

# The Indicator

*College of Agriculture, Environmental and Human Sciences*



# Greetings from the Dean

Spring has barely come and gone, and now summer is upon us! From April through June, the College of Agriculture, Environmental and Human Sciences has accomplished so much.


We had an excellent showing of our students and faculty on the national level, we graduated 11 students, and we were able to bring several youth from the Missouri Bootheel into the capital city to learn about state government. Researchers have begun harvesting blueberries, and soon we will have more data on growing tomatoes in high tunnels. But, with all of the programs, projects and research going on at the same time, not to mention budget constraints, we have been successful in sharing and living the Soldier's Dream at Lincoln University.

We hope you enjoy reading this issue of *The Indicator*. And please visit our Facebook page <https://www.facebook.com/LUCollegeAgricultureEnvironmentalHumanSciences/> so you can be connected to all the exciting, innovative and sustainable ideas going on in our college. ■



*Albert E. Essel, Ph.D., Dean, Research Director and 1890 Administrator, College of Agriculture, Environmental and Human Sciences.*

*Dean Essel*



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*Cover photo: Students and faculty at the 18th Biennial Research Symposium of the Association of 1890 Research Directors (ARD) held in Atlanta, Georgia, April 1-5, 2017.*

### Youth from the Bootheel Visit Jefferson City; Jefferson City Visits the Bootheel

By P. J. Donner

On April 23 and 24, several youth from the Charleston Lincoln University Cooperative Extension (LUCE) outreach center, under the supervision of Sherry Maxwell, Program Assistant – Southeast Missouri, traveled to Jefferson City,



Missouri, to learn about Lincoln University, state law enforcement, the justice system and health services.

The youth and chaperones toured the campus and ate lunch with Lincoln University's President Rome. Next, they were met by Dr. Randall Williams, Director, Department of Health and Senior Services (DHSS), as part of National Minority Health Month, and Joseph S. Palm, Chief, Office of Minority Health. Afterwards, staff from the Missouri State Highway Patrol (MSHP) headquarters, along with Colonel Sandra Karsten, walked them through the training facility and museum in Jefferson City and served them snacks.

The second day, they visited with Senator Shaalon "Kiki" Curls, Representative Don Rone and Representative Tila Hubrecht at the State Capitol.

Youth observed the legislative process and toured the building. Later that day, Supreme Court Judge George W. Draper III took time to explain the judicial process and share significant historical facts about the courts in Missouri as he walked the youth through the Supreme Court Building.

Then, on June 3, Maxwell held a community-wide event in Lilbourn, Missouri, that united law enforcement and local citizens to promote a better way to live together. The name of the program, B.A.T.T.E.R. U.P., stands for "Back At The Things Everyone Remembers—Uniting People!"

Many of the same organizations that welcomed the youth in Jefferson City in April traveled to Lilbourn for a softball game, face painting, Shriner clowns and educational and informational booths, all to build stronger relationships within the community between law enforcement and within families. The primary goal was to promote the message "Stepping Up to Stomp Out Violence!"

Maxwell, also known as "Miss Sherry," was dressed in an old-fashioned uniform to emcee the event. MSHP Colonel Sandra K. Karsten, the first female trooper in Troop E, threw the opening pitch. At least 800 people signed in, but it is estimated that 1,000 were in attendance. ■



## Students Take Top National Research Awards

The 18th Biennial Research Symposium of the Association of 1890 Research Directors, Inc. (ARD) was held in Atlanta, Georgia, April 1-5, 2017. This year's theme was Meeting 21st Century Challenges Through Innovation. Thirty-six faculty, students and staff from Lincoln University attended--all from the College of Agriculture, Human and Environmental Science's (LUCAEHS) Department of Agriculture and Environmental Science, and Cooperative Research.

Dr. Albert E. Essel, Dean, 1890 Administrator and Research Director was also at the conference and attended ARD planning meetings along with Dr. John Yang, Associate Research Director.

Pamela Donner, Media Center Coordinator, took photographs and videos to document the event. Debra Hanlin, Administrative Assistant, represented the college with a display booth.

The following awards were given to Lincoln students during the ARD:

### Oral Presentation Student Award Winners

#### Graduate Student

**Luke Wilbers: 2nd Place** (tie) (Animal Health and Production and Animal Products); "Evaluation of Performance, Parasite Resistance and Survivability After Five Years of Divergent Selection for Gastrointestinal Parasite Resistance in  $\frac{3}{4}$  Kiko  $\times$   $\frac{1}{4}$  Boer Progeny."



*Luke Wilbers (left) with Dean Albert Essel (right).*

#### Undergraduate Student

**Tricia Timpe: 2nd Place** (Animal Health and Production and Animal Products); "Effects of Vitamin Pre-mix, Ascorbic Acid and Choline Chloride Supplementation on Growth and Survival of Northern Bluegill."



*Tricia Timpe (left) with Dean Albert Essel (right).*

### Poster Presentation Undergraduate Student Award Winners

**Traron Shivers: 1st Place** (Plant Health and Productions and Animal Products); "Japanese Beetle Composting: Converting Pests to Soil Fertilizer Using Common Farm Materials."



*Traron Shivers (center) with Dean Albert Essel (left) and Dr. Jaime Piñero (right).*



**J. D. (Jeri) Rippeto: 1st Place** (Family, Youth, Community and Economic Development); “Evaluation of Student Knowledge of Production Agriculture and Animal Welfare Following a ‘Students-Training-Students’ Unit.”

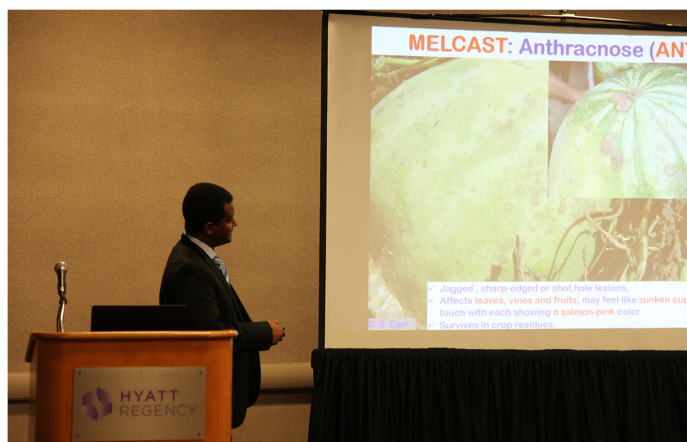
**Tricia Timpe: 3rd Place** (Animal Health and Production and Plant Products); “Dietary Inclusion of Biochar and Kaolin for Northern Bluegill Sunfish.”

**William Doggett: 3rd Place** (tie) (Renewable Energy, Natural Resources and Environment); “Effect of Silver Nanoparticles on Select Soil Enzyme Activities Involved in Nutrient Cycling.”



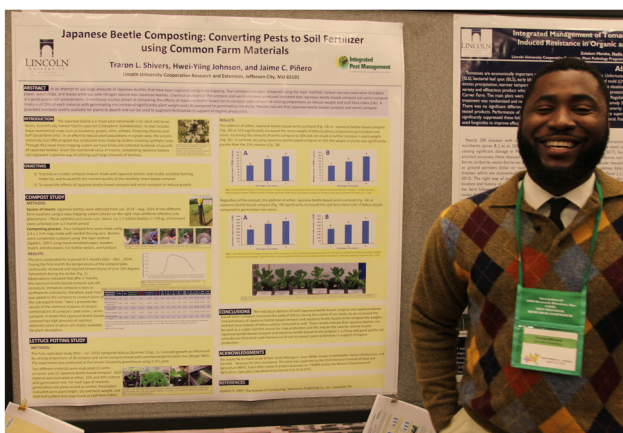
*J. D. (Jeri) Rippeto (above) with Dr. Bruce Shanks (left) and Dean Albert Essel.*

*William Doggett (left) with Dean Albert Essel (right).*



Faculty who gave oral presentations and exhibited posters included Drs. Majed Dweik, Abua Ikem, Hwei-Yiing Johnson, Fengjing Liu, Zelalem Mersha, Safiullah Pathan, Jaime Piñero, Ajay Sharma, Samson Tesfaye, Tumen Wuliji and John Yang. ■

*Dr. Zelalem Mersha (left) presents on MELCAST.*



*J. D. (Jeri) Rippeto (left) and Traron Shivers (right) displaying their research posters.*

## The Indicator

# Achievements, Grants and Publications in January, February and March

### Achievements

**Dr. Nadia Navarrete-Tindall**, State Extension Specialist – Native **Plants**, gave a radio interview with Mediacom on “Native Plants for Pollinators,” February 1 – 31.

**Dr. Hwei-Yiing Johnson**, State Extension Specialist, gave a presentation on worm biology and composting to the Green Team students at the South Callaway R-II School in Mokane, Missouri, on March 3.

**The Kansas City Urban Impact Center (KCUIC)** hosted the Healthy Living Series: “Heart and Stroke” by TruKechia Smith, Vice President, Health Disparities, with a meal provided, on March 8.

**Martha O’Connor**, Plant Pathology Technician, coordinated and led the Future Farmers of America (FFA) contest on nursery and landscaping that was held on the LU campus on March 14.

**Dr. Hwei-Yiing Johnson** conducted a composting training for a group of new immigrants at the Juniper Gardens Training Farm – Cultivate Kansas City, in Kansas City, Kansas, on March 23.

On March 25, **Martha O’Connor** offered two hands-on workshops for the Phelps County Master Gardeners™ “Growing Green Gardening Education” seminar in Rolla, Missouri: “Growing Healthy Plants” and “Pesticide Safety.”

The “Footrot and Internal Parasite Management for Small Ruminants” workshop was held at [Alan T. Busby Farm](#) on March 25, sponsored by a SARE (Sustainable Agriculture Research and Education program) – North Central Region (NCR) grant. **Dr. Wuliji**; **Dr. Bruce Shanks**; Dr. Clay Samson (Quail Valley Veterinary Clinic); and Jay Wilkins (Crowder College), presented lectures. Practical information about footrot and internal parasite management was provided by LU technicians Amy Bax and Luke Wilbers.

The Native Plants Program’s **Dr. Navarrete-Tindall** and **Sue Bartelette**, Landscape Designer Native Plants Program, gave a presentation about native plants in landscaping and native plants for pollinators for the “Growing Green Gardening Education” Master Gardeners™ Conference in Rolla, Missouri, on March 27.

On March 28, the **LU Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS)** chapter entered into an Adopt-A-Highway agreement with the Missouri Highways and Transportation Commission, in which the club adopted a stretch of about one mile, including parts of U.S. Route 50 and East McCarty Street.



*In May, Mikayla Morris (left) from the LU Ag Club presented an award of appreciation to Debra Hanlin (right), Administrative Assistant, for her hard work and dedication to the organization.*

From March 29 – April 2, the LU chapter of **MANRRS** and **Julius Moody**, United States Department of Agriculture (USDA) 1890 Program Liaison, attended the MANRRS 32nd Annual Career Fair and Training Conference in Pittsburgh, Pennsylvania, where they won their 6th consecutive Regional Chapter of the Year award. **Aaron Lewis**, LU freshmen, was awarded 3rd place for the Elevator Speech Contest.

The **KCUIC** hosted “Estate Planning” by Patrick Johnson at Mt. Sinai Baptist Church, Kansas City, Missouri, on March 31, and the Healthy Living Series: “Men’s Health” by Dr. Jasper Fullard, M.D. and “Hepatitis C” by Neann Wedgeworth, KC Care Clinic, with a meal provided.

**Dr. James Wetzel**, Associate Professor of Animal Science, advised the St. Louis Science Center on the aquaponics component of the GROW exhibit. ■



## Congratulations to our Summer 2016, Fall 2016 and Spring 2017 graduates!

### Master of Science

**Nasruddeen Al-Awwal**   **Hang Chen**   **Namrata Giri**  
**Grace Mobley**   **Parameshwor Takhachhe**

### Bachelor of Science

**Taylor Atkinson**   **Miranda Brandt**   **L'Sharesee Burrell**  
**Katherine Fifer**   **Alexander Gilliam**   **Garrett Grellner**  
**Paul Lackman**   **Micah Leopard**   **Kendric Lock**  
**Connor McGill**   **Christopher Mzeru**   **Jeri Rippeto**  
**Jacob Rowell**   **Austin Ruediger**   **Lauren Stamp**  
**Shannon Stockton**   **Mikel Thompson**   **Tricia Timpe**  
**Jason Walker**   **Joseph Zoellner**

## Grants

**Dr. Suman Ahuja** received a USDA-CBG award of \$296,195 to study youth obesity and a new award of \$500 from the Walmart© Foundation for "Reducing Health Disparities Amongst Minority Populations Through the Use of Health and Nutrition Education."

**Dr. Touria Eaton**, State Extension Specialist – [Horticulture](#), and **Dr. K.B. Paul**, Program Leader, received \$200,000 from the USDA – NRCS for "Enhancing Farm Profitability and Livelihood of Minority and Limited Resource Farmers, Agricultural Producers and the Rural Community in the Designated StrikeForce Counties of Missouri."

**Dr. Hwei-Yiing Johnson**, State Extension Specialist – Composting, received a USDA-CBG award of \$467,858 for "A Circle of Green Project: Strengthening Extension, Outreach, and K-14 Education to Promote Green Farms and Schools."

The [Paula J. Carter Center on Minority Health and Aging](#) (PJCCMHA) received a grant notification in March from CLAIM regarding the Medicare Improvements for Patients and Providers Act (MIPPA) funding opportunity of \$4,950.

The Organic Farming Research Foundation awarded \$14,806 for "Developing a Cover Crop-based, No-till System for Small-scale Vegetable Producers: Effects on Soil Health, Weeds, Arthropod Communities, and Yield" to LU graduate student **Justin Keay** and **Dr. Jaime Piñero**, State Extension Specialist – [Integrated Pest Management \(IPM\)](#).

**Dr. Majed Dweik** received a USDA grant of \$50,000 to develop a pathogen detection biotechnology test kit for for *E. coli* O157:H7 contamination and \$5,000 from Venture Well to develop "Smart Diagnostics Systems."

**Dr. Frieda Eivazi** was awarded \$147,741 for "Use of Simulation Modules to Enhance Learning Chemistry and its Applications in Agriculture and Environmental Sciences."

**Dr. Safiullah Pathan**, Principal Investigator, was awarded \$10,000 from Organic Valley®-FAFO (Farmers Advocating For Organic) for "Variety Selection and Production of Organic Quinoa Across Environment," from April 2017 – March 2018.

## Publications

Cui H., Fan, Y., **Yang, J.**, Xu, L., Zhou, J. and Zhu, Z. 2016. In situ phyto-extraction of copper and cadmium and its biological impacts in acidic soil. *Chemosphere*. 161:233-41. doi: 10.1016/j.chemosphere.2016.07.022.

Hua, B., Xiong, H., Zhu, G., Wang, L., Yan, S., **Yang, J.**, and B. Deng. 2016. "Physical-chemical Process of Water Quality." *Water Environment Research* 88, no. 10: 966-1000.

Jahanzad, E., Barker, A. V., Hashemi, M., **Eaton, T.**, Sadeghpour, A., and S. Weis. 2016. "Nitrogen Release Dynamics and Decomposition of Buried and Surface Cover Crop Residues." *Agronomy Journal* 108: 1735-1741.

Jahanzad, E., Barker, A. V., Hashemi, M., Sadeghpour, A., and **T. Eaton**. 2017. "Forage Radish or Winter Pea Cover Crops Outperformed Rye in a Potato Cropping System." *Agronomy Journal* 109: 646–653.

Meagy, M., J., **Eaton, T. E.**, and A. V. Barker. 2016. "Assessment of Mineral Nutrient Concentrations of Lettuce in Response to Cultivar Selection and Fertilization in Greenhouse Production." *Journal of Plant Nutrition* 39, no. 12: 1796-1808.

Meagy, M. J., **Eaton, T. E.**, and A. V. Barker. 2016. "Zinc Accumulation in Lettuce Cultivars Grown with Organic or Chemical Based Nutritional Regimes." *Journal of Plant Nutrition* 39, no. 6: 743-748.

Meagy, M. J., **Eaton, T. E.**, Barker, A. V., and G. M. Bryson. 2016. "Assessment of Organic and Conventional Soil Fertility Practices and Cultivar Selection on Mineral Nutrient Accumulation in Field-grown Lettuce." *Journal of Plant Nutrition* 39, no. 13: 1936-1948.

**Navarrete-Tindall, N.** "Dining Wild: Sassafras Tree Is Aromatic, Edible and Beautiful." *News Tribune*, March 8, 2017.

**Navarrete-Tindall, N.** "Native Wild Leeks: Delicious Native Edibles for Shade Gardens." *The Kansas City Gardener*, March 2017, 22.

**Piñero, J. C.**, Souder, S. K., Smith, T. R., and R. I. Vargas. 2017. "Attraction of *Bactrocera cucurbitae* and *B. dorsalis* (Diptera: Tephritidae) to Beer Waste and Other Protein Sources Laced with Ammonium Acetate." *Florida Entomologist* 100: 70-76.

**Piñero, J. C.**, Souder, S. K., and R. I. Vargas. 2017. "Vision-mediated Exploitation of a Novel Host Plant by a Tephritid Fruit Fly." *PLOS ONE* 12, no. 4: e0174636. doi:10.1371/journal.pone.0174636.

Shen, Z., Mustapha, A., Lin, M., and **G. Zheng**. 2017. "Biocontrol of the Internalization of *Salmonella enterica* and *Enterohaemorrhagic Escherichia coli* in Mung Bean Sprouts with an *Endophytic Bacillus subtilis*." *International Journal of Food Microbiology* 24, no. 250: 37-44. doi: 10.1016/j.ijfoodmicro.

Zhang, S., Fu, Y., **Mersha, Z.**, and K. Pernezny. 2017. "Assessment of Copper Resistance in *Pseudomonas syringae* pv. phaseolicola, the Pathogen of Halo Blight on Snap Bean." *Crop Protection* 98: 8-15. ■

# Calendar of Events for July, August and September 2017

## July

**July 9 – 22: AgDiscovery** will be held. Contact Adrian Hendricks II at (573) 681-5523 for more information or email [HendricksA3@LincolnU.edu](mailto:HendricksA3@LincolnU.edu).

**July 12: Senior Summer School on Colorectal Disease** will be held at LUCE's Paula J. Carter Center on Minority Health and Aging (PJCCMHA). Call Gina Avery at (573) 681-5375 for more information or email [AveryG@LincolnU.edu](mailto:AveryG@LincolnU.edu)

**July 15: LUCE's ACE (Abstinence and Comprehensive Education) Club-Teen Pregnancy Prevention Program, Rights of Passage graduation** will be held from 11 a.m. to 5 p.m. at the DoubleTree Hotel in Jefferson City. Youth participants who completed the Teen Pregnancy Prevention program in Jackson, Mississippi, New Madrid, Pemiscot, St. Louis and Scott counties will be acknowledged. The guest speaker is Christopher Appleton, a certified K-12 reproductive health specialist with expertise in HIV/AIDS, sexually transmitted diseases and teen pregnancy prevention. Sunshine and the East St. Louis Community Performance Ensemble will perform a musical presentation. Contact Michael Washington at (573) 681-5541 for more information or email [WashingtonJ@LincolnU.edu](mailto:WashingtonJ@LincolnU.edu).

**July 17 – 20: Youth Futures at the University of Missouri (MU)**, with 10 high school student attendees selected by [LUCESoutheastMissouri](#). Call (573) 471-3059 for more information.

**July 25 – 26: Youth Agriculture Camp, "Building a Better World,"** LUCE Southeast Missouri, at the Charleston Baptist Camp Association, Benton, Missouri. Call (573) 471-3059 for more information.

## August

**August 4: George Washington Carver Farm Field Day.** Contact Dr. Touria Eaton at (573) 681-5174 for more information or email [EatonT@LincolnU.edu](mailto:EatonT@LincolnU.edu).

**August 10 – 20: Missouri State Fair.** The College of Agriculture, Environmental and Human Sciences will have several Extension, Research and Department of Agriculture and Environmental Science exhibits on display all 10 days of the fair from 10 a.m. until 8 p.m. in the air-conditioned Agriculture Building. Contact Pamela Donner at (573) 681-5554 for more information or email [DonnerPJ@LincolnU.edu](mailto:DonnerPJ@LincolnU.edu).

**August 16 – 18: Fall Semester Advisement and Registration** for all students.

**August 21:** Fall Semester **First Day of School**

**August 28 – 30: 20th Missouri Institute on Minority Aging (MIMA)**, Columbia, Missouri, "Piecing Together 20 years of Greatness." Call Gina Avery at (573) 681-5375 for more information or email [AveryG@LincolnU.edu](mailto:AveryG@LincolnU.edu).

## September

**September 23: Lincoln University Homecoming.** ■