Zoysiagrass Breeding Techniques. (C05-genovesi135307-Poster)

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Abstract:

Zoysiagrass is a common warm season turfgrass used on golf courses, parks, cemeteries, athletic fields and home lawns because of its drought tolerance, cold hardiness, shade tolerance, salt tolerance and excellent turf quality. Zoysiagrass is indigenous to the Orient and consists of 9 species all of which are sexually compatible, but whose flowering cycles are not always synchronized. Zoysia species have a protogenous flowering habit with racemes that are small and difficult to handle. Techniques are being developed that improves the crossing efficiency between elite cultivars. These techniques include (1) photoperiod manipulation of parental lines, (2) high phosphate fertility regiment of parental lines, (3) allowing potted parental lines to become root bound, (4) labeling and covering pollinated flowers with microcentrifuge tubes supported by bamboo skewers, (5) removing husks from mature seed under a dissecting scope and scarifying with a scalpel and (6) surface sterilizing caryopses then germinating on a nutrient medium in vitro. About 3000 progeny have been produced using these techniques over a 3 year period.

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