

UF/IFAS

Range Cattle Research & Education Center NEWS

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

by Bayleigh Pierstorff & Andrea Dunlap

Recently, a *Weed Technology* publication (<http://www.wssajournals.org/doi/full/10.1614/WT-D-12-00109.1>), ranked the University of Florida as the number one group in the world for publications pertaining to integrated weed management (IWM). Without the research and extension of the RCREC Weed Science Program many of these publications would not have been possible.

Leading the Weed Science efforts at the Center is Dr. Brent Sellers (below), who began his work here in 2004. Dr. Sellers earned his M.S. in Weed Science from Purdue University and his Ph.D. in Agronomy at the University of Missouri.

He worked as a Research Specialist and a Post Doctoral Fellow with the Agronomy Department at University of Missouri prior to accepting his current position here. Over these 9 years, Dr. Sellers become widely recognized as a top researcher, in 2010 being named “Researcher of the Year” by the Florida Cattlemen’s Association and FACA “Outstanding Specialist”. Most recently Dr. Sellers received the 2012 Outstanding Weed Scientist award from the Florida Weed Science Society.

The backbone of this Program is the evaluation of existing and new herbicides to maximize weed control in pastures and rangeland. Seldom are “new” herbicides

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available for the pasture market – usually it ends up being a new name for a herbicide that is already labeled for pastures. However, in the past few years a new herbicide aminopyralid (Milestone, Grazonnext) has emerged and another like it, aminocyclopyrachlor (ACP), has been under investigation. It is expected that ACP, an experimental compound, will be named and labeled for use in 2013. Meanwhile, the RCREC Weed Science Program continues to investigate its effectiveness on weeds, as well as, forage tolerance. Research has found that ACP is effective on dogfennel at 2 to 3 oz/acre. The same rates provide good initial control of tropical soda apple, but time will tell if ACP has the same residual control observe with aminopyralid products. Favorable results have been seen on several other weed species, but ACP appears to work poorly on blackberry species. In regard to forage tolerance, some minor injury on bahiagrass has been observed, but bahiagrass quickly outgrows the injury; Bermudagrass injury

may be a concern, as it is injured to a greater extent; and its use on limpograss causes greater injury than observed with 2,4-D.

The main purpose of the research program is to supplement the RCREC Weed Science extension program. The extension program consists of field days, county and industry meetings, fact sheets, websites and trade journal articles. The Pasture Weed Day has been a huge success over the past six years, averaging 100 attendees. This event has been a great way for the RCREC to share recent advances in research with chemical and biological weed control, as well as providing information on weed identification, weed biology, soil fertility, and grazing management. The most utilized fact sheet continues to be SS-AGR-08 “Weed Management in Pastures and Rangeland” (<http://edis.ifas.ufl.edu/wg006>), a fact sheet that is updated annually for specific weed control recommendations. Many other fact

sheets are available detailing biology and control methods of several pasture weeds and many of these are updated annually to include the most recent research. Our websites (<http://rcrec-ona.ifas.ufl.edu/weed-science/index.shtml> and <http://weedext.ifas.ufl.edu>) provide quick access to EDIS fact sheets, slide presentations, and other resources available for weed management.

Graduate student training is a vital part of the RCREC Weed Science Program. To date, three students have completed their research programs under the direction of Dr. Brent Sellers:



Mr. Barton Wilder is currently serving as the Agriculture and Natural Resource agent in Alachua County.



Sushila Chaudhari who is a former Master's student and now employed as a graduate research assistant in Horticulture at North Carolina State University. Sushila is also a recent recipient of an Endowment Scholarship through the Southern Weed Science Society.



Dr. Neha Rana completed her doctorate in May 2012. During her last year at UF Dr. Rana was recognized as the “2012 Outstanding Ph.D. Student” by the Florida Weed Science Society. After graduation Dr. Rana worked for a short time as a post-doctoral fellow at the University of Nebraska and recently joined the team at Monsanto as a Herbicide Systems Research Scientist.

The RCREC Weed Science program currently has one Ph.D. student, Ken Johnson and two Master's students, Cody Lastinger and Daniel Abe. Ken is working on a long term Broomsedge management study; Cody, who just entered the program, will likely develop his research project on understanding the role of herbicide timing on Limpograss tolerance; and Daniel is continuing work he began as an intern in 2010 on aminocyclopyrachlor (ACP).



The newest edition to RCREC weed science program is Dr. Sarah Lancaster, an Extension Scientist whose

work will focus on weed control in natural landscapes. Dr. Lancaster earned a B.S. in Agronomy at the University of Missouri, a Master's Degree in Weed Science from North Carolina State University, and a Ph.D. in Agronomy from Texas A&M University. She has studied weed management, pesticide interactions as well as pesticide fate in corn, peanut and cotton production systems. Prior to joining the faculty at RCREC, in April of this year, Dr. Lancaster held a faculty position at Oklahoma State University where she was responsible for coordinating undergraduate education programs in the Plant and Soil Sciences Department.

With the addition of an outstanding new extension faculty like Dr. Sarah Lancaster, continued success of UF students, and Dr. Sellers's ongoing exceptional research and extension efforts, the future of the RCREC Weed Science Program is sure to be a great one. A Program with continued high quality research and extension efforts, helping Florida land managers with research proven methods, products, and management techniques win the war on weeds.

Dr. Rana had this to say about her time at the Range Cattle REC:

The weed science program at the University of Florida prepared me for a career as a Research Scientist. The weed science courses offered at the university provided me with the knowledge-base and I gained the practical experience at the Range Cattle Research and Education Center (RCREC) under the supervision of Dr. Brent Sellers. My training at RCREC was an integral part of evolving me as a researcher, it was there that I got hands-on experience and learned the why and how of weed science. The mentoring I received, the facilities that were provided to me at the RCREC, and the amiable work environment helped me learn and grow through the years of graduate school. In addition to this, the multi-cultural environment I was exposed to at the RCREC helped me enhance my adaptability skills and make new friends from different backgrounds and cultures. I feel that my training at the RCREC has allowed me to establish a strong foundation to face the challenges and obstacles that lie ahead.

Student Spotlight



Sutie Xu is an international PhD. student from China under the supervision of Dr. Maria Silveira. Her work focuses on the investigation of the effects of long

time land use change on ecosystem carbon in subtropical grasslands.

In February at an award ceremony hosted by the Southern branch of the American Society of Agronomy, Sutie placed 3rd in the graduate student soils poster presentation.

Learn more about Sutie:
http://rcrec-ona.ifas.ufl.edu/students/sutie_xu.shtml



Julius Adewopo is a UF Soil and Water Science Ph.D. student under the supervision of Dr. Maria Silveira. Some of his most recent accomplishments include:

- USDA-SARE Graduate Student Grant
- Marilyn Little Altrusa Scholarship
- Soils oral presentation award, American Society of Agronomy Southern Branch Awards.
- Received a travel scholarship to participate in the International Conference on "Soil Systems and Critical Processes Integrating Life Support Functions Across Disciplines" in Switzerland.
- Organizing a special session on soil science research at the upcoming ASA/CSSA/SSSA annual meeting.

Learn more about Julius:
http://rcrec-ona.ifas.ufl.edu/students/julius_adewopo.shtml

UF/IFAS High Impact Research Publications

2012

Obour, A. K., M. L. Silveira, J. M. B. Vendramini, J. Jawitz, G. A. O'Connor and L. E. Sollenberger. 2011. A phosphorus budget for bahiagrass pastures growing on a typical Florida Spodosol. *Agronomy Journal*. 103:611-616.

Silveira, M.L., A. K. Obour, J. M. Vendramini, and L. E. Sollenberger. 2011. Using Tissue Analysis as a Tool to Predict Bahiagrass Phosphorus Fertilization Requirement. *Journal of Plant Nutrition*. 34:14, 2193-2205.

2013

Chaudhari, S., B. A. Sellers, S. V. Rockwood, J. A. Ferrell, G. E. MacDonald and K. E. Kenworthy. 2012. Integrating chemical and cultural practices to control para grass (*Urochloa mutica*). *Journal of Aquatic Plant Management*. 50:39-45.

Chaudhari, S., B. A. Sellers, S. V. Rockwood, J. A. Ferrell, G. E. MacDonald and K. E. Kenworthy. 2012. Nonchemical Methods for Paragrass (*Urochloa mutica*) Control. *Invasive Plant Science and Management*. 5(1):20-26.

Upcoming Events

6th Annual Youth Field Day

June 28

Range Cattle REC, Ona, FL

6th Annual Youth Field Day

Each June our Center hosts a field day specifically structure for students ages 8 – 18. At this event, our 6th Youth Field Day, students will find a new structure which is set up more like an expo than a field day. The event will be open from 8:30 a.m. – 1:30 p.m. for students, parents, other adults to visit various educational booths. Booths will be diverse; ranging from beef cattle judging to protecting wetlands. Many of these booths will conduct educational talks and demonstrations throughout the event. For older students and adults, there will be special lectures/demonstrations at the top of every hour in the stage area, beginning at 9:00 a.m. There will also be a pasture tour running throughout the event, t-shirts to purchase, and lunch to enjoy. The goal of this event is to excite students about agriculture and science, reveal future opportunities in those fields, and foster a love of learning which will promote agriculture and good stewardship in this and future generations.

Range Cattle REC Field Day

October 1

Range Cattle REC, Ona, FL

Please register through Eventbrite at <http://ufcrecyfd2013.eventbrite.com/>. When completing your registration you will have the option to purchase a Youth Field Day T-shirt! T-shirts will be available for pre order during "Early Bird" registration from April 15-June 10. If you miss this limited time offer, a small quantity of t-shirts will be available for purchase the day of the event.

Register

4/15 - 6/10 \$7.50

Credit or debit card or pay by check made payable to "University of Florida" post marked by June 11th.

6/11-6/26 \$10

Credit or debit card or pay by check made payable to "University of Florida" post marked by June 24th. After this date pay at check-in.

6/28 or after \$15

Cash or check made payable to "University of Florida"

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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.

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