2018

Department of Agriculture 2018 Newsletter

Department of Agriculture and Food Science

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Greetings Alumni & Friends of Agriculture,

The Department of Agriculture hopes that you and your families have had a year of good health and fortune! Without a doubt, there have been challenges this year, but the department has continued on a positive trajectory and we have much to be thankful. First, I would like to dedicate this addition of the Newsletter to Mr. Dave Maples, recipient of our 2017 Alumnus of the Year Award. We are so honored to have distinguished Alumni such as Mr. Maples. His passion and support for agriculture is an inspiration that plays such an important role in all our lives, we cannot thank him enough for all that he does.

I would like to congratulate Dr. Paul Woosley, Director of AREC. Dr. Woosley has assembled an exceptional AREC staff and because of these efforts we have had an exceptional year. First and foremost, AREC debt that had accumulated over many years has been completely paid off, Dave Ramsey would be so proud! We have been able to proceed with a number of capital improvements on AREC that Dr. Woosley will expand upon later in this Newsletter. It is hard to believe that we have been producing WKU cheese for over a year now! If you get the chance, please thank our Artisan Cheesemaker Gary Beu for all that he has accomplished. You can find more information on the WKU Hilltopper Creamery later in this newsletter.

In other news, rooms G8 & G9 in the basement of EST have been thoroughly cleaned out, new epoxy paint added throughout, and new cooling units added to the walk-in cooler. The space is now officially operating as a Meat Science Lab under USDA FSIS approval (thanks Dr. Chuck Zickus & WKU alumnus Dr. Joel Dooley!). Last June, ASSET campers were the first students to use the facility and they got a real kick out of processing the beef for their last two dinners; under the instruction of Dr. Hunter Galloway, our Meat Scientist. Thank you Champion Pet Foods and Farm Credit of Mid-America, FMC for your role in making ASSET happen! Danielle Berkshire provides more detail on ASSET later in this Newsletter. Looking forward to this fall, Dr. Galloway will be using the Meat Science Lab extensively during his Meat Science class, which is totally packed with students. This makes us feel pretty good about our student centric approach and maximizing our awesome facilities to provide as many hands-on experiences as we can for our students.

I would like to introduce some new faces in the department. This summer, Jonathan West assumed the duties of Livestock Technician. Jonathan just finished up his BS degree at the University of Kentucky and will also be pursuing his MS degree in Beef Production. Beverly Gartland is our new Equine Technician. Beverly just finished her BS in Equine Science at Midway University and will also be working on her MS degree in Equine Science. Phillip Gunter will be finishing up his PhD at Auburn University this fall and will join our faculty in January as an Assistant Professor of Animal Science. Phillip will be bringing a background in Ruminant Nutrition and Beef Production. Dr. Dan Strunk will be joining our faculty next January as well. Dan will be coming to WKU from the University of Tennessee after earning his PhD at the University of Arkansas and will be joining us as an Assistant Professor of Plant Science. Dan will be bringing an exceptional background in Turf Grass Management to our program. We are so excited about the additional capability these individuals bring to our program. Please welcome them aboard when you get the chance!

We look forward to seeing you all at our next Alumni Gathering, good times and comradery promised for all! I could go on, but space is limited. So let me close by saying thank you all for what you do. Stop by if you get the opportunity, and as always, my door is always open.

Best wishes,
Fred DeGraves
Interim Chair

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agriculture@wku.edu
**2017-2018 Outstanding Agriculture Students**

The Elmer Gray Outstanding Graduate Student Award
Robert Anderson

Outstanding Undergraduate Student
Thomas Poole

Outstanding Agricultural Education Student
Emilee Graves

Outstanding Horticulture Student
Max Goldstein

Outstanding Agricultural Business Student
Audrey Barnett

Outstanding Student in Agronomy–Plant Science
Kelly Eicher

Outstanding Student in Agronomy–Soil Science
Isaac Brown and Efrain Fonseca

Outstanding Animal Science Student
Kelsy Leppo

Outstanding Floriculture Student
Emily Smith

Outstanding Turfgrass Science Student
Mitch Diller

Outstanding International Student
Akor Igboyi

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**WKU Agronomy News (continued on Page 9)**

**Research**

Drs. Paul Woosley and Todd Willian continue to conduct research on industrial hemp. Our fifth year of hemp research includes field trials that investigate the influence of nitrogen rate and application timing on growth and yield of hemp. Robbie Anderson completed his thesis project which examined both nitrogen rate and application timing effects. Robbie graduated with his M.S. in Agriculture in May 2018 and is employed by North Carolina State University at their Mountain Research Station near Asheville. Agronomy faculty are also continuing an experiment examining long-term effects (>10 years) of poultry litter and tillage vs. no-till effects on soil used for corn/soybean production. Drs. Becky Gilfillen, Todd Willian, Paul Woosley, and graduate students Robbie Anderson and Ryan Mairs attended the Southern American Society of Agronomy Meetings in Jacksonville, FL where Robbie and Ryan presented their M.S. thesis research. Additionally, Dr. Willian, Dr. Woosley and Robbie Anderson presented hemp research results at the Kentucky Hemp Industries Conference in Lexington, KY.

**USDA- WKU Agriculture Cooperative Research**

Drs. Paul Woosley, Annesly Netthisinghe, Becky Gilfillen, and Ms. Naomi Rowland (WKU Biology) continue a research project to investigate how *Clostridium botulinum* from applied poultry litter affects quality of alfalfa haylage. In addition, this research examines forage yield and quality of manure based alfalfa production.

Drs. Annesly Netthisinghe is working with Drs. Hunter Galloway (WKU/Animal Science) and Gatahun Agga (USDA-ARS Bowling Green) on a field research project to examine sustainability of row crop/cover crop/ beef grazing mixed systems for crop production, animal weight gains, and chemical and biological properties of soil.
Agriculture Mechanics News

Kathy and Dustain Vance of the “The Vance Store” in Bowling Green and Glasgow, KY, both former students of Western Kentucky University are giving something back to WKU that will benefit many students in future generations by the donation of several new blowers and trimmers manufactured by ECHO Power Equipment to be used in WKU’s Agriculture Mechanics classes. This equipment will help students be more prepared to service, diagnose and repair new equipment that is available at an outdoor power equipment store today.

The Vance Store, a family owned store since 1962, has two locations in the area serving the lawn care needs of commercial, municipal customers and large property owners in the South-Central Kentucky area. Echo Incorporated of Lake Zurich, IL, is a worldwide leader in the development and manufacture of professional-grade hand-held outdoor power equipment. Echo Incorporated produces hand-held landscaping equipment for both the commercial and residential homeowner markets. Echo prides itself on setting the industry standard with its dedication to new technology and quality products. Echo Incorporated product offerings include chain saws, straight shaft trimmers and brush cutters, backpack and hand-held blowers, grass trimmers hedge clippers, tillers, and specialty construction equipment, all backed by the best warranty in the business.

Please stop by one of the Vance Store locations and thank the owners of The Vance Store for their contribution back to the community by helping train the next generation of technicians in the area.

Pictured below is Kathy Vance from The Vance Store in Bowling Green and Glasgow, KY and, accepting the equipment for use in his classes is Mr. Cris Scudder, Agriculture Mechanics Instructor at WKU.

Submitted by: Cris Scudder

WKU Meat Science Laboratory

The Meat Science Laboratory received the inauguration of inspection from the United States Department of Agriculture Food Safety Inspection Service on May 15th of 2018. The Meat Science Laboratory is listed as Federal Establishment Number 48305. The laboratory is located in rooms G8 and G9 of the Engineering Sciences and Technology Building on main campus. The laboratory will serve to educate students in aspects of meat processing, food safety, and meat quality analysis. In June, Asset students participated in the first hands-on meat fabrication laboratory to take place in the new facility. Forty-five students are registered for the Meat Science Course (ANSC 340) this fall. These students will participate in multiple labs this fall including beef fabrication, pork fabrication, and further meat processing.

Also, the laboratory serves as a research unit broadening the department’s areas of research. Currently, research is being conducted on the meat quality of cattle finished at the Agriculture Research and Education Complex (AREC). Of the cattle harvested on the study so far, 25% have graded USDA-Prime with an average hot carcass weight of approximately 900 lbs.

All meat produced at the Meat Science Laboratory is produced under USDA-FSIS inspection and in compliance with the Code of Federal Regulations. Therefore, all products can be marketed commercially. All products are from animals fed at AREC. Animals are slaughtered under USDA-FSIS inspection at another local establishment and the carcasses are shipped to the Meat Science Laboratory for processing. All beef is dry-aged for a minimum of 21 days prior to fabrication. Currently, the Meat Science Laboratory only markets products wholesale to Rian’s Fatted Calf Meat Shoppe and the WKU Farm Store. Anyone interested in purchasing WKU meat including custom cut whole and half beef should contact Rian’s Fatted Calf at (270) 783-0505.

Submitted by: Hunter Galloway
The Agricultural Education program has had another exciting year. The WKU AgEd program has had many students involved in regional and state activities throughout the year. Bradon Burks served as a state FFA officer. Thomas Poole assisted with the state welding contest. Thomas Poole, Anna Winchell, and Erin Masterson, worked as camp counselors at the Kentucky FFA Leadership Training Center. Sabrina Young, Kelsey Woodrum, and Wesley Estes taught at FFA Camp and Sabrina Young and Wesley Estes assisted with the ASSET conference. Sabrina Young helped promote and recruit students through the Teach Ag initiative.

One of the many highlights from the year was the chance to serve as judges at the National FFA’s Convention in Indianapolis, Indiana in October. Eight WKU Agricultural Education students were charged to evaluate the high school teams on many areas of the Agriscience contest. Some of the areas, included Animal Science, Horticulture, Agricultural Science, and Sociology. They were also available to examine the many educational vendors and gather contacts for acquiring teaching materials, supplies and textbooks as they continue to prepare for their teaching career.

Students also participated in the National TEACH AG day by participating in activities on campus. Students enrolled in the live web cast from NAAE and also promoted the day by handing out free popsicles to students in front of EST to promote Agricultural Education.

Another highlight of the year was the spring break travel trip. Students were given the opportunity to enroll in a course entitled Agricultural Education Explorations in America. WKU AgEd students were able to travel to Tennessee, Arkansas, Oklahoma, and Texas to look at Agricultural Education programs and FFA Chapters that were Star chapters in their respective states. Chapters visited included, Munford High School, Van Buren Freshman Academy, Yukon FFA livestock facilities, Oklahoma State University, Roscoe Independent High School, and Texas Tech University. Students gained valuable teacher experience seeing the different approaches used by the teachers to train and educate their students. The course selections offered by the schools were different than the ones found in Kentucky. Aquaculture, STEM integration courses, and many certificate and training courses were available for students to enroll. The acting FFA advisors also gave them valuable tips for the first day of class and understanding “life balance” as an agricultural educator. Students also visited the Oklahoma City Stockyards, National Cowboy Museum, Oklahoma City National Memorial, AT&T Stadium, Gas Monkey Garage, Segway Tour of Fort Worth, Lubbock Stockyards, National Ranch Heritage Museum, Express Ranch, Heifer International, Fort Phantom Hill, and the Oklahoma Youth Expo.

The final event for the school year was the AES banquet that was held in May and top individuals were rewarded for their efforts for the academic year. Dr. Paul Woosley, Professor, was the keynote for the event as well as the Honorary Member award recipient. Leadership awards were presented to freshman, sophomores, juniors, and seniors and the senior future teachers were recognized as well. Award recipients were Abby Payne, Aaron Decker, Erin Masterson, and Emilee Graves & Thomas Poole. Thomas Poole and Emilee Graves were our graduating teachers for Spring 2018. Emilee Graves received the Ogden College Agricultural Education award and Thomas Poole received the Outstanding Undergraduate Agricultural Student Award. Loren Gross received the Rising Sun Award and Jayna Thompson received the Crystal Eagle award. Emilee Graves was also selected to give the Ogden College Commencement address at graduation.

The Agricultural Education Society has also started a scholarship for Agricultural Education students. It cannot be awarded until we meet the $10,000 minimum. The pullover and vest sales each year are being used to meet our goal. Contact any AES member for more information about assisting in the development of this fund.

For further correspondence please contact Dr. Kingery at thomas.kingery@wku.edu or 270-745-5966.
2017-2018 Agricultural Ambassadors

Morgan Askins
Animal Science
Rockfield, KY

Wesley Estes
Agriculture Education
Auburn, KY

Max Goldstein
Dietetics/Horticulture
Louisville, KY

Morgan Mason
Agriculture Business
Bowling Green, KY

Julia McClain
Animal Science
Georgetown, KY

Alexandra Palkovic
Animal Science
Thousand Oaks, CA

Meagan Walters
Agronomy-Plant Science
Bonnieville, KY

Sabrina Young
Agriculture Education
Sanders, KY

Horticulture students work with City of Bowling Green Urban Forester, and Department of Ag graduate, Jared Weaver, to process 1500 trees that will be given away on Arbor Day.

Submitted by: Dr. Martin Stone
We are very excited to announce our first anniversary of WKU’s Hilltopper Creamery being an approved cheesemaking plant. We made our first batch of cheese with WKU students on April 19, 2017, and we haven’t slowed down since then. Several different varieties are now available including three flavors of Queso dip! The cheese is made by WKU students enrolled in the AGRI 369 Cheese Processing course. All of us are having a lot of fun, and students are learning the art and science of making a variety of cheeses.

All products are available at our retail store in the Charles L. Taylor Agricultural Center on the WKU farm Tuesday – Friday 9:00 AM – 4:00 PM, at the SoKY Marketplace by the BG Hotrods stadium Saturdays 8:00 AM – 1:00 PM, and our online store. You can access the online store through our website wku.edu/hilltoppercreamery and click on “Shop Online”. Contact us at 270-745-4361 or by email at hilltopper.creamery@wku.edu.

A great big THANK YOU goes out to everyone who has purchased our cheese during the last year. We hope you enjoyed it.

The Hilltopper Creamery staff

Submitted by: Gary Beu
Every year the Agriculture Department hosts a 5-day leadership program called ASSET. It stands for Agriculture Student Striving for Effective Tomorrows. The Agriculture Department selects a group of high school students who have completed their junior year of high school. These students excel in academics, extra-curricular activities and are leaders in their local community.

This year the Agriculture Department hosted 20 high school students interested in pursuing a degree in agriculture. Students experienced what it was like to live on campus, watch research being conducted on the Agriculture Research and Education Center and interacted with professors, students, professionals, and alumni in their field of interest.

The Agriculture Department would like to thank our sponsors Champion Pet Foods, Farm Credit of Mid-America, FMC, L.D. Brown Agricultural Exposition Center, clubs and organizations within the department. After interacting with these students the Agriculture Department is excited and confident the future of agriculture looks bright.

ASSET Counselors included Meagan Walters (Head Counselor), Wesley Estes, Julia McClain, Sabrina Young, Andrew Milam, Alley McMillian

ASSET participants included: Bryce Bays, Corbin, KY; Jasmine Benningfield, Magnolia, KY; Samuel Benton, Drakesboro, KY; Nicole Bratcher, Bowling Green, KY; Alex Burke, Hardinsburg, KY; Mykayla Clark, Vlarico, FL; Britney Cox, Shelbyville, KY; Katie French, Elizabethtown, KY; Dorothy Gomez, Morgantown, KY; Holly Hamilton, Frankfort, KY; Carley King, Strunk, KY; Erica Maples, Lexington, KY; Madison Mason, Princeton, KY; Chloe Mattingly, Lebanon, KY; Zach Milam, Olmstead, KY; Hannah Price, Russellville, KY; Makenzie Raymer, Quality, KY; Selena Rodriguez, Bowling Green, KY; Rachel Taylor, Auburn, KY; Lillie Wood, Shelbyville, KY

If you have a high school junior or know of one that might be interested, please contact the Agriculture Department (agriculture@wku.edu www.wku.edu/agriculture) and we will make sure that the student receives an application.

Submitted by: Danielle Berkshire
Dr. Martin Stone spent four weeks in Denmark and Sweden this summer teaching Courses in Sustainable Agriculture and Biodiversity. Here he is in Kronborg Castle, northern Denmark, the site of Hamlet. The students visited the only organic college in Denmark and measured plant biodiversity in many locations.

Biodiversity students measuring green roof biodiversity on top of a museum in Aarhus, Denmark.

Submitted by: Dr. Martin Stone

Max Goldstein, Horticulture major from Louisville, won the National Garden Club Scholarship this year as well as the regional and state scholarship. The first WKU ag student to win all three! He has been Horticulture Club President for the past two years and has lead numerous community service projects with the club. He is also a volunteer at the Boys and Girls Club in Bowling Green. Congratulations!

Biodiversity students measuring green roof biodiversity on top of a museum in Aarhus, Denmark.

Submitted by: Dr. Martin Stone

Agronomy News (continued from Page 2)

Student News

Isaac Brown, Brett Carper, Efrain Fonseca, Perry Pedley and Matthew Schier participated in the 2017 Southern Regional Soil Judging Competition hosted by University of Tennessee - Martin. Darwin Newton and Becky Gilfillen went with the group as coaches. Isaac Brown, Efrain Fonseca, and Logan Duke competed in the NACTA Soil Judging Contest hosted by Northeast College in Norfolk, NE in April 2018. We also congratulate our Graduates of the team which include: Isaac Brown, Brett Carper, Efrain Fonseca, Perry Pedley and Matthew Schier. During Fall 2017 semester, the Soil Fertility Class and the Agronomy Club toured Crop Production Services and Waters Agricultural Laboratory in Owensboro. We appreciate all the support from our local Agricultural Industries and the time they take out of their busy schedules to provide tours and assist our students.

Congratulations to our annual winners of the Outstanding Agronomy Student. This year’s winners were Efrain Fonseca and Isaac Brown who were co-recipients of the Outstanding Agronomy-Soils student and Kelly Eicher, recipient of the Outstanding Agronomy-Plant Science student. Additionally, Robbie Anderson was awarded the Elmer Gray Outstanding Graduate Student in Agriculture at the April 2018 ceremony.

Submitted by: Drs. Gilfillen and Dr. Willian
Dear Alumni,

AREC had a successful year. Timely rains lent to high corn and soybean yields. Additionally, corn was marketed at $4/bu and beans at $10.04/bu. We are extremely pleased with these prices considering current grain markets. We also continue to collaborate with companies to carry out agronomic research. These include: Syngenta, NK Seeds, Dekalb, Helena, Winfield Solutions, and Wheat Tech. We currently have 12 beef heifers that are ready to breed and move into the beef herd. Through genetic testing, the beef herd had been culled to 60 cows. These 12 animals will help increase our numbers to reach a goal of 100 cows. The dairy recently began utilizing sexed semen and currently has 22 replacement heifers to go back in the herd. After current production cows are culled, this will place herd numbers around 40 cows, close to our goal of a herd size of 50 cows.

Industrial hemp research continues to take place at AREC. Additionally, hops have recently been planted. Nutrition and grazing research is ongoing in equine and beef at AREC as well as soil quality and herbicide research in agronomy and snow pea, common bean, and other lentils research in horticulture. WKU compost, along with Baker Arboretum, have begun composting food waste from campus.

Improvements at AREC this year have included additional fencing. A stack pack structure has been approved to complete the livestock research facility. Additionally, the third stall barn at the Ag. Expo is slated to receive black top inside this fall. Earth work will take place to divert water runoff around the two older stall barns. This is in preparation for a single large stall barn construction to replace the aging structures. While money is not currently available, the structure is in the master plan for the University. We hope it takes place in the near future.

Finally, the department was recently gifted 150 acres in Breckinridge County just outside of Leitchfield, KY from the estate of Beulah Winchel. The farm is currently being leased for row crop production. We mourn the loss of Ms. Winchel. She was a great supporter of WKU Agriculture. AREC strives to continually support the Department in reaching its goal of providing the highest of quality education through hands-on experiences. This year’s successes are the accomplishments of the AREC Staff and student workers. We hope you can visit AREC during homecoming.

Submitted by:

Paul Woosley
Agriculture Research & Education Center Director

Dave Maples has been with the Kentucky Cattlemen’s Association since 1999 serving as the Executive Vice President. In addition to the KCA, he has managed projects for the Kentucky Beef Council, Kentucky Beef Network, Kentucky Cattlemen’s Foundation, Southeastern Livestock Network and various grant projects.

During his tenure, the Kentucky cattle industry has received tobacco settlement dollars and he has overseen increased funding for cattle projects, marketing efforts and education, steadily increasing the value of cattle in Kentucky.

He is a native of Elkmont, AL and a graduate of Western Kentucky University with a BS in Agriculture specializing in Animal Science. His family have been leaders in the industry for many years. Both his father and grandfather are members of Alabama’s beef hall of fame. Prior to moving to KY, he worked diligently with the Alabama Cattlemen Association for 10 years. Dave lives in Lexington with his wife Dana and children.

Dave has always waved the red towel proudly and been a great ambassador and supporter of WKU Agriculture. WKU Agriculture would like to congratulate Dave on receiving this recognition. Recognition well deserved. Visit us this year at homecoming when we announce the 2018 Alumni of the year!

Submitted by Paul Woosley
WKU Farm New Employees

WKU is excited to welcome the arrival of three new horses to use in the equine program. All three horses are descended from Appaloosa bloodlines, an American Breed of horse known for its unique spotted coloration. This breed originated in the Northwestern United States, where they were selectively bred by the Nez Perce tribe for their distinct coloration. A beautiful example of this is Trigger, who displays the classic “blanket spotting” pattern of a patch of spots over his hip. Trigger will be used in the Basic Equitation Course this fall. The other spotted addition to the program is Ollie, also known as Polka-Spot. He is an adorable Pony of the Americas (POA), a breed descended from the Appaloosa known for the spotted coloring on a smaller sized horse. Ollie will be used for Equine Laboratory Courses. Our third addition did not inherit her sire’s spotted coat but is still a beautiful built horse. Brandy is a three-year-old Appaloosa cross that spent the last year at Locust Trace Agricultural Center and will be used as an English horse as she grows into the program. As these three horses are getting adjusted to their new homes, the students have been enjoying getting to know them!

WKU Equine News

Jonathan West accepted the Livestock Technician position at AREC and began in June. Jonathan received his B.S. in Career and Technical Education in Agriculture from the University of Kentucky in 2018. He is a native of Barbourville, KY where his family farm raises commercial and purebred Charolais cattle. While at WKU, Jonathan will pursue a M.S. Degree in Agriculture with a research focus in reproduction as it relates to beef cattle production.

Beverly Gartland also began her position as Equine Technician with AREC in June. Beverly is a native of Essex, Vermont. She received her B.S. in Equine Studies from Midway College in 2018. While at Midway, Beverly worked at the KY Horse Park and managed Midway’s equine facilities. She has experience in Western and Dressage riding styles. Here at WKU, she will be pursuing an M.S. in Agriculture with a research effort in equine nutrition.

Submitted by:
Beverly Gartland
We hope that you have enjoyed our Newsletter this year. Please make a gift today to support the Department of Agriculture. Your financial support will help with student learning opportunities outside of the classroom.

Please make checks payable to the “WKU Foundation”
Donations can be mailed to:

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Bowling Green, KY 42101
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www.wku.edu/makeagift
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Save the Date for Alumni Gathering

Schedule TBA

Saturday, October 27, 2018

WKU Football Kickoff—6:30 p.m.