

Forage Testing

by Dr. Joao 'Joe' Vendramini, Professor



Dr. Joao Vendramini (right) with the Forage Extension Lab manager, Dr. Hiran M. S. da Silva (left).

Winter is around the corner, warm-season forages will be dormant, and many producers in the southeast will feed conserved forages to meet the nutrient requirements of the cowherd. Hay is the most popular source of conserved forage for beef cattle producers. While reducing the need for hay is desirable, some quantity of hay is required to avert risk in most livestock production systems. In addition, haylage (50% DM) has been widely used by beef cattle producers to preserve forage during the summer when climatic conditions are not ideal for hay production.

Regardless of the management practice used to conserve and feed forage during the winter, some concentrate supplementation is usually necessary to meet cow-calf nutrient requirements. An estimate of the nutrients present in the forage is essential to maximize the efficiency of concentrate supplementation. The most accurate way to predict forage nutritive value is through FORAGE TESTING. Many producers allege that they own the forage, and it will be fed anyway, so why to test? Two different scenarios can happen when you do not have an estimate of the forage nutritive value: 1) The forage has high nutritive value and the producer will be overfeeding concentrate, or 2) The forage has low nutritive value, and the concentrate is not supplementing the cow adequately. In the first scenario, the producer inflates production costs without benefits in production. Conversely, in the second scenario, the cows decrease body condition, pregnancy rates, and finally results in fewer calves harvested and decreased profitability.

Beyond understanding the nutrient value of your forage, it is also valuable to understand how your forage samples compare with others submitted to the laboratory. This procedure allows producers to verify if the current management practices used to produce conserved forage have been effective to optimize forage nutritive value.

How to Collect a Sample

Properly collecting and identifying a sample is very important. A sampling device or tool is needed for collect-ing hay samples. Several commercial

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UF FLORIDA

UF/IFAS Range Cattle Research & Education Center **NEWS**

types are available. They usually consist of a tube with a cutting edge on one end and a shank on the other that is fastened in the chuck of an electric drill or hand brace. The sampler is driven into the end of a rectangular bale or the rounded side of the round bale. Collect a single core sample from each of 12 bales for a particular lot of hay. Combine the 12 cores into one sample. This will ensure that the sample is representative. The outer layer of weathered round bales should be pulled away before sampling. Each hay cutting, type of hay, etc. should be sampled and analyzed separately. Each hay cutting or lot should be identified and stored separately.

Silage samples can be collected from the face of a bunker silo as it is being fed and from the unloader of an upright silo. Bagged silage can be sampled by cutting small slits along the side of the bag and penetrating the hay sampler to collect the material. Producers must reseal the slit with waterproof tape after collection. Collect silage from 5 or 6 places along the bag, mix well, and extract a single sample to send to the laboratory. Immediately place the sample in a plastic bag and seal it. If not mailed right away, place the sample in a refrigerator or freezer.

Pasture samples can be collected and analyzed by plucking the forage with your fingers at the height the animals are grazing it. When adequate pasture forage is available, cattle may select better nutritive value forage than what is being sampled by hand plucking. For instance, in a limpograss pasture with good forage availability, , cattle will typically select leaves with greater nutritive value than hand-plucked samples collected with leaves and stems. Thus, forage testing results may suggest that cattle would respond to protein supplementation, however, animals are consuming adequate amounts

of protein from forage selection and may not actually respond to supplementation. Scissors or some other cutting device could also be used. If possible, these samples should be dried before sending to the laboratory. If drying is not possible, mail the sample immediately after it is harvested. Remember, your results are only as good as your sample!

Visit the forage extension lab web page where for the general submission form and other lab information: <u>https://rcrec-ona.ifas.ufl.edu/for-</u> <u>age-extension-lab/</u>.

For additional forage testing information check out this publication: <u>https://edis.ifas.ufl.edu/publication/</u> aa192

* * *

Questions, contact Dr. Vendramini at jv@ufl.edu or 863-374-7055.

Forage Ext. Lab: 863-374-7071

Center News

We recently updated our phone system!

Below are a few of the new direct lines that may be helpful to you. Our original main line, 863-735-1314, is still in use. It will take you to the front desk where Lauria can transfer you, if needed.

Andrea Dunlap, Communications - 863-735-1001

Austin Bateman, Herdsmen - 863-374-7063

Dr. Brent Sellers, CD/Pasture & Rangeland Weed Management - 863-374-7048

Christina Markham, Office Manager - 863-374-7070

Dennis Kalich, Farm Manager - 863-374-7062

Dr. Golmar Golmohammadi, Hydrology & Water Quality - 863-374-7053 Dr. Hance Ellington, Rangeland Wildlife - 863-374-7049

Hannah Baker, Beef & Forage Economics - 863-374-7051

Dr. Joao Vendramini, Forage Management - 863-374-7055

Lauria Gause, Secretary (admin office front desk) - 863-735-1314

Dr. Maria Silveira, Soil & Water Science - 863-374-7054

Dr. Philipe Moriel, Beef Cattle Nutrition & Management - 863-374-7050

Remaining Ona White Angus sold on October 19 -

The remaining 38 cows and 3 bulls of the original UF/IFAS Range Cattle Research and Education Center Ona White Angus herd were sold on 10/19/23, through Superior Livestock Auction, LOT 10436 for \$1,175 each to Claude Burdett of Hardrock Farms Tignall, GA. For additional information contact us at 863-735-1001.

The Ona White Angus breed is approximately ³/₄ Black Angus with a white hair coat color and dark skin. The remaining ¹/₄ is a combination of Black Angus, Charolais, Brahman, and/or Simmental. They are a product of a breeding program led by F.M. Peacock, a genetics professor at the University of Florida, who focused on productivity traits of purebred and crossbred Black Angus, Charolais, and Brahman. This was followed by additional studies that introduced genetics from Simmental and Black Brangus. In 2002, a small but significant number of white calves were recognized in the herd. Over the following 12 years, researchers at the center were able to identify and increase the number of individual cows that were responsible for passing the white color trait to their offspring, which eventually formed the foundation herd for the creation of the Ona White Angus. Due to the unknown genetic makeup of individual cows, the majority of the offspring are white, but it is not uncommon for offspring to be non-white.



Annual UF/IFAS Range Cattle REC Braford Heifers Offer-

On November 9, two UF/IFAS Range Cattle REC Braford Heifers were sold at the Adams Ranch Annual Auction in Ft. Pierce to Mr. Clayton Charles with Midnight Cattle. They were purchased for \$2,700. That will be matched by Adams Ranch so that \$5,400 will be added to the Adams Ranch Endowment. This endowment was established by Adams Ranch in 2015 to support teaching, research, and extension activities at the Center associated with natural resources on southern Florida grazinglands.

Thank you Mr. Clayton Charles and thank you Adams Ranch for your continued support!

Each year at the sale 2 heifers are offered from the UF/IFAS Range Cattle Research and Education Center Braford herd which are offspring of a herd of 250 head that was generously donated to the Center in the 1980s by the Adams family.



Hurricane Idalia -

On August 29/30, Hurricane Idalia passed by traveling north in the Gulf of Mexico making landfall in the Big Bend region of Florida with sustained winds of 125 mph and a devastating storm surge. We had a few limbs down and received 4.7" of rainfall during the event.

Rainfall totals at a few of the other FAWN locations were: 7.2" in Arcadia, 0.73" in Sebring, 1.8" in Balm, 1.35" in Alachua, 3.84" in Live Oak, and 1.72" in Quincy.

Program Highlight -

Three UF IFAS Range Cattle Research and Education Center faculty took part in the South Florida Beef Forage Program's (SFBFP) program 'Seasonal Resilience: Management Strategies to Maximize Winter Performance' on 9/14 in Okeechobee.

Dr. Joao Vendramini spoke on forage stockpiling and hay during the morning portion of the program at Pearce Cattle Company while Hannah Baker and Dr. Philipe Moriel spoke in the afternoon at the Okeechobee Civic Center. Dr. Moriel spoke about early weaning and Hannah spoke on the economic impacts of supplementation. A PDF handout of Hannah's presentation is available for viewing or download on her webpage under 'presentations.'



Hannah Baker presenting.



Dr. Joao Vendramini presenting.



Faculty News

RCREC Animal Science Group Attend Meeting in Wyoming -

Dr. Philipe Moriel, Vinicius Izquierdo, and Dr. Cassio Brauner participated in the Applied Reproductive Strategies in Beef Cattle program on 9/6/23 and 9/7/23 in Cheyenne, WY.

Dr. Moriel's presentation was titled 'Management strategies to enhance fertility and longevity in replacement heifers' and Vinicius Izquierdo's poster was titled 'Bakery waste supplementation to late gestating beef cows successfully impacted offspring postnatal performance.'



Vinicius, Dr. Moriel, and Dr. Brauner.

Visiting Professors Assist RCREC Programs -

Dr. Raul Ortega Perez and Dr. Isabel Miralles Mellado (with University of Almeria, Spain) spent the month of August here with Dr. Maria Silveira



Dr. Raul Ortega Perez and Dr. Isabel Miralles

and Dr. Joao Vendramini assisting with soil DNA assessments. This technique consists of identification of soil microbes and is a powerful tool to examine the impact of land management on the diversity and structure of the soil microbial community.



Dr. Raul and Dr. Silveira's RCREC group.



Dr. Raul and Dr. Priscila Cruz (Research Assistant in Silveira's program) performing soil DNA extractions.

Dr. Joao Vendramini American Society of Agronomy (ASA) Fellow -

In late July ASA announced it's 2023 award recipients. Among them was the UF/IFAS RCREC's very own Dr. Joao Vendarmini, designated an ASA Fellow for his outstanding contributions to agronomy through education, national and international service, and research. This recognition is the highest awarded by ASA.

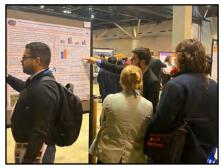
The award ceremony was held on Oct. 30th in St. Louis, Missouri during the ASA-CSSA-SSSA Annual Meeting.



Dr. Joao Vendramini with plaque.



Pictured here with Joao at the award ceremony are Dr. Ray Smith, Texas A&M University, Dr. Maria Silveira, Jane Smith (Ray's Wife), and Sharlot Rouquette.



Master's student, Joao Lazarin, participated in the poster competition at the ASA-CSSA-SSSA Annual Meeting on October 30th. His poster's title was "Refining phosphorus fertilization recommendations for limpograss in south Florida."

Faculty News continued

\$1,405,947 Grant Awarded -

Big news! Dr. Hance Ellington and fellow collaborators have 1 of the 74 projects recently awarded funds by the National Fish and Wildlife Foundation's 2023 America the Beautiful Challenge. They were awarded a \$1,405,947 grant for their project: Working Rangelands Resiliency in the Avon Park Air Force Range Sentinel Landscape.

UF/IFAS, in collaboration with Conservation Florida, Archbold Biological Station, and the Central Florida Regional Planning Council, is launching a program to boost long-term



climate resilience in the Avon Park Air Force Range Sentinel Landscape by enhancing land management on private properties. They want to keep rangelands as rangelands while maximizing the ecosystem services provided by these lands.

1. They are creating a network of private landowners eager to improve land management. Collaborating with landowners and state/federal agencies project experts are developing comprehensive, climate-smart land management plans that include prescribed fire, invasive species control, enhancing endangered species habitat, and improving water quality. Landowners get direct financial, technical, and organizational support for efficient plan implementation.

2. The DeLuca Preserve is the testing ground where they will measure the economic and environmental impacts of climate-smart land management through focused research and monitoring. Programs include wildlife and plant diversity, Florida grasshopper sparrow

recovery, forage quality and cattle productivity, and sustainable water management. This will guide land management plans on private properties and help them quantify the value of ecosystem services.

Lead PI, Dr. Hance Ellington with UF/ IFAS RCREC. Co-PIs, Dr. Brent Sellers and Dr. Golmar Golmohammadi with UF/IFAS RCREC; Dr. Carolina Baruzzi with UF/IFAS NFREC; Dr. Stephen Enloe with the UF Center for Aquatic and Invasive Plants; Cyndi Fernandez with Conservation Florida; Joe Guthrie and Dr. Angela Trigali with Archbold Biological Station; Sheila McNamara with Central Florida Regional Planning Council; and Buck MacLaughlin with the Avon Park Air Force Range.

View official announcement.

View full list of project awards.

For more information contact Dr. Hance Ellington at <u>e.ellington@ufl.edu</u> or 863-374-7049.

Staff News

UF Postdoctoral Appreciation Week - Sept. 18 - 23

This year we honored our 2 postdoctoral staff members Dr. Abmael Cardoso and Dr. Temnotfo Mncube. We are so grateful for all they do!



Dr. Abmael Cardoso works in biogeochemistry in the Dr. Maria Silveira's lab with long-term agricultural research (LTAR) projects. Originally from Brazil, Dr. Cardoso received his BS in agronomy, MS in soil science and a PhD in animal science. He is investigating the effects of prescribed fire management on the biogeochemical cycles of C and N in the natural rangelands of Florida. Specifically, he is conducting studies measuring variations in native plant biomass, nutritive value of forage plants in the rangeland, carbon stocking in the soil and vegetation,

and greenhouse gas emissions.

Dr. Temnotfo 'Tenzy' Mncube is

from Eswatini where she obtained her BS and MS degrees. She graduated with a PhD in agronomy specializing in weed science from Stellenbosch University and is currently working in Dr. Brent Sellers rangeland and pasture weed science lab. She is working on multiple projects that aim to increase pasture and rangeland productivity through the management of weeds such as smutgrass and dogfennel using different integrated weed management methods that incorporate herbicide application.

Student News

Congratulations Graduate!

Dr. Leandro Otavio Vieira-Filho graduated this past summer with his PhD in soil and water science. He accepted a position as a Postdoctoral Fellow in Forage Systems with Clemson University at the Edisto Research and Education Center. This position is part of a recently awarded Climate-Smart USDA-NRCS grant in Dr. Liliane Silva's Lab. He is responsible for managing and coordinating measurements to determine greenhouse gas emissions and soil nutrient accumulation in beef cattle operations in response to implemented climate-smart practices.



Improvements for RCREC Student -

Through a joint effort to improve graduate student experience and welfare at RECs, the REC Graduate Student Welfare Committee, along with UF deans Dr. Elaine Turner, Dean of College of Agricultural and Life Sciences, and Dr. Robert Gilbert, Dean for Research, Higher Education Emergency Relief grant funds were secured to provide athletic and exercise equipment and Tytocare home telehealth equipment to ease access to health care while students are at RECs. Our student are very grateful. A big THANK YOU to everyone who had a hand in bringing these much appreciated items to our REC!

In the new exercise room, pictured from left to right are students Joao Lazarin, Julian Bernal, Jennifer Sarchapone, Seyed Mostafa, Andre Miranda, Nikitha Kovvuri, and Vinicius Izquierdo.



Upcoming Events

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

Cattle Management for Women

– Dec. 7, 9:00 AM - 3:00 PM Location: UF/IFAS Range Cattle REC, Ona Register by 11/30 to attend. General registration fee is \$40. Lunch and educational materials included.

Ona Agronomy Program Highlight with Dr. Joao Vendramini

– Dec. 12, 11:00 - 11:45 AM "Stockpiled Forage for Cow-Calf Production in Florida"

Ona Highlight with guest presenter Dr. Stephen Enloe

– Jan. 9, 11:00 - 11:45 AM "Climbing Fern & Brazilian Pepper Management"

Ona Highlight with featuring the South Florida Beef Forage Program (SFBFP)

– Feb. 13, 11:00 - 11:45 AM "Educational Opportunities and Resourses Provided by the SFBFP"

Two UF/IFAS RCREC students took part in 2023 GCPSA Inter-REC Poster & Flash Talk Competition. Both are advised by Dr. Maria Silveira.

- Nikitha Reddy Kovvuri, PhD Student – "Evaluating phosphorus dynamics in subtropical systems"

- Julian David Avila Bernal, MS Student – "Climate smart agricultural practices impact on soil and grassland ecosystem functions"



CONNECT WITH US

Ona Highlight Webinar Recordings

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:

Aug. 2023

'Florida Cattlemen's Association Highlight' with President, Pat Durden and President Elect, Dale Carlton

Sept. 2023

'Brazilian beef cattle industry environmental and nutritional challenges and opportunities' with guest speaker, Dr. Cassio Brauner

Oct. 2023

'Grazing of cover crops and annual forages to improve soil health in dryland cropping systems' with guest speaker Dr. Augustine Obour

Nov. 2023

'Ona Long-Term Agroecosystem Research (LTAR) Highlight' with Dr. Maria Silveira

Florida Cattle Market Update - published in the Florida Cattleman & Livestock Journal:

View these on our website at:_ https://rcrec-ona.ifas.ufl.edu/about/ directory/staff/hannah-baker/

This is a new monthly feature provided by Hannah Baker, a state specialized extension agent II in beef and forage economics. At the link above see 'Florida Cattle Market Update'

Ona Reports - published in the Florida Cattleman & Livestock Journal:

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

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Aug. 2023

'Groundwater Study in South Florida' - by Dr. Golmar Golmohammadi

Sept. 2023 'Barriers to Effective Wild Pig Management on Florida's Grazinglands' - by Dr. Hance Ellington

Oct. 2023

'Fatty acid supplementation and pregnancy rates of beef cows' - by Dr. Philipe Moriel

Nov. 2023 'Can Climate-Smart Ag Live Up to Its Expectations?' - by Dr. Maria Silveria

dropdown menu. Questions? Contact Hannah at <u>h.baker@ufl.edu</u> or 863-374-7051.

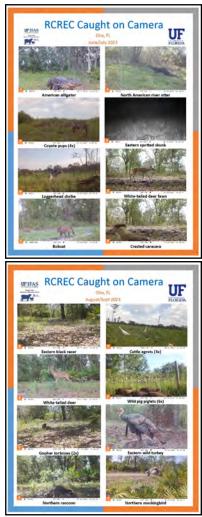
Aug. 2023 - What should producers be expecting this fall?

Sept. 2023 - How can producers use the female cattle market to plan?

Oct. 2023 - The 2023 fall season will involve feeding hay but will not involve herd expansion.

Caught on Camera:

This feature is assembled by the UF/IFAS RCREC Rangeland Wildlife Ecology Program with images collected from RCREC game cameras mounted throughout the property near Ona, FL. View online, <u>click here.</u>





University of Florida News - with Abby Weingarten https://news.ufl.edu/

The Wall Street Journal ranked UF as the number 1 public institution in the country in its "2024 Best Colleges in the U.S." report.

- Sept. 6, 2023

The Wall Street Journal, which has published U.S. college rankings since 2016, has improved its methodology this year by working with research partners College Pulse and Statista to focus on the importance of real-world student outcomes. The new formula emphasizes how much an institution improves its students' chances of graduating on time, as well as how much it boosts the salaries that students earn after graduation.

"The University of Florida dared to be audacious, and we've succeeded – for our students and for our state," said UF Board of Trustees Chair Mori Hosseini. "I've always believed that giving our students an amazing education and sending them out into the world with the tools they need to succeed is our No. 1 job. Now we've been recognized as being No. 1 for doing that. The people of the great state of Florida...

click here to read the full news article.

With "an audacious vision" for the future, Ben Sasse is inaugurated as the 13th president of the University of Florida

- Nov. 3, 2023

"Today is not about me; it's far more interesting than that. Today is about the University of Florida's last decade and next decade. It's about Gator Nation's unbelievable accomplishments of late and where we're headed next."

With this poignant statement, Ben Sasse was officially inaugurated on Thursday as the 13th president of the University of Florida.

The elements of his inaugural address — as well as the entire investiture celebration at 3 p.m. in the historic University Auditorium — included themes of service, academic excellence, and higher education's role in the digital revolution. Hundreds of members of the UF community and the public, dressed in blue and orange attire, attended the ceremony and the reception afterward... <u>click here</u> to read the full news article.

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

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

<u>Dr. Golmar Golmohammadi</u>, <u>g.golmohammadi@ufl.edu</u> - Hydrology and Water Quality

Hannah Baker, h.baker@ufl.edu - Beef Cattle and Forage Economics

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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. Our goal is to keep you up to date on RCREC happenings, publications, research, faculty & student news, upcoming events and bring you beneficial information you can use in your beef cattle or forage operation.

CONTACT INFORMATION

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