

vegetatively. Seed germination is usually low and there are no domestic supplies of seed. Imported seed does not produce satisfactory turfgrass for golf courses.

Zoysiagrass produces a very dense, tight turf of pleasing color and is able to crowd out most competing species. Also, it possesses good temperature and moisture stress tolerance.

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#### *Breeding and Development of Zoysiagrass*

The purpose of this project was to develop zoysiagrasses which are better adapted to natural environmental conditions. Specific emphasis was placed on low water-use, competitive ability against weed invasion, recovery from injury, reduced fertilization, and sod or seed production characters.

In 1991, several new zoysiagrasses were entered in the National Turfgrass Evaluation Program (NTEP). Material of 24 unique experimental and commercial cultivars were vegetatively increased and distributed to 39 locations throughout the United States. The zoysiagrass breeding program had a total of nine elite entries in this trial. These entries range in texture from broad leaved, aggressive *Zoysia japonica* types to fine textured, highly rhizomatous *Z. matrella* types. The nine entries are all vegetative; however, numerous hybrids have been produced which show seed production potential and will be included in the next cycle of NTEP evaluations.

Additional achievements include the development of effective heat resistance and root screening procedures utilized to identify superior plants. Several parental clones with superior agronomic and biological characters were selected to provide improved turf under conditions of significant water stress. Characteristics of interest included color retention, leaf rolling, leaf water content, leaf firing, and low water use.