

UF/IFAS

Range Cattle Research & Education Center NEWS

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

summer 2021

IN THIS ISSUE

Increasing the knowledge and adoption of nutritional evaluation and management practices for beef females

The extension program on beef cattle nutrition at the Range Cattle REC is conducted by Dr. Philippe Moriel. This program was developed in response to the statewide needs expressed by county faculty, beef producers, and industry personnel, and it targets two main programmatic areas: (#1) increase adoption and accuracy of body condition scoring to consistently evaluate the nutritional status of beef animals; and (#2) develop educational programs for stakeholders to enhance cow-calf productivity.

Situation: Increased reproductive performance of beef females can be achieved by increasing their body condition score (BCS) at calving. Body condition score is a practical and inexpensive indicator of fat reserves (energy reserves) in a beef cow positively correlated with reproduction and that can be easily implemented by producers. Surprisingly, surveys administered in top cow-calf counties in Florida indicated that 73% of attendees do not keep records of cow BCS. Also, because BCS is a subjective measurement, the variation among scores selected for the same animal was extremely large (1- to 2-point difference using a 1 to 9 scale), leading to under- or over-estimations of cow energy reserves and misjudgment-induced economic losses. It is crucial that a standardized BCS trainings are developed to educate stakeholders about

proper estimates of cow's energy reserves. Thus, the major focus of Dr. Moriel's extension program include: (1) develop and implement body condition score training tools and activities to standardize the scoring procedure and improve the accuracy of those scores among stakeholders; and (2) producer implementation of strategic nutritional management programs to enhance reproduction of beef females and optimize future calf growth and health.

Activities: Dr. Moriel in collaboration with members of the South Florida Beef and Forage Program developed the [Beef Cattle Body Condition Scoring Tutorial](#) and the annual Nutrition for Beef Females workshops (Figures 1 and 2), which consists of multiple annual face-to-face trainings for producers and livestock agents. Educational materials were developed to teach stakeholders about the importance of nutritional management of beef females, and also educate clientele on how to evaluate the nutritional status of their herd using BCS. In the Nutrition for Beef Females workshops, Dr. Moriel uses interactive learning devices (Turning Point; Figure 3) that provide immediate feedback relative to the information learned and knowledge increase. Dr. Moriel also provides the audience with free flow charts intended to improve the statewide accuracy of body condition scoring (Figure 4).

Connect With Us	3
Faculty & Student News	5
UF/IFAS News	5
Upcoming Events	6
Recent Publications	7

Click on the images below to check us out on:



UF UNIVERSITY of FLORIDA
IFAS



Figure 1. Drs. Joao Vendramini and Philippe Moriel speaking at the 1st Annual Nutrition for Beef Females (Okeechobee, FL).



Figure 2. Dr. Philippe Moriel speaking about nutrition for replacement beef heifers at the 2nd Annual Nutrition for Beef Females (Okeechobee, FL).

Outcomes and impacts: These trainings described above have been well-received by stakeholders and generated multiple impacts. Some of these impacts are summarized below.

Skill increase: 46% on selecting the proper body condition score after online training and 20% on selecting the proper body condition score after face-to-face training (see Table 1); 52% on impacts of body condition score on cow performance: 56% on impacts of body weight and age needed to induce puberty in heifers: 48% on impacts of cow nutrition

on calf performance. In addition to skill increase, we also increased the awareness of producers regarding our ongoing research efforts to address their needs. For instance, knowledge increase achieved 79% on previous research studies and 80% on on-going research studies on cow and heifer nutrition studies conducted at the Range Cattle REC.

Aspirations: 98% of attendees answered they will utilize body condition scoring tools delivered to them; 83 and 68% of attendees are also planning to implement at least one supplementation strategy for cows

and heifers, respectively, presented to them; and attendees expect that heifer pregnancy rates will increase from 71% to 82% with the information provided during the trainings. **Long-term impacts:** The number of teaching events on nutritional management of beef females increased from 2 events in 2017 to 6 events in 2018 and 3 events in 2019, respectively; Events scheduled for 2020 were delivered online due to COVID-19. Normal format will be resumed in the Fall 2021. Within 3 years of initial attendance, we expect that 20% of beef producers will adopt pre-breeding supplementation strategies to increase annual calf production as measured by annual follow-up surveys, phone interviews, or on-farm visits.

Program recognition: The success of our beef nutrition extension program is clearly evidenced by various metrics and awards, including: 115 State/County meetings, 6 in-service trainings, 15 webinars, 8 field days, >6,500 contacts and YouTube views, 11 EDIS publications, 71 proceedings and popular press articles, and 2 websites developed; 2018 State Winner for the Search for Excellence in Livestock Production Award and 2018 State

Table 1. Summary of pre- and post-training skill increase collected at the 1st and 2nd Annual Nutrition for Beef Females.

County	Attendees	% of people selecting the correct answer		
		Pre-training	Post-training	% change
Wauchula 2019	13	47.3	63.3	16.0
Sarasota 2019	35	40.0	61.6	21.6
Hendry 2019	38	37.3	60.1	22.8
Polk 2019	42	45.0	66.0	21.0
Okeechobee 2019	42	46.6	66.3	19.7
Hendry 2018	25	49.5	60.0	10.5
Highlands 2018	37	46.7	68.0	21.3
Okeechobee 2018	37	44.7	61.5	16.8
Polk 2018	60	53.7	64.4	10.7
Manatee 2018	10	45.7	74.2	28.5
Sarasota 2018	20	46.6	74.0	27.4
Mean	359	45.7	65.4	19.7

**In 2020, the 3rd Annual Nutrition for Beef Females was delivered via webinar due to COVID-19 (knowledge increase and additional data were not collected).

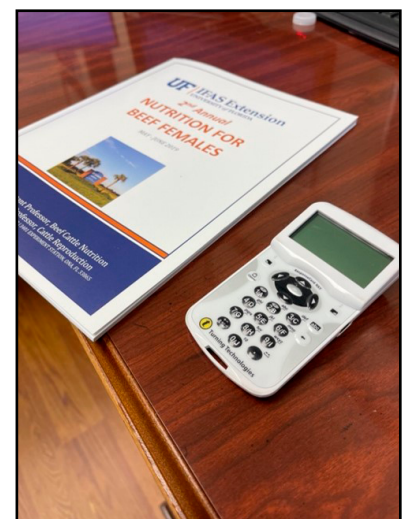


Figure 3. Learning tools used with the audience during the Annual Nutrition for Beef Females. The turning point device provides immediate feedback and anonymous response to questions presented during the training.

Winner for the Search for Excellence in Farm and Ranch Financial Management from the National Association of County Agricultural Agents; 2019 Outstanding Young Animal Scientist Award for Research, Southern Section American Society of Animal Science; 2020 Richard Jones Outstanding New Faculty Research Award, UF/IFAS - Annual Florida Agricultural Experiment Station Awards Ceremony; and recently the 2020 Christine Taylor Waddill Extension Professional Enhancement Award from UF/IFAS Extension.

Latest activity: Our Beef Cattle Nutrition Extension program is continuously searching for novel topics and supplementation strategies to improve cow-calf productivity in tropical and subtropical environments, and consequently, provide better assistance to beef cattle stakeholders in Florida. The 4th Annual Nutrition for Beef Females was held

August 13 at the center. [Click here](#) to access the videos and PDFs of the PowerPoints of presenters Dr. Philippe

Moriel, Dr. Reinaldo Cooke, and Dr. Ky Pohler.

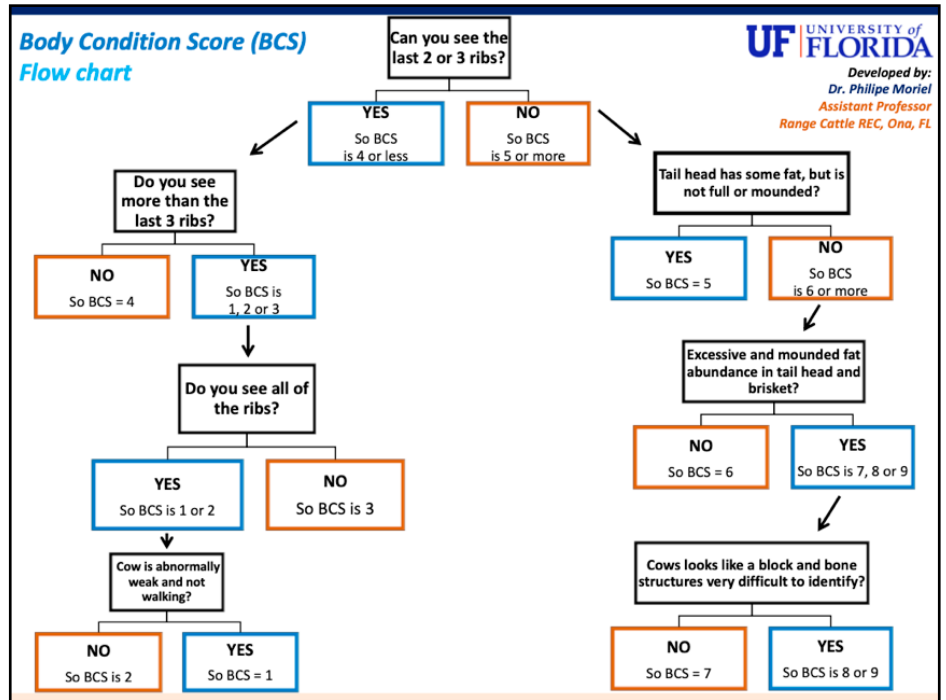


Figure 4. Learning tool - body condition score flow chart that provides a quick and easy guidance to properly body condition score beef cows.

CONNECT WITH US

Articles published in the Florida Cattleman & Livestock Journal:

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

Ona Reports

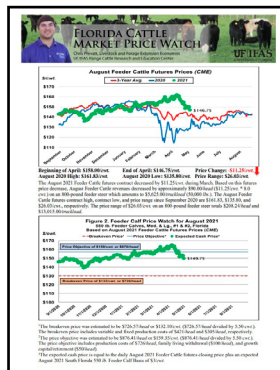
Jun. 2021 - 'Special Report: Research update'

Jul. 2021 - 'Marketing Feeder Cattle during the Second Half of 2021' by Chris Prevatt

Aug. 2021 - 'Price Projections – A Risk Management Strategy for Beef Cattle Producers' by Chris Prevatt

Florida Cattle Market Price Watch

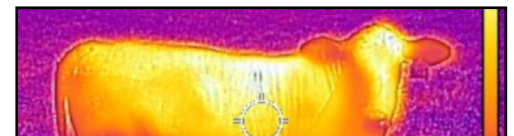
This helpful resource is provided monthly by Chris Prevatt, State Specialized Agent II, Beef Cattle and Forage Economics. View a complete listing of past reports on our website, [click here](#).



Recent Blog Posts:



'Livestock Predation: Identifying the culprits' by Hannah Fox - 6/21



'Heat Stress on Beef Cattle' by Philippe Moriel – 7/21

New Videos

Ona Highlight Webinars

Save the date and join us for an upcoming Ona Highlight webinar. These informative presentations are held each month. They begin at 11:00 a.m. and last about 45 minutes. See our online calendar for upcoming webinars, [here](#).

Recordings of recent webinars:

'A matter of choices: Importance of variety selection and resources available' with Dr. Marcelo Wallau
6/8/2021
Run time: 49.58 minutes

'Heat stress on beef cattle' with Dr. Philippe Moriel,
7/13/2021
Run time: 34.17 minutes

President Cliff Coddington & Executive Vice President, Jim Handley of the Florida Cattlemen's Association discuss the current issues and initiatives of the Florida Cattlemen's Association
8/3/2021
Run time: 50.03 minutes

PROGRAM RECORDINGS

AVAILABLE - click the underlined text to watch

Become a Bluebird Watcher

Session 7, July 12
- The useful activities and sensitivities of Eastern Bluebirds with guest speaker Dr. Kathryn Sieving.
(Run time: 1 hour)

12th Annual Youth Field day - June 29
5 video playlist

4th Annual Nutrition for Beef Females - August 13
4 video playlist

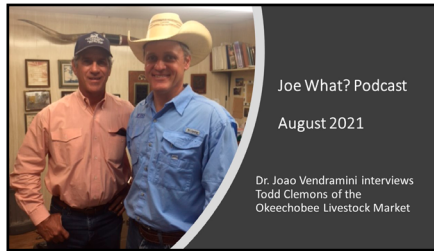
Listen or download the latest **Joe What? Podcasts:**



Jun. 2021 - Rick Kellison of West Texas. They discuss the challenges of cow-calf production in West. (Run time: 16.02 min.)



Jul. 2021 - David Riley, Texas A & M University. They discuss the use of genetic markers in beef cattle production. (Run time: 21.05 min.)



Aug. 2021 - Todd Clemons, President of Okeechobee Livestock Market which has been owned and operated by the Clemons family for over 50 years. (Run time 16.37; rerun from Sept. 2017)

These monthly podcasts can be found on:

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

You can view all of our our past webinars, program recordings, field day videos, and other recordings on YouTube or on our website's <https://rcrec-ona.ifas.ufl.edu/virtual-classroom/>



Tropical Storm Elsa passed by on Tuesday, July 6/7. Total rainfall for the event measured by FAWN was 5.93." The total rainfall received for July 7th alone was 5.13" which is a new record for rainfall received within a 24 hour period for July. Thankfully we were dry before the event so

the water wasn't too bad. This photo was taken the morning after the storm looking east down Goose Pond Road.

UF/IFAS News

DeLuca Preserve Team receives United States Fish and Wildlife Service Regional Director Honor Award

View online: <https://www.fws.gov/southeast/regional-director-honor-awards-2021>

The Regional Director’s Honor Award is given to volunteers, partners, and employees who have contributed to the accomplishments of the Service’s mission and vision in the South Atlantic-Gulf and Mississippi Basin Interior Regions: “Together we will connect lands and waters to sustain fish, wildlife and plants by being visionary leaders, bold innovators and trusted partners, working with and for people.”

The University of Florida’s Institute of Food and Agricultural Sciences is now managing the 27,000-acre preserve in the Everglades Headwaters National Wildlife Refuge and Conservation Area. And the Wetlands America Trust, the land trust for Ducks Unlimited, holds a perpetual

conservation easement on DeLuca Preserve.

But the deal – one of the largest donations of private land to an American university – was boosted by the long-term working relationship between refuge staff, Partners for Fish and Wildlife, and the DeLuca family. It’s a blueprint for conservation success that can be replicated with other private landowners in the future.

All parties realize how vital it is to preserve the prairies, wetlands and ranchlands that support Florida grasshopper sparrows, red-cockaded woodpeckers, gopher tortoises and other trust species. For the university, the property will serve as a biological research station for students and faculty to learn about the major environmental challenges facing Florida – climate change, biodiversity, emerging pathogens and invasive species, and the need for clean water.

For Ducks Unlimited, the conservation easement provides protection for this critical watershed; showcases the compatibility of conservation and agriculture; and ensures that the

grasshopper sparrow, and other T&E species, never go extinct.

The DeLuca Preserve never would have happened without the tireless engagement of the Service’s partners. The university, the nonprofit, and the Service will protect and sustain the lands for generations to come.

RD Honor Award Recipients: Brent Sellers, Margaret Atherton, Jerry Holden, Josh Green, Carol Ann Walker, Maggie Hines, Darin Blunck, Karen Waldrop, Anna Rollososon, Diana Iriate, and Dale James.



Dr. Brent Sellers

Faculty News

Faculty Promotion

Congratulations to Dr. Philippe Moriel who was promoted to associate professor on July 1.

Dr. Moriel began his animal science program at Ona in June 2016.



Dr. Philippe Moriel

Student News

Congratulations Leandro Otavio Vieira Filho

Leandro recently learned he was the winner of the UF College of Agricultural and Life Sciences William C. and Bertha M. Cornett Fellowship. This fellowship is awarded annually to a graduate student in agriculture who demonstrates leadership, promise, and scholarship.

Leandro began his Soil and Water Science PhD in the summer of 2019. He is advised by Dr. Maria Silveira.



Youth Field Day Highlights

The 12th Annual Youth Field Day was held on June 29 at the Center. There were 139 participants, and 37 workers present. Although rain was a concern, the day went off without a hitch.

Save the date! The next youth field day will be held June 30, 2022.

[Click here](#) to view all the photos, taken by Tyler Jones with UF/IFAS Communications.

[Click here](#) for a playlist of the class session videos.



LTAR Update

The Long-Term Agroecology Research (LTAR) project at RCREC in partnership with Ameriflux currently has two Eddy Covariance Towers: one installed on native rangelands since 2017 and another on a bahiagrass pasture installed earlier in 2021. Both of these towers have multiple sensors that measure variables of interest to agricultural production, including carbon dioxide fluxes which are an important indicator of sustainability and meteorological data such as air temperature, moisture, and wind direction and speed. Both towers are now also equipped with a methane analyzer, the later one installed last week at the bahiagrass site by Dr. Rosvel Brach and Dr. Marta Kohmann. This sensor measures methane fluxes in the air, which can vary greatly throughout the year particularly as it relates to soil moisture and temperature. A Phenocam, which measures vegetation greenness among other things, was also installed at the bahiagrass site. These sensors collect data at a high frequency throughout the entire year, and information will be used to better understand what management strategies and environmental characteristics most contribute to sustainability of Florida's grazing lands.



Upcoming Events

View our online calendar for more info on these events and the links to register:

<http://rcrec-ona.ifas.ufl.edu/calendar-of-events/>

Become a Bluebird Watcher! Session 8: Preparing for the next nesting season/Project results

– Sept. 11, 1:00 - 2:00 PM

Dr. Hance Ellington will present research results and talk about what comes next for bluebird research and outreach at the Center. He will also discuss how to clean, store, and prepare nest boxes for the next nesting season.

Ona Highlight with Guest Presenters discussing the DuLuca Property and the Grasshopper Sparrow

– Sept. 14, 11:00 AM - 12:00 PM

Brent Sellers of the Range Cattle REC along with Reed Bowman and Fabby Baeza of Archbold Biological Station will present, "Description of the DeLuca Preserve and How Working Landscapes May Be Pivotal to Protecting the Florida Grasshopper Sparrow."

Winter Supplementation Seminar

– Sept. 23, 5:30 - 8:00 PM

Pasco Co. Ext. Auditorium, 36702 SR 52, Dade City. Attend in-person: \$10 or Virtual: \$5 Register, [click here](#).

Field Day and 80th Anniversary Celebration

– October 7, 8:00 AM – 3:00 PM

Visit the Center for research updates, graduate student posters, visit with our sponsors, enjoy a steak lunch, and field site visits.

General registration \$20, college student \$10

Late registration (Oct. 1 – 5): \$40

View details and register, [click here](#).

Cattlewomen's College: Cattle Management for Women

– October 8, 9:00 AM - 3:30 PM

To be held at the UF/IFAS Range Cattle REC, Ona. Space is limited. Registration is \$40.

View details and register, [click here](#).

Ona LTAR Highlight with Guest Presenter

Dr. Sheri Spiegel

– Oct. 19, 11:00 - 11:45 AM

Dr. Spiegel will present, "Using Manureshed Management to Connect Distant Links of the Beef Supply Chain"

Refereed Publications

Carroll, J. A., Burdick Sanchez, N. C., Broadway, P. R., Silva, G. M., Ranches, J., Warren, J., Arthington, J. D., Lancaster, P. A., & Moriel, P. (2021). Prenatal immune stimulation alters the postnatal acute phase and metabolic responses to an endotoxin challenge in weaned beef heifers. *Translational Animal Science*. 5(3), txab097. <https://doi.org/10.1093/tas/txab097>

Grace M. K., Akçakaya H. R., Bennett E. L., et al. (2021). Testing a global standard for quantifying species recovery and assessing conservation impact. *Conservation Biology*. doi: 10.1111/cobi.13756

Oliveira, R. A., Vendarmini, J. M. B., Vedovatto, M., Palmer, E., da Silva, H. M., Neiva, J. N. M., Miotto, F. R. C., & Moriel, P. (2021). Growth, physiology, and coccidiosis infestation of suckling beef calves grazing warm-season grasses and offered creep-feeding supplementation with or without monensin. *Tropical Animal Health and Production*. 53, 363. <https://doi.org/10.1007/s11250-021-02789-x>

Palmer, E. A., Penagaricano, F., Vedovatto, M., Oliveira, R. A., Field, S. L., Laporta, J., & Moriel, P. (2021). Effects of maternal gestational diet, with or without methionine, on muscle transcriptome of *Bos indicus*-influenced beef calves following a vaccine-induced immunological challenge. *PLoS ONE*. 16(6), e0253810. <https://doi.org/10.1371/journal.pone.0253810>

Ranches, J., Alves, R., Vedovatto, M., Palmer, E. A., Moriel, P., & Arthington, J. D. (2021). Differences in copper and selenium metabolism between Angus (*Bos taurus*) and Brahman (*Bos indicus*) cattle. *Journal of Animal Science*. 99(3), skab048. <https://doi.org/10.1093/jas/skab048>

Ranches, J., De Oliveira, R. A., Vedovatto, M., Palmer, E. A., Moriel, P., & Arthington, J. D. (2021) Use of radio-frequency identification technology to assess the frequency of cattle visits to mineral feeders. *Tropical Animal Health and Production*. 53(3), 341. <https://doi.org/10.1007/s11250-021-02784-2>

Vedovatto, M., Carvalho Faria, F. J., Costa, D. S., Cooke, R. F., Sanchez, J. M. D., Moriel, P., Coelho, R. N., & Franco, G. L. (2021). Effects of temperament on body parameters, ovarian structures and inflammatory response in grazing Nellore cows following fixed-time artificial insemination. *Journal of Veterinary Behavior*. 44, 40-54. <https://doi.org/10.1016/j.jveb.2021.03.005>

UF/IFAS Range Cattle REC Faculty -

Dr. Brent Sellers, sellersb@ufl.edu - Pasture and Rangeland Weed Management

Dr. Maria Silveira, mlas@ufl.edu - Soil and Water Science

Dr. Joao Vendramini, jv@ufl.edu - Forage Management

Dr. Philippe Moriel, pmoriel@ufl.edu - Beef Cattle Nutrition & Management

Chris Prevatt, prevacc@ufl.edu - Beef Cattle and Forage Economics

Dr. Hance Ellington, e.ellington@ufl.edu - Grazinglands Wildlife Specialist

E NEWS AVAILABLE

Help us protect the environment and reduce expenses by receiving this and other publications from us by e-mail. Give us a call (863-735-1314) or click the link below to let us know you would like to receive electronic mailings.

Subscribe to E News
via ona@ifas.ufl.edu

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
Website: <http://rcrec-ona.ifas.ufl.edu>
Newsletter Contact: Andrea Dunlap





UF/IFAS Range Cattle Research and Education Center **Field Day & 80th Anniversary Celebration**

October 7, 2021

8:00 Check-in opens

Visit sponsor booths and student poster displays
Light refreshments

9:30 Opening Assembly

Dr. Brent Sellers, Center Director - Welcome
Dr. Scott Angle, VP for Agriculture and Natural Resources - IFAS Update
Cliff Coddington, President, Florida Cattlemen's Association - FCA Update

10:05 Faculty Presentations

Dr. Philippe Moriel

- Using Nutrition and Management to Alleviate Heat Stress in Grazing Cattle

Chris Prevatt

- 2022 Beef Cattle Market Outlook

Dr. Hance Ellington

- Coyote Behavior: Lessons from the city and applications to the ranch

12:00 Steak Lunch

1:15 Afternoon Faculty Field Presentations

Dr. Joao Vendramini - New Potential Warm-Season Perennial Grasses Propagated by Seed

Dr. Brent Sellers - DuraCor Tank Mixes for Pasture Weed Control

Dr. Maria Silveira - Update on Biosolids Research

3:00 Field Day Ends

Registration required. Fee includes a steak lunch and a copy of the field day proceedings.

Location: 3401 Experiment Station, Ona

- General:** \$20
- College Student:** \$10
- Late Registration (Oct. 1-5):** \$40
- Pay by check** - call 863-735-1314 for details
- Pay by card** - Online

**[https://rcrec-2021-fd.
eventbrite.com](https://rcrec-2021-fd.eventbrite.com)**

(Eventbrite processing fees apply)

