



# On the Bayou

NOVEMBER 2019

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## Message from the Director

**Dr. Deepak Bhatnagar**

### Time for Sharing

Our Halloween Costume Contest event kicked-off our Combined Federal Campaign this year on October 31. In a relaxed setting, the kick-off allowed us to think of those less fortunate than us, primarily people who live below the poverty line. In Southeast Louisiana that number is 20% of the total population. For a household of four, the poverty line rests at an income of \$24,800 per year. Imagine 1 in 5 people live below the poverty line!

In addition, what we often overlook are the households in our communities who work hard but struggle to make ends meet; households that are called Employed but Asset Limited and Income Constrained. Living paycheck to paycheck, these families are one major accident, one medical bill, or one harsh storm away from poverty. The number of such folks in our area is almost 50% of the population. The reality is that nearly one in two households are unable to afford basic expenses of housing, child care, food, transportation, health care, cell phone access and taxes.

This is where the numerous CFC charitable agencies can help needy families and individuals with financial or social adversities. At our event, we heard from Volunteers who run these agencies give very touching stories of people in need of some assistance or a helping hand, irrespective of their financial situation, and how the local agencies answer the call from donated funds.

The Combined Federal Campaign is our way of supporting these agencies who in turn help needy people in our communities. So, think about this and give generously because all of us at SRRC have jobs with stability and certainty, and we should think about sharing.

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## National Disability Employment Awareness Month

Submitted by: Vince Edwards and Shawndrika Reed

October was Disability Awareness Month. This year's official National Disability Employment Awareness Month (NDEAM) theme was "The Right Talent, Right Now". NDEAM is a nationwide campaign that celebrates the contributions of workers with disabilities throughout America's history. As voiced by the Department of Labor, this year's theme emphasized the essential role that people with disabilities play in America's economic success, especially in an era when historically low unemployment and global competition are creating a high demand for skilled talent. The **'right talent right now'** implies navigating the waters of life at work and home, and in some cases with special needs, there are unique challenges.

On this note, The Disability Awareness Committee held two excellent events with speakers on the second and fourth Tuesdays, Oct 8<sup>th</sup> and 22<sup>nd</sup>. On Tuesday October 8, Dave Brashear, a Licensed Clinical Social Worker gave a talk on Mental Health.



Then on, Tuesday, October 22, Courtney Baker, Ph.D. Associate Professor of Tulane University Psychology School joined us to share her thoughts on Stress and Special Needs: Teaching Others Coping Skills. Dr. Baker engaged our employees and provided specific ways to help with stress, along with a lively question and answer session.



Our last event was well attended, with a delicious luncheon provided by Liberty's Kitchen, coordinated by Shawndrika Reed and Stephanie Gross. The mission of Liberty's Kitchen reflects that of NDEAM by cooking up a community where all young people can flourish. Supporting their organization helps with providing employment, education, and entrepreneurial opportunities for the youth.

Many thanks to the entire committee for everything done to help with the success of Disability Awareness Month.

## Events and Observances (cont.)

### 2019 SRRC Combined Federal Campaign

Submitted by: Geromy Moore and Suzanne Brashear

The GNO Federal Community kicked-off this year's CFC Campaign season with a 5K Run/Walk and Kids Run inside Audubon Zoo on Monday, October 14<sup>th</sup>. The event's theme was *Creature Crawl for a Cause* and was sponsored by the New Orleans Federal Executive Board.

SRRC was well represented at the FEB's second annual fun run event. We had runners, we had walkers, and we had family and friends of all ages in attendance. A subset of SRRC participants, known as The SRRC Experience, provided some fun run speed, and all its members finished the 2.84 mile race in less than 22 minutes. The six members of The SRRC Experience finished in the top 14 of all fun run participants, and included (in order of fastest finish times): Brian Mack, Scott Pelitire, Matt Lebar, Greg Ford, Rebecca Sweany, and Geromy Moore. Other SRRC participants included Deepak Bhatnagar, Matthew Hillyer, Isabel Lima, Crista Madison, Kanniah Rajasekaran and Skyler Taylor. Although all participants earned medals, some SRRC participants earned trophies for placing first in their respective age groups:

- ◆ Deepak Bhatnagar, Senior Grand Master
- ◆ Kanniah Rajasekaran, Grand Masters
- ◆ Scott Pelitire, Masters

The zoo was closed to the public, so racers had a wonderful opportunity to explore the zoo after the race. It was a fun event for a great cause, so maybe next year we'll have even more runners and walkers representing SRRC!



The winning team:  
The SRRC Experience

SRRC Creature Crawl  
participants



Our **CFC Halloween Event** was back to kick-off our Campaign on Thursday October 31st. More about that in the December issue!

## Outreach Activities

Submitted by: Michael Watson

The Southeastern Louisiana University Career Fair is an annual event that allows university students the opportunity to meet prospective employers in an academic environment. The event this year was held on September 19, 2019 in the Pennington Student Activity Center.

As one of its many outreach programs, the Southern Regional Research Center uses this venue as a mechanism to canvass prospective candidates for both temporary and permanent employee placement. Representing SRRC at this Career Fair were Ms. Jeanne Lea and Mr. Michael A. Watson. Interested students in various fields of study (i.e. Chemistry, Biology, Accounting, Finance, etc.) were provided background information about the USDA Agricultural Research Service and provided literature detailing the many job opportunities available in this Agency of the federal government.

Students at this event seemed very much interested in the information provided about the USDA ARS at our Career Fair booth. Furthermore, a campus wide group "BUGS" (Biology Undergraduate Society) indicated that they would very much like to visit our facility and learn more about the scientific research conducted at SRRC.



## Dr. Ruth Benerito's posthumous induction into Cotton Incorporated Hall of Fame

Dr. Al French, Collaborator and retired SRRC Research Chemist had a brief on-camera interview on Friday, November 8, during which he was asked about Ruth Benerito's contribution to the cotton industry. The interview will be included in a short video that will be shown during Dr. Benerito's posthumous induction into the Cotton Incorporated Hall of Fame ceremony in New Orleans in December.

ARS Research Chemist **Dr. Matthew Gilbert** of the Food and Feed Safety Research Unit gave a practice talk on October 7 entitled, “Is host resistance against *Aspergillus flavus* infection and aflatoxin contamination possible? Gene expression of resistant and susceptible maize lines provides insights”. The talk was in preparation for a presentation at the WMFmeetsIUPAC – the joint conference of the 11th Conference of The World Mycotoxin Forum and the XVth IUPAC International Symposium on Mycotoxins in Belfast, Northern Ireland on October 14-16, 2019.

ARS Research Chemist **Dr. Matthew Lebar** of the Food and Feed Safety Research Unit will give an oral presentation entitled, “The secondary metabolism of *Aspergillus flavus*: small molecules with diverse biological function” at the 9<sup>th</sup> International Symposium on Recent Advances in Food Analysis to be held in Prague, Czech Republic on November 5-8, 2019.

**Dr. Heping Cao**, Research Plant Physiologist in Commodity Utilization Research Unit is invited to give a seminar on “Bioactivity and molecular mechanisms of cottonseed and other plant compounds in mammalian cells”. Chengdu Phyto Cosmos Biotechnology Co., Ltd, Sichuan, China is sponsoring his visit on November 1-7, 2019. His host, Dr. Rui Li, Founder of the Company and Professor of Chengdu University of Traditional Chinese Medicine, also wants to explore potential collaborations on research of mutual interests.

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## Learning About Science - Practice Presentations

Dr. Isabel Lima and Dr. Zhongqi He of the Commodity Utilization Research Unit gave practice presentations on Tuesday, November 5 prior to attending the conferences listed below.

ARS Research Chemist **Dr. Isabel Lima** will present an oral presentation entitled “*Field Application of Sugarcane Bagasse Biochar for Increased Sugarcane Yields*” at the IBI Biochar World Congress 2019 in Seoul, South Korea on November 10-14.

ARS Research Chemist **Dr. Zhongqi He** will present a poster entitled “*Spectroscopic Characterization of Defatted Cottonseed Meal-Based Biochars*” at the 2019 American Society of Agronomy, Crop Science Society of American and the Soil Science Society of America (ASA-CSSA-SSSA) International Meeting in San Antonio, TX on November 10-14.



## Scientific Presentations Series features Commodity Utilization Research Unit

We began our new Scientific Presentations Series with the Commodity Utilization Research Unit kicking off the Series on October 30. Sponsored by the Management Team, the Series is an effort to learn about science at SRRC specific to each research unit. We are looking forward to these programs as a collaborative effort where the entire Center is involved in listening to colleagues and learning about their great work, and ultimately opening up channels of communication.



Our presenter for the first in the Series was **Dr. Isabel Lima**. She started her presentation by giving an overview of the SRRC sugar crops research program and its team of scientists and students. She explained sugarcane processing from cane harvest to juicing and sugar crystal production in mills to removing impurities and packaging sugar in refineries.

After her introduction, she presented details of the issues affecting the sugar crops processing industry. She then went on to describe how CU is addressing those—from reducing sugar cane processing costs to improving cane quality. In addition, she detailed the use of lower quality sugar as biofuels, biochemicals and the use of byproducts as animal feed, fuel and biochar. She also explained the workings of the SRRC pilot plant and its role in the sugar program. Finally, Dr. Lima highlighted the CU program's impressive research accomplishments, and who it benefits.

After her general introduction, Isabel shared her award winning presentation titled: Sugarcane-bagasse and leaf-residue biochars as soil amendments for increased sugar and cane yields:

There are two potential untapped resources associated with the harvesting and processing of sugarcane, the trash (leaves and tops) left in the field and the sugarcane bagasse as surplus from the mills. Burning of sugarcane leaf residue in the field has been under scrutiny in recent years due to urban encroachment and air-quality concerns and excess leaf residue left in the field can also reduce ratoon crop yields due to lower soil temperatures and higher soil moisture. Sugarcane mills produce excess bagasse during the grinding season which is left unused indefinitely. These two organic feedstocks, sugarcane leaf residue and bagasse, can be thermo-chemically converted into biochars that can be brought back to the field to be used as a soil amendment to enhance soil health, water holding capacity and improve sugarcane yields. Biochars from sugarcane leaf residue and sugarcane bagasse were applied at three application rates, 0, 4 and 8%, with and without commercial fertilizer. Biochars and feedstock materials were chemically characterized for their nutrient content and several physico-chemical properties. Sugarcane biomass and theoretical recoverable sucrose (TRS) content were measured and compared across the different treatments. Best results were observed with a 4% addition of bagasse biochar with a TRS yield improvement of 22.3% and 31.6% from control, for fertilizer and no fertilizer additions, respectively. Benefits of applying biochar to cane fields include an increase in soil carbon content, improvement to soil drainage and aeration, and addition of nutrients for the sugarcane crop. Economic benefits are expected for both sugarcane growers and processors through the production of valued by-products from pyrolysis of sugarcane leaf residues and bagasse as well as enhancing the sugarcane industry's footprint in renewable energy markets.

**Isabel's presentation will be available on the SRRC Intranet page under "Research Related".**

**Stay tuned for the 2<sup>nd</sup> presentation in the Scientific Presentations Series where the work of the Cotton Chemistry Research Unit will be featured in December.**

## November Scientific Conferences

Submitted by: Terri von Hoven

Nov 1-3	<a href="#">International Conference on Emerging Trends in Traditional and Technical Textiles (ICETT)</a>	Jalandhar, India
Nov 4-5	International Conference on Agriculture, Food & Aquaculture	Bangkok, Thailand
Nov 6-8	Polymers and Textile Conference	Lowell, Massachusetts
Nov 4-5	European Conference on Agro Technology	Paris, France
Nov 11	Investing in Cellulose	London, England
Nov 11-12	World Conference on Food Science & Technology	Tokyo, Japan
Nov 12-14	AATCC Fall Committee Meetings	Research Triangle Park, NC
Nov 18-19	Conference on Crop Science and Agriculture	Bali, Indonesia
Nov 29-30	9th European Food Safety & Standards Conference	Dublin, Ireland

## Scientific Recognition

**Dr. J. Vincent Edwards** won a 2019 REE Under Secretary's Award! These prestigious awards recognize noteworthy accomplishments that significantly contributed to the advancement of USDA's strategic goals and objectives. On behalf of the entire REE Mission Area, we want to congratulate and recognize you and your notable achievements!

Dr. Edwards was formally recognized at the REE Under Secretary's Award ceremony on Tuesday, November 5, 2019.



Submitted by: Shannon Beltz



## It is time for our Annual Safety Training

**WHEN:** Wednesday, November 13, 10 AM -OR- Thursday, December 5, 10 AM

There are two dates for your convenience, it is **mandatory** that you attend only one of these dates.

**WHERE:** Bayou Conference Room (MCR)

**WHO:** All SRRC ARS employees must attend this training. This includes all **Research Groups and administrative employees**. Yep, that means you! ☺

**Biosafety training** will be delivered immediately following Safety Training for anyone who works in a BSL 1 or BSL 2 lab, or uses any autoclaves.

If you have any questions or concerns, please contact Shannon Beltz at 395. Thanks!

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**Save the Date:** Our SEA Inspection with Shelia Parker and Darrell Williamson will be February 5-6, 2020

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If you do not yet have the **NEW SRRC Parking Decal**, please stop by the front desk and get one!

The USDA has blue decals and our other in-house agencies have green.



A representative from Walgreens was onsite and provided flu shots to all workers at SRRC with insurance (including Pontchartrain Partners, SPRI, LDAF, and FEMA). The standard shot and the 65+ shot were available on 2 days, September 25 and October 2.

Please spread the word and let's get everyone vaccinated against the flu! Unless you have some special health concern, the CDC recommends the flu shot for those 6 months old and up.

Take preventive actions this flu season to protect yourself and your family.  
For more information: [https://www.youtube.com/watch?v=QvyaE\\_eXDJU&t=1s](https://www.youtube.com/watch?v=QvyaE_eXDJU&t=1s)

Submitted by: **Janell Becker**

Please welcome one new employee to SRRC:

**Eric Prestenburg** is an ORISE collaborator working in the Food Processing & Sensory Quality Research Unit with Dr. Christopher Mattison. Eric graduated from LSU with a Bachelor of Science in Biochemistry.



## SRRC 9<sup>th</sup> Annual Clothing Drive

The Martin Luther King, Jr. & Day of Service Committee presents the SRRC 9<sup>th</sup> Annual Clothing Drive. In recognition of the 2020 National Service Day to recognize and celebrate Martin Luther King's birthday, we will be collecting items to donate to Ozanam Inn, a non-profit shelter and kitchen for the homeless in New Orleans.

Please consider donating men's, women's, and children's clean, unstained clothing items for this worthy cause. Blankets, purses, shoes, belts, small toiletries, etc. will also be accepted.

Donations may be brought to the Administrative Office, where we will consolidate the clothing before delivery to Ozanam Inn in January. We will be accepting donations: Now – January 20, 2020. Thank you for your generosity.

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## Save the Date: Holiday Season Events

Submitted by: **Scott Pelitire**

Tree Trimming – Wednesday December 4 at 10:00 am in the Lobby

SRRC Holiday Party – Thursday December 12 at noon in the Bayou Conference Room



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## Book Exchange

Submitted by: **Suhad Wojkowski**

For the past several years our Earth Day activities included a Book Swap (along with the popular Plant Swap). This book exchange is very popular, with many employees bringing books and taking books. Since it is so popular, the Library will have a year round Book Exchange area. These book-cases are not meant to take away from our Earth Day's book swap, only to highlight that reading is fundamental and fun. The expanded book exchange in the Library (Room 1040) will soon be available in December. Come to the Library and check it out!

## November New Orleans Area Events

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Submitted by: Terri von Hoven

Bayou Bacchanal	Crescent Park, NOLA	Nov 1-3
<a href="#">Louisiana Pecan Festival</a>	Colfax, Louisiana	Nov 1-3
<a href="#">Taste</a> of Africa Mini-Festival	Deja Vieux Food Park, NOLA	Nov 2
Algiers Folk Art Festival	Algiers Folk Art Zone & Blues Museum	Nov 2
Hot Wheels Monster Trucks	Smoothie King Center, NOLA	Nov 2-3
Bloody Mary Festival	Howlin' Wolf, NOLA	Nov 2-3
Oak St Po Boy Festival	Oak St, NOLA	Nov 3
Thrift Tea Tuesday	Tea Witch Café, NOLA	Nov 5
Boudin, Bourbon & Beer	Champions Square, NOLA	Nov 8
Central City Festival	1712 Oretha Castle Haley Blvd, NOLA	Nov 9
<a href="#">Atchafalaya Basin Festival</a>	Henderson, Louisiana	Nov 9
<a href="#">Fête des Fromages</a>	NO Jazz Museum, NOLA	Nov 13-16
Congo Square World Rhythms Festival	Louis Armstrong Park, NOLA	Nov 16-17
Treme Creole Gumbo Festival	Louis Armstrong Park, NOLA	Nov 16-17
Water Lantern Festival	City Park, NOLA	Nov 16
<a href="#">Natchitoches Christmas Festival</a>	Natchitoches, Louisiana	Nov 23, 2019 - Jan 6, 2020

## Recent SRRC Publications

Submitted by: **Suhad Wojkowski**

Full text pdfs of SRRC publications are available in the Eprints database via “Library” link on the SRRC Intranet page: <http://nola.srrc.usda.gov:8000/srrcmenf.htm>

Click on the article’s title below to launch the pdf from Eprints.

Boone, Stephanie and Ihli, S. and Hartsough, D. and Hernandez, Ligla M. and Sanders, J. and Klasson, K. Thomas and Lima, Isabel M. (2019) [\*Application of Permanganate to Reduce Microbial Contamination and Sugar Loss in Raw-Sugar Production in Louisiana, USA.\*](#) In: Proceedings of the International Society of Sugar Cane Technologists.

Eggleston, Gillian and Lima, Isabel M. and Schudmak, C. and Hulett, Roddy and Waguespack, Jr., Herman and Birkett, Harold and Gay, J. and Landry, Al and Finger, Atticus (2019) [\*First Year Operation of a Mechanical Detrasher System at a Louisiana Sugarcane Factory - Impact on Processing and Value-Added Products.\*](#) International Sugar Journal, 121 (1448). pp. 574-583.

Jordan, Jacobs H. and Easson, Michael and Condon, Brian (2019) [\*Alkali Hydrolysis of Sulfated Cellulose Nanocrystals: Optimization of Reaction Conditions and Tailored Surface Charge.\*](#) Nanomaterials, 9 (123). pp. 1-15.

Ling, Zhe and Edwards, J. Vincent and Guo, Zongwei and Prevost, Nicolette T. and Nam, Sunghyun and Wu, Qinglin and French, Alfred D. and Xu, Feng (2019) [\*Structural Variations of Cotton Cellulose Nanocrystals from Deep Eutectic Solvent Treatment: Micro and Nano Scale.\*](#) Cellulose, 26. pp. 861-876.

Meng, Shi and Tan, Yuqing and Chang, Sam and Li, Jiaxu and Maleki, Soheila J. and Puppala, Naveen (2020) [\*Peanut Allergen Reduction and Functional Property Improvement by Means of Enzymatic Hydrolysis and Transglutaminase Crosslinking.\*](#) Food Chemistry, 302 (125186). pp. 1-10.

Wright, Maureen S. (2019) [\*Impact of Storage on Sugar Loss in Sorghum Stalks.\*](#) African Journal of Agricultural Research, 14 (33). pp. 1629-1634.