

UF/IFAS

# Range Cattle Research & Education Center NEWS

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### The UF/IFAS Range Cattle Research and Education Center (RCREC) Agronomy Program

Andrea Dunlap with Joao Vendramini



The Agronomy Program at the UF/IFAS Range Cattle REC is led by Joao Vendramini, an associate professor specializing in forage management. Joao (Joe), who is originally from Brazil, acquired his BS (Agronomy) and MS (Forage Management) from the University of Sao Paulo and his PhD (Agronomy) from the University of Florida. Prior to joining the UF Agronomy Department in Ona as an assistant professor in August 2006, Joao was a Forage Specialist at Texas A&M University. In 2012 he achieved associate professor. Joao's appointment is 60% Research and 40% Extension.

Joao is a member of several professional organizations including the Crop Science Society of America, Agronomy Society of America, Animal Sciences Society of America, and American Registry of Professional Animal Sciences.

During his 11 years with UF, Joao has received several awards:

2010 American Forage and Grassland Council Merit Award – Each year, the American Forage and Grassland Council recognize individuals who have made superior contributions in some phase of forage and grassland agriculture.

2011 Florida Cattlemen's Association Researcher of the Year – The objective of this award is to recognize researchers that have made significant contributions to the beef cattle industry in Florida.

2011 Florida Association of County Agriculture Agents Outstanding Specialist – Individuals that collaborated and contributed with County Extension Agents in Florida.

2014 Outstanding Crop Science Journal Associate Editor

#### Research

In a recent interview, I asked Joao about his present research and findings. He said, "There are three current research areas that are of major importance for grazinglands managers in the State of Florida. 1) Identification of limpgrass cultivars with superior performance in low-input systems. This research expands the knowledge on new limpgrass cultivars, Gibtuck and Kenhy, released

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by UF/IFAS in 2014. 2) Adaptation of pinto peanut (perennial peanut propagated by seed) in South Florida. After three years of research, we concluded that pinto peanut is a perennial legume in South Florida that is tolerant to low-fertility and moderate poorly drained soils. In addition, establishing pinto peanut with bahiagrass is the best management practice to have a productive stand of pinto peanut, and 3) Potassium (K) and nitrogen effects on bahiagrass and bermudagrass. We concluded that tissue K concentrations are dependent on the availability of other nutrients and should not be used as a single determinant of K status in the plant."

### Extension

"Working with producers is the most rewarding part of my job," says Joao, "and it is part of my extension work. The example below illustrates what I would consider a successful history of my program."

"In 2006, we had a grazing school and a citrus producer said he would like to start a cattle operation and asked me for advice on what forage species to plant. We talked and he decided to plant Jiggs bermudagrass. The Range Cattle REC provided 100 square bales of plant material and he established 5 acres. In 2016, he called me and asked me if I could come to his property to give him some advice on his pastures. He had 600 acres of Jiggs, which originated from the initial 5 acres that he planted, and 400 cows. He stated that he really enjoys cattle production and feels the forage choice was one of the most important decisions that he made in his cattle business."

Forage plant material is available each summer. For more information view the flyer: [http://rcrec-ona.ifas.ufl.edu/publications/RCREC\\_PastureGrassBrochure\\_032017.pdf](http://rcrec-ona.ifas.ufl.edu/publications/RCREC_PastureGrassBrochure_032017.pdf) or call 863-735-1314.

In 2006, the Forage Extension Laboratory at Ona reopened under Joao's direction. The lab specializes in the



*Joao Marcelo Dalmazo Sanchez, Pedro Afonso Mamede Campos, Dr. Hiran M. Siqueira da Silva, and Dr. Makoto Kaneko.*

analysis of warm-season forages (bahiagrass, bermudagrass, stargrass, and limpograss) providing crude protein and total digestible nutrient (TDN) results. Joao says, "The forage Extension Laboratory, in association with livestock agents, provides technical information and educational material for producers to achieve their forage nutritive value goals." Since opening, the lab has analyzed approximately 6,600 samples; processing 700 of those in 2016. For information on submitting samples, visit: <http://rcrec-ona.ifas.ufl.edu/agronomy/forage-extension-laboratory.shtml>. Forage training videos are also available online at: <http://rcrec-ona.ifas.ufl.edu/agronomy/index.shtml>. Regarding the importance of forage testing, Joao said, "We can only improve what is measured and forage testing is the only practice to measure forage nutritive value."

Joao's program is supported by biological scientist, Hiran M Siqueira da Silva. Hiran assists Joao with his research projects, student supervision, and maintains the day-to-day operations of the Forage Extension Laboratory.

### International Activities

Joao feels international activities are a very important part of a faculty program working in a land grant university. Every year he teaches a graduate forage course

in a different country and collaborates with research projects in tropical and subtropical areas of the world. Currently, he has collaborations in Costa Rica, Brazil, Australia, and Japan.

### Students

Student training is very important to Joao, who has advised 5 graduate students and 18 exchange visitors in his 11 years at Ona. Presently he is advising one PhD student, Joao Marcelo Dalmazo Sanchez and is hosting two exchange visitors, Pedro Afonso Mamede Campos (intern) and Dr. Makoto Kaneko (research scholar).

### Learn More

Visit Joao's faculty or program page on the RCREC website for more information: <http://rcrec-ona.ifas.ufl.edu>



*Joao resides in Wauchula with his wife Maria Silveira and their twin daughters.*

## Record Low Rainfall? It Has Actually Been Drier

Brent Sellers

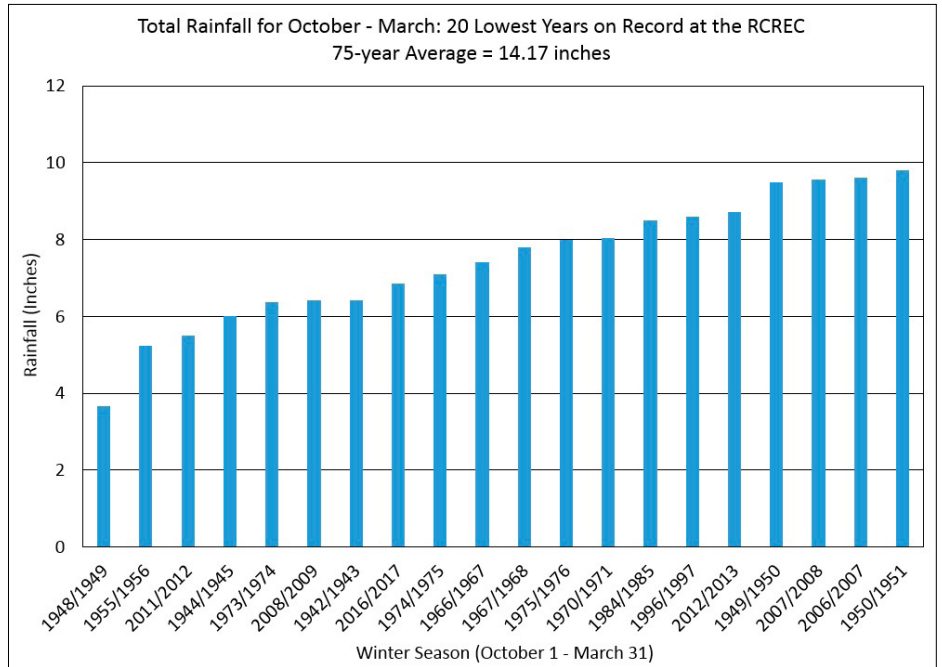
We have collected rainfall records at the RCREC since 1942 soon after the center opened. Recently, we have had questions surrounding whether or not we have had record low rainfall due to our excessively dry conditions in central and south Florida. While no one would argue that we are dry with the recent burning bans throughout much of the state, we have not set any rainfall records at the RCREC compared to the past 75 years.

If we look at the total rainfall that was recorded from October 1, 2016 through March 31, 2017, we were currently in the 8th driest "winter" season since 1942-1943 (Figure 1). If we look only at January 1 through March 31, 2017, things look a bit better since it was the 17th driest period in our records (Figure 2).

We have had limited rainfall during April at the center this year. Once we included the April 2017 rainfall data into the analysis of our rainfall records, the records look a little different. We are currently in the 3rd driest "winter" season since 1942-1943 (Figure 3). The 2nd and 3rd driest "winter" seasons differ by only 0.01 inches. January through April rainfall data indicate that we are currently in the 12th driest period on record (Figure 4).

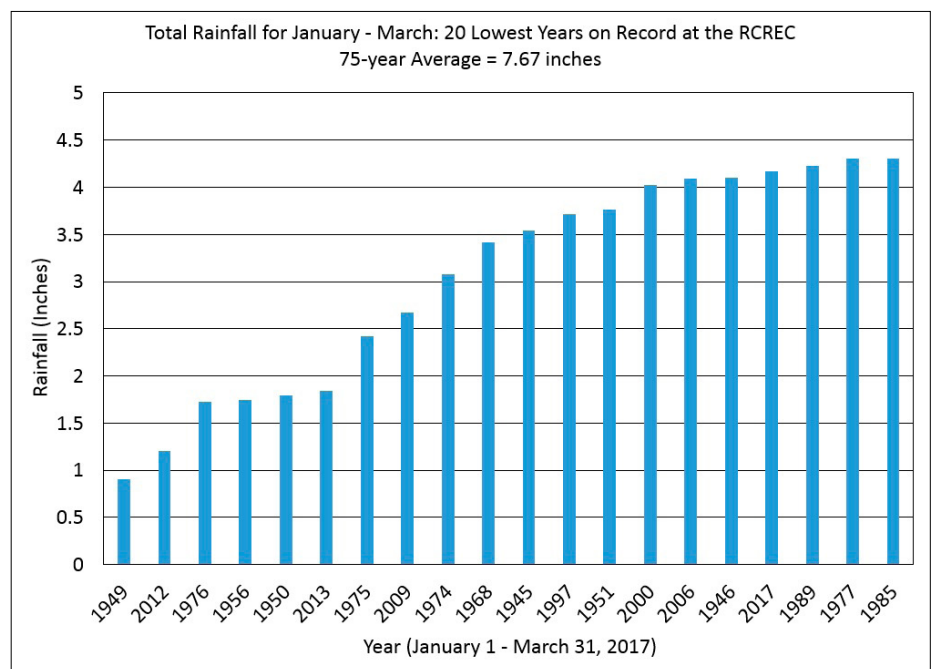
Our records indicate that our driest times of the year are from October through May, with average rainfall below 2 inches in November and December, making summer rainfall extremely important to help carry us through the dry season.

Figure 1



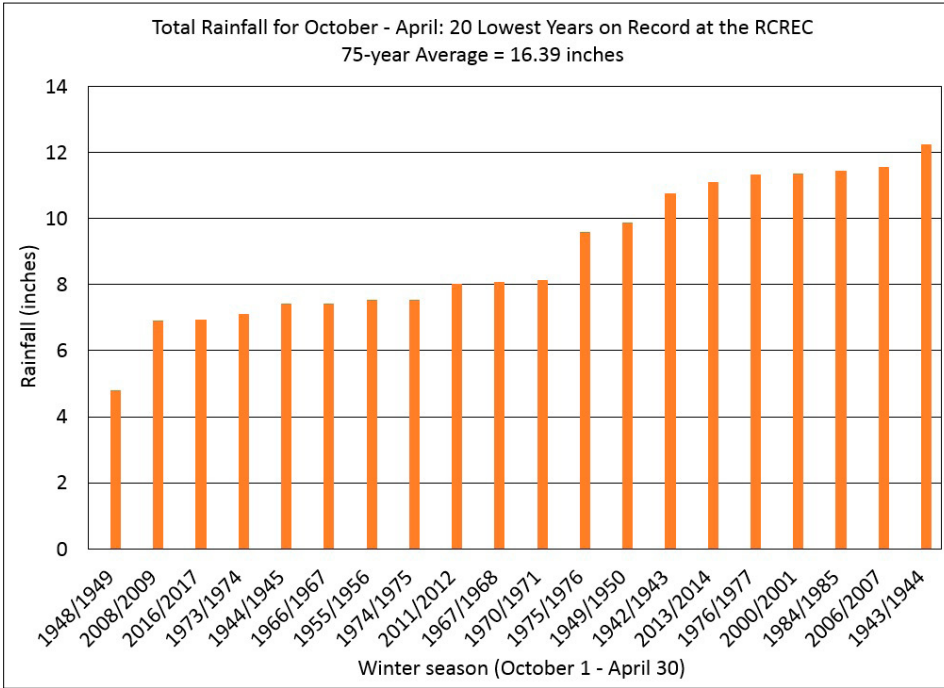
Peace River, view looking south from SR 64 in Zolfo Springs, 5/17/17.

Figure 2



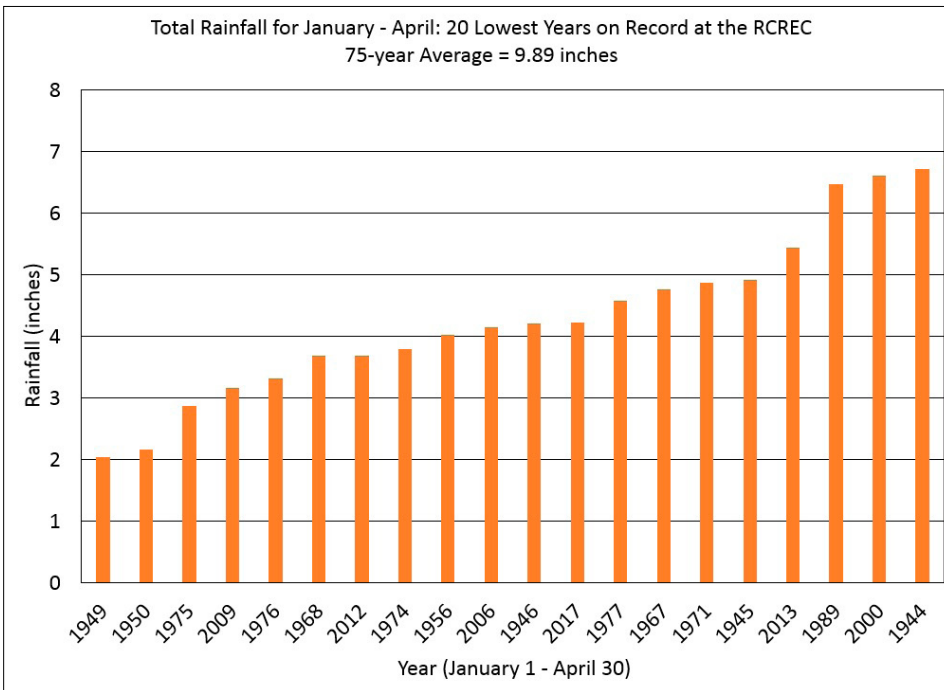
**Record Low Rainfall? It Has Actually Been Drier** *continued...*

Figure 3



Getting a new fence up in a normally wet area along Goose Pond Road . In photo, Ryan Nevling and Tom Fussell.

Figure 4



Watchout for alligators looking for water! With the canal dry, these alligators were visitors to the RCREC lawn irrigation for a few days, before moving on.

## Faculty News

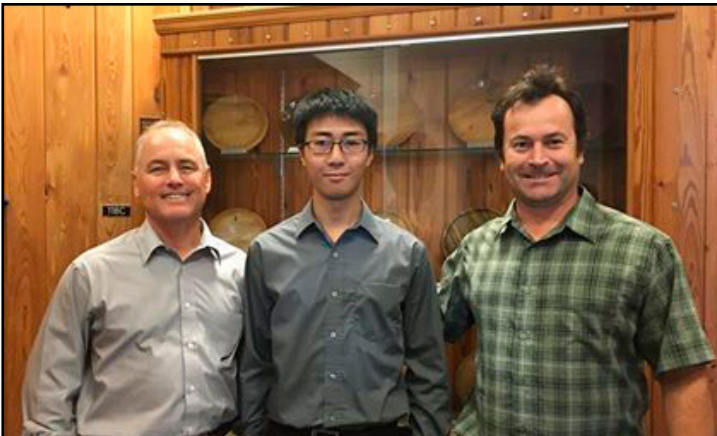


Maria Silveira and Brent Sellers were recently awarded Term Professorships. This UF "Term Professorship Award" recognizes faculty excellence in recent contributions along with potential for future accomplishment. The term of this professorship is 2017-2020.



On 5/16, at the 10th Annual Florida Agricultural Experiment Station Research Awards, Maria received the 2017 UF/IFAS High Impact Research Publication Award for her paper, "Effect of land-use conversion on ecosystem C stock and distribution in subtropical grazing lands" published in the journal *Plant and Soil*.

## Student News



Marty Main, Ke Zhang and Raoul Boughton after Ke successfully defended his thesis in February 2017.

Ke Zhang graduated and completed his thesis, "Coyote (*Canis latrans*) Spatial Ecology and Interaction with Cattle (*Bos taurus*) in the Sub-tropical Rangelands of Florida" in February 2017. He is currently working on completing a manuscript from his thesis and searching for a PhD program. Ke is planning to apply for a PhD program in the U.S. to continue studying spatial ecology or related research.



On March 6, 2017, Jose Luiz C. S. Dias was awarded outstanding graduate student at the Annual Florida Weed Science Society Meeting. Jose is advised by Dr. Brent Sellers.



WEC MS student Samantha Baraoidan (WEC BS '14) received this year's Courtney A. Tye Memorial Graduate Student Scholarship from the Florida Chapter of The Wildlife Society at their Spring Meeting in Orlando. This annual scholarship of \$3,000 is conferred annually by the Chapter in memory of WEC MS student, Courtney Tye. Sam is advised by Dr. Raoul Boughton.

## Upcoming Events

### **UF CALS Prospective Student Workshop & Expo**

- June 29, 2017, 9:00 a.m. - 2:00 p.m.

Range Cattle REC, Ona

For more information and to register call:

863-735-1314 ext. 204 or go to:

<https://rcrec-ufcals-2017.eventbrite.com>

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. Students will learn from CALS representatives about college majors and their entry requirements, distance education options, the importance of having a plan, and more. See the [flyer](#) include with this newsletter.

### **Perennial Peanut Field Day - June 30, 2017**

9:00 - 11:00 a.m.

Pasture off SR 64 near Zolfo Springs.

To register call 863-735-1314 or go to:

<http://rcrec-ppfd.eventbrite.com>

### **Ona Agronomy Program Highlight with Joao Vendramini - Sept. 12, 2017 at 11:00 a.m.**

Grazinglands Education Building, Ona

Registration information coming this summer.



Alligator in the RCREC landscaping outside the front office on 4/12. Enjoying the dampness from the irrigation.

## Recent Publications

Caramalac, L. S., A. S. Neto, P. G. M. Martins, P. Moriel, J. Ranches, H. J. Fernandes, and J. D. Arthington. 2017. Effects of hydroxy sources of copper, zinc, and manganese on measures of supplement intake, mineral status, and pre- and post-weaning performance of beef calves. *J. Anim. Sci.* 95:1739-1750.

Liu, K., L.E. Sollenberger, M.L. Silveira, J.M.B. Vendramini, and Y.C. Newman. 2017. Nutrient pools in bermudagrass swards fertilized at different nitrogen levels. *Crop Science* 57:525-533

Moriel, P., J. M. B. Vendramini, J. D. Arthington, A. D. Aguiar, and G. Caputti. 2017. Effects of crude protein level and degradability of limited creep-feeding supplements on performance of beef cow-calf pairs grazing limpopgrass pastures. *Livestock Science* DOI: 10.1016/j.livsci.2017.03.020

Martins, P. G. M., P. Moriel, and J. D. Arthington. 2017. Effects of repeated freezing and thawing, and different storage temperature on plasma concentrations of haptoglobin and ceruloplasmin from beef steers. *Journal of Veterinary Diagnostic Investigation* DOI: 10.1177/1040638717712756

Reyes-Cabrera, J., R.G. Leon, J.E. Erickson, M.L. Silveira, D.L., Rowland, and K.T. Morgan. 2017. Biochar changes shoot growth and root distribution of soybean during early vegetative stages. *Crop Science* 57:454-461

Yarborough, J.K., J.M.B. Vendramini, M.L. Silveira, L.E. Sollenberger, R.G. Leon, J.M.D. Sanchez, F.C. Leite de Oliveira, F.A. Kuhawara, V. Gomes, U. Cecato, and C.V. Soares Filho. 2017. Impact of potassium and nitrogen fertilization on bahiagrass herbage accumulation and nutrient concentration. *Agronomy Journal* 109:1099-1105

Xu, S., M.L. Silveira, K.S. Inglett, L.E. Sollenberger, and S. Gerber. 2017. Soil microbial community responses to long-term land use intensification in subtropical grazing lands. *Geoderma* 293:73-91

## Videos and Slides Available

### Recent Additions:

- Weed Science Program Highlight with Brent Sellers, 4/11
- Animal Science Program Highlight with Philippe Moriel, 5/9
- 'Post-weaning nutrition and puberty induction protocol for beef heifers in Florida,' Philippe Moriel, 5/18

View these presentations and others on the RCREC website, go to: <http://rcrec-ona.ifas.ufl.edu/> look under **Extension** in the left navigation panel and then visit the "Virtual Classroom."



**UF/IFAS RCREC SMM 5K Team, 5/5/17**  
*Hiran da Silva, Jose Luiz Dias, Brent Sellers, Hunter Sellers, Matheus Piccolo, Maria Silveira, Melissa Vendramini, Andrea Dunlap, Shyleah Dunlap, and Julia Vendramini. Both Brent and Jose came in 2nd in their age groups and Jose was the fastest for our team, coming in 39th out of 283 runners.*

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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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