

UNIVERSITY OF ARIZONA

Breeding and Development of Curly Mesquitegrass as a Desert Turf

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Dr. Charles F. Mancino
Andrew E. Ralowicz
Principal Investigators

The primary objective of this project is to develop a seed propagated, low-maintenance, low water-requiring turfgrass for the desert southwest. Curly mesquitegrass (*Hilaria belangeri*), a native to parts of Arizona, Texas, New Mexico and southern California, has many desirable turf traits including low stature, density, color, spread and prolific seed production.

Heritability studies, concluded in 1991, have shown that significant genetic variation exists in many of the turfgrass characters mentioned above, such that selection and breeding can produce a population with improved turfgrass traits. In addition, the environment has been shown to have little or no influence on certain physical parameters (total germination, germination rate, seed weight, late season color, overall color, stature, leaf width, leaf length, and density) so that the genetic component for these traits is large and heritable.

More than three years of plant screening has resulted in the selection of over forty plant materials with desirable turf traits. These plants have been incorporated into a plant breeding program. Seed from these crossing blocks will be harvested and planted. These progeny will be evaluated during 1992 and 1993 to further refine the population for turf and reproductive characteristics.