

UF/IFAS

# Range Cattle Research & Education Center NEWS

3401 Experiment Station • Ona, FL 33865  
863.735.1314 • rcrec-ona.ifas.ufl.edu

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### John Arthington - UF/IFAS Range Cattle Research and Education Center (RCREC) Animal Scientist & Center Director

Andrea Dunlap with John Arthington

UF/IFAS Range Cattle Research and Education Center's faculty programs are diverse, yet interconnected, all pertaining in one way or another to beef cattle and the lands they graze. Situated on 2,840 acres in rural SW Hardee County, the Center houses 7 faculty members specializing in beef cattle nutrition and management, pasture and rangeland weed management, rangeland ecosystems and wildlife, soil and water sciences, forage management, and livestock and forage economics. These programs and the Center's day to day operations are maintained with the support of 20 staff members. Staff members work closely with faculty and students to ensure their programs run smoothly and are successful in meeting research and extension goals which align closely to the needs of Florida beef cattle producers and grazinglands managers. Leading the way is John Arthington, Professor of Animal Science and Center Director of the UF/IFAS Range Cattle REC (RCREC) in Ona.

Originally from Indiana, John received a BS in Animal Science from Purdue and a MS in Nutrition/Physiology, and a PhD in Nutritional Immunology from Kansas State University. He came onboard at the RCREC in 1998 as an Assistant Professor specializing in beef cattle nutrition and management. In 2004 John achieved Associate Professor and in 2005 Center Director, fol-



lowed by Professor in 2009. Presently as Professor and Center Director, his appointment is 50% Administration, 25% Extension, and 25% Research.

John is a member of several professional organizations including the American Society of Animal Science, American Dairy Science Association, American Registry of Professional Animal Scientists, Florida Cattlemen's Association, and the National Cattlemen's Beef Association. In a recent interview, I asked, "What are your present leadership roles?" (John) "I have served as President of the American Society of Animal Science's Southern Section and 4 years on the Executive Board. In addition, I have served as associated editor for the Journal of Animal Science (American Society of Animal Science) and the editorial board for the Professional Animal Scientist Journal (American Registry of Professional Animal Sci-

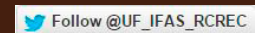
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entists)."

**Research**

As a Professor of Animal Science, John's research focuses on improving cow/calf productivity through optimization of forage resources and stress management. Some current projects include work on the mineral status of the pre-weaned calf, use of alternative methods of mineral supplementation, and the evaluation of visits to mineral feeders.

(Andrea) "What is your greatest mineral supplementation concern for Florida producers?" (John) "Selenium nutrition of grazing beef cows and calves in Florida is the major mineral nutrition problem. Our forages are very low in selenium and milk is a poor source of selenium. If cows consume an adequate amount of properly formulated mineral supplement, selenium nutrition is adequate. However, in the winter months, cows do not normally crave salt, resulting in an inadequate intake of free-choice mineral supplement. Further, calves consume small amounts of mineral prior to weaning. Low or deficient selenium status is common for weaned calves. Management systems aimed at improving both cow and calf selenium status will result in healthier and more productive animals."

(Andrea) "In a nut shell, why is selenium an important mineral for cattle?" (John) "It is the most limiting trace mineral for grazing cattle in Florida and much of the world. It is important for immunity and growth. For cows, deficiency results in weak calves, poor vaccine response, and reduced immune competence. For cows, deficiency results in retained placentas, high milk somatic cell counts, and reduced immune competence."

**Extension**

Since 2012, the Center has offered Continuing Education and Round Table Discussion sessions for bovine veterinary practitioners. These meetings provide a beneficial exchange

of knowledge so that practitioners learn about the latest RCREC research efforts and findings and the RCREC faculty learn about the current herd health challenges veterinarians are seeing. John feels these programs have been well received. His goal is to continue offering these Extension education events twice annually.

(Andrea) "Are there any new extension programs on the horizon?" (John) "We have been investigating opportunities to highlight our extension programs by hosting events away from the Center on producer's ranches. As a response to inputs from our Center's advisory council, this effort will coincide with timely topics impacting our beef producers, such as pasture fertilization, weed control, or winter supplementation. We anticipate these new events to be conducted twice annually in coordination with local county extension agents."

**As Center Director**

(Andrea) "What changes or improvements do you foresee for the Center in the near future?" (John) "The RCREC has been virtually reconstructed over the past 10 years. With new laboratories, graduate residences, and office and conferences spaces, we are now positioned

with the modern facilities required to support faculty programs far into the future. New initiatives at the Center will focus on the development of endowments and fellowships which will provide reliable, long-term, financial support of our faculty research and extension programs."

**International Activities**

(Andrea) "Tell me a little about the international collaborations you are involved with in South Africa." (John) "Over 75% of South Africa's electricity is generated from coal-powered plants. These power stations are primarily located near large coal deposits in the north and east portions of the country. The Tranavall Highveld region of Mpumalanga province is one of these regions and is characterized by large commercial agricultural enterprises dispersed among multiple coal-powered electricity-producing plants. Sulfur dioxide emissions from these plants result in dilute acid precipitation which increases plant sulfur accumulation and reduces soil pH. These ecosystem alterations have been implicated in both plant and livestock trace mineral imbalances. We are currently engaged in a 2-year study investigating plant and animal sulfur, copper, and selenium concentrations on farms impacted or non-im-



UF/IFAS Range Cattle REC faculty (Oct. 2016). L to R, back row: Joao Vendramini, John Arthington, Raoul Boughton, Philippe Moriel. front row: Maria Silveira, Chris Prevatt, & Brent Sellers



pacted by these coal-powered plants. The information derived from these efforts will assist farmers in better managing the mineral nutrition of their grazing cowherds. This information can be extended to farmers in the US that are also impacted by high-sulfur diets from certain by-product feedstuffs such as dried distillers grains, sugarcane molasses, and brewers grains."

**Students**

John feels very strongly about student training and has mentored many graduate students and exchange visitors over the years. Present graduate students are Juliana Ranches and Jose Arce-Cordero, both are PhD

students. Juliana's work is primarily focused on identifying differences in Selenium and Copper requirements and metabolism among Brahman (*Bos indicus*) and Angus (*Bos taurus*) cattle, while Jose's research is focused on the effects of long term Zinc deficiency in beef cattle. In March, Aline Domingues Moreira will arrive at Ona to begin a six month internship with John and she will be assisting Juliana and Jose with their research.

**Learn More**

On January 20 John provided an Animal Science Program highlight with Juliana Ranches. The presentation entitled, "Factors impacting the free-choice intake of salt-based mineral supplements" is available for viewing along with the PowerPoint at: [http://](http://rcrec-ona.ifas.ufl.edu/vclassroom/video/vcmedia.shtml#webinars)

[rcrec-ona.ifas.ufl.edu/vclassroom/video/vcmedia.shtml#webinars](http://rcrec-ona.ifas.ufl.edu/vclassroom/video/vcmedia.shtml#webinars)

Visit his faculty page on the RCREC website for more information about his work: <http://rcrec-ona.ifas.ufl.edu>

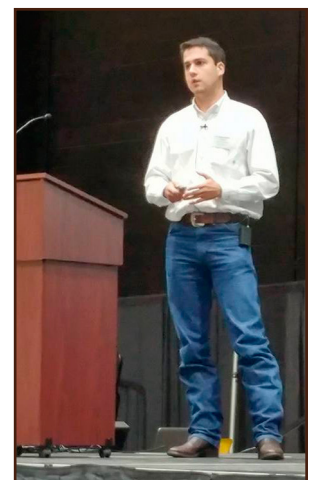
John resides in Punta Gorda with his wife Victoria and daughters Ann Marie and Emma.



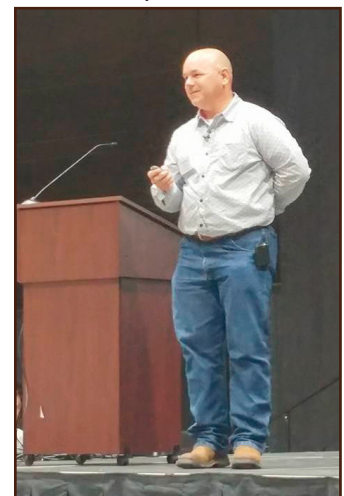
**The Florida Cattlemen's Institute and Allied Trade Show**

If you were unable to attend the Florida Cattlemen's Institute and Allied Trade Show held January 19th in Arcadia, or if you would just like to review any of the topics, a recording of each of the presentations is available for you at the following links:

- Welcome & Opening Comments by Ned Waters, FCA President  
<https://mediasite.video.ufl.edu/Mediasite/Play/86aa18006a7b4f5383b257d-f790bb1ae1d>
- Brenda Rodgers, South Central Florida Extension District Director, "UF/IFAS Update"  
<https://mediasite.video.ufl.edu/Mediasite/Play/76531cdf8b5746fab90a9523d-163edf91d>
- Duane Lenz, "CattleFax Protein Market Situation & Outlook"  
<https://mediasite.video.ufl.edu/Mediasite/Play/a136c07ce74447e08bf7efeb-5d37e0fc1d>
- Matt Hersom, "The Veterinary Feed Directive: What it means for your operation."  
<https://mediasite.video.ufl.edu/Mediasite/Play/027ccbda3bfd495cb646a91b-2f4e576f1d>
- Philippe Moriel, "Energy and Protein Supplementation."  
<https://mediasite.video.ufl.edu/Mediasite/Play/66d0d1d180fb-49c495ea3d2bb241f2d91d>
- Brent Sellers, "Weed Control in Pastures"  
<https://mediasite.video.ufl.edu/Mediasite/Play/ad3b4508e211472fb315a-fe2365ace7a1d>

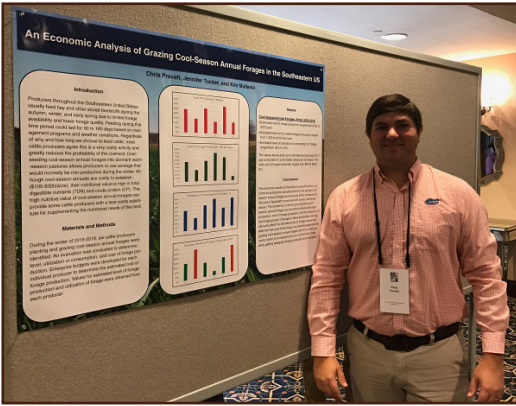


Philippe Moriel



Brent Sellers

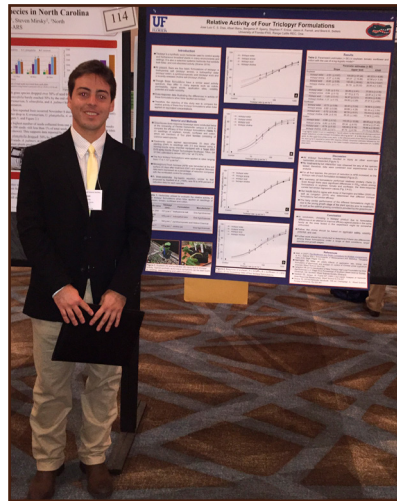
## Faculty and Student News



Chris Prevatt with poster “Beef Cattle and Forage Producers planting and grazing Cool-Season Annual Forages in Florida” at American Forage and Grassland Council Annual Conference in Roanoke, VA on Jan. 24.



Chris Prevatt and Joao Vendramini, spoke at the American Association of Animal Science-Southern Section meeting in Franklin, TN on Feb. 7.



PhD student José Luiz Carvalho de Souza Dias at the Southern Weed Science Society Meeting in Birmingham, AL on Jan. 25.

## Ona Program Highlights

The schedule for the Ona Program Highlights is below. These special presentations will begin at 11:00 a.m., last about 40 minutes, and may be attended in person or by webinar. Those interested in attending should pre-register, see ‘Upcoming Events’ on this page for details.

April 11	Brent Sellers (Weed Science)
May 9	Philippe Moriel (Animal Science)
Sept. 12	Joao Vendramini (Agronomy)
Oct. 10	Maria Silveira (Soil & Water Sciences)
Nov. 14	Chris Prevatt (Livestock & Forage Economics)
Dec. 12	Raoul Boughton (Wildlife, Ecology, & Conservation)

Past Ona Report Webinars (recordings and slides) are available for viewing at anytime on our website: <http://rcrec-ona.ifas.ufl.edu/> look under **Extension** in the left navigation panel and then visit the “Virtual Classroom.”

### Recent Additions:

- Animal Science Program highlight with John Arthington and Juliana Ranches, “Factors impacting the free-choice intake of salt-based mineral supplements”

## Upcoming Events

**2017 Small Ruminant Production Conference**  
 - March 24, 2017, 8:00 a.m. - 4:00 p.m.  
 Osceola County Ext. Office, Kissimmee  
 For more information and to register call: 863-773-2164 or go to: [ufsmallruminant.eventbrite.com](http://ufsmallruminant.eventbrite.com)

**Florida Heartland Pasture Weed Workshop**  
 - April 4, 2017, 5:30 - 8:00 p.m.  
 UF/IFAS Range Cattle REC, Grazinglands Education Building. For more information and to register call: 863-773-2164 Or visit: <http://goo.gl/ewojdc>

**Ona Weed Science Program Highlight with Brent Sellers** - April 11, 2017 at 11:00 a.m.  
 Grazinglands Education Building, Ona  
 Register for the webinar: <https://attendee.gotowebinar.com/register/5821490038107962369> or to attend in person: 863-735-1314

**66th Annual Florida Beef Cattle Short Course**  
 - May 3 - 5, 2017  
 Straughn IFAS Ext. Professional Development Center, Gainesville  
 For more info go to: [http://animal.ifas.ufl.edu/beef\\_extension/bcsc/2017/short.shtml](http://animal.ifas.ufl.edu/beef_extension/bcsc/2017/short.shtml)

**Ona Animal Science Program Highlight with Philippe Moriel** - May 9, 2017 at 11:00 a.m.  
 Grazinglands Education Building, Ona  
 Register for the webinar: <https://attendee.gotowebinar.com/register/4438788195961906178> or to attend in person: 863-735-1314



Eastern Screech Owl, *Megascops asio*. This Eastern Screech Owl was spotted on Jan. 11 by Clay Newman. The red/rufous phenotype is rare.



## Recent Publications

Abe, D. G., B. A. Sellers, J. A. Ferrell, R. G. Leon, and D. C. Odero. 2016. Bahiagrass tolerance to aminocyclopyrachlor in Florida. *Weed Technol.* 30:943-948.

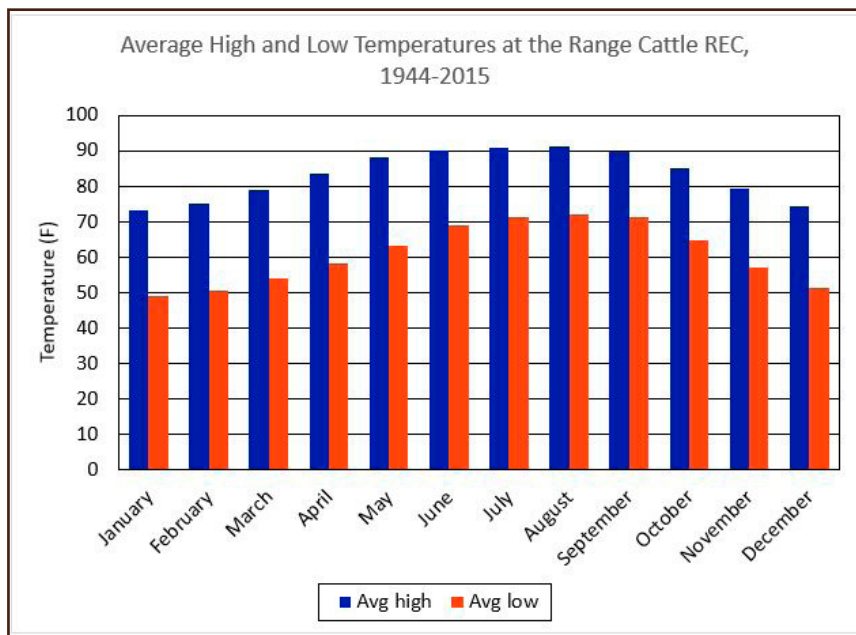
Ranches, J., J.M.B. Vendramini, and J.D. Arthington. 2017. Effects of selenium biofortification of hayfields on measures of selenium status in cows and calves consuming these forages. *Journal of Animal Science* 95:120-128.

### The 2016 Climatological Report is now available

This report includes weather data collected at the Center from the Florida Automated Weather Network (FAWN) station. Knowledge of past weather conditions can be a valuable tool as weather conditions strongly influence agricultural operations from planting through harvesting. Knowing about annual rainfall and temperature cycles, along with their extremes, can help producers determine optimum times to prepare and plant seedbeds, fertilize pastures, apply herbicides, control water, and supplement cattle on pasture or range. Weather conditions also influence forage seed germination, growth and development, palatability, and nutritive value.

The total rainfall for 2016 was 43.60" which is 9.09" less than the RCREC's 75-year average of 52.69."

To view this report visit our website: <http://rcrec-ona.ifas.ufl.edu/publications/index.shtml#range> or give us a call to receive a copy by mail.



## Other News

### Summer RCREC Youth Event in the Works with UF CALS

Do you know someone who is interested in going to the University of Florida College of Agricultural and Life Sciences (UF CALS) as a freshman or transfer student? If so, let them know to save the date and plan to attend the UF CALS Prospective Student Workshop & Expo at the UF/IFAS Range Cattle REC on Thursday, June 29. This program is for high school juniors and seniors and community college students who would like to attend UF CALS. The goal of this program is to promote UF CALS and provide students with an understanding of the enrollment process and prerequisites. Students will learn from CALS representatives about college majors and their entry requirements, distance education options, the importance of having a plan, and more. Watch for the schedule and registration information to be announced this spring!

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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

UF/IFAS Range Cattle Research and Education Center  
3401 Experiment Station, Ona, FL 33865  
Phone: 863-735-1314  
Fax: 863-735-1930  
E-Mail: [ona@ifas.ufl.edu](mailto:ona@ifas.ufl.edu)  
Website: <http://rcrec-ona.ifas.ufl.edu>  
Newsletter Contact: Andrea Dunlap



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