

Genetic Enhancement of Paspalum for Recreational Turf

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Objectives:

1. Off-site seashore paspalum ecotype evaluations with industry collaboration.
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 U.S. licensing of SeaIsle 1 has progressed to 19 growers with seven of those having an international shipping license and one having a plug license in Florida. The international licensing outside the U.S. has not accomplished much in the last 20 months even though opportunities have been there.

An international fairway nursery program has been instituted by UGARF/GSDC that directly competes with the external-U.S. international licensing issue. The SeaIsle 2000 litigation issue has not been resolved yet.

The breeding program has identified three prospective cultivars—HI 10, 561-79, and Sullivan 1—for increase and these cultivars have the best potential for eventual future release. HI 10 (seawater salinity tolerance) and 561-79 (broadbased insect resistance) are fairway/tee/rough types while Sullivan 1 is a good looking greens type.

On-course evaluations will be instituted in 2002. Hybrid seedlings from (Hyb 7 x Q36313) are being screened for fall army



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

worm resistance and early indications are that the level of resistance can be improved in this species. Breeder/foundation stock field problems with bermudagrass encroachment have not been resolved satisfactorily, since all the chemicals that have been tested kill the bermudagrass, but significantly injure the paspalum also.

New herbicides Manor (metsulfuron) and Lontrel (clopyralid) are non-injurious to paspalum and can be safely used. Trimmit (paclobutrazol) and Proxy (ethopon) effectively suppress seedheads in paspalum, but Primo (trinexapacetyl) does not. Nematode resistance evaluations are underway, including resistance to root knot nematodes, which have some tolerance to saline conditions.

Management protocols for paspalum with morning shade vs. afternoon shade are being devel-

oped with and without significant traffic. Low light intensity studies (with shade at 30%, 60%, and 90%) will help to fine tune management strategies under these conditions. Overhead salt irrigation and water use studies will be used to develop water conservation management strategies for this species.

Summary Points

- SeaIsle 1 has been licensed to 19 growers with acreage varying from five to 100 acres.
- Development of a seeded type is progressing.
- Fall armyworm resistance is being improved.
- A new greens type is under development/evaluation.
- Manor and Lontrel are safe herbicides for use on paspalum.
- Bermudagrass encroachment into paspalum is not controllable with current herbicides/combinations.
- SeaIsle 1 is continuing to exhibit superior low light intensity tolerance, but only minimal tree shade tolerance.



Dr. Robert Carrow and Dr. Ron Duncan provide an overview of the University of Georgia breeding program to develop new seashore paspalums for golf courses.