

UF/IFAS

Range Cattle Research & Education Center NEWS

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fall 2017

IN THIS ISSUE

The UF/IFAS Range Cattle Research and Education Center (RCREC) Weed Science Program

Andrea Dunlap with Brent Sellers



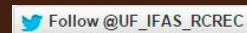
Brent Sellers is a professor and the associate center director at the University of Florida/IFAS Range Cattle Research and Education Center. Brent specializes in dealing with troublesome weeds, specifically pasture and rangeland weed management. In a recent interview I asked Brent about his early years growing up in Indiana, his education, and professional career.

When asked about his early years, Brent said, "I grew up in Bourbon, a small town in northern Indiana and am the youngest of four. My family grew corn on approximately 500 acres to feed a farrow to finish swine operation. At peak production we had approximately 3,000 feeder pigs. We lived approximately ¼ mile from my paternal grandparents, who had a small dairy farm when I was young, and I barely remember the dairy in operation, but I do remember asking my

dad why we couldn't have retained the cattle and sold the pigs. We also had 8,500 laying hens. When I was young, I spent quite a bit of time helping my mom gather eggs and sort them into 30 dozen cases in the cooler until they were picked up by a semi. At age 9 or 10, I started driving small tractors and eventually some of our larger tractors by the time I was 11. I helped prepare ground for planting every spring, and began applying anhydrous ammonia when I was 13, and sometimes planted corn when I was in my upper teens. I spent many summers cultivating corn (which hardly anyone does anymore as we have gone to more reduced tillage operations). When we were not working on the crops, we were working in the pig barns, which entailed castration, clipping teeth and tails, ear notching, giving shots, and, of course, feeding. I attended a small high school where I was involved in several activities including marching band, choir, musicals (I was the Lion in the Wizard of Oz during my senior year), basketball, and tennis. I graduated with a class of 62. I mowed a lot of yards during the summer as well. I remember most of my summers involved getting up, eating, working, eating dinner, and then eating supper sometime after the sun went down. Every once in a while we would venture off on family excursions, but we were never gone for long as my dad didn't like to "work harder to leave and work even

Weed Science Program	1
Construction Update	3
Faculty & Staff News	4
Student News	5
Connect With Us: podcasts, video recordings, webinars & Upcoming Events	6
Recent Publications	7

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harder to catch back up" when we returned."

After high school, Brent obtained his BS in Biological Sciences and MS in Weed Science at Purdue University (1995, 1999) and his PhD in Weed Science from the University of Missouri (2003). After college and prior to Ona, Brent worked as a post-doctoral associate at the University of Missouri for his PhD advisor. "I essentially ran the weed science field program from April, 2003 through December, 2004." Brent said, "Our research trials were conducted in corn and soybean, and was at the forefront of some of the glyphosate resistance that was beginning to be observed in row crops in the Midwest."

Brent's program began at Ona in December 2004. When he first visited the Center, for his interview, it had been just 10 days since the passing of Hurricane Charley (8/13/04) – the Center was still operating on generator power. Brent said, "The mess here was amazing. I wish I could have seen the Center prior to the hurricane." Since being hired as an assistant professor, Brent has been promoted to associate professor in 2011, then associate professor and associate center director in 2014, followed by professor in July of this year. When asked what his role as associate center director entails, Brent said, "I assist Dr. Arthington in leadership of faculty and staff. I have enjoyed this role as it has required me to work more closely with some of the staff than I otherwise would have while solely working on my program objectives. I also provide feedback to Dr. Arthington on working relationships at the center and how they could possibly be improved."

A member of several professional societies, Brent has served in numerous leadership roles. Presently, he is a member of the Weed Science Society of America serving on the Extension Committee, the Federal Noxious, and Invasive Weed Committee, and the Standardized Plant Names Subcom-

mittee. As a member of the Southern Weed Science Society Brent is on the Foundation Board of Trustees. He is also an active member of the Florida Weed Science Society, Florida Cattlemen's Association, and the American Society of Agronomy.

During his 13 years with UF, Brent has received many awards, including:

- 2014 Sadler Distinguished Extension Professional and Enhancement Award
- 2012 Outstanding Weed Scientist, Florida Weed Science Society
- 2011 Florida Association of County Agricultural Agents Best Publication Award (Team)
- 2011 Florida Association of County Agricultural Agents Best Newsletter Award, Team Category
- 2010 Florida Cattlemen's Association Researcher of the Year Award
- 2010 Florida Association of County Agricultural Agents Extension Specialist of the Year Award.
- 2010 UF/IFAS Extension Dallas Townsend Extension Professional Enhancement Award.
- 2009 Communicator Award for Education Package – Team
- 2009 USDA SARE/NACAA Excellence in Livestock Production Award (Team)
- 2009 USDA SARE/NACAA Excellence in 4-H & Youth Programming Award (Team).

Research

When asked about current research, Brent said, "We continue to work on broomsedge and smutgrass management through two grants funded through the Florida Cattlemen Enhancement Board. Broomsedge management is turning out to be much more difficult than I originally anticipated, but I believe we have some data that indicates increasing fertility does help to some extent, but I don't think it will solve the problem. We have shown that wiping broomsedge in opposite directions using a 10% v/v glyphosate solution is effective, but needs to be done at least two years in a row. As for smutgrass management, we continue to learn a lot about the use of Velpar (hexazinone), including how rainfall impacts activity

and long-term control. We are also currently looking at various rates of glyphosate and Velpar applied through the wiper.

Other projects that we are working on include bermudagrass tolerance to glyphosate to help control grass weeds like vaseygrass, guineagrass, and bahiagrass. Bermudagrass is fairly tolerant to 16 and 32 oz/acre of glyphosate as long as it is applied within 14 days after cutting.

Recent completed work includes rhizoma and pinto perennial peanut tolerance to herbicides. We have found that established rhizoma peanut is quite tolerant to glyphosate, and this has resulted in a supplemental label for GlyStar Plus to be used as a broadcast treatment for weed control in rhizoma peanut. Rhizoma peanut is also fairly tolerant to triclopyr, and we are still working on getting a supplemental label for this herbicide to help control weeds like blackberry briars and juvenile tropical soda apple."

Extension

Extension is the application of scientific research and new knowledge to agricultural practices through education. The Center has an extension asset in the onsite forage and weed demonstration area which is also known as the forage and weed nursery. It was established in 2006. When I asked Brent about the area he said, "The forage and weed nursery contains 205 species. Of these 205 species, there are 50 forages, and 155 weed species, with 7 of the 155 weeds being commonly found aquatic weeds. This nursery represents forage species that are utilized on both improved pastures and native rangeland. The purpose of the area is to increase the awareness of ranchers on particular topics including forage quality, pest susceptibility, fertility, livestock stocking rates, plant poisoning, and other important factors related to grazing management. The weed component of the nursery serves as an identifica-

tion resource for ranchers and ranchette owners. Ranchers and ranchette owners who attend educational events or simply stop in at the forage and weed nursery will be able to learn various forage and weed species. Upon further examination, they will be able to learn which forage is best suited for their given situation and what weeds can be expected in their pasture. After learning which forage is best suited for their situation, they can find additional information at the Range Cattle REC concerning proper management and fertility, which can increase the competitiveness of the forage against many of the weed species in Florida. Cultural inputs, such as these, may help growers avoid herbicide applications, which will help them reduce production costs and potentially decrease potential environmental risks associated with herbicides. The poisonous plants located in the forage and weed nursery also give growers an idea of how plant pests can reduce both human and animal welfare."

"We are currently working on revamping the weed garden. We have had a lot of cross-plot contamination, and have lost several species during the past couple of years. We hope to have everything replaced by 2018."

In regards to other extension endeavors, Brent said, "I am working with two colleagues on collecting plant images for a pasture weed identification reference book. We expect this will take at least 12 more months before it is completed. I also plan to work one on one with a few county extension agents to help solve local county issues as well as state-wide issues related to weed management."

When asked about attending meetings (local, state, national, and international), Brent said, "We attend the Southern Weed Science Society annual meetings that are located at various locations throughout the Southeast to give presentations to our

peers in weed science. I was scheduled to go to Prague last year for the International Weed Science Congress, but I got sick prior to the meeting and couldn't go. My poster made it for the meeting, however, and it was displayed. I also have been to Tennessee to give presentations on pasture weed management to herbicide distributors from across the southeast. We also attend the Florida Weed Science Society Annual meetings in Haines City every year at the FFA leadership center. I also support our local FFA chapter by providing weed identification lectures for various crop judging activities."

International Activities

In February, 2018, Brent and Jose Luiz Dias, one of his graduate students, will travel to Australia to meet with several researchers and cattlemen to talk about issues with smutgrass management. This is part of an internal grant funded through the Dean of Research to foster international relationships and activities.

Students

Student mentoring is an important part of Brent's program. He said, "I really enjoy my work with graduate



José Luiz Dias and Courtney Darling

students. Not only do they learn basic weed science skills from me, but I also learn from them. I think the most rewarding thing for me, as an advisor, is seeing them excel in graduate school, but most importantly, after they leave my program." Brent has advised 2 PhD students (one current) and 6 MS students (one current). Those presently under his guidance are PhD student, José Luiz Carvalho de Souza Dias and MS student, Courtney Darling. Jose's dissertation topic is *Implementation of Integrated management practices to manage smutgrass (Sporobolus indicus) populations in pastures*, while Courtney's thesis topic is *Tolerance of Bermudagrass and weedy grasses to herbicides in bermudagrass hayfields*.

Construction Update

A lot has happened since the July demolish of the old lab building. The new labs, student work room, and collaboration room are coming along nicely.



Brent feels the exchange visitor program has been a real asset to his research and extension programs. Over his 13 years, he has hosted 14 interns and exchange visitors. Brent said, "They have allowed me to perform small projects that may not get done as they are typically lower on the scale of importance than others. However, it has been through these smaller projects where bigger ideas have come from for some of our more recent experiments. Also, it provides a way to get to know these students and understand their potential capabilities for graduate work. So far, I have been able to attract two of these individuals back to my program for graduate studies, and will hopefully have a 3rd return next summer."

Program Support

The Weed Science program is supported by Ag Assistant, Joseph Noel. Joseph began working at the Center while still in high school working after class in the fall of 2006 and spring of 2007, and as full time OPS employee beginning in the summer of 2007. He came on full-time in 2011. When asked about his role and the value his efforts add to the program, Brent said, "He assists me by maintaining

equipment, establishing research trials, and supervising students. He has built many things in my program that I would have had to hire out to get done, including fabricating a sprayer, and various accessories to perform certain research tasks. Since he is also good at running equipment, he has helped my program become more self-supportive, which helps reduce assistance from the farm crew for my program activities."

In Closing

Brent's final remarks, "To be honest, I didn't see myself staying at Ona when I first arrived in 2004 as I saw it as a stepping stone for "bigger" things. Once I got to know several of our



Brent resides in Bowling Green with his wife Mary Shannon and son, Hunter.

clientele as well as people in Hardee County, I realized that I was happy here. Over the years my acquaintances have turned into friendships that will last way beyond my career. Lastly, I would like to thank all of my colleagues and clientele that have been part of my research and extension programs through research trials and field days over the past 13 years. It has certainly been the backbone of my success."

Learn More

Visit Brent's page on the RCREC website at <http://rcrec-ona.ifas.ufl.edu/> to learn more about his work. Contact him at sellersb@ufl.edu or 863-735-1314 ext. 207.



Joseph Noel

Faculty News



John Arthington is taking on a new role at UF in addition to his responsibilities as Center Director at Ona. Senior Vice President, Jack Payne has asked John to serve as an industry relations liaison between IFAS and our stakeholders involved in production agriculture. It is not an exit from the

Range Cattle REC. John will still run Ona, but over the coming year, Brent Sellers, Maria Silveira, and Joao Vendramini will oversee most of Ona's day-to-day operations. During this time, John will reside in Gainesville with his wife, Victoria, who is completing her law degree at UF's Levin College of Law. You are welcome to reach out to him anytime at 941-661-8034 or jarth@ufl.edu.

Staff News



In October, Tom Fussell was chosen for this year's UF/IFAS Range Cattle REC Superior Accomplishment Award. He was selected for his outstanding work ethic, positivity, and for his innovative fencing techniques which have improved corner brace construction - increasing the spike size of cross-supports in corner braces to extend fence life. Tom has now been nominated by the Center

for the UF/IFAS division level award in the support services category. Winners will be announced around Christmas - we wish him the best. Tom is an Agricultural Assistant II who supports the Center's land and cattle operations assisting herdsman, Austin Bateman and farm manager, Dennis Kalich. Tom's day to day tasks vary, but could include building/repairing fence or cowpens, working cattle, tagging calves, making hay, etc. Tom began his career at the Center in an OPS role with the farm crew in 2010 and transitioned to his present position in 2014.

Student News

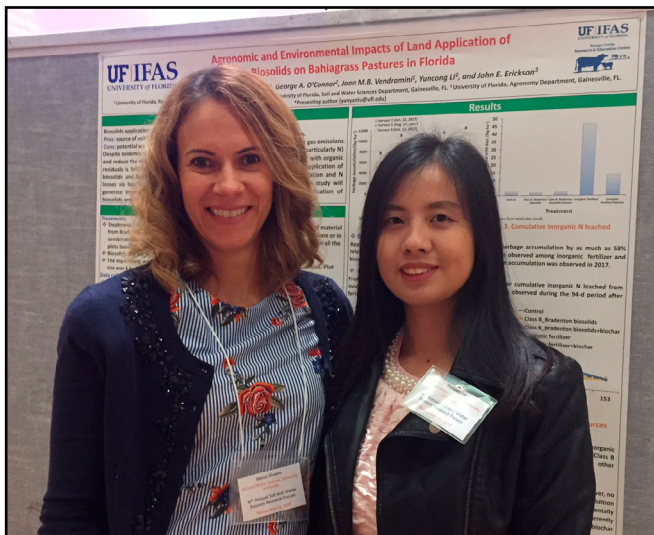


Ona faculty, grad students and visiting scholars attended the ASA-CSSA-SSSA annual meeting in Tampa Oct. 22-25. Those attending made several oral and poster presentations. The theme of this meeting was focused on “Managing global resources for a secure future.” Those attending: Jhone Sousa, Joao Sanchez, Dr. Maria Silveira, Dr. Joao Vendramini, Dr. Makoto Kaneko, Dr. Hiran da Silva and Dr. Susana Mello.



University of Florida Graduate Student Gleise Medeiros da Silva was selected as the Masters Student candidate from the Department of Animal Science and nominated for the 2017 IFAS Awards of Excellence for Graduate Research. During her master’s studies she was advised by Philippe Moriel. Her research evaluated the effects of reducing the frequency of supplementation and timing of vaccination on growth and immune response of preconditioning beef calves. Gleise is continuing her studies at the University of Florida as a PhD student and graduate research assistant with Nicolas DiLorenzo at the North Florida Research and Education Center. A Ph.D. student was also selected and both will represent the Animal Sciences Department and be nominated for the best thesis and dissertation in IFAS for 2017.

At the 18th Annual Soil and Water Sciences Research Forum in Gainesville on Nov. 13, Yanyan Lu presented a poster reporting the results from the Florida Cattlemen Association funded project “Agronomic and environmental impacts of land application of biosolids on bahiagrass pastures in Florida” for which she received the poster award. Those attending with Soil and Water Scientist Dr. Maira Silveira were Ph.D. student Yanyan Lu and exchange visitors intern Bianca Sekiya and Dr. Susana Mello.



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Joao with Jim Handley

Listen or download the latest **Joe What? Podcasts:**

- Erik Jacobsen, Vice President and General Manager of Deseret Cattle & Citrus with Deseret Ranches of Florida.

- Todd Clemons, the President of Okeechobee Livestock Market which has been owned and operated by the Clemons family for over 50 years.

- Jim Handley, the Executive Vice President of the Florida Cattlemen's Association (FCA). Listen in as Jim shares about the FCA's establishment, structure, and purpose, and the efforts of quarterly meetings and committees.

These monthly podcast can be found at:
<http://ufifascrec.podbean.com>.

Florida Cattle Enhancement Program

In-Service Training - Videos (recorded 9/26/17)

View these recordings and a PDF of the slides at:
<http://rcrec-ona.ifas.ufl.edu/vclassroom/video/vcmedia.shtml>

Identification of Superior Limpograss Under Low-Input Systems
 – Joao Vendramini

Broomsedge and Smutgrass Management in Bahiagrass Pastures
 – Brent Sellers

Agronomic and Environmental Impacts of Biosolids Application to Bahiagrass Pastures – Maria Silveira

Tracking and Identifying Causes of Calf Loss on Florida Ranches
 – Raoul Boughton

BCS Management and Supplementation Strategies
 – Philippe Moriel

Upcoming Presentations



Register now for the December Ona Program Highlight featuring the Rangeland Wildlife and Ecosystem Program with Raoul Boughton presenting. The presentation will begin at 11:00 a.m. and last about 30 minutes. You may attend in person (call to register: 863-735-1314) or by webinar: <https://register.gotowebinar.com/register/76523091011556867>

Past webinars (recordings and slides) are available 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."

Upcoming Events

Rangeland Wildlife and Ecosystem Program Highlight with Raoul Boughton

- December 12, 11:00 a.m.

Webinar, register at: <https://register.gotowebinar.com/register/76523091011556867>

Nutrition for beef females (see flyer attached)

- January 11, 6:00 p.m.

Okeechobee Livestock Market

Register with Lauren at 863-801-5518

- January 23, 6:00 p.m.

Hendry Co. Ext. Office

Register with Lindsey at 863-674-4092

- February 22, 6:00 p.m.

Polk Co. Ext. Office

Register with Bridget at 863-588-2697

Florida Cattlemen's Institute and Allied Trade Show

- January 25, 8:00 a.m.

Turner Agri-Civic Center

2250 NE Roan Str. - Arcadia

call Lindsey to register at 863-674-4092

South Florida Ranch Horse Seminar

- January 26, 9:00 a.m. - 4:00 p.m.

Buck Daniel Ranch, 3224 SW 57th Dr., Okeechobee

Info call Lauren at 863-763-6469

Register at: <https://soflhorseseminar2018.eventbrite.com>

UF/IFAS Range Cattle REC Field Day

- April 5, 2018



Field Day April 2015

University of Florida Nationally Ranked No. 9 among public schools & No. 42 overall

“University of Florida is a public institution that was founded in 1853. It has a total undergraduate enrollment of 34,554, its setting is suburban, and the campus size is 2,000 acres. It utilizes a semester-based academic calendar. University of Florida’s ranking in the 2018 edition of Best Colleges is National Universities, 42.”

Read the full article at U.S. News: <https://www.usnews.com/best-colleges/university-of-florida-1535>

“Now the state’s highest-ranked university, UF last year was ranked No. 14 among publics and No. 50 overall.”

Read the full article at UF News: *UF first in Florida to crack U.S. News list of top 10 best public universities*
<http://news.ufl.edu/articles/2017/09/uf-first-in-florida-to-crack-us-news-list-of-top-10-best-public-universities.php>

Recent Publications

Borges, B.M.M.N., Silveira, M.L., Cardoso, S.S., Moline, E.F.V., Coutinho, A.M. Neto, Lucas, F.T., Muraoka, T., and Coutinho, E.L.M. 2017. Growth, herbage accumulation, and nutritive value of ‘Tifton 85’ bermudagrass as affected by nitrogen fertilization strategies. *Crop Science* 57:3333-3342.

Burdick Sanchez, N.C., J.A. Carroll, J.D. Arthington, P.A. Lancaster. 2017. Exposure to lipopolysaccharide in utero alters the postnatal metabolic response in heifers. *J. Anim. Sci.* doi:10.2527/jas2016.0885

Carroll, J.A., N.C. Burdick Sanchez, J.D. Arthington, C.D. Nelson, A.L. Benjamin, F.T. Korkmaz, D.E. Kerr, and P.A. Lancaster. 2017. In utero exposure to LPS alters the postnatal acute-phase response in beef heifers. *Innate Immunity*. 23:97-108.

Kohmann, M.M., L.E. Sollenberger, J.M.B. Vendramini, M.L. Silveira, and S.B. Moreno. 2017. Harvest stubble height and K fertilization affect performance of Jiggs and ‘Tifton 85’ bermudagrasses. *Crop Science*. 57:3352-3359.

Lastinger, C.A., J.L.C.S. Dias, B.A. Sellers, J.A. Ferrell, M.L. Silveira, and J.M.B. Vendramini. 2017. Limpograss (*Hemarthria altissima*) Tolerance to Hexazinone. *Weed Technology* 31:682-688

Martins, P. G. M., P. Moriel, and J. D. Arthington. 2017. Effects of storage temperature and repeated freeze–thaw cycles on stability of bovine plasma concentrations of haptoglobin and ceruloplasmin. *Journal of Veterinary Diagnostic Investigation*. 29(5):738-740.

Rana, N., A.V. Varanasi, and B.A. Sellers. 2017. Effect of Environmental Factors on Weed Germination and Management. Book Chapter 3: Biology, Physiology and Molecular biology of weeds, author: Mithila Jugulam

Silveira, M.L., J.M.B. Vendramini, H.M.S. da Silva, B.M.M. N. Borges, V.S. Ribeirinho, J.J.J. Lacerda, M.V. Azenha, P.R.A. Viegas, and A.D. Aguiar. 2017. Potassium and phosphorus fertilization impacts on bermudagrass and limpograss herbage accumulation, nutritive value, and persistence. *Crop Science*. 57:2881-2890

Yarborough, J.K., J.M.B. Vendramini, M.L. Silveira, L.E. Sollenberger, R.G. Leon, B. Sellers, J.M.D. Sanchez, F. Leite de Oliveira, F. Kuhawara, V. Gomes, U. Cecato, and C. V. Soares Filho. Potassium and nitrogen fertilization effects on Jiggs bermudagrass herbage accumulation, root-rhizome mass, and tissue nutrient concentration. *Crop, Forage and Turfgrass Management* doi:10.2134/cftm2017.04.0029.

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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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Newsletter Contact: Andrea Dunlap





NUTRITION FOR BEEF FEMALES

Thursday, January 11, 2018, 6PM

Okeechobee Livestock Market, 1055 US 98, Okeechobee, FL

RSVP Contact: UF/IFAS Okeechobee County Ext. Office
Lauren Butler at (863) 801-5518 or l.butler@ufl.edu

Tuesday, January 23, 2018, 6PM

1085 Pratt Blvs., LaBelle, FL

RSVP Contact: UF/IFAS Hendry County Extension Office
Lindsey Wiggins (863) 674-4092 or horse1@ufl.edu

Thursday, February 22, 2018, 6PM

1702 S Holland Pkwy., Bartow, FL

RSVP Contact: UF/IFAS Polk County Extension Office
Bridget Stice at (863) 588-2697 or bccarlis@ufl.edu

Supplementation
strategies for beef
females

&

Body Condition
Score training

Dr. Philippe Moriel

Range Cattle REC, Ona

Forage
management for
optimal cow
performance

Dr. Joao Vendramini

Range Cattle REC, Ona

Dinner Included

Be Sure to RSVP no
later than one week
before each event

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