ASCPC 2018
May 15th - 18th
Le Pavillon Hotel, 833 Poydras
New Orleans, LA 70112

Advances in Sugar Crop Processing and Conversion

USDA-ARS-SRRC
1100 Robert E. Lee Blvd
New Orleans, LA 70124
www.ars.usda.gov/ASCPC
Welcome to ASCPC 2018!

This conference is organized by a committee of scientists, support scientists, and technical assistants from the Sugar and Energy CRIS Research Project belonging to the Commodity Utilization Research Unit at the Southern Regional Research Center (SRRC) of the United States Department of Agriculture’s Agricultural Research Service (USDA-ARS), located in New Orleans, Louisiana, USA.

The title of the current project is: “Develop Technologies that Enable Growth and Profitability in the Commercial Conversion of Sugarcane, Sweet Sorghum, and Energy Beets into Sugar, Advanced Biofuels, and Bioproducts.” These developments were the primary reasons to create the ASCPC conference and to show return of investment to project stakeholders, and create, investigate, and promote the use of sugar crops for processing and conversion into food, energy, and materials.

ASCPC conference incorporates the processing and conversion of all three crops as a much needed platform to enlighten the general audience on new technologies and provide advancements and new directions translatable to each crop industry. ASCPC 2018 includes a Liquid Sweetener/Beverage workshop and the Sweet Sorghum Association (SSA) meeting.

Big Thank you to all our conference Sponsors:
Schedule of Events

Tuesday, May 15, 2018
2nd Floor, Bienville Room
Registration
2:00pm - 6:00pm

Tuesday, May 15, 2018
Lower Level Complex – Versailles Ballroom
Opening Reception
6:30pm – 8:30pm

Wednesday, May 16, 2018
2nd Floor, Bienville Room
Late Registration
7:30am - 5:00pm

Wednesday, May 16, 2018
Technical Sessions/Poster Presentations
2nd Floor, Denechaud Ballroom/Bienville and Gravier Complex
8:30am - 5:00pm

Thursday, May 17, 2018
Technical Sessions/Poster Presentations
Liquid Sweetener/Beverage Workshop
2nd Floor, Denechaud Ballroom/Bienville and Gravier Complex
8:30am – 12:00pm

Thursday, May 17, 2018
Sweet Sorghum Association Annual Meeting
2nd Floor, Denechaud Ballroom
1:30pm - 4:35pm

Thursday, May 17, 2018
Lower Level Complex – Versailles Ballroom
Awards Banquet
6:30pm - 8:30pm

Friday, May 18, 2018
Field Trip – USDA-ARS-Southern Regional Research Center and
The Old New Orleans Rum Distillery – Breakfast and Lunch Included
Hotel Lobby at 8:45am
9:00am - 4:00pm
Program at a glance

Tuesday Evening, May 15, 2018

2:00 – 6:00 PM CONFERENCE REGISTRATION (Conference registration will be in the Bienville Room, 2nd Floor, throughout the Conference)
6:30 – 8:30 PM WELCOME RECEPTION (The Versailles Room, Lower Level)

Wednesday, May 16, 2018

7:30 AM – 5:00 PM Conference Registration (Bienville Room, 2nd Floor)
Refreshments (Bienville & Gravier Complexes, 2nd Floor)

TECHNICAL SESSION I (The Denechaud Room, 2nd Floor)
Moderator: Gillian Eggleston (8:30 AM - 12:00 PM)
8:30 – 8:40 Gillian Eggleston, ASCPC Lead Organizer – Welcome and Conference Overview
8:40 – 8:50 Welcome, Deepak Bhatnagar, Director of USDA-ARS-Southern Regional Research Center, New Orleans, LA, USA
8:50 – 9:00 Dedication of Conference to the late Benjamin Legendre by Kenneth Gravois, LSU Ag Center, Baton Rouge, LA, USA
9:00 – 9:30 Keynote Speaker: Ed King, Retired Area Director, Southeast Area, United States Department of Agriculture, Agricultural Research Service (USDA-ARS), Stoneville, MS, USA. “Importance of Stakeholders in Support of Federal Agricultural Research.” ars9677@gmail.com.
9:30 – 10:00 Doug Bice, Marketing Director, United Sorghum Checkoff Fund, Lubbock, TX, USA. “Consumer Messaging for Sorghum Syrup.” dougb@sorghumcheckoff.com.

LUNCH AND POSTER SESSION (11:50 AM-1:15 PM)
(Lunch in the Versailles Room, Lower Level; Poster Session, Bienville & Gravier Complexes, 2nd Floor)

TECHNICAL SESSION II (The Denechaud Room, 2nd Floor)
Moderator: Herman Waguespack, Jr. (1:15 PM - 5:00 PM)
Wednesday, May 16, 2018


1:55 – 2:15 Matt Heckemeyer, CEO, Heckemeyer Biorefinery, Sikeston, MO, USA. “On the Continuing Road to a Large-scale Sweet Sorghum Industry in the USA.” M.heckemeyer@yahoo.com.


2:55 – 3:15 Break and Poster Session (Bienville & Gravier Complexes, 2nd Floor)

3:15 – 3:35 Steve Kaffka, Steve Zicari, and Ruihong Zhang, Extension Specialist, Department of Plant Sciences and Director, California Biomass Collaborative, University of California, Davis, California, USA. “Biofuel from energy beets? Potential year-round ethanol production from fermented sugar beet roots in California.” srkaffka@ucdavis.edu.


3:55 – 4:15 Jadyr Oliveira, Marcelo Vieira, Diego Oliveira, and Rafael Borges, Chemistry Professor, Prozyn Biosolutions, Sao Paulo, SP, Brazil. “Polysaccharides Hydrolysis in Sucrose Production: Avoiding Color Development and Increasing the Yield.” Jadyr@prozyn.com.br.

4:15 – 4:35 Philip Keating and Roddy Hullett, CEO, American Biocarbon LLC, White Castle, LA, USA. “Partnering with Sugar Producers to Provide Clean Cane Through Detrashing and Utilizing Agricultural Residue and Waste Streams for the Production of Biocarbon Products.” Pkeating@americanbiocarbon.com.


Adjourn.

Dinner on your own.

Thursday, May 17, 2018

7:45 AM – 8:30 AM. Refreshments (Bienville & Gravier Complexes, 2nd Floor)

TECHNICAL SESSION III (The Denechaud Room, 2nd Floor)
Moderator: Isabel Lima (8:30 AM - 9:45 PM)


Program at a glance (continued)

Thursday, May 17, 2018

9:45 – 10:15  Break and Poster Session (Bienville & Gravier Complexes, 2nd Floor)

TECHNICAL SESSION IV – LIQUID SWEETENER/BEVERAGE WORKSHOP (The Denechaud Room, 2nd Floor)
Moderator: Doug Bice (10:15 AM - 12:15 PM)

10:45 – 11:00  Mary An Godshall, Retired Managing Director of the Sugar Processing Research Institute, New Orleans, LA, USA.  “Liquid Sweeteners in Non-Alcoholic Beverages.”  Mgodshall@cox.net.
11:15 – 11:30  Gillian Eggleston and Alexa Triplett, Head of Audubon Sugar Institute, USDA-ARS Southern Regional Research Center, New Orleans, LA, USA.  “The Nature of Floc Problems in Alcoholic Beverages Sweetened with Cane Sugars and How to Remove Them.”  Geggleston@agcenter.lsu.edu.
11:30 – 12:00  LIQUID SWEETENER/BEVERAGE WORKSHOP PANEL DISCUSSION

LUNCH AND POSTER SESSION (12:00 PM - 1:30 PM)
(Lunch in the Versailles Room, Lower Level; Poster Session, Bienville & Gravier Complexes, 2nd Floor)

SWEET SORGHUM ASSOCIATION (SSA) ANNUAL MEETING (The Denechaud Room, 2nd Floor)
Moderators: Randall Powell and Hal Debor (1:30 PM - 4:20 PM)

1:30 – 1:45  Welcome and Introduction from SSA, Randall Powell
1:45 – 2:05  Ryan Stoklosa, David Johnston, Nhuan Nghiem, Research Chemical Engineer, USDA-ARS Eastern Regional Research Center, Wyndmoor, PA, USA.  “Improving Astaxanthin Production by Phaffia rhodozyma Cultivated in Sweet Sorghum Juice.”  Ryan.Stoklosa@ars.usda.gov.
2:45 – 3:15  Break and Poster Session (Bienville & Gravier Complexes, 2nd Floor)

4:15 – 4:30  Closing Remarks

6:30 - 8:30 PM  AWARDS BANQUET (Versailles Room, Lower Level)

Adjourn.
Friday, May 18, 2018

FIELD TRIP TO USDA-ARS-SRRC, NEW ORLEANS, LA AND TOUR OF THE OLD NEW ORLEANS RUM DISTILLERY

Tour of USDA-ARS-SRRC SUGAR PROCESSING PILOT PLANT FACILITIES

*Please remember to wear closed toe shoes for your tour day*

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>8:45</td>
<td>Board Bus at the front of the Le Pavillon Hotel</td>
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<td>9:00 – 9:30</td>
<td>Transport to USDA-ARS-SRRC, 1100 Robert E. Lee Blvd, New Orleans, LA 70124</td>
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<tr>
<td>9:30 – 10:00</td>
<td>Refreshments (Bayou Conference Room – 3rd floor)</td>
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<td>10:00 – 10:15</td>
<td>Welcome to SRRC and research overview of the Center by the Center Director, Deepak Bhatnagar</td>
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<td>10:15 – 10:30</td>
<td>Safety message and final notes (organizing participants into tour groups)</td>
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<td>10:30 – 12:00</td>
<td>Tour (including the Vintage Lab and the Sugar Processing Pilot Plant facilities)</td>
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<td>12:00 – 1:30</td>
<td>Lunch at USDA-ARS-SRRC (Bayou Conference Room – Catered New Orleans Style Lunch)</td>
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<tr>
<td>1:30 – 1:45</td>
<td>Bus departs USDA-ARS-SRRC to arrive at New Orleans Old Rum Distillery for 1:45. Please be ready for the bus at 1:15</td>
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<tr>
<td>2:00 – 3:30</td>
<td>Tour of Old New Orleans Rum Distillery</td>
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<tr>
<td>3:30</td>
<td>Board bus</td>
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<tr>
<td>3:40 – 4:00</td>
<td>Bus departs New Orleans Old Rum Distillery at 3:40 pm sharp for transport back to Le Pavillon Hotel by 4:00pm. Please be ready to load the bus by 3:30</td>
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Adjourn.

**USDA-ARS-SRRC**

Old New Orleans Rum Distillery uses locally-sourced Louisiana cane sugar and molasses.
Posters


2. Marsha Cole, Gillian Eggleston, Deriesha Gaines, Matthew Heckemeyer, and Thomas Klasson, Lecturer, USDA-ARS-SRRC, New Orleans, LA, USA. New enzyme system to convert starch in sweet sorghum processing by-products for the augmentation of fermentation yields. Cole@latech.edu.


5. Isabel Lima, Ana Jimenez, Gillian Eggleston, Benhur Pabon, and Emmanuel Sarir, Research Chemist, USDA-ARS-SRRC, New Orleans, LA, USA. Pilot plant study on the use of powdered activated carbons to remove various impurities from a sugar refinery liquor. Isabel.Lima@ars.usda.gov.

6. Gillian Eggleston, Karen Bett-Garber, Peter Bechtel, Alexa Triplett, and Douglas Bice, Head of Audubon Sugar Institute, USDA-ARS-SRRC, New Orleans, LA, USA. Nutritional properties and composition of commercial syrup sweeteners in the USA. Geggleston@agcenter.lsu.edu.


10. Fang Deng and Giovanna Aita, Post-Doctoral Researcher, Audubon Sugar Institute, St. Gabriel, LA, USA. Fumaric acid fermentation from lignocellulosic syrup. Gaita@agcenter.lsu.edu.

11. Fang Deng, Saeed Oladi, Giovanna Aita, Post-Doctoral Researcher Audubon Sugar Institute, St. Gabriel, LA, USA. Lignocellulosic syrup from energy crops. Gaita@agcenter.lsu.edu.


17. Luis Bento, Sugarcane Consultant, Porto, Portugal. Light Refractive Index Calculations for Water, Glucose, Fructose and Sucrose. Ismbento@gmail.com.

