

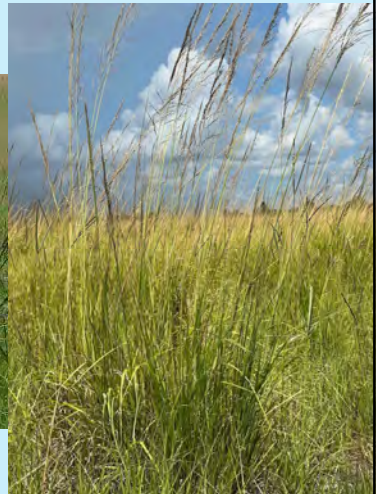
Controlling Australian Beardgrass [*Bothriochloa bladhii* (Retz.) S.T.Blake] in Florida Pastures

Tenzy Mncube – Postdoctoral research associate and Brent Sellers – Professor

Pasture and Rangeland Weed Management
UF-IFAS Range Cattle Research & Education Center Ona, FL



Smutgrass (*Sporobolus indicus*) in Pastures



Cogongrass (*Imperata cylindrica*) in Pastures



Australian beardgrass (*Bothriochloa bladhii*) in Pastures



Invasive species

- Invasive species – introduced intentionally or unintentionally
- Competitive with native species
- Ecosystem incompatibility
- Economic losses

Australian beardgrass distribution



- Introduced
- Native

Australian Beardgrass distribution around the world



Alachua, Baker, Bradford,
Columbia, Dixie, Levy,
Putman, Suwanee, and
Union. (Martin and
Broward added in 2023)

Australian beardgrass distribution in Florida

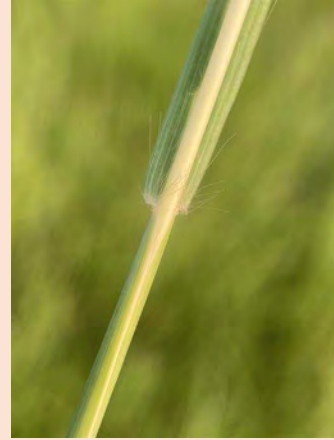
Australian beardgrass



Tufted grass



noticeable leaf midrib



Hairs on ligule

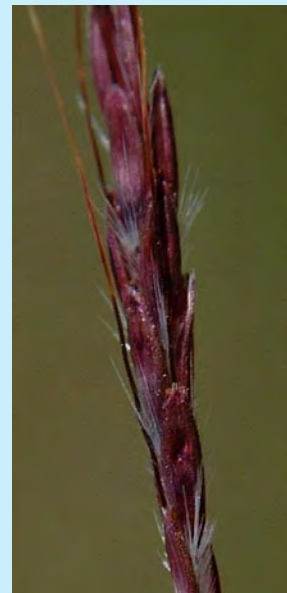
Australian beardgrass



Red seed head



Seed head

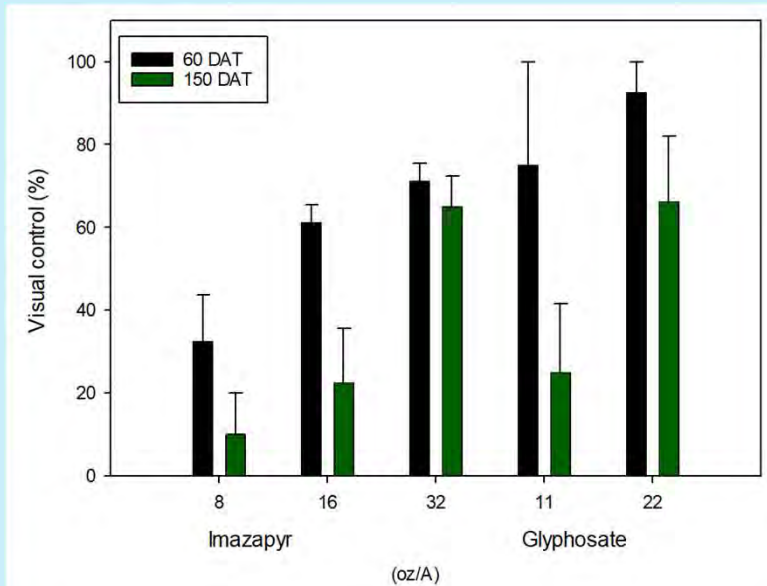


Seeds

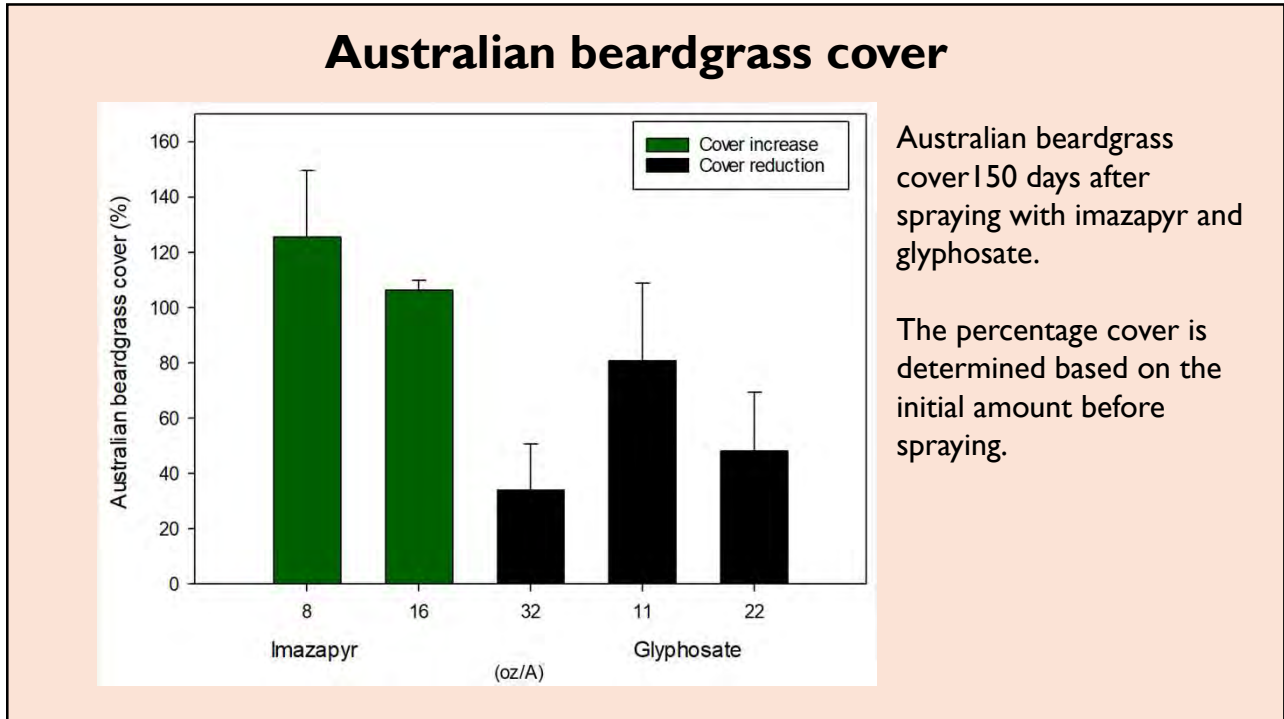
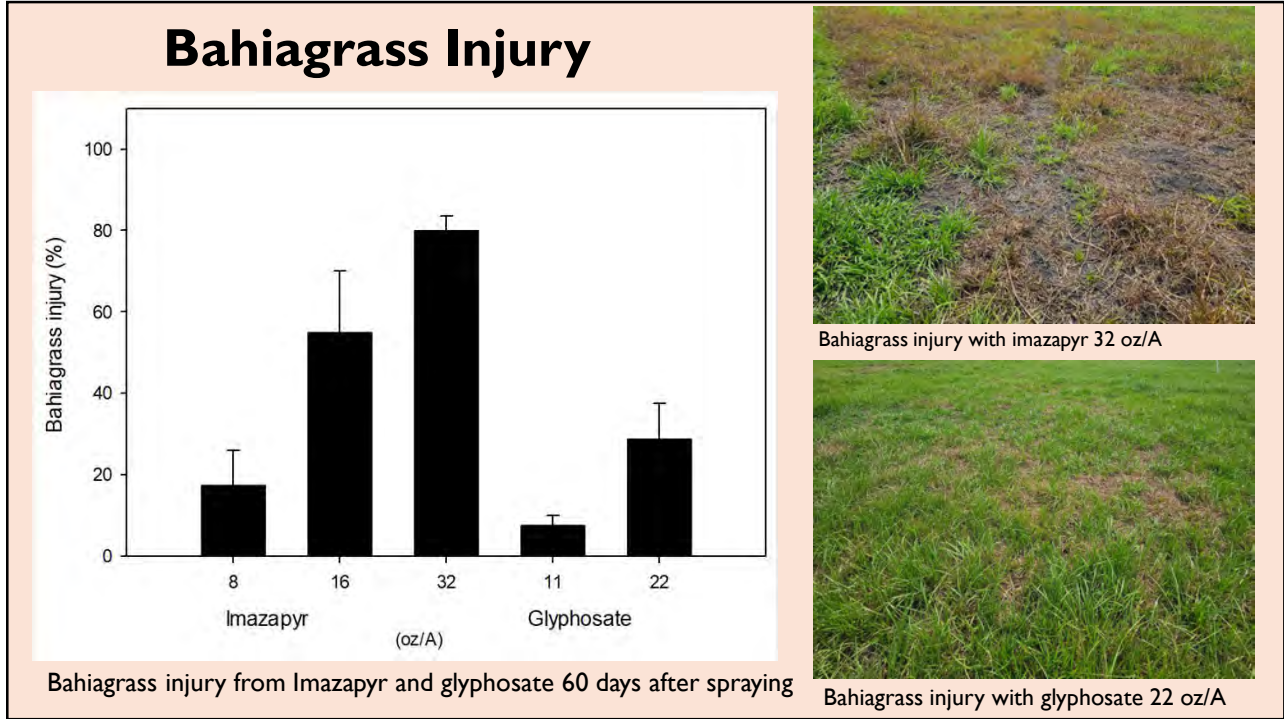
Research in Kansas

Herbicide	Rate (oz/A)	Australian beardgrass control (%)	Injury to warm-season species (%)
Glyphosate	32	42	100
	48	75	100
	64	66	100
Imazapyr	16	99	21
	20	100	78

Visual Control of Australian beardgrass



Australian beardgrass control (%) with imazapyr and glyphosate in Lake Butler, FL, 2024, 60 and 150 days after spraying.



Australian beardgrass cover after imazapyr application



Imazapyr 8 oz/A



Imazapyr 16 oz/A



Imazapyr 32 oz/A

Australian beardgrass cover after glyphosate application



Glyphosate 11 oz/A



Glyphosate 22 oz/A

Conclusion and Recommendation

- Imazapyr managed to control and reduce Australian beardgrass cover at 150 DAT.
- Both Glyphosate rates controlled Australian beardgrass.
- Multiple trials and sequential applications
- Species identification
- Scouting
- Early control

Acknowledgments

2024 CPPM-EIP Project University of Florida:
Entomology & Nematology, Plant Pathology, Weed Science
 Norman C. Lappala, PD, Adam G. Dale, CO-ED, Natalia A. Perez, CO-ED, Brent A. Sellers, CO-ED

Project overview
 This is the Extension Implementation Plan (EIP) proposal that addresses the University Integrated Pest Management (IPM) needs of Florida. Goals in this document cover entomology and nematology, plant pathology, and agronomy. The respective Extension subproject team defined and validated by a faculty leader who will coordinate with their department chair and Dr. Michelle Galloway (Current Associate Dean for Extension) and report (EIP) to the Committee.

UF IFAS
 UNIVERSITY OF FLORIDA
 ENTOMOLOGY
 NEMATODOLOGY

IPM priorities addressed
 • EIPM implementation in agriculture & specialty crops
 • EIPM for Pasture Health

Entomology & Nematology
 Integrating pest management and biosecurity interventions in herbivore of systems
 Obj. 1: Over three years, participants will demonstrate increased knowledge and skills in implementation of pest and plant protection interventions.
 Obj. 2: Over three years, 75% of participants completed and report knowledge gain in pest management interventions as measured by follow-up training evaluations.
 Obj. 3: Annually, 50% of Extension participants will report knowledge gain in implementation of pest management and/or pest management interventions as a result of their efforts.
 Team members and roles:
 Adam Dale – Extension Director, IPM and nematology outreach leader
 Lucinda Reynolds – Tropical nematology plant IPM
 Larry Chase – Extension nematology
 David Usselman – Insect biosecurity interventions
 Rachel McLaughlin – Plant disease and pest management specialist crop
 David Manning – Cattle and vegetation IPM
 John Temple – Extension Program Director

Plant Pathology
 Identifying and managing diseases with selected herbicides during integrated pest management (IPM) systems
 Obj. 1: Validate a comprehensive, integrated IPM system for Florida citrus.
 Obj. 2: Develop a comprehensive IPM system for Florida citrus.
 Obj. 3: Develop a comprehensive IPM system for Florida citrus.
 Obj. 4: Develop a comprehensive IPM system for Florida citrus.
 Team members and roles:
 David Dale – Disease, Citrus, Plant Pathology
 Melissa Furr – Disease, Citrus, Plant Pathology
 Carlos Torres – Disease, Citrus, Plant Pathology
 Maria Lopez – Disease, Citrus, Plant Pathology
 Paula Kishner – Disease, Citrus, Plant Pathology
 Pamela Goss – Disease, Tropical Plant Diagnostic Clinic (TPDC)

Agromony
 Survey and management of established and invading grass weeds in perennial forage and turfgrass systems
 Obj. 1: Validate and document the efficacy of herbicides used in other areas of the U.S. for control of Australian beardgrass and goosegrass for weed control as well as turfgrass and forage tolerance under Florida's environmental conditions.
 Obj. 2: Annually, 75% of Extension professionals reached during their onboarding process will report increased knowledge in the areas of grass weed identification and management strategies for turfgrass and forage systems.
 Obj. 3: Over three years, 50% of participants reached will report knowledge gain in grass weed identification in turfgrass and forage systems, as measured by follow-up training evaluations.
 Obj. 4: Over three years, at least 100 participants will be able to correctly identify grass weed species and determine the appropriate management strategy, including proper herbicide selection and timing.
 Team members and roles:
 Brent Sellers – Project leader; pasture & rangeland weed mgmt
 Marcelo Wallau – Forage agronomist
 Pawel Petelewicz – Turfgrass weed scientist
 Lucas Majure – Curator, Univ. of FL Herbarium
 Marc Frank – Extension botanist
 Kevin Korus – Ag & Nat Res Extension Agent
 James DeValerio – Ag & 4-H Extension Agent
 Lizzie Whitehead – Ag & Nat Res Extension Agent
 Laura Bennet – Multi-county Livestock Extension Agent

Agromony

Survey and management of established and invading grass weeds in perennial forage and turfgrass systems

- Obj. 1:** Validate and document the efficacy of herbicides used in other areas of the U.S. for control of Australian beardgrass and goosegrass for weed control as well as turfgrass and forage tolerance under Florida's environmental conditions.
- Obj. 2:** Annually, 75% of Extension professionals reached during their onboarding process will report increased knowledge in the areas of grass weed identification and management strategies for turfgrass and forage systems.
- Obj. 3:** Over three years, 50% of participants reached will report knowledge gain in grass weed identification in turfgrass and forage systems, as measured by follow-up training evaluations.
- Obj. 4:** Over three years, at least 100 participants will be able to correctly identify grass weed species and determine the appropriate management strategy, including proper herbicide selection and timing.

Team members and roles

- Brent Sellers – Project leader; pasture & rangeland weed mgmt
- Marcelo Wallau – Forage agronomist
- Pawel Petelewicz – Turfgrass weed scientist
- Lucas Majure – Curator, Univ. of FL Herbarium
- Marc Frank – Extension botanist
- Kevin Korus – Ag & Nat Res Extension Agent
- James DeValerio – Ag & 4-H Extension Agent
- Lizzie Whitehead – Ag & Nat Res Extension Agent
- Laura Bennet – Multi-county Livestock Extension Agent



Tenzy Mncube – tmncube@ufl.edu
Brent Sellers – sellersb@ufl.edu