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R. Duncan
UGA-Griffin

APPLICATION FOR APPROVAL
OF TURF CULTIVAR

1. Crop: *Paspalum vaginatum* Swartz
   Common names: seashore paspalum, siltgrass, saltwater couch

2. Experimental number: FWY-1/PI 509018-1.

3. Pedigree history: One of four selections from a segregating gene pool out of PI 509018 from Argentina. First evaluated on a green at ⅛" mowing height, but aggressive growth habit made it better suited for fairway/tee/sports uses.

4. Description: This new fine-textured cultivar appears to have better salt tolerance than Adalayd. It maintains higher turf quality, higher density, and a darker green color than Adalayd under field conditions, but may have higher mole cricket damage than Adalayd.

5. Station where developed: Georgia Agricultural Experiment Station - Griffin

6. Principle scientist: R. R. Duncan
   Participating scientists: R. N. Carrow, S. Kris Braman, B. J. Johnson, Laurie Trenholm, Geungjoo Lee, Susan Shortman, Bingru Huang.

7. In what respect is the new cultivar superior to the cultivar (Adalayd/Excalibur) in use?
   Using appropriate salinity laboratory evaluation methods, PI 509018-1 exhibited higher inherent shoot, root, crown, and total growth with no salt, higher shoot, root, crown, and total growth at 40 dSm^{-1} salt, and higher EC @ 25% growth reduction for both shoots and roots (Table 1). Even though mole cricket feeding was higher on PI 509018-1 than on Adalayd, overall turf quality & density were higher on PI 509018-1 in a 3-year field study (Table 2). PI 509018-1 maintained a darker green color during this study compared to Adalayd.

8. Method of propagation: Vegetative

9. Amount of breeder stocks available: None/maintained by breeder

10. Amount of foundation stocks available: ⅓ - Acre

11. Amount of vegetative material available for distribution: same as (10)

12. Is there likely to be unusual difficulty encountered in the production of stocks? No. All material was started from a single stolon in the greenhouse. All material planted during evaluations and for subsequent foundation stock increase came from this single breeder source.

13. Three suggested names for the cultivar:

Salviro	Rockport	Oasis	Apollo
Salcar	Solara	Caliente	Atlanta

14. Name approved by plant cultivar and germplasm release committee:

15. Form of intellectual property protection: PVP/patent

16. Is a royalty assessment recommended? __xx__ yes _____ no

Recommended by:

A. Ronny R. Duncan
Originating Scientist

B. Albert E. Smith
Department Head

C. Joel Boutwell
Chairperson, GAES Plant Cultivar and Germplasm Release Committee

D. _____
Resident Director
Appropriate Station

E. _____
Associate Dean for Research

F. _____

Approved:

_____
Dean and Director
College of Agricultural & Environmental Sciences

TABLE 1. COMPARATIVE SALT TOLERANCES OF PASPALUM ECOTYPES

	Inherent Growth (g)				EC 25% dSm^{-1}	
	No salt		40d Sm^{-1}			
	S	R	S	R	S	R
Adalayd vs.	0.23	0.20	0.08	0.13	7.64	15.79
PI 509018-1	**0.70***	**0.42****	**0.22***	**0.32****	**16.58**	**16.98**
F test	***	***	***	***	0.38	0.38
	C	T	C	T		
Adalayd vs.	0.57	1.00	0.37	0.59		
PI 509018-1	**0.80**	**1.92***	**0.63†**	**1.17***		
F test	***	***	***	***		

***, **, *, † 0.001, 0.01, 0.05, 0.1 probability levels, respectively. Dunnett T test.
S = shoot, R = root, C = crown, T = total.

Data from Geungjoo Lee, R. N. Carrow, and R. R. Duncan.

TABLE 2.

Mole Cricket
Field Study — Tifton, GA

	Quality†	Density#	Color§	MC@
PI 509018-1	**6.0a**	**6.1c**	**6.6b**	**0.89**
Adalayd	4.6b	4.9d	5.9c	0.40

† Field study on mole crickets. 3 years (1996-1998). 7 reps. 21 total months (1 rating per month).
# 3 years. 7 reps. 16 total months (1 rating/month). **1" mowing height**. Low maintenance.
§ 3 years. 7 reps. 10 total months (1 rating/month).
= Planted May 16, 1996, 7' x 7' plots. 7 reps. visual estimation.
@ Mean of 5 sampling periods (Lsd = 1.0, 0.75, 0.9, 1.1, 0.9) with significant differences. The higher the number, the greater the potential damage.

Data from R. R. Duncan and S. Kris Braman (mc data).