

Brunswickgrass (*Paspalum nicorae* Parodi)



a weed contaminant in southern pastures and
bahiagrass seed fields

The FACTS ABOUT BRUNSWICKGRASS

- Brunswickgrass (*Paspalum nicorae* Parodi)
- Alias “Brown-seed paspalum”
- Native to S. Brazil, N. Argentina, Paraguay and Uruguay
- Introduced to U.S. and spread for soil conservation purposes (erosion control and forage)
 - Moderate energy and CP levels (TDN of 50-55%; CP of 7-11%)
 - Reasonable tonnage of 4-5 tons DM/acre
 - Held a thick sod
- Cattle grazing Brunswickgrass consume the grass when young

The FACTS ABOUT BRUNSWICKGRASS

- Well adapted to many soil types
 - Does not tolerate poor drainage
- Naturalized and competitive with bahiagrass and bermudagrass.
 - Found to be less tolerant of freezing than bahiagrass
- Intolerant of heavy residue buildup
 - Used to line edges of ditch banks and waterways, but would smother itself out when not mowed within 3-5 years.
 - This led to it quickly falling out of favor, but not before it was widely dispersed along the Gulf Coast

The FACTS ABOUT BRUNSWICKGRASS

- Low palatability, dominates in perennial grass pastures.
- Contaminated bahiagrass seed fields/pastures reported (including Gilchrist, Levy, Alachua, Citrus and Sumter counties in Florida).

Appearance

Brunswickgrass is a perennial summer grass

Similar growing season and appearance to that of bahiagrass

Closely related to bahiagrass (*Paspalum notatum* Flugge)

Similar flowering to 'Pensacola' bahiagrass but it often has 3-4 racemes per head

Bahiagrass has typically 2 to 3 racemes



Brunswickgrass-flowering seed head

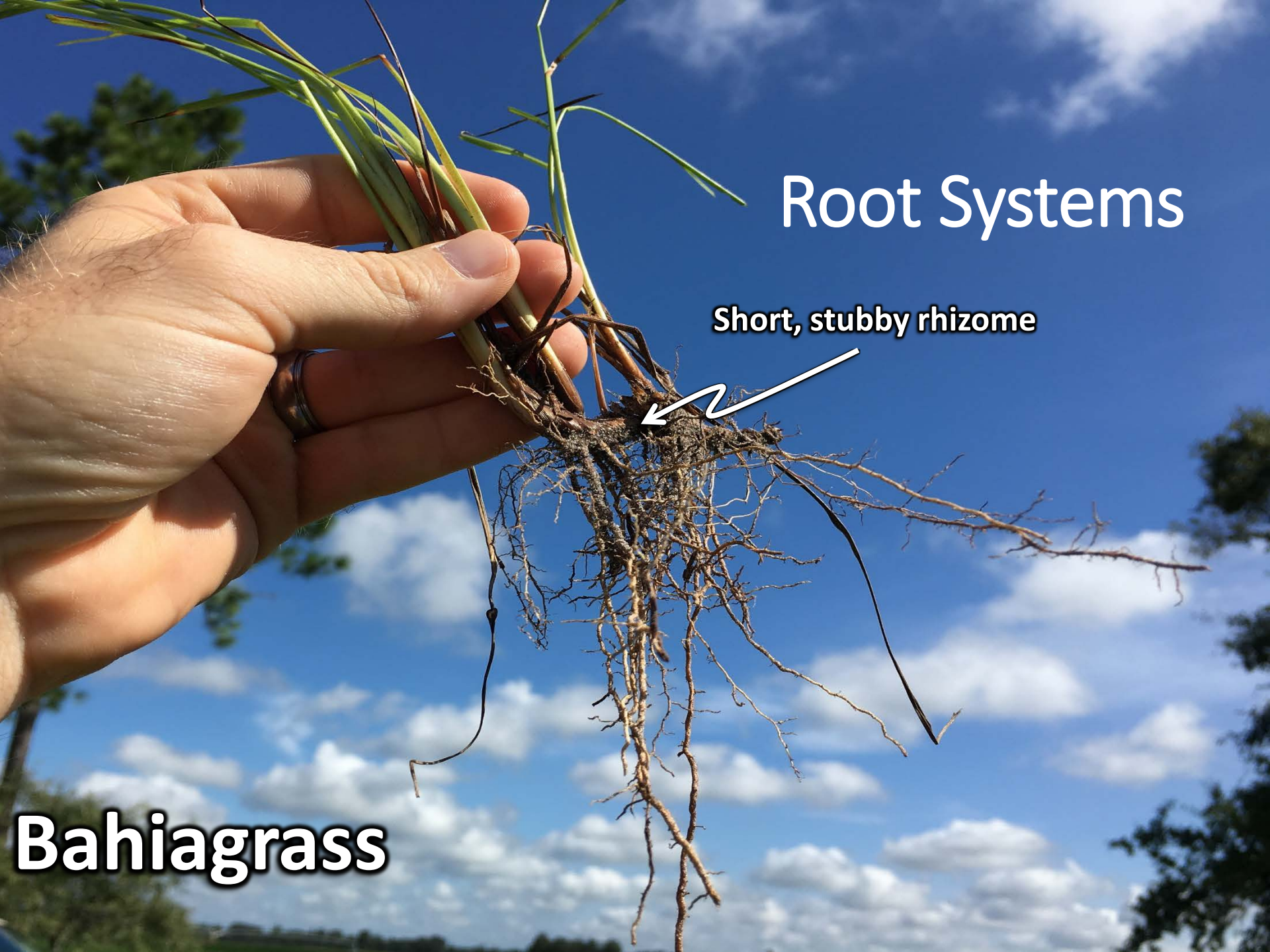


Root Systems

Short, stubby rhizome



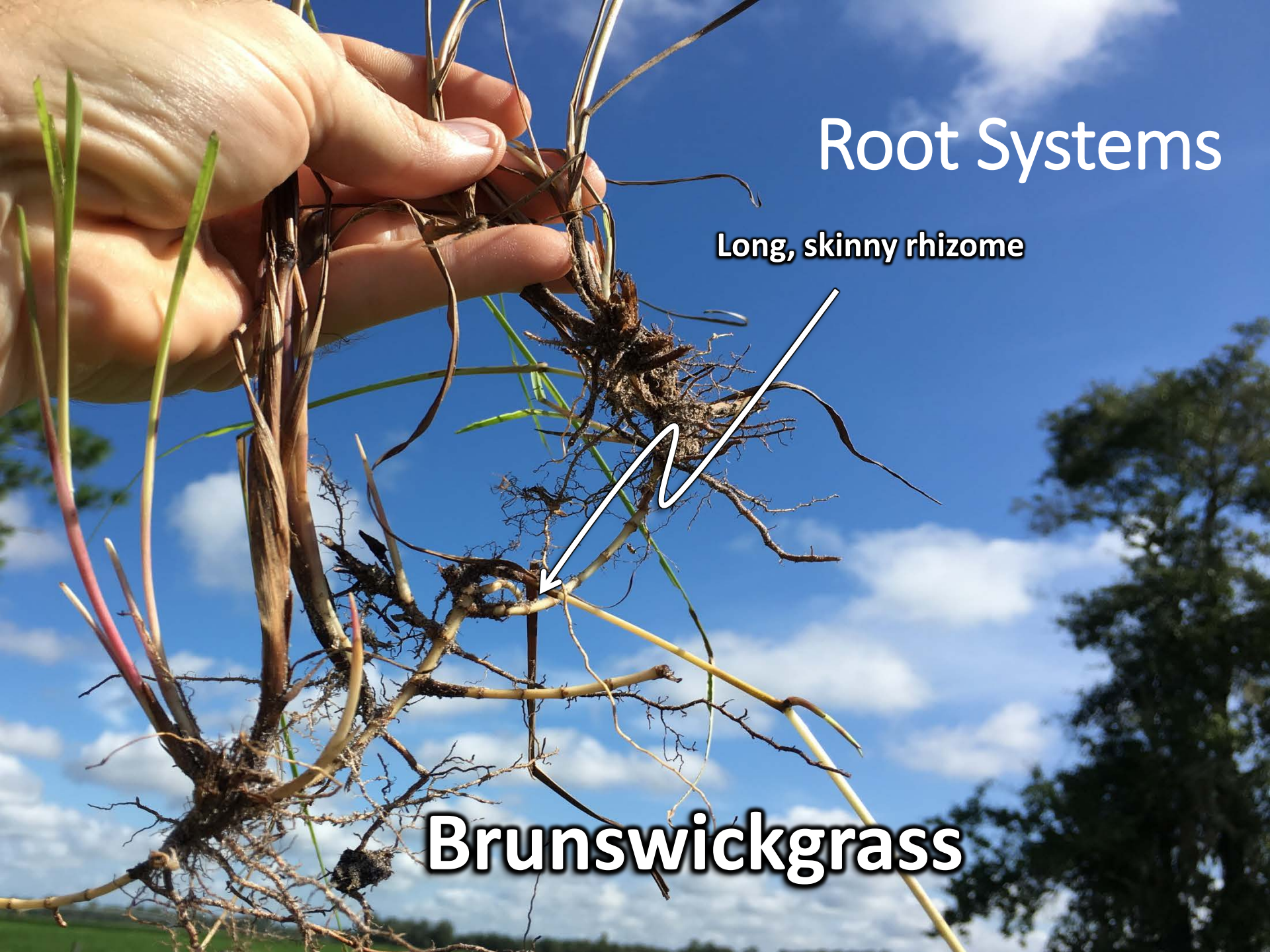
Bahiagrass



Root Systems

Long, skinny rhizome

Brunswickgrass



Root Systems



Brunswickgrass



Bahiagrass

Seed Comparison



Brunswickgrass



Bahiagrass

- Seed are slightly smaller than that of Pensacola bahiagrass
- seed coat has a dark, chestnut brown center
- Seed are noticeably convex in shape compared to flat, tan colored seed of bahiagrass

Brunswickgrass - Close up of seed



100% Brunswickgrass field, Levy Co.

Pasture planted in Pensacola bahiagrass in 2006

Continuously grazed until 2016

When cattle were removed, Brunswickgrass flourished



100% Brunswickgrass field, Levy Co. FL
~40 acres July, 2016





Learning curve



- We need to know
 - how to identify the plant
 - how many acres are infested
 - how unpalatable it is
 - how hard-seeded it is
 - how long it persists in the seed bank
 - how do we eradicate it
- We plan to develop a “Quality Assurance” bahiagrass seed program with the bahiagrass seed industry
- We created a Task Force of members from the Department of Agriculture (AL, GA and FL), commercial seedsmen, cattlemen, and research and extension faculty (AU, UGA and UF) to address the above issues in a TEAM approach

Read the label, but also read the lab analysis

Do Not Use For Food, Feed, or

Lot: 11.4859.NCTDS

65.00 % PURE SEED
0.15 % OTHER CROP
0.30 % INERT MATTER
34.50 % COATING MATERIAL
0.05 % WEED SEED

COATED W/ ALL-VANTAGE LOTM113
TREATED W/NUTRI-START LOT152322
(0.0046 OZ per coated pound)
Noxious Weed Seeds: None Found
Net Weight: 50 LBS/22.68KG

02111630

IDAHO Grown

Tested: JUNE 2014

GERM	85%
HARD SEED	5%
TOTAL	90%

INOC EXP 09/15



7 56637 22815 6

GEORGIA DEPARTMENT OF AGRICULTURE

Gary W. Black, Commissioner

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Scott Hobby
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 3150 U.S. HWY 41 S
 Tifton, Georgia 31794
 229-386-3657

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Seed

Official Report

DATE REPORTED: 3/8/2017

DATE RECEIVED: 2/16/2017

LAB NO. [REDACTED] LOT NO. [REDACTED] LABELED Pensacola Bahiagrass

FOUND ON [REDACTED] LABELED:
 COLLECTED FROM:

WHOLESALE/SHIPPER:

LABELED BY:

Inspector: JHW 85 Origin: Florida Label Date: 9/1/2016
 Net Wt: 50 lb No. Containers in Lot: 200 No. Containers Sampled: 26

Pure Seed Components	Labeled	Labeled	Found	Found
	PURE SEED	GERMINATION - HARD OR DORMANT SEED	PURE SEED	GERMINATION-HARD OR DORMANT SEED
Bahiagrass / Pensacola	95.00	80	90.23	73 + 8 DS

	Labeled(%)	Found(%)
INERT	4.00	8.62
OTHER CROP	0.75	0.18
WEED SEED	0.25	0.97

Treatment:

Noxious Weed Labeled/Lb:

REMARKS:

[Weed Seed - Crabgrass, Sedge, Pigweed, Cyperus, Chervil, Peppergrass, Indigo Hair, Brunswickgrass, Other Crop - Ryegrass, Millet Browntop]
 Sample must be relabeled to reflect current purity analysis.
 Mislabeled as to pure seed.
 Mislabeled as to inert matter.
 Mislabeled as to weed seed.
 Dormant seed confirmed by Tetrazolium (TZ) testing.

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DATE RECEIVED: 10/3/2006

LAB NO. [REDACTED] LOT NO. 160

Seed

Official Report

LABELLED Pensacola Bahiagrass

Scott Hobby
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 3150 U.S. HWY 41 S
 Tifton, Georgia 31794
 229-386-3557

Scott.Hobby@agr.georgia.gov

DATE REPORTED: 10/3/2006

FOUND OTHER KIND THAN LABELED:
 COLLECTED FROM:

Tri-Chek
 PO Box 5280
 Augusta, GA 30916

WHOLESALE/SHIPPER:

LABELED BY:



Inspector: SLB 104
 Net Wt: 50 lb

Origin: Florida
 No. Containers in Lot: 280

Label Date: 7/1/2005
 No. Containers Sampled: 30

Pure Seed Components	Labeled PURE SEED	Labeled GERMINATION - HARD OR DORMANT SEED	Found PURE SEED	Found GERMINATION-HARD OR DORMANT SEED
/	95	40 + 40 DS	97.3	67 + 8 DS

	Labeled(%)	Found(%)
INERT	3	2.54
OTHER CROP	1.5	0.08
WEED SEED	.5	0.08

Treatment:

Noxious Weed Labeled/Lb:

Tests

Pure Seed (Mixture): 97.3 %
 Dormant Seed (Mixture): 8 %

REMARKS:

[Weed Seed - Crabgrass, Brunswickgrass, Cyperus,
 Other Crop - Ryegrass]
 Analysis copied from bag

Germination test date has expired.

Historical evidence of brunswickgrass in the seed trade

Volume 3. Uniform Classification of Weed and Crop Seeds

Scientific name- <i>Paspalum</i>	Common name	Family	SPP. Class	Contaminating class
<i>P. boscianum</i>	bull paspalum	Poaceae	W	W
<i>P. dilatatum</i>	dallisgrass	Poaceae	A	C
<i>P. distichum</i>	knotgrass	Poaceae	W	W
<i>P. floridanum</i>	Florida paspalum	Poaceae	R	W
<i>P. laeve</i>	field paspalum	Poaceae	W	W
<i>P. malacophyllum</i>	ribbed paspalum	Poaceae	W	W
<i>P. nicorae</i>	brunswickgrass	Poaceae	R	W
<i>P. notatum</i>	bahiagrass	Poaceae	A	C
<i>P. plicatulum</i>	brown-seed	Poaceae	A	C
<i>P. scrobiculatum</i>	kodo millet	Poaceae	W	W
<i>P. setaceum</i>	kodo, thin paspalum	Poaceae	W	W
<i>P. setaceum</i> var. <i>stramineum</i>	sand paspalum	Poaceae	W	W
<i>P. spp.</i>	paspalum	Poaceae	W	W
<i>P. urvillei</i>	vaseygrass	Poaceae	A	W

2017 Georgia State Seed Lab Report (Jan-July)

Lab no.	Lot no.	Brunswickgrass contaminant (%)	No./lb.	Collected from	Grown
1001	XXXXX	0.37	1,188	XXXXX	Florida
1002	XXXXX	0.10	315	XXXXX	Florida
1003	XXXXX	0.19	621	XXXXX	Florida
1004	XXXXX	0.01	27	XXXXX	Florida
1005	XXXXX	0.90	3,600	XXXXX	Florida
1006	XXXXX	0.08	252	XXXXX	Florida
1007	XXXXX	0.11	450	XXXXX	Florida
1008	XXXXX	0.09	396	XXXXX	Florida
1009	XXXXX	0.05	153	XXXXX	Florida
1010	XXXXX	0.08	324	XXXXX	Florida
1011	XXXXX	0.02	54	XXXXX	Florida
1012	XXXXX	0.02	63	XXXXX	Florida
1013	XXXXX	0.002	9	XXXXX	Florida
1014	XXXXX	2.31	7,920	XXXXX	Florida
1015	XXXXX	0.43	1,890	XXXXX	Florida

Brown-seed paspalum (*Paspalum plicatulum*)



Brunswickgrass (*Paspalum nicorae*)



Georgia State Seed Lab: microscope view of Brunswickgrass seed



Concerns for seed analysts

- Brunswickgrass is difficult to distinguish from brown-seed paspalum – need close microscopy
- National classification of “weed seed” (Brunswickgrass) vs “crop seed” (brown-seed paspalum)
- Total number Brunswickgrass/lb. permissible for seed sale
- “Brown bagged” bahiagrass seed



What we can do to reduce or eliminate Brunswickgrass in our seed trade



- Educate producers involved in bahiagrass seed harvest to recognize the plant, especially at flowering.
- Educate combine drivers and seed processors to avoid harvesting from contaminated fields or areas within.
- Promote harvesting from clean fields, perhaps with a “value-added” premium for clean seed.
- Consider planting NEW and CLEAN fields for seed harvesting where feasible.

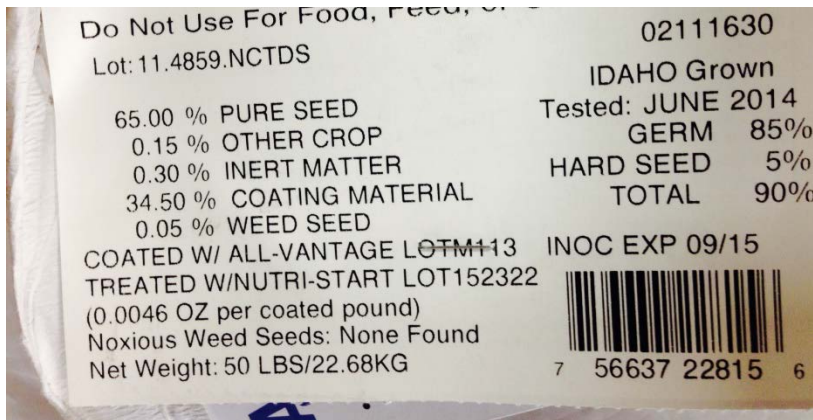
What we can do to reduce or eliminate Brunswickgrass in our seed trade



- Educate land owners with contaminated fields to contact local county agents for up-to-date information on potential herbicides or crop rotations that reduce or eliminate the weed.
- Educate all livestock producers (Cattle, equine, small ruminants, etc.), as well as turfgrass producers and turfgrass users (DOT, municipalities, etc.) to avoid purchasing contaminated or “brown-bagged” seed to reduce spread.

What we can do to reduce or eliminate Brunswickgrass in our seed trade

- Consider planting certified seed.
- Remember “you get what you pay for”, so read the SEED TAG and ask to see the state or private company SEED LAB REPORT.



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 BATE REPORTER: 3/6/2017

Seed
 Official Report

LABELLED: Pensacola Bahiagrass

FOUND OTHER KIND THAN LABELLED:
 COLLECTED FROM:
 Seed Production Inc
 PO Box 290
 Madison, GA 30650

WHOLESALE/SUPPLIER:
 Dick's Seed Cleaning & Harvesting Co
 Lake City, FL

LABELLED BY:
 Dick's Seed Cleaning & Harvesting

Inspector: JHW 85
 Net Wt: 52 lb
 No. Containers in Lot: 200
 Label Date: 8/12/2016
 No. Containers Sampled: 28

Pure Seed Components	Labelled pure seed	Labelled dormant/inv. seeds or dormant seed	Found PURE SEED	Found OTHER CROPS OR DORMANT SEED
Bahiagrass / Pensacola	95.00	80	90.23	73 + 8.235
			Inert 4.00	OTHER CROP 0.18
			WEED SEED 0.25	0.97

Treatment:
 Noxious Weed Labelled: _____

REMARKS:
 [Weed Seed - Crabgrass, Sedge, Pigweed, Cyperus, Chervi, Peppergrass, Indigo Itary, Brunswickgrass,
 Other Crop - Ryegrass, Millet Browntop]
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