

Shade Tolerance and Performance of Commonly Used Turfgrass Species for Lawns and Golf Course Rough in Southern California

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Objectives:

1. Determine relative water use, shade tolerance, and overall performance among nine turfgrass species in southern California.
2. Expand knowledge base about the ecological role of turf in the landscape.

Location: UCR Turf Facility

Soil: Hanford fine sandy loam

Mowing Heights: 2.5" for cool-season grasses except fine fescues (no mow), 2.0" for warm-season grasses, except St. Augustinegrass and buffalograss (3")

Experimental Design: Randomized complete block with 3 repetitions

Plot Size: 6' by 10'

Establishment: Treatments 1-12 were established on 7/17/2008, 13-16 on 7/25/08, 17-19 on 8/1/08, and 20 on 8/5/08

Fertility: 1 lb N/1000 ft² at planting; 0.5 lb N/1000 ft²/wk thereafter

Irrigation Regimes: Once established, turfgrasses will be subjected to warm-season irrigation regimes (approximately 60% Et₀/DU). Supplemental irrigation will be applied to the cool-season turf as necessary by hand watering and the amount of water will be documented.

Data Collection: Turf quality, color, density, leaf firing/wilting, and rooting will be evaluated periodically throughout the study. . Physiological measurements to include carbohydrate content, photosynthesis, chlorophyll fluorescence, soil respiration.

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North

4	12	3	14	7
17	2	9	5	16
19	8	20	18	15
10	1	13	11	6
10	20	8	12	5
19	3	17	1	14
9	15	11	16	6
18	2	4	7	13
20	19	18	17	16
15	14	13	12	11
10	9	8	7	6
5	4	3	2	1

Treatments:

1. Tifsport Bermudagrass	11. West Coaster Tall Fescue
2. Bull's Eye Bermudagrass	12. UC Verde Buffalograss
3. Palmetto St. Augustinegrass	13. El Toro Zoysiagrass
4. Tifway II Bermudagrass	14. Experimental Tall Fescue I
5. Sea Spray Seashore Paspalum	15. St. Augustinegrass
6. Tifway 419 Bermudagrass	16. Experimental Tall Fescue II
7. De Anza Zoysiagrass	17. Excalibre Seashore Paspalum
8. Tifgreen 328 Bermudagrass	18. Medallion Tall Fescue
9. Bayside Blend K. Bluegrass/P. Ryegrass	19. GN-1 Bermudagrass
10. Hillside Fine Fescue	20. Elite Plus T. Fescue/K. Bluegrass