African Grass Invades Coastal California

Calvin Wilvert

In comparing tropical grasses, those of African origin are generally superior as pasture species, often being more proteinaceous and drought-resistant than those native to other continents. When introduced to compatible habitats, the African species have typically largely displaced indigenous grasses, thereby improving carrying capacities. A half-dozen such species of grasses, representing several life zones, have been primarily associated with this "Africanization."[1]

One of these, kikuyugrass *(Pennisetum clandestinum)*, is native to the moist, fertile highlands of East Africa from 6500 to 9000 feet elevation. It has spread explosively under comparable environmental conditions, such as in Costa Rica's Central Highlands, Colombia's Sabana de Bogotá, and Ecuador's Quito basin. Kikuyugrass has also achieved major significance as an introduction to various low elevation subtropical settings, including the North Island of New Zealand and the coasts of California and eastern Australia. It is a most important range grass in Hawaii, especially in wetland areas, and is often underrated as a pasture species.

The invasiveness which has endeared kikuyugrass to cattlemen in so many countries has earned it curses from farmers, horticulturalists, and urban homeowners. Indeed, an entire chapter is devoted to it in *The World's Worst Weeds*.[2]

Apparently first introduced to California in the 1920's, kikuyugrass was planted for erosion control.[3] It was an ideal choice for this function, as it soon forms a thick, protective, stoloniferous mat; rhizomes interlace the soil. It was believed that early stands were seedless, spreading only by runners, but it was eventually realized that the grass is also a prolific seed producer. Casual inspection of the plant, in any season, finds no visible seed head. However, seed does form inside the leaf sheaths. In fact, the specific name "clandestine" refers to the inconspicuous nature of the spikelets. Kikuyugrass spreads so aggressively that most government agencies stopped planting it decades ago.

Today, one cannot buy kikuyugrass seed or plugs in a nursery, yet the grass is ubiquitous and steadily more conspicuous. The author's survey of agricultural reserach agents throughout California, as well as field observation, reveals kikuyugrass to be a major—sometimes sole—sward component in many immediate-coastal areas from the Mexican border to the northern fringes of San Francisco Bay. North of there, low temperatures are a constraint, as are high temperatures in the interior of the state. The grass flourishes along the foggy coast, its thick stolons spilling over the cliffs. A few miles inland, it thrives in irrigated turfs. The physical environment most conducive to kikuyu is along the southern part of the coast. In Santa Barbara, for instance, city officials estimate that kikuyugrass constitutes 90% of the park swards.

Kikuyugrass has long been viewed by California's farmers and horticulturalists as a rapacious nuisance, plaguing avocado orchards, citrus groves, vineyards, and golf courses. Golfers blame the uneven surface of thatched kikuyugrass for poor swings and directional changes of rolling balls. Dislocated wrists have even been attributed to clubs becoming entangled by the ropy stolons. The grass has probably been an even greater challenge to the homeowner, because the cord-like runners of infrequently mowed kikuyugrass can cause powerful mowers to choke or jump without cutting.

While kikuyugrass will probably always be considered a pest in ornamental plantings, as a lawn grass it is gaining some—albeit grudging—respectability. California landscapers are discovering that since the grass must be lived with (eradication from a heavily infested lawn is not a realistic option), it does have certain virtues. It requires less water and fertilizer and is more insect-free and trample-resistant than most turf varieties. The key to successful management appears to be frequent, very low mowings with a highly sharpened mower.[4] However, such cutting, while reducing stolon buildup, is said to stimulate flowering and seed production, thereby fostering further dispersal. Even if kikuyugrass never actually wins the affection of Californians, it is a conspicious reminder that the state's flora has been enriched by yet another immigrant.

The author is professor of geography, Social Sciences Department, California Polytechnic State University, San Luis, Obispo, California.

Cited References

1 **James J. Parsons. 1972.** Spread of African Pasture Grasses to the American Tropics, J. Range Manage. 25:13-17.

2 **LeRoy G. Holm, et al. 1977.** The World's Worst Weeds: Distribution and Biology. The University Press of Hawaii, Honolulu, p. 362-366.

3 **Ed Zimmerman. 1970.** Kikuyu grass: its characteristics and control, 22 Annual Proceedings, California Weed Conferences, p. 13-15.

4 **V.B. Younger, et al. 1971.** Kikuyu grass: its management and control, California Turfgrass Culture. 21:1-13.