

Genetic Enhancement of Paspalum for Recreational Turf

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Objectives:

1. Ecotype evaluations for recreational turf uses
2. Creation of additional genetic diversity within the species
3. Genetic profiling of ecotypes

Start Date: 1998

Project Duration: 5 years

Total Funding: \$125,000

The Sea Isle 2000 issue was settled in March, 2002 and growers received foundation stock for planting in August, 2002. Sprigs and plugs of Sea Isle 2000 have been shipped to grassing projects by licensees in Hawaii and Australia. Other licensees will have available quantities for grassing in 2003. Both Sea Isle 2000 (PP12,625) and Sea Isle 1 (PP2,665) have been patented and these two cultivars are currently the only patented and certified paspalum cultivars worldwide. Both grasses are being patented in Australia.

A new cultivar has been identified-coded SI 98-for planting course-wide and can be grown on greens, tees, fairways, and roughs. On-site golf course evaluations at three sites were instituted in 2002. A foundation stock nursery has been planted

by a collaborating sod producer in Georgia and funded by the Georgia Seed Development Commission. Salinity tolerance is better than both Sea Isle 1 and Sea Isle 2000. Data are being accumulated for subsequent release.

Seedlings from a seeded hybrid have been germinated and planted for turf quality evaluations, stand uniformity and density, and mowing capabilities. PVP trials have begun in Oregon. A seed production field of 2.3 acres has been planted in Oregon.

Paspalum encroachment into bermudagrass can be controlled using Confront (clopyralid + triclopyr) + MSMA in combination. Bermudagrass encroachment into paspalum cannot be controlled without significant damage to the paspalum. Most herbicides (the exception being Prograss or ethofumesate) that kill bermudagrass are also phytotoxic to paspalum. Use of Prograss on paspalum is cautioned due to detrimental environmen-

tal interactions that cause damage to the paspalum.

Herbicide efficacy studies with new experimental chemicals coming through the pipeline have shown promising results. Some of these chemicals have not received a trade name yet.

Fall armyworm resistance screening of F1 hybrid seedlings have progressed through two cycles and a third cycle is planned. Approximately 10 individual seedlings have survived the rigorous screening and if this resistance holds up, they will be planted in field plots during summer, 2003. Insect population studies have revealed that seashore paspalum harbors a higher population of beneficial insects than zoysia grass or bermudagrass.

Two studies investigating low light intensity tolerance (cloudy, foggy, smoggy, prolonged rainy periods with heavy cloud cover) of seashore paspalums compared to bermudagrasses have revealed the superior capabilities of Sea Isle 1 for this specific trait. Sea Isle 2000 has some tolerance to these conditions, but Sea Isle 1 has been the top performing cultivar of those evaluated. Management programs are being developed for grasses grown under this scenario.

Summary Points

- Sea Isle 1 and 2000 are currently the only certified and patented seashore paspalum cultivars on the market.
- A cultivar that can be planted from greens to roughs has been identified (one grass for the entire course).
- Hybrid seedlings are being evaluated for turf quality traits and fall armyworm resistance.
- Bermudagrass encroachment into seashore paspalum cannot be effectively controlled with herbicides.
- Sea Isle 1 is the best paspalum cultivar for low light intensity tolerance.



Dr. Ronny Duncan and his colleagues are developing improved cultivars of Seashore paspalum and the management knowledge necessary to successfully use these grasses.