

# ASCPC 2018

May 15<sup>th</sup> - 18<sup>th</sup>

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](http://www.ars.usda.gov/ASCPC)



## ***Advances in Sugar Crop Processing and Conversion ASCPC Technical Sugar Research Conference***

***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 (SRR) 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:***



**Advances in Sugar Crop Processing and Conversion 2018 Conference**  
**Le Pavillon Hotel**  
**833 Poydras, New Orleans, LA 70112, USA**  
**May 15-18, 2018**

***Schedule of Events***

**Tuesday, May 15, 2018**  
**2<sup>nd</sup> 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**  
**2<sup>nd</sup> Floor, Bienville Room**  
**Late Registration**  
**7:30am - 5:00pm**

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

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

**Thursday, May 17, 2018**  
**Sweet Sorghum Association Annual Meeting**  
**2<sup>nd</sup> 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, 2<sup>nd</sup> 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, 2<sup>nd</sup> Floor)

Refreshments (Bienville & Gravier Complexes, 2<sup>nd</sup> Floor)

TECHNICAL SESSION I (The Denechaud Room, 2<sup>nd</sup> 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](mailto: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](mailto:dougb@sorghumcheckoff.com).

10:00 – 10:30 Break and Poster Session (Bienville & Gravier Complexes, 2<sup>nd</sup> Floor)

10:30 – 10:50 Herman Waguespack, Jr., Technical Director, American Sugar Cane League, Thibodaux, LA, USA. *“A Brief Overview of the Louisiana Sugar Cane Industry.”* [Hlwag@amscl.org](mailto:Hlwag@amscl.org).

10:50 – 11:10 Christopher Aurand and Klanarong Sriroth, Sr. Expert. Innovation Global Sourcing, Mitr Phol Sugarcane Research Center Ltd., Phukiao, Chaiyaphum, Thailand. *“Impact of the Bioeconomy on Thailand’s Sugar Crop Agro-Industry.”* [Thomasc@mitrophol.com](mailto:Thomasc@mitrophol.com).

11:10 – 11:30 Andrew Wierdak, Charles Clayton, Alec Walker, Nicholas Watts, Gillian Eggleston, Isabel Lima, Craig Parker, and Emmanuel Sarir, Engineering Department, Tulane University, New Orleans, LA, USA. *“Powdered Activated Carbon to Adsorb Colorants from Sugar Beet Syrup – A Pilot Plant Study.”* [Isabel.Lima@ars.usda.gov](mailto:Isabel.Lima@ars.usda.gov).

11:30 – 11:50 Sam Ihli, Stephanie Boone, Gillian Eggleston, John Sanders, Larry Boihem, Belisario Montes, Kevin Pontif, and Maureen Wright, Director of Marketing, Carus Corporation, Peru, IL, USA. *“Using Sodium Permanganate as a Processing Aid in Louisiana Sugarcane Factories.”* [Sam.Ihli@caruscorporation.com](mailto:Sam.Ihli@caruscorporation.com).

LUNCH AND POSTER SESSION (11:50 AM- 1:15 PM)

(Lunch in the Versailles Room, Lower Level; Poster Session, Bienville & Gravier Complexes, 2<sup>nd</sup> Floor)

TECHNICAL SESSION II (The Denechaud Room, 2<sup>nd</sup> Floor)

Moderator: Herman Waguespack, Jr. (1:15 PM - 5:00 PM)

1:15 – 1:35 Morakot Sakulsombat, Nuttapong Kumpan, Nopparat Cheetangdee, and Klanarong Sriroth, Researcher, Mitr Phol Sugarcane Research Center Ltd., Phukiao, Chaiyaphum, Thailand. *“Extraction of Health Promoting Phenolic Compounds from Sugarcane Bagasse Using Green Technology.”* [Morakots@mitrphol.com](mailto:Morakots@mitrphol.com).

## Program at a glance (continued)

### Wednesday, May 16, 2018

- 1:35 – 1:55** Jordan Wood, COO, Redleaf Biologics, Inc., Lexington, KY, USA. *“Using a Sweet Sorghum Plant to Produce Natural Food Colors.”* [Jordan@redleafbiologics.com](mailto:Jordan@redleafbiologics.com).
- 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](mailto:M.heckemeyer@yahoo.com).
- 2:15 – 2:35** Stephanie Boone, Alexander Nydell, Gillian Eggleston, Alexa Triplett, and Maureen Wright, Research Molecular Biologist, USDA-ARS Southern Regional Research Center, New Orleans, LA, USA. *“Practical Use of Soybean Oil to Stabilize and Store Medium to High Brix Sweet Sorghum Syrups.”* [Stephanie.Boone@ars.usda.gov](mailto:Stephanie.Boone@ars.usda.gov).
- 2:35 – 2:55** David Johnston and Nhuan Nghiem, Research Food Technologist, USDA-ARS Eastern Regional Research Center, Wyndmoor, PA, USA. *“Evaluation of Sweet Sorghum Juice for the Production of Lysine Using Corynebacterium glutamicum.”* [David.Johnston@ars.usda.gov](mailto:David.Johnston@ars.usda.gov).
- 2:55 – 3:15** Break and Poster Session (Bienville & Gravier Complexes, 2<sup>nd</sup> 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](mailto:srkaffka@ucdavis.edu).
- 3:35 – 3:55** Marsha Cole, Gillian Eggleston, and Deriesha Gaines, Lecturer, Louisiana Tech University, Ruston, LA, USA. *“Development of the Industrial Starch Method to Quantify Total, Soluble, and Insoluble Starch in Sugar Manufacturing Products.”* [Cole@latech.edu](mailto:Cole@latech.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](mailto: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](mailto:Pkeating@americanbiocarbon.com).
- 4:35– 4:55** Isabel Lima and Amir Hass, Research Chemist, USDA-ARS Southern Regional Research Center, New Orleans, LA, USA. *“Effect of Feed Source and Pyrolysis Conditions on Sugarcane Bagasse Biochar.”* [Isabel.Lima@ars.usda.gov](mailto:Isabel.Lima@ars.usda.gov).

Adjourn.

Dinner on your own.

### Thursday, May 17, 2018

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

TECHNICAL SESSION III (The Denechaud Room, 2<sup>nd</sup> Floor)

Moderator: Isabel Lima (8:30 AM - 9:45 PM)

- 8:30 – 9:05** **Keynote Speaker:** Jonathan Male, Director, United States Department of Energy, Washington DC. *“DOE Energy and Biomass Research.”* [Jonathan.Male@ee.doe.gov](mailto:Jonathan.Male@ee.doe.gov).
- 9:05 – 9:25** Luis Bento, Sugarcane Consultant, Porto, Portugal. *“Decolorization in Sugarcane Refineries and in Sugar Beet Factories Adapted for Processing Raw Sugar from Sugarcane.”* [Ismbento@gmail.com](mailto:Ismbento@gmail.com).
- 9:25 – 9:45** Fikadu Beyene and Antonio Avila, Environmental/Process Engineer, Louisiana Sugar Cane Cooperative Inc, St. Martinville, LA, USA. *“New Molasses Cooler Design for Stopping Maillard Reactions in Molasses Storage Tanks.”* [Fbeyene@lasuca.com](mailto:Fbeyene@lasuca.com).

## Program at a glance (continued)

**Thursday, May 17, 2018**

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

**TECHNICAL SESSION IV – LIQUID SWEETENER/BEVERAGE WORKSHOP (The Denechaud Room, 2<sup>nd</sup> Floor)**

**Moderator: Doug Bice (10:15 AM - 12:15 PM)**

**10:15 – 10:45 Les Pfahl, Product Development Director, Bacardi Corporation, FL, USA. “Development of Specifications for Sugar in Beverage Alcohols.” [Lpfahl@bacardi.com](mailto:Lpfahl@bacardi.com).**

**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](mailto:Mgodshall@cox.net).**

**11:00 – 11:15 Karen Bett-Garber, Jeanne Lea, Gillian Eggleston, and Peter Bechtel, Research Food Technologist, USDA-ARS Southern Regional Research Center, New Orleans, LA, USA. “Sensory Flavor Characteristics of Sweet Sorghum Syrup.” [Karen.Bett@ars.usda.gov](mailto:Karen.Bett@ars.usda.gov).**

**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](mailto: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, 2<sup>nd</sup> Floor)**

**SWEET SORGHUM ASSOCIATION (SSA) ANNUAL MEETING (The Denechaud Room, 2<sup>nd</sup> 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.Stoklasa@ars.usda.gov](mailto:Ryan.Stoklasa@ars.usda.gov).**

**2:05 – 2:25 Hal Debor, CEO, Debor Consulting, Saint-Lazare, Quebec, Canada. “Sweet Sorghum Co-Product Optimization.” [Hal@deborconsulting.com](mailto:Hal@deborconsulting.com).**

**2:25 – 2:45 Maureen Wright, Isabel Lima, Randall Powell, and Renee Bigner, Microbiologist, USDA-ARS-Southern Regional Research Center, New Orleans, LA, USA. “Stabilization of Sweet Sorghum Bagasse for Novel Applications Using Compaction and Ensilage.” [Maureen.Wright@ars.usda.gov](mailto:Maureen.Wright@ars.usda.gov).**

**2:45 – 3:15 Break and Poster Session (Bienville & Gravier Complexes, 2<sup>nd</sup> Floor)**

**3:15 – 3:35 Joseph Knoll, Karen Harris-Shultz, and Xinzhi Ni, Research Geneticist, USDA-ARS Crop Genetics and Breeding Research Unit, Tifton, GA, USA. “Update on Sugarcane Aphid Management in Sweet Sorghum and Breeding for Resistance.” [Joe.Knoll@novozymes.com](mailto:Joe.Knoll@novozymes.com).**

**3:35 – 3:55 Randall Powell, Jared Lindley, and Maury Radin, Co-founder and Technology Manager, Delta BioRenewables LLC, Memphis, TN, USA. “Sugarcane Aphid Mitigation for Sweet Sorghum.” [Randy@deltabiorenewables.com](mailto:Randy@deltabiorenewables.com).**

**3:55 – 4:15 Robert Schaffert and Rafael A.C. Parrella, Senior Researcher, Embrapa Milho e Sorgo, Sete Lagoas, MG, Brazil. “Advances in Sweet Sorghum Cultivation and Processing in Brazil.” [reschaffert@hotmail.com](mailto:reschaffert@hotmail.com).**

**4:15 – 4:30 Closing Remarks**

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

**Adjourn.**

## Program at a glance (continued)

**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*

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

Adjourn.



USDA-ARS-SRRC



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

## Posters

1. **Gillian Eggleston, David Stewart, Belisario Montes, Alexa Triplett, Eldwin St. Cyr, and Stephanie Boone, Head of Audubon Sugar Institute, USDA-ARS-SRRC, New Orleans, LA, USA.** *Evaluation of hydrogen peroxide as a decolorizer in upstream juice products at a sugarcane factory.* [Geggleston@agcenter.lsu.edu](mailto:Geggleston@agcenter.lsu.edu).
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](mailto:Cole@latech.edu).
3. **Gillian Eggleston, Charlie Schudmak, Roddy Hulett, Herman Waguespack, Jr., Harold Birkett, John Gay, Al Landry, Isabel Lima, Eldwin St. Cyr, Jeanie Stein, and Atticus Finger, Head of Audubon Sugar Institute, USDA-ARS-SRRC, New Orleans, LA, USA.** *First year operation of a mechanical detrasher system at a Louisiana sugarcane factory.* [Geggleston@agcenter.lsu.edu](mailto:Geggleston@agcenter.lsu.edu).
4. **Isabel Lima, Paul White Jr., and Charles Webber III, Research Chemist, USDA-ARS-SRRC, New Orleans, LA, USA.** *Increased sugarcane yields observed in biochar and fly ash-amended soils.* [Isabel.Lima@ars.usda.gov](mailto:Isabel.Lima@ars.usda.gov).
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](mailto: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](mailto:Geggleston@agcenter.lsu.edu).
7. **Maureen Wright, K. Thomas Klasson, and Keitarou Kimura, Microbiologist, USDA-ARS-SRRC, New Orleans, LA, USA.** *Nutrient requirements for the production of biochemical from sweet sorghum and sugar beet syrups via fermentation.* [Maureen.Wright@ars.usda.gov](mailto:Maureen.Wright@ars.usda.gov).
8. **Thomas Klasson, Nasib Qureshi, Matthew Heckemeyer, and Gillian Eggleston, Supervisory Chemical Engineer, USDA-ARS-SRRC, New Orleans, LA, USA.** *Biobutanol production from sweet sorghum biorefinery by-products.* [Thomas.Klasson@ars.usda.gov](mailto:Thomas.Klasson@ars.usda.gov).
9. **Minori Uchimiya, Research Chemist, USDA-ARS-SRRC, New Orleans, LA, USA.** *Antioxidants in sorghum.* [Sophie.Uchimiya@ars.usda.gov](mailto:Sophie.Uchimiya@ars.usda.gov).
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](mailto: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](mailto:Gaita@agcenter.lsu.edu).
12. **Abd El-Razek A.M., Gohar, I., Abo El-Ftooh, A., and Abd-El Rahman, Researcher, Sugar Crops Research Institute, Agricultural Research Center, Giza, Egypt.** *The performance of six sugar beet varieties under the effect of nematicide application on the root-knot nematode-fusarium wilt complex in Ismailia and Nubariya marginal sugar beet fields.* [aymanhabl@hotmail.com](mailto:aymanhabl@hotmail.com).
13. **Barbara Muir and Elsa Permentier, Process Lead Sugar Technologist, Tereos, Aalst, Belgium.** *Conservation of beet intermediate syrups to extend the sugar producing season.* [Barbara.muir@tereos.com](mailto:Barbara.muir@tereos.com).
14. **Anutin Pattamasuwan, Nuchnicha Phaeon, Pisittinee Chapanya, Klanarong Sriroth, Wason Wongrat, Wirat Vanichsiratana, Researcher, Mittr Phol Sugarcane Research Center Ltd., Chaiyaphum, Thailand.** *Occurrence of spontaneous combustion of bagasse stockpile.* [anutinp@mitrphol.com](mailto:anutinp@mitrphol.com).
15. **Charles Webber III, Paul White Jr., Douglas Spaunhorst, Isabel Lima, and Eric Petrie, Research Agronomist, USDA-ARS-Sugarcane Research Unit, Houma, LA, USA.** *Sugarcane bagasse biochar: Growing media amendment for greenhouse seedling production.* [Chuck.Webber@ars.usda.gov](mailto:Chuck.Webber@ars.usda.gov).



16. **Charles Webber III, Paul White Jr., Darcey Wayment, Douglas Spaunhorst, Derek Landrum, and Emmanuel Dorvil, Research Agronomist, USDA-ARS-Sugarcane Research Unit, Houma, LA, USA.** *Sugarcane crop residue and roots: Allelopathic impact on weed seed germination.* [Chuck.Webber@ars.usda.gov](mailto:Chuck.Webber@ars.usda.gov).
17. **Luis Bento, Sugarcane Consultant, Porto, Portugal.** *Light Refractive Index Calculations for Water, Glucose, Fructose and Sucrose.* [Ismbento@gmail.com](mailto:Ismbento@gmail.com).
18. **Peeraya Klomsa-ard, Klanarong Sriroth, Researcher, Mitr Phol Sugarcane Research Center Ltd., Chaiyaphum, Thailand.** *Situation of Sugarcane variety in Thailand and trend for the future.* [peerayak@mitrophol.com](mailto:peerayak@mitrophol.com).
19. **Gillian Eggleston, Alexa Triplett, Steve Boue, Karen Bett-Garber, Peter Bechtel, and Douglas Bice, Head of Audubon Sugar Institute, USDA-ARS-SRRC, New Orleans, LA, USA.** *Total Phenolics in Sweet Sorghum Syrups Compared to Other Commercial Syrups: Antioxidant Activity and Color.* [Geggleston@agcenter.lsu.edu](mailto:Geggleston@agcenter.lsu.edu).

