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DATE: November 15, 2005

MESSAGE TO: Mike Garland, GSDC

FACSIMILE NUMBER: (706) 227-7159

MESSAGE FROM: Alisa Harkins
Phone: (706) 542-1404
Fax: (706) 542-3837

This document contains 12 pages, including this cover sheet.

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The University of Georgia

Department of
Crop and Soil Sciences

College of Agricultural and Environmental Sciences
GEORGIA AGRICULTURAL EXPERIMENT STATIONS

Coastal Plain Station
P.O. Box 748
Tifton, GA 31793
(912) 386-3360
FAX 912-386-7293

November 15, 2004

RECEIVED
DEC 14 2004

Dr. Paul Raymer
University of Georgia
Crop and Soil Sciences Department
1109 Experiment St.
Griffin, GA 30223-1797

Dear Dr. Raymer:

The original approved copy of your **Application for Approval** of Seashore Paspalum cultivar SI 98 is enclosed for your **records. You should be hearing** from Dr. John Ingle's office concerning the Licensing **Committee meeting**.

Sincerely,

Wayne Hanna, Chair
Plant Cultivar Germplasm **Release Committee (PCGRC)**

Enclosure

cc: Dr. John Ingle
Dr. James Sutton
Dr. Terry Hollifield

Post-it® Fax Note 7671	Date 12-14-04	# of pages ▶ 11
To Dr. John Ingle	From Paul Raymer	
Co./Dept.	Co. Crop + Soil - Griffin	
Phone #	Phone # 770-228-7324	
Fax # 706-542-3837	Fax # 770-412-4734	

APPLICATION FOR APPROVAL OF ASSOCIATE CULTIVAR RELEASE

1. **Crop:** Seashore Paspalum (*Paspalum vaginatum* O. Swartz)

2. **Experimental no. or identification name: SI 98 (a.k.a Salt, OC03, Charleston, and Colliers)**

3. **Pedigree and history:**

SI 98 is a ecotype collected from a single clone by Dr. Ron Duncan on the eastern coast of the United States. The original plant material was vegetatively propagated and evaluated first in the greenhouse at Griffin, GA, and later expanded to field evaluations at Griffin under mowing heights ranging from 3/16" to 2". This line was included in the NTEP bermudagrass trial at Griffin established during 2002 and has been established and evaluated on the Griffin greens and fairway plots since 2002. SI 98 was included in replicated seashore paspalum turf evaluations established at Jay, Florida in 2003 and in Griffin and Tifton, Georgia in 2004. SI 98 has also been evaluated for suitability as a greens grass on two premier golf clubs for one year prior to this application. A test green of SI 98 was established at Old Collier Golf Club near Naples, Florida in 2003 (see Heirs letter attached) and 18 greens of the Ocean Course on Kiawah Island, South Carolina were sprigged with SI 98 in 2003 (see Stone letter attached). The SeaIsle Growers Group, license holders for SeaIsle 1 and SeaIsle 2000, have expressed interest in marketing this cultivar and have first right to license this cultivar (See Jennings letter attached).

4. **Description**: SI 98 is a vigorous ecotype that is suitable for use on golf courses, athletic fields, and other recreational venues as a fine turf. SI 98 is a low growing and rapidly spreading semi-dwarf type that tolerates a wide range of mowing heights and still maintains good turf density and quality (Tables 1-5). SI 98 has excellent salt tolerance (Table 6) and should be well suited for use as a fine turf in environments where salt is a problem for other turfgrasses. SI 98 is lighter green in color that SI 2000. The limited data that is currently available indicates that SI 98 is susceptible to dollar spot, a fungal disease that attacks many turfgrasses in the humid Southeast (Table 7).

5. **Station at which germplasm was developed:** Georgia Station (Griffin Campus)

6. **Scientist(s) who developed the germplasm:** Dr. Ron Duncan (retired). Application prepared by Dr. Paul Raymer.

7. **In what respect is the new cultivar superior to the cultivar now in use?**

A. SI 98 is a vigorous ecotype that produces good turf density and quality at mowing heights of 3/16 to 1.0 inch (Tables 1-5).

B. A single greenhouse study showed that SI 98 is more salt tolerant than SeaIsle 1 and SeaIsle 2000 and should be well-suited for use as a fine turf in environments where salt is a problem for other turfgrasses (Table 6, contrast comparative performance at 40 dS m^{-1} with performance using fresh water).

C. SI 98 is vigorous and spreads rapidly providing quicker grow-in than SI 2000 (Tables 2, 4, 5, & 8).

8. **Method of propagation:** Vegetatively

9. **Amount of breeder seed stocks available (if applicable):** N/A

10. **Amount of foundation seed stocks available:** N/A

11. **Amount of cutting or bud material available for vegetatively propagated material for nursery distribution (if applicable):** Four acres of SI 98 were established in 2002. This four acres was expanded to 20 acres in 2004.

12. **Is there likely to be unusual difficulty encountered in the production of any class of seed stocks? Explain.** NO.

13. **Three suggested names for the cultivar:** In order of preference:

Name to be Determined by the Licensing Committee or Licensing Group.

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

15. **Form of intellectual property protection: Patent**

16. **Is a royalty assessment recommended: X Yes ___ No.**

RECOMMENDED BY:

A. Paul L Raymer
Originating Scientists

B. Clint Way
Chairperson, Commodity Committee

C. _____
Department Head

D. Wayne A Carver
Chairperson, GAES Plant Cultivar and Germplasm Release Committee

E. _____
Resident Director of the Appropriate Station

F. _____
Associate Dean for Research

APPROVED:

Gale A Buchanan
Dean and Director
College of Agricultural and Environmental Sciences

Table 1. Evaluation of Paspalum Lines Maintained at 3/16" Mowing Height. Griffin, Georgia.

	2003				2004			
Line	Turf Quality	Turf Density	Color	Seed Heads	Turf Quality	Turf Density	Color	Green-Up
	score				score			%
SI 99	7.6	8.5	6.3	7.0	7.5	8.2	7.7	70.0
Cloister	7.3	8.0	7.5	8.0	5.8	6.2	6.8	50.0
Durban	7.0	7.6	8.4	9.0	8.3	7.7	8.7	70.0
HI10	6.5	6.5	7.3	7.0	6.7	6.8	7.0	75.0
HI14	7.2	7.0	7.7	8.0	7.5	7.3	7.3	95.0
Hyb5	6.5	6.5	6.8	8.0	6.8	6.8	7.7	70.0
K6	6.5	6.8	5.8	8.0	6.3	6.2	6.5	55.0
K8	6.5	7.3	7.3	8.0	5.7	6.8	6.5	75.0
Kailuna	5.1	6.0	4.6	7.0	5.8	6.0	7.2	30.0
PI28960	7.1	6.6	6.8	5.0	7.0	7.7	6.8	70.0
Sealsle 1	6.5	6.8	7.5	6.0	7.2	7.8	7.5	95.0
SIPV2-1	7.0	7.4	6.8	8.0	6.8	7.0	7.2	80.0
Salam	6.3	6.5	6.9	8.0	6.2	6.8	7.3	90.0
SI 98	**7.6**	**8.1**	**6.5**	**8.0**	**7.3**	**8.0**	**7.5**	**80.0**
TCR1	7.0	7.5	8.0	6.0	7.0	7.0	7.5	90.0
TCR3	4.5	5.0	5.4	8.0	6.0	6.7	6.0	60.0
Temple2	6.0	7.3	7.0	7.0	7.5	7.3	7.2	90.0
TifEagle	7.1	8.9	7.0	9.0	4.7	7.0	5.8	60.0
Mean	**6.6**	**7.1**	**6.8**	**7.5**	**6.7**	**7.1**	**7.1**	**72.5**
No. ratings	**4**	**4**	**4**	**1**	**3**	**3**	**3**	**1**
LSD .05	**1.5**	**1.2**	**1.6**	**-**	**1.4**	**1.6**	**n.s.**	**-**
Std. Err.	**0.5**	**0.4**	**0.6**	**-**	**0.5**	**0.5**	**0.7**	**-**

Ratings are on a 1-9 scale with 9 as excellent.

Table 2. Performance Summary of Seashore Paspalum Entries included in the NTEP Bermudagrass T
Maintained at 1/2" Mowing Height at Griffin, Georgia.

	2002			2003		2004	
Line	Est. Vigor	Turf Quality	Density	Turf Quality	Green-up	Turf Quality	Color
	---------- score ----------			score	percent	----- score -----	
561-79	5.5	5.1	4.3	5.5	47.5	7.1	7.3
SI 98	***6.8***	***6.6***	***7.3***	***5.9***	***38.3***	***7.8***	***7.0***
SeaSpray	6.0	5.8	5.3	5.9	56.7	7.3	6.7
Mean	**6.1**	**5.8**	**5.7**	**5.8**	**45.7**	**7.5**	**6.9**
No. Rating	**1.0**	**3.0**	**1.0**	**4.0**	**1.0**	**3.0**	**1.0**
LSD .05	**0.6**	**0.8**	**1.7**	**n.s.**	**n.s.**	**0.5**	**n.s.**
Std. Err.	**0.2**	**0.3**	**0.4**	**0.1**	**3.1**	**0.2**	**0.2**

Data provided by Dr. Clint Waltz, Univ. of Georgia.

Table 3. Evaluation of Seashore Paspalum Lines When Maintained at 1-inch Mowing

Line	2003				2004			
	Seed Heads	Turf Texture	Turf Quality	Color	Seed Heads	Turf Texture	Turf Quality	Color
	score				score			
561-79	7.0	7.3	7.5	8.5	4.0	6.7	6.7	7.3
SI 99	8.0	7.5	6.8	8.0	6.3	6.3	7.3	7.3
HI 10	7.0	6.5	7.5	8.0	6.0	6.2	7.3	7.3
NM Hyb	8.0	6.8	6.0	6.7	6.0	6.5	6.0	6.5
SI 98	8.0	7.5	6.8	8.0	6.3	7.0	7.7	7.5
Mean	7.6	7.1	6.9	7.8	5.7	6.5	7.0	7.2
No. Rating	2.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0
LSD .05	n.s.	n.s.	n.s.	n.s.	n.s.	n.s	1.0	n.s
Std. Err.	0.9	0.3	0.4	0.6	0.7	0.2	0.3	0.4

Ratings are on a 1-9 scare with 9 as excellent.

Table 4. Evaluation of Seashore Paspalum Lines in Replicated Trial at Tifton, Georgia, 2004.

Line	% Cover	Color
		score
SI 99	83	6.0
Sea Isle 1	66	5.5
Sea Isle 2000	56	5.8
Salam	90	6.3
SI 98	***89***	***6.0***
Sea Dwarf	78	7.5
Mean	**77**	**6.2**
No. of Ratings	**2**	**2**
LSD .05	**8**	**0.9**
Std. Err.	**3**	**0.2**

Trial established May 2004.

Table 5. Evaluation of Seashore Paspalum Lines in Replicated Trial at Griffin, Georgia, 2004.

Line	% Cover	Color
		score
Adalayd	72	6.8
SI 99	86	7.8
Sea Isle 1	84	7.9
Sea Isle 2000	74	7.6
Salam	90	6.8
SI 98	***86***	***8.2***
Sea Dwarf	84	8.8
Sea Green	83	7.5
Mean	**82**	**7.7**
No. of Ratings	**2**	**2**
LSD .05	**7**	**0.8**
Std. Err.	**3**	**0.3**

Trial established May 2004.

Table 6. Visual and Growth Responses of Seashore Paspalum Genotypes to Varying Concentrations of Salt[1].

	Fresh Water					20 dS m^{-1}					40 dS m^{-1}				
Genotype	Leaf Firing[2]	Total Clip Wt.	Verdure[3]	Crown & Roots	Total Biomass	Leaf Firing	Total Clip Wt.	Verdure	Crown & Roots	Total Biomass	Leaf Firing	Total Clip Wt.	Verdure	Crown & Roots	Total Biomass
	score	*grams*	*grams*	*grams*	*grams*	*score*	*grams*	*grams*	*grams*	*grams*	*score*	*grams*	*grams*	*grams*	*grams*
Adalayd	8.7	1.7	4.9	3.4	10.0	5.7	1.0	3.4	3.1	7.5	3.4	0.5	1.5	2.0	4.0
Excalibur	8.7	1.6	4.3	3.5	9.3	6.3	0.7	2.7	3.0	6.5	3.6	0.6	1.3	2.0	3.9
HI 10	8.6	1.9	4.0	3.5	9.4	6.2	1.0	3.1	3.2	7.3	3.4	0.8	1.5	2.8	5.1
HI 101	8.8	1.9	4.5	3.5	9.8	6.1	0.8	2.7	3.0	6.5	3.7	0.3	1.7	2.8	4.8
K 3	8.6	1.7	3.8	2.7	8.1	6.9	1.0	2.8	3.4	7.2	4.3	0.6	1.9	2.0	4.5
KC 8	8.7	2.2	4.5	3.5	10.2	6.0	1.3	3.7	3.8	8.8	3.6	1.0	2.1	2.7	5.8
SPS K1	9.0	2.1	4.5	3.0	9.6	7.0	0.9	3.6	3.1	7.6	4.3	0.4	1.7	2.0	4.2
SI 1	8.6	2.1	5.4	4.3	11.7	6.3	1.0	3.2	3.6	7.8	4.5	0.8	2.1	3.4	6.3
SI 2000	9.0	1.7	3.8	4.6	10.1	7.2	0.9	3.1	3.7	7.6	4.6	0.7	1.6	3.1	5.3
Salam	8.7	1.8	4.3	3.2	9.3	6.7	0.8	3.4	2.7	6.8	3.4	0.4	1.5	2.3	4.1
SeaSpray	8.8	1.9	4.0	3.4	9.3	6.5	0.9	2.8	2.6	6.3	3.9	0.8	1.4	2.5	4.7
SI 98	8.9	1.6	4.6	3.4	9.6	8.0	1.1	3.6	4.2	8.9	6.7	0.7	2.7	4.5	7.9
SI 99	8.6	1.7	4.6	2.8	9.1	8.1	1.2	4.8	4.2	10.1	5.3	0.6	2.4	3.9	7.0
Tift Eagle	9.0	2.2	5.1	5.3	12.6	5.1	0.8	3.4	3.7	7.8	2.0	0.5	1.6	3.7	5.8
Tropic Sh	8.1	3.1	4.4	3.9	11.3	3.3	1.0	2.1	2.5	5.6	1.5	0.5	1.4	1.8	3.8
Mean	**8.7**	**1.9**	**4.4**	**3.6**	**10.0**	**6.4**	**1.0**	**3.2**	**3.3**	**7.5**	**3.9**	**0.6**	**1.8**	**2.8**	**5.1**
LSD 0.05	**0.2**	**0.5**	**0.8**	**0.8**	**1.6**	**0.5**	**n.s.**	**0.9**	**0.8**	**1.2**	**0.7**	**0.3**	**1.0**	**0.8**	**1.2**
Std. Err.	**0.1**	**0.2**	**0.3**	**0.3**	**0.6**	**0.2**	**0.7**	**0.3**	**0.3**	**0.4**	**0.2**	**0.1**	**0.3**	**0.3**	**0.4**

1. These are results from a greenhouse experiment conducted in the spring of 2004 using sub-irrigation with water at varying concentrations of salt. Note that ocean water is approximately 50 dS m-1.
2. Leaf firing was rated on a 1-9 scale with 9 equal to no firing.
3. Top growth, i.e. the green stuff.

Table 7. Dollar Spot Disease Ratings from Replicated Plots During Establishment on a Test Green at Jay, Florida 2004

Line	Dollar Spot Disease
	no. / ft²
SeaDwarf	0.7c
SeaGreen	2.1bc
Sealsle 2000	1.6bc
SI-98	**10.7a**
SI-99	3.6bc
Salam	4.2b
Sealsle 1	2.3bc
SeaSpray	0.7c
Mean	**3.2**
LSD .05	**3**
Std. Dev.	**1.7**

Ratings recorded June 3, 2004 by Dr. Bryan Unruh of Univ. of Florida.

Table 8. Comparison of "Grow-in" Rate from a Replicated Greenhouse Experiment

Line	Percent Cover			Total Dry Biomass	
				Verdure	Roots
	days after sprigging			*grams*	
SI 98	72a	93a	95a	14.3a	31.7a
Sealsle 2000	13b	32b	53b	5.9a	32.2a

Sprigged on Feb. 1, 2004 at a 20% coverage rate.