

UF/IFAS

Range Cattle Research & Education Center NEWS

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IN THIS ISSUE

What's Next: A New Way to Integrate Cattle and Crops

Chris Prevatt



Chris Prevatt, Beef Cattle and Forage Economics, State Specialized Agent II

The current economic environment of low commodity prices offers few opportunities for agricultural producers. A group of farmers in North Florida and South Georgia have begun searching for new ways to further diversify their cash crop rotations and generate new income streams for their business. One alternative that producers have shown interest in is the evaluation of integrating livestock into cash crop rotations.

During 2018, a project began to evaluate the economics of preconditioning and backgrounding stocker cattle grazing warm-season annual forages in the Southeast. Two producers (Mace Bauer of Bell, FL and Dan Glenn of Osierfield, GA) serve as project advisors. To gain a better

understanding of the economics of integrating cattle on cropland during the warm-season, a simulated economic grazing experiment was developed to evaluate grazing warm-season annual forages as a cash crop alternative over the past fifteen years.

Research data was collected from the University of Florida, Auburn University, and the University of Georgia to evaluate the potential forage yield, animal production, revenue, cost of production, and net returns of stocker cattle grazing warm-season annual forages. In addition, USDA AMS (Agricultural Marketing Service) data was collected from the past fifteen years to calculate the value of animal gain during the summer grazing period. The value of gain used with animal production data from university grazing experiments estimates the revenue that could have been generated. An excel spreadsheet was developed to use the data collected to simulate the annual production and economic outcomes for the past fifteen years.



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Table 1. Estimated Production Summary for Grazing Warm-Season Annual Forages with Stocker Steers in the Southeastern USA.

Forage Planted	Sorghum-Sudangrass/Pearl Millet	Warm-Season Annual Forage Mix*
Seeding Rate, lbs./acre	25	25
Projected Planting Date	1-May	15-May
Level of Nitrogen (N) Applied, Split Applications	100	100
Number of Acres Planted	120	120
Number of Stocker Steers (At Beginning of Grazing Period)**	120	120
Number of Stocker Steers (At End of Grazing Period)	119	119
Death Loss, %	0.8%	0.8%
Stocking Rate, head/acre	1.0	1.0
Begin Grazing Date	20-Jun	1-Jul
End Grazing Date	15-Sep	15-Oct
Number of Grazing Days	87	106
Forage Production, DM lbs./acre	8,000	8,000
Level of Forage Utilization, %	40%	40%
Forage Consumption, DM lbs./acre	3,200	3,200
Forage Quality, Total Digestible Nutrients (TDN)	65%	65%
Forage Quality, Crude Protein (CP)	12%	15%
Animal Gain, total pounds gained	17,500	18,500
Animal Gain, pounds/acre	146	154
Animal Gain, pounds/animal	147	155
Animal Gain, ADG (average daily gain), lbs./head/day	1.69	1.47

*Warm-Season Annual Forage Mix consists of BMR Sorghum-Sudangrass, Pearl Millet, Sorghum-Sudangrass DM, BMR Dwarf Sorghum-Sudangrass, BMR Forage Sorghum, Grain Sorghum, BMR Grazing Corn, Browntop Millet, Sunflower, Safflower, Buckwheat, Okra, Sunn Hemp, Mung Beans, Guar, Cowpeas, and Forage Soybeans.

**Stocker Steers had an average weight of 550 lbs./head at turn-in.

The production variables being evaluated can be seen in Table 1. Please note, that the data included in Table 1 are production expectations from our project advisors.

This cash crop alternative is no-tilled on cropland following a cool-sea-

son annual forage cover crop. It will receive 100 pounds of nitrogen (N) fertilizer in two applications (50 – 50) over 100 grazing days. The stocker steers will begin grazing warm-season annual forages at 550 pounds. Total production costs include the amortization of fencing and water

systems, seed, hired labor, fertilizer, feed, machinery and equipment, interest, general overhead, and land rent. Production costs were adjusted for inflation over the fifteen-year period to help account for changes in input prices. The results from this project will be

available at the 2019 Range Cattle Research and Education Center Field Day on October 24, 2019. The template of the economic summary (Table 2) is available below. Please note, that the data included in Table 2 are the economic expectations from our project advisors.

As this project moves forward,

hopefully we can help producers answer two important questions. Will grazing warm-season annual forages be an economically viable cash crop option? If not, will benefits to yield or reduced production costs for future cash crops make it an economically viable option for cash crop rotations?

For additional information please contact [Chris Prevatt](mailto:prevacg@ufl.edu) at prevacg@ufl.edu.

Table 2. Estimated Economic Summary for Grazing Warm-Season Annual Forages with Stocker Steers in the Southeastern USA.

Forage Planted	Sorghum-Sudangrass/Pearl Millet	Warm-Season Annual Forage Mix*
<i>Value of Gain, \$</i>	\$19,250.00	\$20,350.00
<i>Value of Gain, \$/grazing day</i>	\$221.26	\$191.98
<i>Value of Gain, \$/acre</i>	\$160.42	\$169.58
<i>Value of Gain, \$/head</i>	\$161.76	\$171.01
<i>Value of Gain, \$/lb.</i>	\$1.10	\$1.10
<i>Forage Cost of Gain, \$</i>	\$18,000.00	\$18,000.00
<i>Forage Cost of Gain, \$/grazing day</i>	\$206.90	\$169.81
<i>Forage Cost of Gain, \$/acre</i>	\$150.00	\$150.00
<i>Forage Cost of Gain, \$/head</i>	\$151.26	\$151.26
<i>Forage Cost of Gain, \$/lb.</i>	\$1.03	\$0.97
<i>Net Value of Gain, \$</i>	\$1,250.00	\$2,350.00
<i>Net Value of Gain, \$/grazing day</i>	\$14.37	\$22.17
<i>Net Value of Gain, \$/acre</i>	\$10.42	\$19.58
<i>Net Value of Gain, \$/head</i>	\$10.50	\$19.75
<i>Net Value of Gain, \$/lb.</i>	\$0.07	\$0.13

*Value of Gain estimated at \$1.10/lb.

Connect with us

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



- Mr. Woody Larson of Larson Dairy in Okeechobee. They discussed the history and current situation of dairy production in Florida. (Run time: 19.15 min.)



- Edgar and Conner Davis of Florida Fertilizer Inc. in Wauchula. They discussed fertilizer and the changes they've seen as a business in their 59 years of operation. (Run time: 14.25 min.)



- Flint Johns of Lykes Brothers Inc. They discussed cost management strategies in various areas of beef cattle production. (Run time: 16.49 min.)

These monthly podcasts can be found on:

[Podbean](#) [YouTube](#) [UF/IFAS Range Cattle REC Website](#)

Ona Highlights

Save the date and join us for an upcoming Ona Highlight webinar. These informative presentations are held in the Grazinglands Education Building each month. They begin at 11:00 a.m. and last about 45 minutes. To attend in person, call 863-735-1314 and to attend by webinar, access the registration links online [here](#).

Recent recordings:

"Cow-Calf Management Strategies for the Bottom of the Cattle Price Cycle" - Chris Prevatt, 5/21/2019

"Proposed Changes in Regulations Governing Land Application of Biosolids in Florida" - Maria Silveira, 4/9/19

"Effects of prescribed fire on cattle use and foraging behavior in subtropical grasslands" - Britt Smith, 3/12/2019

Past webinars (video recordings and a PDF of the slides) are available on the RCREC website, in the [Virtual Classroom](#).

Upcoming Events

2nd Annual Nutrition for Beef Females program
- June 6, 6:00 PM

458 US Highway 98 North, Okeechobee. RSVP contact: Lauren Butler at 863-801-5518 or l.butler@ufl.edu. [Click here to view the flyer.](#)

Ona Graduate Student Highlight with José Luiz Carvalho de Souza Dias

- June 11, 11:00 - 11:45 AM

Jose will be presenting, "Implementation of Integrated Management Practices to Manage Giant Smutgrass (*Sporobolus Indicus* var. *Pyramidalis*) in Bahiagrass Pastures."

[Click here to register.](#)

Florida Cattlemen's College

- June 20, 9:00 - 11:00 AM

Presented by: UF/IFAS Range Cattle REC at the Florida Cattlemen's Convention. Room location to be announced. [See the flyer for details.](#)

Smutgrass Management Using the Weed Wiper & Haylage Management Field Day

- June 27, 9:00 AM - 3:30 PM

UF/IFAS Range Cattle REC, Ona. [Click here to view the flyer.](#) To register, [click here.](#)

Ona Agronomy Program Highlight with Joao Vendramini

- July 2, 11:00 - 11:45 AM

Joao will be presenting, "Warm-season forage mixtures for pasture establishment."

[Click here to register.](#)

Ona Highlight with Guest Presenter Jim Handley

- August 13, 11:00 - 11:45 AM

Jim, the executive vice president of the Florida Cattlemen's Association, will provide an activity report on state and federal legislation and other issues. [Click here to register.](#)

Ona Graduate Student Highlight with Juliana Ranches

- Sept. 10, 11:00 - 11:45 AM

Juliana will be presenting, "Differences on Selenium and Copper Metabolism between Brahman (*Bos indicus*) and Angus (*Bos Taurus*) cattle." [Click here to register.](#)

UF/IFAS Range Cattle REC Field Day

- Oct. 24, 8:00 AM - 3:00 PM

Save the date! **Details coming this summer.**

Personal News

Hardee Sr. FFA Livestock Evaluation Team is Headed to Nationals

The Hardee Senior FFA Livestock Evaluation Team competed at the 2019 Florida FFA Association State High School Livestock Evaluation CDE in Gainesville on April 13. The state winning team consisted of Jake Henderson, Kipp Cooper, Hunter Sellers, and Emery Smith, with Mr. Brett Wheeler as their advisor. The team will represent Florida at the National level CDE at the National FFA Convention in Indianapolis in October. Other teams placing in the top 10 include DeLand Sr. FFA, Durant FFA, East River FFA, Lafayette FFA, Chiefland Sr. FFA, Williston FFA, Okeechobee Brahman FFA, Apopka High School FFA, and Sneads. Congratulations to Hardee Sr. FFA on their accomplishment in this very

competitive event and good luck at the national level.

Pictured from Left to right: Jansen Walker, Emery Smith, Jaime Walker, Jake Henderson, Kipp Cooper, Hunter Sellers, Brett Wheeler (Advisor).

Hunter, a senior, is the son of Brent and Mary Shannon Sellers.



SMM 5K Team 2019 - José Luiz Dias places 1st in his age group

On May 3, a team from the Center took part in a local 5K walk or run event to benefit SendMeMissions. Ph.D. Candidate José Luiz Carvalho de Souza Dias came in 14th overall with a time of 22.21 minutes and placed 1st in his age group. Congratulations José!

Those participating were Carolina Brandani, Juliana Ranches, Marcelo Vedovatto, Liz Palmer, Shyleah and Andrea

Dunlap, Vinícius Nunes de Gouvêa, Julie Warren, Jose Luiz Dias, Jaime Eduardo Garzon Alfonso, Hiran Marcelo Siqueira da Silva, and Luciano Fernandes Sousa.



Blog Posts

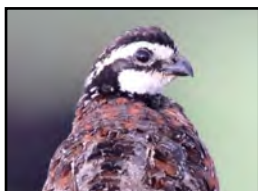


Controlling Smutgrass with the Weed Wiper by Brent Sellers, Professor and Interim Center Director, Pasture and Rangeland Weed Management and José Dias, Ph.D. Graduate Student



Effects of prescribed fire on cattle use and foraging behavior in subtropical grasslands

by Britt Smith, Postdoctoral Research Associate working jointly with Archbold Biological Station and the UF/IFAS Range Cattle REC on the USDA Long Term Agroecosystem Research (LTAR) Project



Quail Field Day – April 26 by Raoul Boughton, Assistant Professor, Rangeland Wildlife and Ecosystems

[Click here](#) to visit our blog page to access this and all past blog posts.

Training Available

Beef Cattle Body Condition Scoring (BCS) Tutorial

What are the body condition scores (BCS) of these cows? How do you determine BCS? Why is it important to know your cattle's BCS?

Take this tutorial (part 1 and 2) and learn how body condition affects fertility and ultimately the profitability of your cow-calf operation. Learn how to properly score cattle and access handy resources to help you score your cattle.

[Click here](#) to take this training (recommended browsers: Google Chrome or Firefox).

The training will take 30 minutes to an hour to complete.



Quail Field Day Held April 26 at Sharp Ranch in Ona

Morning Talks in the Field (click to view)

[Welcome and Information on Sharp Ranch](#)

- Raoul Boughton (UF/IFAS Range Cattle REC), Ken Harrison and Robert King (cattle and land/game managers at the Buzzard Roost, Sharp Ranch in Ona, FL)

[Moring calls and spring cock counts](#)

- Raoul Boughton, Assistant Professor, Wildlife Ecology and Conservation, UF/IFAS RCREC

[Natural Resources Conservation Service \(NRCS\) in the field review process](#)

- Carlos Torres, District Conservationist, Sebring Service Center

[Fire Management and Maintaining Habitat for Bobwhite Quail](#)

- Greg Hagan, FWC, Northern Bobwhite Program Coordinator

[Insight on Bobwhite Quail Chick Survival](#)

- Theron Terhune, Ph.D., Tall Timbers, Game Bird Program Director

[Can you restore a population with pen reared quail?](#)

-Theron Terhune, Ph.D., Tall Timbers, Game Bird Program Director

[Florida Flatwood Native food plants](#)

- Betsey Boughton, assistant research biologist at MacArthur Agro-ecology Research Center, Venus, FL. and Raoul Boughton, UF/IFAS Range Cattle REC

Afternoon presentations (click to view):

[Bobwhite Quail - Biology and ecology in South Florida, improving the ranch](#)

- Raoul Boughton, Assistant Professor, UF/IFAS Range Cattle REC, Rangeland Wildlife and Ecosystems

[Big Picture Bobwhites - Working to recover bobwhites from the top, down](#)

- Jef Hodges, Grasslands Coordinator, National Bobwhite Quail Initiative, University of Tennessee

[Bobwhite management in South Florida and lessons learned at Babcock - Webb WMA](#)

- Greg Hagan, FWC, Northern Bobwhite Program Coordinator

These links are available on our website at:

<http://rcrec-ona.ifas.ufl.edu/virtual-classroom/>



Faculty News

John Arthington Accepts New Position



John began his career at the University of Florida (UF) in 1998 as an assistant professor of animal science specializing in beef cattle nutrition and management at Ona. He became the center's 4th center director in 2005 and after 14 years of leadership, he now calls another UF location home. April 1, John's

new address became PO Box 110910, Gainesville, FL 32611 as he was selected through a national search to be the next chair of the UF Department of Animal Sciences. Congratulations to John!

Brent Sellers appointed Interim Center Director



Congratulations are also in order for [Brent Sellers](#) who was appointed UF/IFAS Range Cattle REC Interim Center Director. Brent began his UF career at Ona in 2004 as an assistant professor specializing in pasture and rangeland weed management, he became an associate professor in 2011, the Associate Center Director in 2014, and

professor in 2017. Best wishes to Brent on his new role! He will serve as interim until the open position is filled.

Staff News

Dennis Kalich Receives UF/IFAS Superior Accomplishment Award

On March 25, our farm manager/research coordinator, [Dennis Kalich](#) was recognized at the 2019 UF/IFAS Superior Accomplishment Awards held at the J. Wayne Reitz Union, in Gainesville. He was one of 8 chosen to receive the 2019 IFAS Superior Accomplishment Award in the Administrative/Supervisory category.

He is pictured here receiving his award from Dr. Nick Place, the Dean and Director of Florida's Cooperative Extension Service. Congratulations Dennis!



Staff Recognized for Years of Service

On March 4, UF President Kent Fuchs and Vice President Jodi Gentry honored staff with 25, 35, or more years of service at a special reception at the Earl and Christy Powell University House in Gainesville.

Among those recognized were Dennis and Christina. [Dennis Kalich](#), our farm manager/research coordinator, for 25 years of service. Dennis, is pictured here with President Fuchs.

[Christina Markham](#), our administrative specialist, was also recognized for her 35 years of service, but did not attend the reception. At right, Christina is pictured with her plaque.



Recent Refereed Publications

Sanchez, J.M.D., Vendramini, J.M.B., Silveira, M.L., Sollenberger, L., Dubeux Jr., J., Moriel, P., Sellers, B., Yarborough, J. and Oliveira, F. (2019) Seeding strategies of bahiagrass and pinto peanut affect pasture establishment under weed competition. *Grass and Forage Science*. <https://doi.org/10.1111/gfs.12413>

De Oliveira, F. C. Leite, J. M. D. Sanchez, J. M. B. Vendramini, C. G. Lima, P. H. C. Luz, C. O. Rocha, L. E. T. Pereira, and V. R. Herling. (2019). Time to move beef cattle to a new paddock: Forage quality and grazing behaviour. *The Journal of Agricultural Science*, <https://doi.org/10.1017/S0021859619000133>

Articles Published in The Florida Cattleman & Livestock Journal:

Ona Reports

“UF/IFAS Range Cattle REC - Research Update”
All Faculty Reporting, June 2019

“Low-Moisture Molasses Tubs A Limit-Fed Creep Feeding Opportunity for Pre-weaned Calves” by John Arthington, May 2019

“Proposed changes in regulations governing land application of biosolids in Florida” by Maria Silveira, April 2019

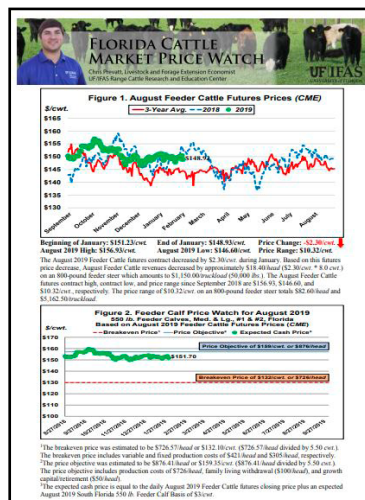
“Controlling Smutgrass with the Weed Wiper”
by Brent Sellers and Jose Dias, March 2019

Florida Cattle Market Price Watch

This helpful resource is provided monthly by Chris Prevatt, State Specialized Agent II, Beef Cattle and Forage Economics.

View a complete listing of past reports on our website at:
<http://rcrec-ona.ifas.ufl.edu/florida-cattle-market-price-watch/>

View these and other publications on our website at:
<http://rcrec-ona.ifas.ufl.edu/publications/>



This spring the UF/IFAS RCREC crew has been working with the long term agroecosystem research (LTAR) project and the US Forest Service to conduct prescribed burns on our rangelands.



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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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