

Native Grass for Lawns

Lawns without guilt. A native Sonoran desert grass may fill the bill.

Desert lawn lovers could substitute low-water, low-maintenance, curly mesquitegrass for the typical water-loving grasses used today. Such a switch could be possible by 1993 if the desert grass continues to prove itself in University of Arizona research.

In 1988, UA plant scientist Charles Mancino and doctoral student Andrew Ralowicz collected mesquitegrass plants from throughout Arizona and replanted them at the germ plasm nursery at the UA Campus Agricultural Center in Tucson. The native grass grows in many locations at altitudes ranging from 2,000 feet to 6,000 feet.

"Curly mesquitegrass obviously is a strong grass that can take both cold and heat," Ralowicz says. "It's well adapted to a dry climate; it has no pest problems, and it shows true diversity."

The genetic differences among mesquitegrass plants allow scientists to improve the species,

Mancino says, by selecting for desirable turfgrass traits that will be passed on to the next generation.

Fifteen different mesquitegrass clones were planted at the UA Campus and Safford Agricultural Centers to measure variations among the clones. Ralowicz and Mancino want to make sure variable growth habits are caused by genetic differences, not by changes in altitude and climate.

To be successful, curly mesquitegrass must adapt to being fertilized and mowed. It should be drought-tolerant, low-growing grass with short, narrow leaves for soft turf, and have a healthy, rich, green color.

Living in the desert, the grass already has proven its toughness, Mancino said.

In 1989, he and Ralowicz evaluated curly mesquitegrass for color, height, leaf length and width. They checked the survival rates of transplanted seedlings, plus the results of applying different levels of nitrogen fertilizer, and of mowing the grass at different heights.



(Left to right) Charles Mancino and Andrew Ralowicz

Grass colors were uniform despite fluctuations in fertilizer rates. Increased nitrogen raised the percentage of ground cover, as did raising the cutting height. The two found no correlation between fertilizer rates and production of runners, or stolons, indicating stolon production to be a genetic trait. That's a desirable characteristic, since production of a large number of runners will result in a dense, uniform turfgrass.

Seedlings survived best if transplanted while actively growing. Although some plants that were transplanted while dormant survived, the rates were significantly lower.

"Curly mesquitegrass really looks like a strong commercial possibility," Mancino said. "It's demonstrated lots of potential for home lawns, golf course roughs, roadsides and cemeteries."

—By Lorraine B. Kingdon

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Plots of curly mesquitegrass at the UA Campus Agricultural Center.