

UF/IFAS

Range Cattle Research & Education Center NEWS

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Brunswickgrass Research Leads to Increased Harvestable Bahiagrass Seed

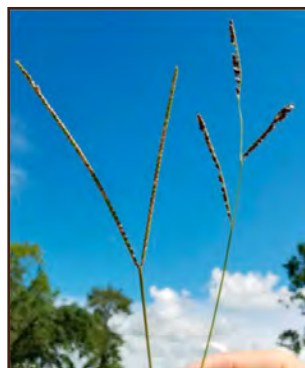
by Dr. Brent Sellers, Pasture and Rangeland Weed Management Specialist



Closely grazed bahiagrass pasture with patches of Brunswickgrass in late September (toward the end of the growing season) in Levy County, FL. Credit: Marcelo Wallau, UF/IFAS

Several years ago, we were notified by bahiagrass seed producers that many growers were being impacted by Brunswickgrass. The problem with Brunswickgrass was that other states stopped accepting Florida bahiagrass seed due to the amount of Brunswickgrass seed found in seed lots from Florida. Although many attempted to screen the contaminated seed, the similarity in seed size and weight made this extremely difficult. This left a lot of seed being left in the field due to the amount of Brunswickgrass in the bahiagrass pastures. Additionally, Brunswickgrass is not as palatable to cattle as bahiagrass, which typically results in overgrazing of bahiagrass and an increase in Brunswickgrass over time.

The similarities of bahiagrass and



Seed heads of bahiagrass (left) and Brunswickgrass (right). Credit: Marcelo Wallau, UF/IFAS

Brunswickgrass do not stop at seed size. It is very difficult to identify Brunswickgrass without the seed head or by looking at the root system. Brunswickgrass seedheads have 3 to 5 branches, while bahiagrass usually only has 2; the typical v-shaped seedhead. Both species technically have rhizomes, but bahiagrass rhizomes (sometimes referred

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Rhizome comparison of Pensacola bahiagrass (left A) and Brunswickgrass (right B).

Credit: Marcelo Wallau, UF/IFAS

to as stolons) tend to be near the soil surface, while Brunswickgrass rhizomes spread laterally 2 to 4 inches below the soil surface.

Grower observations. As many of you already know, selectively removing a grass weed from a grass forage is typically very difficult; this is especially true when the weedy grass and the desirable grass are in the same genus. While one rancher was trying to remove smutgrass from their bahiagrass pasture with hexazinone (Velpar/Tide Hexazinone), they observed control of another grass. It just so happened to be Brunswickgrass. It is exciting when growers share their observations with extension agents and researchers because it often provides opportunities for research. This observation provided us an opportunity to visit the ranch, ask questions, and ultimately come up with a research plan to help growers manage Brunswickgrass.

The research. The following year, we established several trials in Pasco, Citrus, and Sumter counties to determine which rate of hexazinone would be needed for Brunswickgrass control. Similarly, we were also interested in trying to determine if there was an optimum timing for Brunswickgrass control. We knew that rainfall and active growth is needed to control smutgrass, so we were assuming the same would be true for Brunswickgrass. Based on the initial results, we chose only 3 rates of hexazinone with monthly applications beginning in May and ending in Sep-

tember to get a better understanding of how application timing impacted Brunswickgrass control.

The results. Our initial research determined that Brunswickgrass is relatively sensitive to hexazinone and that at least 1 qt/A would result in acceptable control. We quickly found that Brunswickgrass would reinfest plots due to the number of seed in the soil seedbank. Overall, it appears that at least two years of application of at least 1 qt/A is necessary to reduce the Brunswickgrass population, but a third year could be required in some instances. Timing wise, we found that applications after May were most beneficial, and rainfall, although beneficial, is not necessarily as much of a requirement as we see with smutgrass. Timing of application may also be extremely important for bahiagrass tolerance to hexazinone as we have observed substantial damage to the bahiagrass stand with April and May applications.

Extending the science. As results came in from our research, we started to share our observations with bahiagrass seed producers and ranchers who were struggling with Brunswickgrass infestations. After two years of research, we were comfortable making recommendations of at least 1 qt/A of hexazinone applied anytime from June through September. We communicated one on one with growers and by updating county faculty of our research. We also updated the management information in our “[Ask IFAS](#)” fact

sheet - ‘[Brunswickgrass \(Paspalum nicorae\): A Weed Contaminant in Southern Pastures and Bahiagrass Seed Production Fields](#)’

The impacts. Since we began sharing our results with clientele, we have seen a fairly significant decrease in the amount of Brunswickgrass and a consequent increase in the number of acres of bahiagrass seed harvested over the past couple of years. For example, one ranch has increased the harvestable acreage of bahiagrass seed by nearly 80%.

The future. We still have work to do. We have just learned of truckloads of bahiagrass seed being rejected in the panhandle this year due to Brunswickgrass seed contamination. So, our extension efforts must expand northward. Additionally, understanding if the application of UAN with Velpar could help increase efficacy and potentially seed production when applications occur in May and how this may impact bahiagrass injury. We are also hoping to understand how adding residual herbicides to Velpar could increase long-term control by preventing Brunswickgrass seed germination. The inclusion of different adjuvants to help increase hexazinone efficacy is also of interest.

Teamwork. This effort would not have been possible without the assistance of our many cooperators, county extension faculty, and other state specialists. We will continue to work together to find economical solutions to help mitigate the invasion of Brunswickgrass.

Questions, contact [Dr. Sellers](#) at sellersb@ufl.edu or 863-735-1314 ext. 202.

CENTER NEWS

13th Annual Youth Field Day - June 30

The field day was a great success with 107 guests attending and 52 RCREC and Extension faculty and staff, UF students, exchange visitors, Expo participants, and friends of the center assisting.

A huge THANK YOU to this year's sponsors!

Platinum level sponsors

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Highlands Soil and Water Conservation District

Sarasota County Farm Bureau

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Roman III Ranch

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A very special "Thank You" to everyone who has had a part in our program! We are very grateful for your time, assistance, support, and donations!


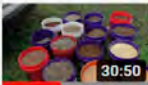


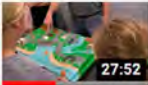
Class session recordings are now available for viewing on [YouTube](#) and from our [website](#). There you will also find links to the field day booklet and the photos taken by UF/IFAS Communications photographer, Cat Wofford.



2023 t-shirt design contest winners!

Designers from left to right... 1st place with 51 votes, Matheus Ferreira; 2nd place with 47 votes, Hunter Born; and 3rd place with 15 votes, Fahad Rafiq. Thank you to everyone who participated and congratulations to the winners!



	Drones in Science - Youth Field Day 2022 UF/IFAS Range Cattle Research and Education Center
	What's in that Feed Stuff? - Youth Field Day 2022 UF/IFAS Range Cattle Research and Education Center
	Forage Quality: What is it & why you need to know - Youth Field Day 2022 UF/IFAS Range Cattle Research and Education Center
	The Invaders - Youth Field Day 2022 UF/IFAS Range Cattle Research and Education Center
	How Water Moves and Why You Need to Know - Youth Field Day 2022 UF/IFAS Range Cattle Research and Education Center



CENTER NEWS**Shipping Day**

On August 3, three loads of calves were shipped to Kansas. They had been sold through Superior Livestock Auction during the 'Week in the Rockies' sale. The week following, another 140 calves were sold at our local market. Some calves were early weaned in January with the bulk being weaned this summer. Approximately 80 replacement heifers were retained.

Our herds consist of 774 breeding cows (not including this year's replacement heifers) and 45 bulls. They include Brangus crossbred cattle and purebred Brahman, Braford, and Ona White Angus.

FACULTY NEWS**Congratulations & Farewell**

[Chris Prevatt](#), a beef cattle and forage economist at the Center, was awarded permanent status and promoted to State Specialized Extension Agent III effective July 1.

Chris works throughout the state and presents in various locations throughout the Southeastern United States.

Sept. 30 will be his last official work day with UF as he is going to work for Alabama Farm Bureau as their Beef Cattle, Sheep, Goat, and Forage Commodity Director.

We wish you the best Chris!

Dr. Philippe Moriel wins federal grant to reduce heat stress, improve beef production in cattle

Every year across the country, heat causes \$300 million in damage to cattle, ample reason for University of Florida scientists to try to cool the animals and increase their beef production.

The newest scientific effort will be led by [Philippe Moriel](#), a UF/IFAS associate professor of beef cattle management. Moriel has received a five-year, \$640,000 grant from the National Institute of Food and Agriculture to continue a UF/IFAS-wide effort to help prevent cattle from getting harmed by oppressively warm temperatures.

Scientists already know the long- and short-term effects of heat stress during pregnancy on performance and health of dairy cows. Moriel's new study will set foundational knowledge of the effects of heat stress on grazing beef cattle.

"This data will help us identify the exact physiological changes occurring in pregnant cows — and then to their offspring — once they are exposed to similar heat," Moriel said. "This knowledge will allow us to develop novel heat-mitigation strategies to

enhance cattle performance and health, which in turn will improve the profitability of cow-calf producers in hot climates."

He and his team will start their research by reducing heat in pregnant cows. They will follow that by lowering temperatures in their offspring. With cows and calves, scientists will alleviate heat by increasing the animals' access to shade.

Through these methods, Moriel and his colleagues believe they can help calves grow optimally and produce more beef.

Cow-calf producers are paid by the pound when the calf is weaned. Thus, the heavier the animal, the greater the income. The more they weigh at weaning, the more ranchers make in Florida, Moriel said.

[Click here](#) to read the full blog article by [Brad Buck](#), UF/IFAS Communications. Posted on July 14.

Student News



Jaime Eduardo Garzón Alfonso, an Agronomy PhD student, under the advisement of Dr. Joao Vendramini has accepted a position as Assistant Extension Professor and Forage Educator in the Cooperative Extension Department at the University of Maine in Orono. He will develop and conduct educational outreach and applied research (on farm or Experiment Station) with an emphasis on dairy forage production and quality, including regenerative pasture management. He will be on the main campus in Orono and his work will collaborate with the Research and Extension programs in the New England region (Maine, Vermont, New Hampshire, and Massachusetts). He will start there on Nov. 3.

Jaime's UF graduation will be on Dec. 16.

Leandro Otavio Vieira Filho recently returned from attending the 22nd World Congress of Soil Science in Glasgow, Scotland. There he was part of a multinational team who won the British Society of Soil Science Grant for Early Career Researchers and Professionals. Their team was led by Dr. Mendes (Germany), and included Leandro, Dr. Elliott (Wales), and Dr. Yau (Scotland). The team will receive £ 5,000 (~ US\$ 6,000) to fund their project entitled "Developing a feasible and low-cost approach through machine learning, near- infrared sensor, and open-access dataset for environmentally sustainable analysis of soils in agriculture." The award was announced at the closing ceremony of the 22nd World Congress of Soil Science.

Leandro began his Soil and Water Science PhD in the summer of 2019.



Leandro with his advisor, Dr. Maria Silveira.



British Society of Soil Science Grant for Early Career Researchers and Professionals winning team. Leandro at far right.



Leandro standing in front of Big Ben in London, England.

Travel grants and awards Leandro received making his trip possible:

1. 2022 World Congress of Soil Science Fellowship Award (Soil Science Society of America and U.S. Committee for Soil Science).
2. Dr. James Davidson Graduate Travel Scholarship Award (UF College of Agricultural and Life Sciences).
3. IFAS Travel Grant (UF Institute of Food and Agricultural Sciences).
4. Office of Research Travel Grant (UF Office of Research).

The World Congress of Soil Science (WCSS) is the most important scientific meeting in the field of soil science. Scientists from all over the world meet every four years to present their research results and discuss the future of the field. The next WCSS will be in Nanjing, China, in June 2026.

Vinicius de Souza Izquierdo won 3rd place in the American Society of Animal Science PhD Graduate Poster Competition in June at the ASAS Annual Meeting in Oklahoma City, OK. While there he also presented two abstracts.

He is advised by Dr. Philippe Moriel.



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Articles published in the Florida Cattleman & Livestock Journal:

View these on our website at:
<https://rcrec-ona.ifas.ufl.edu/news-and-publications/>

Ona Reports

June 2022 - 'UF/IFAS Range Cattle Research and Education Center Research Update' with all RCREC faculty reporting

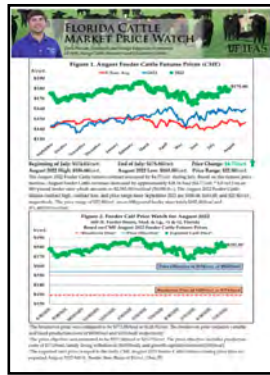
July 2022 - 'Does frequency of supplementation before calving impact cow and calf performance?' by Dr. Philipe Moriel

August 2022 - '2022 University of Florida Top Rancher Challenge' by Chris Prevatt and Doug Mayo



Florida Cattle Market Price Watch

This helpful resource is provided monthly by Chris Prevatt, State Specialized Agent III, Beef Cattle and Forage Economics. View a complete listing of past reports on our website, [click here](#).



'Caught on Camera'

A monthly feature with images collected from RCREC game cameras mounted throughout the property. Provided by the Rangeland Wildlife Ecology Program.

View all the issues on our website at:
<https://rcrec-ona.ifas.ufl.edu/about/directory/faculty/hance-ellington/>



New Videos

Ona Highlight Webinars

Save the date and join us for an upcoming Ona Highlight webinar. These informative presentations are held each month. They begin at 11:00 a.m. and last about 45 minutes. See our online calendar for upcoming webinars, [here](#).

Recordings of recent webinars:

'Heat Stress in Beef Cattle'
 with Vinicius de Souza Izquierdo, a PhD animal science student
 6/21/2022 - Run time: 30.08 minutes

'Fire Generates Seed Rain via the Magnet Effect'
 with David Mason, a PhD wildlife ecology and conservation student
 7/12/2022 - Run time: 44.05 minutes

'Ona Highlight Featuring the Florida Cattlemen's Association'
 President, Wes Carlton and 1st Vice President, Dale Carlton share about the association and discuss current issues and initiatives.
 8/9/2022 - Run time: 43.58 minutes



A few more photos from Leandro's UK travels. Above, standing by the Tower Bridge, below left, in Edinburgh and below right, at Cardiff Castle in Cardiff, Wales



UF News

Presidential Search



Visit <https://presidentsearch.ufl.edu/> for the latest information on the search.

[Click here](#) to view a June update from Board of Trustees Chair Mori Hosseini.

In the update, Chiar Hosseini states, "Going forward the search committee will begin vetting potential candidates. When this phase is complete, the search committee will recommend a small number of highly qualified candidates to the Board of Trustees. The Board will interview the finalists and select the next president of the University of Florida, with the Board of Governors of the State University System ratifying.

Upcoming Events

View our online calendar for more info on events and links to register:
<http://rcrec-ona.ifas.ufl.edu/calendar-of-events/>

2022 Winter Supplementation Seminar

– September 22, 6:00 - 8:30 PM
 A SFBFP event to be held at the Arcadia Stockyard. Space is limited. Register on [Eventbrite](#).

Ona Beef Cattle and Forage Economics Highlight with Chris Prevatt

– September 30, 11:00 - 11:45 AM
 Chris Prevatt, a state specialized agent at the Center, will provide a program update. Register.

Ona Highlight with Guest Presenter Dr. Sally Brown

– October 11, 11:00 - 11:45 AM
 Dr. Brown will present, "Understanding Risk in the Era of PFAS." Dr. Brown is a research professor of environmental and forest sciences with University of Washington College of the Environment in Seattle, WA. Register.

Cattle Management for Women

– October 20, 9:00 AM - 3:30 PM
 A SFBFP event to be held at the Center. Space is limited. Register on [Eventbrite](#).

Ona Soil and Water Science Program Highlight with Dr. Maria Silveira

– November 1, 11:00 - 11:45 AM
 Dr. Silveira will present, "UF/IFAS Range Cattle REC Long-Term Agroecosystem Research (LTAR) Research Updates." She is a professor specializing in soil and water science at the Center. Register

Annual UF/IFAS Braford Heifer Offer

November 10, 2022
 at the Adams Ranch Annual Auction

COME BID!

Proceeds from the sale of two Ona Braford heifers will be added to the UF/IFAS Range Cattle REC Adams Ranch Endowment which supports research activities that work to improve our natural resources.



Scan the QR code to visit the sale website:



Questions, contact us at
 (863) 735-1314 * ona@ifas.ufl.edu

UF 2nd among public universities for students' economic return

UF comes in ahead of schools such as MIT, Cal Tech and Michigan

The University of Florida ranks No. 2 nationally among public universities and No. 4 among publics and privates for the economic return students get from attending college and leading students to greater financial security, according to a new analysis highlighted by Forbes magazine.

The analysis shows that UF came in ahead of schools such as MIT, the California Institute of Technology and the University of Michigan. Princeton University and Stanford University, both private institutions, took the

No. 1 and No. 2 spots, respectively. To arrive at their rankings, Degree Choices looked at more than 2,000 schools using the U.S. Department of Education's College Scorecard and the Integrated Postsecondary Education Data System.

"This is excellent news and frankly not surprising," said Mori Hosseini, chair of UF's Board of Trustees. "It's well known that UF students get an incredible return on their investment, go on to build highly successful careers and become major contributors to the state's economy."

Read the full UF News 8/3/22 article, [click here](#).

UF/IFAS Range Cattle REC Faculty -

Dr. Brent Sellers, sellersb@ufl.edu - Pasture and Rangeland Weed Management

Dr. Maria Silveira, mlas@ufl.edu - Soil and Water Science

Dr. Joao Vendramini, jv@ufl.edu - Forage Management

Dr. Philippe Moriel, pmoriel@ufl.edu - Beef Cattle Nutrition & Management

Chris Prevatt, prevacc@ufl.edu - Beef Cattle and Forage Economics

Dr. Hance Ellington, e.ellington@ufl.edu - Grazinglands Wildlife Specialist

Dr. Golmar Golmohammadi, g.golmohammadi@ufl.edu - Watershed Hydrology and Biogeochemistry

E-News Available

Help us protect the environment and reduce expenses by receiving this and other publications by e-mail. Give us a call to sign up for e-news.

About this newsletter

This newsletter is a publication of the UF/IFAS Range Cattle Research and Education Center (RCREC) located in South Central Florida in the heart of Florida's cattle country. Its intention is to keep you up to date on RCREC happenings, publications, research, faculty, staff and student news, and upcoming events with the goal of providing beneficial information to assist you in your beef cattle or land operation.

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