

**AGENDA**  
**National Sweetpotato Collaborators Group**  
**2015 Annual Conference**  
**February 5-6, 2016**  
**Hyatt Regency San Antonio Riverwalk, San Antonio, TX**

**Chairman:** Kenneth Pecota (North Carolina State University)

**Friday, February 5, 2016**

**7:30-8:00** Registration (\$20) Live Oak Room

**8:00** **Call to order:** Introductions, Announcements, Committee Assignments, State Reports

**Physiology and Breeding**

Presiding: Valerio Primomo (Vineland Research and Innovation Centre)

- 8:45** **Overview of Vineland's Sweet Potato Breeding Program.** Valerio Primomo<sup>1</sup>, Amy Bowen<sup>1</sup>, Travis Banks<sup>1</sup>, David Liscombe<sup>1</sup>, and Don LaBonte<sup>2</sup>. <sup>1</sup>Vineland Research and Innovation Centre, Vineland Station, Ontario, Canada, L0R 2E0; School of Plant, Environmental, and Soil Sciences, Louisiana State University Agricultural Center, Baton Rouge, LA 70803. (valerio.primomo@vinelandresearch.com)
- 9:00** **Current Status and Future Direction of Sweetpotato Research at USVL.** Livy Williams\*, Phillip A. Wadl, and D. Michael Jackson. USDA-ARS, US Vegetable Laboratory, 2700 Savannah Highway, Charleston, SC 29414. (livy.williams@ars.usda.gov)
- 9:15** **Update on the Genomic Tools for Sweetpotato Improvement Project.** G. Craig Yencho, Department of Horticultural Science, NC State University, Raleigh, NC 27695. (craig\_yencho@ncsu.edu)
- 9:30** **Variation in Sweetpotato Root Architecture Response to Nematode Infection.** Arthur Villordon<sup>1</sup> and Christopher Clark<sup>2</sup>, <sup>1</sup>LSU Agricultural Center Sweet Potato Research Station, Chase, LA 71324; <sup>2</sup>LSU AgCenter Department of Plant Pathology and Crop Physiology, Baton Rouge, LA 70803. (avillordon@agcenter.lsu.edu)
- 9:45** **Lost in Translation? Exploring the Presumptive Association between Arbuscular Mycorrhizae-Phosphorus Interaction and Some Root Rotting Pathogens.** Arthur Villordon<sup>1</sup>, Don LaBonte<sup>2</sup> and Christopher Clark<sup>3</sup>, <sup>1</sup>LSU Agricultural Center Sweet Potato Research Station, Chase, LA 71324, <sup>2</sup>LSU AgCenter School of Plant, Environmental, and Soil Science, Baton Rouge, LA

70803; <sup>3</sup>LSU AgCenter Department of Plant Pathology and Crop Physiology, Baton Rouge, LA 70803. (avillordon@agcenter.lsu.edu)

- 10:00 Sweetpotato Yield in Response to Timac Fertilization and Biostimulant on Covington Sweetpotatoes.** Jonathan R. Schultheis\* and William B. Thompson, Department of Horticultural Science, North Carolina State University, Raleigh, NC27695-7609 (jonathan\_schultheis@ncsu.edu)
- 10:15 Break (15 minutes)**
- 10:30 Variety Disposition –** Jeff Main (Mississippi State University)
- 11:00 Clean Plant Network Update and Discussion –** Chris Clark (Louisiana State University)
- 12:00 Lunch**

#### **Graduate Student Contest**

Presiding: Mark Shankle (Mississippi State University)

#### PhD Students

- 1:30 Yield Potential of Fourteen Organic Sweetpotato Cultivars Grown Under Various Mulches in Tennessee.** Sochinwechi Nwosisi and Dilip Nandwani, College of Agriculture, Human and Natural Sciences, Tennessee State University, Nashville, TN 37209. (dilipnandwani@yahoo.com)
- 1:45 Sweetpotato Vine Puller-Chopper: A Transition from Prototype to a Semi-Commercial Unit.** Anirudh Akula\*, J.A. Macialek and M.D. Boyette, Department of Biological and Agricultural Engineering, North Carolina State University, Raleigh, NC 27695. (aakula@ncsu.edu)
- 2:00 Comparison of Three Color Combinations of Light-Emitting Diode, and Ambient Light Treatments for Sweetpotatoes (*Ipomoea batatas*) Grown in Greenhouse Conditions.** T. F. Arnold<sup>1\*</sup>, A. Q. Villordon<sup>1</sup>, T. P. Smith<sup>1</sup>, and C. A. Clark<sup>2</sup>. <sup>1</sup>LSU AgCenter Sweet Potato Research Station, Chase, LA 71324, <sup>2</sup>LSU AgCenter School of Plant Environmental and Soil Sciences, Baton Rouge, LA 70803. (tarnold@agcenter.lsu.edu)

#### M.S. Students

- 2:15 Influence of Growth Retardant and Cultivars on Secondary Metabolites Profile in Sweet Potato Grown Under Hydroponic System in Greenhouse Conditions.** Damerius Johnson\*, Victor Njiti, Qun Xia, Ananda K Nanjundaswamy and Franklin Chukwuma, Alcorn State University, Lorman, MS 39096. (vicnji@alcorn.edu)

- 2:30 Chemical and Alternative Control Options for Managing Soft Rot and Black Rot of Sweetpotato.** Andrew Scruggs\* and Lina Quesada-Ocampo, Department of Plant Pathology, North Carolina State University, Raleigh, NC 27695. (acscrugg@ncsu.edu)
- 2:45 Developing *Bacillus subtilis* Probiotic Feed Supplement Feed Supplement from Sweetpotato-Soymeal Fermentation.** Angela, Jackson\*, Ananda K Nanjundaswamy, Victor Njiti, Xia, Qun, and Franklin Chukwuma, Alcorn State University, Lorman, MS 39096. (ananda@alcorn.edu)
- 3:00 Evaluating Linuron for Weed Control and Sweetpotato (*Ipomoea batatas*) Crop Response.** Lauren L. Barber<sup>1\*</sup>, Mark W. Shankle<sup>2</sup>, Trevor F. Garrett<sup>2</sup>, and Stephen L. Meyers<sup>2</sup>, <sup>1</sup>Plant and Soil Sciences, Mississippi State University, Mississippi State, 39759, <sup>2</sup>Pontotoc Ridge-Flatwoods Branch Experiment Station, Mississippi State University, Pontotoc, MS, 38863. (llb383@msstate.edu)
- 3:15 Development of Transgenic Sweetpotato with Multiple Virus Resistance in US.** David Henderson\*, Chunquan Zhang, Victor Njiti, Yan Meng, Alcorn State University, Lorman, MS 39096. (ymeng@alcorn.edu)
- 3:30 Break (15 minutes)**
- 3:45-4:15 Graduate Student Contest Discussion – Mark Shankle (Mississippi State University)**
- 4:15-5:00 75 Years of Cooperative Sweetpotato Research – David Picha (Louisiana State University)**
- 5:00 Poster Presentations**
- Effect of Microbial Formulation on Sweetpotato Growth and Yield, and Insect Damage to the Roots.** T. Rashid<sup>1</sup>, R. Luttrell<sup>2</sup>, V. Njiti<sup>1</sup> and L. Adams<sup>2</sup>, <sup>1</sup>Alcorn State University, Lorman, MS 39096, <sup>2</sup>USDA-ARS, SIMRU, Stoneville, MS 38776 (trashid@alcorn.edu)
- Crop Tolerance to Command Carryover in Sweetpotato (*Ipomoea batatas*).** Lauren L. Barber<sup>1\*</sup>, Mark W. Shankle<sup>2\*</sup>, Dan B. Reynolds<sup>2\*</sup>, and Trevor F. Garrett<sup>2\*</sup>, <sup>1</sup>Plant and Soil Sciences, Mississippi State University, Mississippi State, 39759, <sup>2</sup>Pontotoc Ridge-Flatwoods Branch Experiment Station, Mississippi State University, Pontotoc, MS, 38863. (llb383@msstate.edu)

**Validation of Sample Collection Methods for Salmonella Isolation from Sweetpotato Production and Harvest Environments.** Jeff Main<sup>1</sup>, Taejo Kim<sup>2</sup>, Stephen Meyers<sup>1</sup>, Lurdes Siberio<sup>2</sup>, Juan Silva<sup>2</sup>, <sup>1</sup>Pontotoc Ridge-Flatwoods Branch Experiment Station, Mississippi State University, Pontotoc, MS 38863, <sup>2</sup>Department of Food Science, Nutrition, and Health Promotion, Mississippi State University, Mississippi State, MS 39762 (stephen.meyers@msstate.edu)

**Saturday, February 6, 2016**

**7:55 Call to Order**

**Postharvest, Processing and Pest Management**

Presiding: Victor Njiti (Alcorn State University)

- 8:00 Bulk Piling of Sweetpotatoes for Short Term Storage.** Justin Macialek\* and Mike Boyette, Biological & Agricultural Engineering Department, NC State University, Raleigh, NC 27695. (jamacial@ncsu.edu)
- 8:15 Sweet Potato as a Feedstock for Bio-Oil Production Using Oleaginous Yeast Fermentation** Ananda K Nanjundaswamy\*, Angela, Jackson, Amber Jones, Victor Njiti, Xia, Qun, and Franklin Chukwuma, Alcorn State University, Lorman, MS 39096. (ananda@alcorn.edu)
- 8:30 Compositional Characteristics of Principal U.S. Sweetpotato Cultivars and Genotypes.** David H. Picha\* and Mary S. Bowen, School of Plant, Environmental and Soil Sciences, Louisiana State University Agricultural Center, Baton Rouge, LA 70803. (dpicha@agcenter.lsu.edu)
- 8:45 Saponins in Sweetpotato Varieties Grown in North Carolina: An Exploratory Study.** Ying Feng<sup>1</sup>, Rong Reynolds<sup>2</sup> and Van-Den Truong<sup>\*2 1</sup> College of Food Science, Shenyang Agricultural University, Shenyang, China. <sup>2</sup>USDA-ARS, SAA Food Science Research Unit, Department of Food, Bioprocessing and Nutrition Sciences, North Carolina State University, Raleigh, NC 27695 (den.truong@ars.usda.gov)
- 9:00 Evaluation of Various Insecticides Regimes for Control of Fall Armyworm in Mississippi Sweetpotato Production, 2015.** Larry Adams\* and Chris Johnson, USDA-ARS, SIMRU, Stoneville, MS 38776. (larry.adams@ars.usda.gov)
- 9:15 Potyvirus Re-Infection during Virus-Tested Sweetpotato Seed Production in Louisiana.** Christopher A. Clark<sup>\*1</sup> and Tara P. Smith<sup>2</sup>. <sup>1</sup>Department of Plant Pathology & Crop Physiology, LSU, Baton Rouge, LA 70803 and <sup>2</sup>Sweet Potato Research Station, Louisiana State University Agricultural Center, Chase, LA 71324. (cclark@agcenter.lsu.edu)

**9:30 Root Knot Nematode (RKN) Management in Sweetpotatoes with Nimitz and Dominus.** Scott Stoddard<sup>1\*</sup>, Antoon Ploeg<sup>2</sup>, Chris Leon<sup>3</sup>, <sup>1</sup>2145 Wardrobe Av., UC Cooperative Extension, Merced, CA, 95341, <sup>2</sup>2240A Spieth Hall, Department of Nematology, UC Riverside, Riverside, CA 92521, <sup>3</sup>Isagro-USA, Inc., 430 Davis Dr, Suite 240, Morrisville, NC 27560. (csstoddard@ucanr.edu)

**9:45 Insecticide Management of the Sugarcane Beetle and Other Soil Insects in Sweetpotato in Louisiana.** T.P. Smith<sup>1</sup>, J. Beuzelin<sup>2</sup>, T.F. Arnold<sup>1</sup> and D. May<sup>2</sup>. <sup>1</sup>LSU Agricultural Center Sweet Potato Research Station, Chase, LA 71324. <sup>2</sup>LSU Agricultural Center Dean Lee Research Station, Alexandria, LA 71302. (tsmith@agcenter.lsu.edu)

**10:00 Break (15 minutes)**

**10:15 Specialty Crops Research Initiative Grant Opportunity – Arthur Villordon** (Louisiana State University)

**12:00 Lunch**

#### **Production**

Presiding: Raja Reddy (Mississippi State University)

**1:30 Method Development and Assessment of Plastic Mulches for Sweet Potato Bedding Systems.** Jason K. Ward\* and J.W. Lowe, Agricultural and Biological Engineering, Mississippi State University, Mississippi State, MS 39762. (jward@abe.msstate.edu)

**1:45 Sweetpotato Growth, Developmental, Physiological, and Storage Root Bulking Responses to Mid- and Late-Season Soil Moisture Deficits.** K. Raja Reddy\* and Bandara Gajanayake, Department of Plant and Soil Sciences, 117 Dorman Hall, Box 9555, Mississippi State University, Mississippi State, MS 39762. (krreddy@pss.msstate.edu)

**2:00 Sulfur Fertilization in Mississippi Sweetpotatoes.** Jeffrey L. Main, Pontotoc Ridge-Flatwoods Branch Experiment Station, Mississippi State University, Pontotoc, MS 38863. (jmain@ra.msstate.edu)

**2:15 Developing Agronomic Best Practices for Sweet Potatoes under Canadian Growing Conditions.** Melanie Filotas<sup>1</sup>, Cathy Bakker<sup>2</sup> and Mary Ruth McDonald<sup>2</sup>. <sup>1</sup>Ontario Ministry of Agriculture, Food and Rural Affairs, Simcoe Resource Centre, Simcoe Ontario, N3Y 4K6, <sup>2</sup>Department of Plant Agriculture, University of Guelph, Guelph, Ontario, N1G 2W1 (melanie.filotas@ontario.ca)

**2:30 Break (15 minutes)**

**NSCG Annual Business Meeting**

**2:45 Graduate Student Awards**  
Mark Shankle (Mississippi State University)

**3:00 Business Meeting**  
Kenneth Pecota (North Carolina State University)

## RESOLUTIONS

**National Sweetpotato Collaborator Group  
January 24-25, 2015  
Nashville, TN**

1. Whereas the NSCG has had a very productive meeting and beneficial meeting at the Opryland Gaylord Resort in Nashville, TN and whereas Mr. Larry Adams with assistance from Dr. Stephen Meyers and Mr. Jeff Main, has conducted the affairs and business of the meeting to great effect, now be it therefore resolved that the NSCG expresses its thanks and deep appreciation for their hard work, creativity, and willingness to serve for the greater good of the sweetpotato community.
2. Whereas the NSCG has learned of the passing of Dr. Dan Austin, and whereas Dr. Austin was a very productive scientist who contributed much over many years to the understanding of sweetpotato evolution and it's relationships with other morning glory species and whereas Dr. Dan Austin was instrumental as a mentor in the early years when the sweetpotato germplasm repository was being initiated and CIP (and the repository) were actively collecting plant material, now be it therefore resolved that the NSCG expresses its sincere appreciation for Dr. Austin's contributions to the NSCG.
3. Whereas the NSCG has had a very productive meeting and beneficial meeting at the Opryland Gaylord Resort in Nashville, TN and whereas Mr. Benny Graves and the MS Sweet Potato Commission extended an invitation to the NSCB to meet in conjunction with the National Sweet Potato Council Convention, now be it therefore resolved that the NSCG expresses its thanks and deep appreciation to Mr. Graves and MS for their hospitality and providing the opportunity to network with the industry at this meeting.
4. Whereas Drs. Howard Harrison and Mike Jackson have recently retired, and whereas Dr. Harrison has made meaningful contributions to weed science in sweetpotatoes and regularly attended the NSPC meetings, and whereas Dr. Jackson has previously served as Chair of the NSPC, and made significant contribution in the areas of entomology and helped to maintain the USDA sweetpotato breeding program, now be it therefore resolved that the NSPC expresses its thanks and appreciation for all their contributions and service to the sweetpotato industry and wishes them an enjoyable retirement.
5. Whereas the NSPC graduate student contest has facilitated the participation of graduate students from multiple universities for their professional development and to present innovative research and whereas Dr. Mark Shankle has spearheaded this part of the program along with co-organizer Stephen Meyers and whereas the participation by Drs. Christopher Clark, Obadiah Njue, Tahir Rashid, Jason Ward and Den Truong as judges is

appreciated, now be it therefore resolved that the NSPC encourages that this contest continue in future NSPC meetings and expresses its sincere thanks to all involved for the contributions this session made in the NSPC program.

**2015 Minutes of the National Sweetpotato Collaborators Meeting**  
**January 24 - 25, 2015**  
**Gaylord Opryland Resort and Convention Center, Nashville, Tennessee**

**Larry Adams, Chairperson**

Saturday, January 24

Called to order by Larry Adams 11:54 A.M.

**New Business**

Mark Shankle announced the winners of the 2015 Graduate Student Paper Contest and asked that students pick up their score sheets. He stated that 1 point separated the first and second place students in the MS contest.

The 4th annual graduate student oral presentation contest was held at the National Sweetpotato Collaborators Group Meeting in Nashville, TN on January 24, 2015. There were 6 Ph.D. students and 4 M.S. students that entered the competition. Six scientific judges from universities across the United States scored the contestants based on several different criteria including research justification, scientific merit, proper use of statistics, and relevance of data to resolution of the problem. The 1<sup>st</sup> and 2<sup>nd</sup> place award winners received a "plaque of recognition" and \$300 and \$150, respectively. The award winning presentations were as follows:

MS Level

2<sup>nd</sup> Place

**Impact of Reduced Rates of Hormonal Herbicide on Growth and Development of Sweetpotato.** T.M. Batts<sup>1</sup>, D.K. Miller<sup>1</sup>, T.P. Smith<sup>2</sup>, A.Villordon<sup>2</sup>, J.T. Copes<sup>1</sup>, and M.S. Mathews<sup>1</sup>. <sup>1</sup>LSU AgCenter Northeast Research Station, St. Joseph, LA; <sup>2</sup>LSU AgCenter Sweet Potato Research Station, Chase, LA.

1<sup>st</sup> Place

**Epidemiological Conditions that Promote Rhizopus Soft Rot and Fusarium Root Rot on Sweetpotato.** Andrew Scruggs and Lina M. Quesada-Ocampo, Dept. of Plant Pathology, NC State University, Raleigh, NC.

PhD Level

2<sup>nd</sup> Place

**Molecular Approaches to Understanding the Basis of Sweetpotato Internal Necrosis.** Adam Fisher<sup>1</sup>, William Thompson<sup>2</sup>, Ken Pecota<sup>2</sup>, Jonathan Schultheis<sup>2</sup>, Jose Alonso<sup>1</sup>, Ross Sozzani<sup>1</sup>, Craig Yenko<sup>2</sup>, Terri Long<sup>1</sup>, Katie Jennings<sup>2</sup>, Dahlia Nielsen<sup>3</sup>, Anna Stepanova<sup>1</sup>. Dept. of Plant and Microbial Biology, NC State University, Raleigh, NC; <sup>2</sup>Dept. of Horticultural Science, NC State University, Raleigh, NC; <sup>3</sup>Dept. of Biological Sciences, NC State University, Raleigh, NC.

1<sup>st</sup> Place

**Phenotypic and Molecular Investigation of Developing Sweetpotato Storage Roots Under Root-knot Nematode Challenge.** Gregory C. Bernard<sup>1</sup>, Marceline Egnin<sup>1</sup>, Steven Samuels<sup>1</sup>, William Witola<sup>2</sup>, Desmond Mortley<sup>3</sup>, Conrad Bonsi<sup>3</sup> and Kathy Lawrence<sup>4</sup>. <sup>1</sup>Plant Cellular and Molecular Genetics Lab, College of Agricultural, Nutritional and Environmental Sciences, Tuskegee University, Tuskegee, AL. <sup>2</sup>Molecular Parasitology and Immunology Lab, Tuskegee University, College of Agricultural, Nutritional and Environmental Sciences, Tuskegee, AL. <sup>3</sup>George Washington Carver Experimental Station, Tuskegee University, College of Agricultural, Nutritional and Environmental Sciences, Tuskegee, AL. <sup>4</sup>Department of Entomology and Plant Pathology, Auburn University, Auburn, AL.

Jonathan Schultheis acknowledged the Resolutions Committee members Tara Smith and Scott Stoddard and read the resolutions (see Resolutions page for more information). There was a motion to approve the Resolutions. It was seconded and passed with a unanimous vote.

The Nominations Committee nominated Melanie Filotas for Chair. The nomination was motioned to a vote by Chris Clark and seconded by Jonathan Schultheis. The vote was unanimous in favor of the motion.

Larry Adams asked if there was discussion regarding the development of a website for the National Sweetpotato Collaborators Group. There was no input provided.

Larry Adams asked for discussion regarding the development of a compendium of research.

David Picha stated that development has been slow and that there has not been much interest in a 25 year bulletin. He stated that he required additional responses and that it is still in process.

David Monks stated that the SERA5 project was up for renewal. Don LaBonte and Tara Smith were to take leadership in the renewal process. Don LaBonte stated that they had prepared the new proposal and thought they were set to go. David Monks stated that he had a list of participants for directors to review and that participation affected funding for travel to meetings like this one. He stated that individuals could add their name, appointment, and university affiliation to the project which would demonstrate participation in the SERA5 project. Roger Crickenberger stated that Don's proposal was in the NIMSS system in February and that a revision period was open through June 1 with a decision made in the Fall.

Scott Stoddard returned to the website discussion.

Arthur Villordon stated that he was the ex-webmaster and has back-up files of PDFs.

Scott Stoddard reminded the group that the NSCG won the Excellence in Multi-State Research Award in 2013 and asked for an update on the funds associated with that

award. David Picha acknowledged winning the award and asked David Monks if funds were placed in reserve for use or at our discretion. David Monks said he would check on where those funds are.

Don LaBonte stated that if we developed a new book, those funds could cover publication charges. Craig Yencho stated the funds could be used to hire a professional web developer and questioned the need for a 75 year book; much of the content of the proposed book can be found online today and would only be of historical value.

Arthur Villordon stated that a review of previous work is beneficial to use as a tool to catch up.

Ramon Arancibia stated that we should have a book, but not in hard-copy form.

Scott Stoddard stated that even e-books cost money and that a viable website would be a good thing.

David Picha stated that he will look into the expense of printing a reduced number of copies.

Scott Stoddard suggested print-on-demand. David Picha state we will need to weigh the expenses of all options.

Mark Shankle made a motion to form a committee with David Picha as chair to develop a website and publication with Scott Stoddard as a committee member.

Ken Pecota seconded the motion. The motion was not put to a vote.

Craig Yencho offered to serve on this committee as well.

Larry Adams stated that he enjoyed serving as chair person and thanked Stephen Meyers for his service as Secretary/Treasurer and Mark Shankle as Graduate Student Contest Committee Chairperson.

Larry Adams handed the gavel to Ken Pecota to adjourn the meeting.

Ken Pecota reminded the members that the meeting in 2016 would be held in conjunction with Southern Region ASHS.

The meeting was adjourned.