrasses are tolerant of heat, drought, salinity, heavy traffic, and not commonly susceptible to disease, insect, or weed invasion problems. De Anza differs from earlier zoysiagrasses in faster establishment rate and extended color retention during the winter when most warm season turfgrasses go dormant, including bermudagrass. 'De Anza' zoysiagrass is appropriate for applications such as home lawns, parks, golf courses, and general purpose lawns, also having performed successfully on major league sports fields. The best turf performance is at cutting heights 3/8 inch to 3/4 inch, though 'De Anza' does well up to 1 1/4 inch height of cut for home lawn use. 'De Anza' zoysiagrass is a low thatch producer, with thatch forming more slowly at the lower mowing heights. Nitrogen (N) and iron (Fe) applications during late fall and winter significantly enhance winter color performance, making overseeding unnecessary where winter temperatures and chilling are moderate.

Zoysiagrasses still have a limited market in the region due to several factors, including uncertain responses to cultural practices used in turf maintenance. Verticutting is one cultural practice to maintain a good quality turf surface.

Objective

Determine the effect of verticutting and fertilization timing on zoysiagrass plant density, growth habit, and surface quality.

Methods

De Anza zoysiagrass (*Zoysia spp.*) was sodded in July 2014. Fertilization was applied 6 times per year at a rate of 0.5 lb N/1000 ft². Irrigation was non-limiting and changed weekly based on estimated evapotranspiration. Mowing was performed twice weekly during the growing season at 0.625 inch mow height using a triplex reel mower. No

verticutting was done prior to the July 2016 treatment (see Table). Barricade 4L and Dimension 2EW were used for pre-emergent weed control and Speedzone Southern and 4-speed XT controlled broadleaf weeds.

Results

First year data will be analyzed in the fall. Early data suggest when managed at 0.625 HOC and low fertility De Anza tends toward a predominantly lateral growth habit with density stabilized at about 80%, suggesting low thatch formation. Vertical mowing in early summer without fertilizer application did not affect the growth habit nor noticeably increase turf density. Vertical mowing in mid-summer and applying fertilizer increased density, while encouraging more upright growth habit.

The “Take Home” is that keeping the growth habit predominantly lateral would provide a faster sports turf surface than encouraging more upright growth.

Figure 1. Research layout showing treatment randomization. Treatments are shown in the Table below.

D	B	A	C	E	↑ N
C	A	D	E	B	
A	C	E	B	D	
D	B	A	E	C	

Table 1. Treatment timing in 2016.

Treatment	Verticut	Fertilizer
A	June	none
B	June	July
C	June, August	July
D	July	July
E	none	none