



Patterns of Guineagrass Invasion

Dean W. Wiemers¹, Timothy E. Fulbright¹, Alfonso Ortega-Santos¹, William P. Kuvlesky¹, George A. Rasmussen¹ and Richard R. Riddle²; (1) Texas A&M University-Kingsville, (2) United States Navy; Contact Author Email: deanwiemers@hotmail.com

Exotic plants such as guineagrass (*Urochloa maxima* [Jacq.] R. Webster) may invade by a multitude of pathways including human imposed disturbances, road networks, and adaptation to soil physical and chemical properties of a site. My objectives were to determine if guineagrass increases with disturbances and to determine if the grass is more abundant in soils with higher concentrations of soil nutrients. We randomly allocated 237 transects on 2 United States Navy bases in Corpus Christi, TX. Each transect was 10 meters and three 20 X 50 cm Daubenmire frames were at 5 m intervals along each transect to estimate canopy cover of native and exotic plant species. Soil samples were also collected along each transect. Slope and disturbance intensity was also documented at each transect. Sloping terrain contained more than twice ($P = 0.009$) the amount of guineagrass canopy cover than level areas, canopy cover of guineagrass was 38% less ($P = 0.026$) in severely disturbed areas, and canopy cover was greater ($P = 0.002$) at distances farther from roads. Soils higher in phosphorous and potassium supported 49% and 76% greater ($P < 0.001$, $P = 0.006$) amounts of guineagrass canopy cover. Area with less soil electrical conductivity contained greater ($P = 0.019$) canopy cover of guineagrass. Severe disturbances may reduce guineagrass, but these severe disturbances may also damage native vegetation.

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