

Alumni:

Greetings Agriculture Alumni & Friends,

We live in interesting times! COVID-19 has dominated the landscape at WKU with social distancing, masks, and hand sanitizer mandated as the new normal. Our students and staff have worked extremely hard to produce a safe campus environment and deserve accolades for their efforts. In spite of these ongoing issues, we have much to be thankful. I congratulate WKU alum Dr. Jack Britt for his induction into the Hall of Distinguished Alumni. Dr. Britt exemplifies what this award represents, we are grateful for the leadership and support provided agriculture throughout his illustrious career. Please read on to find more on Dr. Britt later in this newsletter.

Thank you, Dr. Bob and Virginia Schneider for your incredible generosity in establishing an endowment to enhance the educational experience of our students! This endowment directly supports the experiential learning opportunities for our Agriculture & Food Science students. Please keep in mind that Dr. Bob & Virginia Schneider have laid down the gauntlet with a matching funds challenge for all; it is not too late to take advantage of their generous offer and become part of this historic event! Please note the progress made on this challenge at the end of this newsletter!

Congratulations to WKU alum Terry Shartzter, elected as Agriculture & Food Science Alumni of the Year; Bob Huttick, Agriculture & Food Science Friend of the Year; and WKU alum Fran McCall, Agriculture & Food Science Spirit Award. Please read on to find out more on these remarkable individuals.

I would like to recognize a group of selfless individuals that have been instrumental to the success of the Department. Our part-time faculty provide the opportunity to expose our students to a much wider variety of experiences and expertise than would otherwise be possible. Naomi Rowland facilitates the department with courses focused on environmental issues in agriculture and plant pathology. Dr. Annesly Netthisinghe provides our students a solid foundation in statistical methods. Dr. Hanna (John) Khouryieh is instructing our students on principles of food safety that also leads to HACCP certification. Chris Milam provides valuable instruction on livestock evaluation and prepares our students for the Little North American. Hopefully, COVID-19 will not be as disruptive this next spring! We are quite fortunate that WKU alum Morgan Askins was able and willing to step in on short notice to present equine courses such as basic equitation and equine production. WKU alum Dr. Debbie Shoulders is breaking in our new freshmen via a couple sections of Introduction to Animal Science. Finally, I would like to thank Dr. Jeffrey Bewley for injecting some hard-core dairy science into our program. The Department would not be where it is today without these outstanding individuals. Please join me in thanking them when the opportunity presents itself.

WKU Department of Agriculture and Food Science would like to recognize Warren Beeler's many years of service to the Kentucky Agriculture Industry. Warren is a WKU Ag Alumni and was the first director of the L. D. Brown Agricultural Exposition Center. He has cemented his legacy among Kentucky's livestock producers and their families. He has judged numerous livestock shows across most every state. It would be difficult to find a 4-H or FFA student that doesn't know Warren. He has always been a strong advocate for agriculture, whether it was as a local producer, a WKU Alumni, or with positions he held with the Kentucky Department of Agriculture and the Governor's Office. He has served as Director of Ag. Policy with the KDA and Executive Director of the Office of Agriculture Policy under Governors Matt Bevin and Andy Beshear. He is a former president of the Kentucky Pork Producers Association and a Hall of Fame member, WKU Agriculture Alumnus of the year, Middle Tennessee State University Animal Science Hall of Fame member, Kentucky Cattlemen's Association Service Award winner, and Kentucky FFA Distinguished Service Award recipient. He has served on too many boards to mention here. Whether he continues to manage his farm with his family, or some other endeavor, we know that Warren will continue to be an advocate for agriculture. Warren, we thank you, and we look forward to the next chapter.

The Department of Agriculture & Food Science wishes all of our alumni, friends, and families safe passage through the age of COVID-19! Thank you all, for what you do!

Best wishes,

Fred DeGraves
Chair, Agriculture & Food Science



2019-2020 Outstanding Agriculture Students



*Elmer Gray Outstanding
Graduate Student*
Kylie P. Ewing



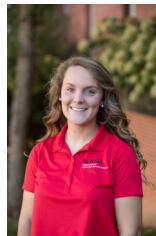
Outstanding Senior Student
Adam Sanderson



*Outstanding Agriculture
Business Student*
Spencer W. Langford



*Outstanding Agriculture
Education Student*
Catherine Wilson



*Outstanding Agronomy-
Plant Science Student*
Shelby Adams



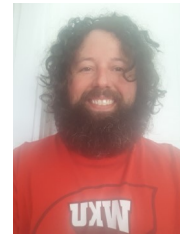
*Outstanding Agronomy-
Soil Science Student*
Avery Fierros



*Outstanding Animal
Science Student*
Zachary L. DeBord



Outstanding Horticulture Student
Monika Decker



*Outstanding Turfgrass
Management Student*
Logan Walters



Outstanding International Student
Gustavo Camargo Silva

*Congratulations to all of the
Outstanding Agriculture Students!*

To view more about these outstanding students, please visit: www.wku.edu/ogden/2020agriculturestudentawards.php

WKU Agronomy News

Student and Staff News

Haley Baird, Zach Brinkley, Avery Fierros, Sawyer Matthews, Graydon McDowell, D.J. Price, Adam Sanderson, Gustavo Silva, & Megan Amber Walters were the WKU Soil Judging Team members for the 2019 Southern Regional Soil Judging Competition, which Virginia Tech hosted in October. Darwin Newton and Becky Gilfillen coached the team. Due to the timing of the pandemic, we were unable to go to the NACTA Contest which was cancelled this spring. We also congratulate our Graduates of the team, which include: Haley Baird, Avery Fierros, Sawyer Matthews, D.J. Price, Adam Sanderson, Gustavo Silva, & Megan Amber Walters. During Fall 2019 semester, the Soil Fertility Class toured Phil Needham Agriculture Technology, Loveland Research Farm, Nutrien Ag 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 the 2020 winner of the Outstanding Agronomy Soil Science Student Avery Fierros, a Graduating Senior from Monticello, KY and to the 2020 recipient of the Outstanding Agronomy Plant Science Student Shelby Adams, a graduating senior from Elizabeth, IN.

Research

Continuing with our commitment to improve hemp production in Kentucky, Dr. Dan Strunk has focused recent efforts on cultivar evaluations, fertility, plant growth regulators, and exogenous sugars. Future evaluations of hemp will include determinations of harvest timing and effects on THC/CBD concentrations with hopes of adding a dedicated HPLC for analysis. Agronomy faculty are also continuing an experiment examining long-term effects (> 10 years) of poultry litter and tillage regime on physical and chemical properties of soil used for corn/soybean production. Drs. Woosley and Strunk presented hemp research results at the Kentucky Hemp Summit held on December 4th at the Kentucky Fair and Exposition Center in Louisville, KY.



USDA- WKU Agriculture Cooperative Research

Drs. Paul Woosley, Annesly Netthisinghe, Becky Gilfillen, and Ms. Naomi Rowland (WKU Biology) continue a research project of 5 years duration to investigate how *Clostridium botulinum* from applied poultry litter affects quality of alfalfa haylage. In addition, this research, which is in its 4th year, examines forage yield and quality of manure based alfalfa production.



Submitted by: Drs. Gilfillen and Willian

Students Gain Experience in the Hemp Industry

Over the course of summer, two Department of Agriculture and Food Science students gained valuable experience in all aspects of hemp production. Brodie Simmons and Logan Walters jumped at the opportunity to intern at Kentucky BioScience International located in Bowling Green, Kentucky. Started in 2018 by Robert Huttick and his wife, Tami Maria O'Dell, Kentucky BioScience International works in all areas of hemp production to produce CBD oils and pharmaceutical grade isolates. Brodie and Logan began with planting feminized hemp seed into trays and continued throughout the year working in all aspects of hemp growth as well as learning how to harvest, process, and extract the valuable cannabinoid oils. As part of his commitment to improving the hemp industry and expanding opportunities for interested students, Mr. Huttick committed to supporting Brodie's graduate research project by providing plants, materials, and chemical analyses. As a newly accepted JUMP program student, Brodie's graduate work is focusing on exogenous sugar effects on cannabinoid production in hemp.



Submitted by: Dr. Dan Strunk

The Agricultural Education program continues to move forward amid the new learning environments that students have been asked to participate. One of the many highlights from the year was to participate in the pre-service learning session at the National FFA Convention in Indianapolis, Indiana in October. Four WKU Agricultural Education students were charged to work through STEM curriculum labs and learn how to evaluate their future students in a science based environment. 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 exchange trip with Purdue University. WKU AgEd students hosted the Purdue Agricultural Education students to campus. Students were able to exchange ideas on teaching, and tour the AREC facility and surrounding agribusinesses. Students were allowed to discuss current topics in AgEd and compare programs at each school, and discuss teaching practices they will use in the future.

The final event for the school year was the AES banquet that was held in May where top individuals were rewarded for their academic efforts. Leadership awards were presented to freshmen, sophomores, juniors, and seniors and the senior future teachers were recognized. Award recipients were Katie Hickerson, Kennedie Knies, Jordan Olson, and Harley Hawkins. Catherine Wilson, Anna Winchell, Harley Hawkins, Adam Sanderson, and Zayne Priddy were our graduating teachers for spring 2020. Adam Sanderson Received the Outstanding Undergraduate Student Award. Catherine Wilson received the Ogden College Agricultural Education Award. Harley Hawkins was named the Outstanding Agricultural Education Society recipient. Thomas Poole received the Rising Sun Award.

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.

The Department had five student teachers in the spring of 2020- Catherine Wilson, Harley Hawkins, Anna Winchell, Zayne Priddy, and Adam Sanderson. All five successfully completed their student teaching semester and will be outstanding Agricultural Education teachers.

Thomas Poole (BS, AgEd, 2018), was one of only six individuals nationwide to receive the National Association of Agricultural Educators Ideas Unlimited Award at the 2019 NAAE annual convention in Anaheim, California on December 3-7. The Ideas Unlimited Award gives NAAE members an opportunity to exchange teaching ideas. Winning ideas are selected by members' peers at NAAE regional conferences. "Advocating for Aggregates", a lab assignment created by Poole, gives students the opportunity to learn about concrete in an engaging and hands-on way. In this lab, students identify different components of concrete, determine how ingredients vary based on purpose, and identify types of concrete reinforcements. This lab also gives students an opportunity to comprehend common core standards. By using the scientific method, taking measurements and discussing chemical reactions, the lab meets standards in literacy, math and science. By presenting these principles in an applicable way, students become motivated to participate and learn, while getting their hands dirty. Poole has worked to make this lab easy to implement by agriculture instructors. He has been able to keep the cost of this lab low by making strategic purchases and utilizing the resources around him. From space, to budget and materials, Poole has worked to make the lab easily modifiable. Each of the Ideas Unlimited winners was recognized at the NAAE convention in Anaheim. National Geographic Learning | Cengage Learning sponsors the Ideas Unlimited Award. (Source: NAAE News Release, 12-07-2019)



Submitted by:
Dr. Thomas Kingery

If you know of any student that would like to be an Agricultural Teacher, please forward their information to Dr. Kingery so he may invite them to campus for a visit. For further correspondence please contact Dr. Kingery at thomas.kingery@wku.edu.

Dr. Jack Britt— Hall of Distinguished Alumni



Dr. Jack Britt has been making a difference in the fields of agriculture, education, research and entrepreneurship since his days on the family farm in Warren County.

As teenagers, Dr. Britt and his twin brother, Jenks, began building a herd of registered Holstein cattle on the 400-acre farm. After earning their bachelor's degrees at WKU, the brothers sold the herd to finance graduate school.

At WKU, Dr. Britt was a campus leader, including President of the Senior Class, was a co-founder of Alpha Gamma Rho fraternity in 1963 and graduated in 1966 with majors in Agriculture and Biology.

Dr. Britt entered graduate school at North Carolina State University and earned a master's degree in Physiology with a minor in Animal Science in 1969 and a doctorate in Physiology with a minor in Biochemistry in 1971.

Dr. Britt's career included leadership roles at three land-grant universities. He joined the faculty at Michigan State University and later served as head of one of the world's top dairy science departments. He returned to North Carolina State University in 1977 where he served

as a Professor in the College of Agriculture and Life Sciences, Associate Dean for Research and Graduate Programs in the College of Veterinary Medicine and Assistant Director of the North Carolina Agricultural Research Service.

In 1998, he joined the University of Tennessee System as Vice President for Agriculture and presided over academic programs at the Knoxville campus as well as extension programs and agricultural and forest research stations across Tennessee. In 2004, Dr. Britt was named University of Tennessee Executive Vice President and led the development and implementation of the UT System's strategic plan.

Even though he retired in 2007, Dr. Britt remains active as a consultant on animal agriculture and as a visionary for the dairy industry. He leads a team of experts from around the world who have been studying what dairy farming may look like in the future.

As a researcher in reproductive physiology, Dr. Britt's work on compromised ovarian function of dairy cows during reduced nutrition, known as the "Britt Hypothesis," is still being studied by graduate students worldwide. As an author, he has had 720 technical articles, papers and more published in numerous journals. Dr. Britt has received numerous awards and recognition for his teaching, research and service.

He remains a supporter of WKU where he established the Jack and Frances Britt Fund for Innovation and Learning in 2018.

Dr. Britt lives in Etowah, N.C. He and his late wife, Frances, have two daughters, Heather and Stephanie.

Article from WKU Alumni Association

Alumni of the Year



Terry Shartzter, a native of Grayson County, graduated with a concentration in Agricultural Education ('82) and also earned his Masters at WKU ('85). He taught for 32 years just South of Bowling Green in Portland, Tennessee. He led many committees and groups in the TAAE and has been a huge advocate for WKU Agriculture in his role as a secondary teacher and as the Kentucky FFA Leadership Training Center Director. Terry was awarded the Tennessee Teacher of the Year Award in 2014 for his outstanding service to the profession and leadership in the school and the community. He also received the VIP award from the Tennessee Association of FFA, the Tennessee Agricultural Educators Association (TAAE) Teacher of the Year Award, and the TAAE program of the year award. Terry was camp director for 3 years after retiring from high school education. He always has a kind word for others and has always had the talent to inspire and help youth learn agriculture in unique and formative ways. He speaks proudly of his time at WKU and the opportunities that his education gave him to build a future in teaching and providing for his family.

Ecuador 2020 Study Abroad



The annual trek to Ecuador took place March 5-17, 2020. This year we had 16 attendees. It was an interesting time to travel during the beginning of a Pandemic. We were well received from our dear friends in Ecuador and had one of the best trips. We visited all the usual sights such as the Equator, Indian Markets, various farms, livestock markets, and yes, everyone's favorite farm, the Cobo dairy and potato farm. This year we added a few things such as a leather making factory, the botanic gardens in Quito, and a strawberry and fruit farm.

The following was written by two of the students on the trip Will Tolley and Brodie Simmons:

My trip to Ecuador this spring was definitely a life changing experience. It was a trip of a lifetime. I am blessed to have had the opportunity to go and cannot wait till I go back in the future!

We visited several of the Indian markets where the indigenous people of Ecuador specialize in hand-crafted items. We were able to negotiate prices and we found that was a common way of business in Ecuador.

While in Ecuador we visited several farms (broccoli, potato, flower). One of our host farms raises around 25 hectares of potatoes and the soil composition at 12,000 ft above sea level compared to the soil down in the valley blew my mind. The reason you grow on the mountain is because there are less diseases but the ones down in the valley had better color. What surprised me the most is the way they farmed on the side of mountains. Some people would terrace different levels and others would go straight up the side of the mountain. In America, it seems like farmers complain about a 12% slope and in Ecuador, they were absolutely thrilled to have that because typically it was 40% or more. Most of the farming work itself is all manual labor with very minimal equipment. All of the crops they grow are hand planted and hand harvested. The only time they use tractors is to load things and work the ground if they are blessed enough to afford it.

Cobo Potato Farm

Ecuador is a beautiful country. Whether it is the beautiful views you can actually see, because pictures cannot relate and you cannot appreciate those enough, or the people and hospitality that it possesses. I definitely see myself returning to Ecuador in the future. There are still many things I want to do, see, and explore. I cannot wait to go back and see my family down there. They took us right in just like we were one of their own and had been there our entire life!

It was very rewarding for me to be able to learn on this trip as well. I not only learned about Ecuadorian culture, but also their agriculture practices. They have a similar climate to Kentucky with the exception that their winters are very mild. What is most different about their agriculture is the landscape they must work with. Ecuador is very mountainous. The Andean Mountain Range has the perfect climate for growing fresh cut flowers.



Ambato Flower Market

It was very interesting to be completely submersed in a culture that is not my own. Luckily, the citizens of Ecuador are very friendly and patient with their visitors. Everywhere we went we were greeted with smiles. Ecuador is filled with amazing places, and equally amazing people. One of my favorite things about being in Ecuador was experiencing their food. I am a huge foodie, and for someone like me Ecuador is a great place to travel. Their local cuisine changes as you travel throughout the country, but they are all delicious. My favorite dish had to be the rotisserie guinea pig "cuy".

If I had any advice for someone who is contemplating a study abroad trip I would say to DO IT! While you're at it, sign up for the Ecuador trip because it is packed with good people, fun times, and is an awesome learning experience.

Ecuador



In Memory of Pascual Kunchicuy

It is with much sadness we report the passing of one of our dear Ecuadorian friends. Pascual was a member of the Shiwiar Tribe, last of the headhunters. He and his daughter Ydira along with his wife Norma made presentations to the Ecuadorian Study Abroad groups over the last 12 years while in the city of Puyo. He passed away with his daughter by his side August 19, 2020 due to complications from COVID-19. His daughter and family will continue to fulfill his legacy of helping the indigenous people in the Amazon.

Ecuador Reunion

WHERE ARE YOU NOW?
LOOKING FOR PAST PARTICIPANTS OF ECUADOR STUDY ABROAD TRIPS

ECUADOR REUNION SUMMER 2021 (DATE TBA)

If you were a participant of the Ecuador trips either with Dr. Coffey, Dr. Linda Brown, or Mr. Roger Dennis please contact Mr. Dennis at the following e-mail: roger.dennis@wku.edu. We would like to get the groups back together.



Baker Arboretum Summer Internship Program



Hey y'all! This summer three young women, who are WKU horticulture students, interned at the Baker Arboretum. Madelyne Taylor, Hannah Price, and Taylor Pendleton are all Kentucky natives with rural roots tying them to agriculture. Every year, Baker Arboretum hires around 6 interns for a one-time experience lasting from Spring until Halloween. An intern can expect to: weed, prune, design, water, fertilize, treat, and maintain 16 acres of land. Baker Arboretum has 116 acres with only 16 in the front being manicured and designed beautifully for visitors to admire. The remaining 100 acres house two greenhouses, an education building, and 6 miles of golf cart paths that visitors can walk. However, these 100 acres are not groomed nor designed. Arboreta, unlike botanical gardens, are accredited organizations which keep a database of their

woody specimens' location (accessions) as well as plant health for research. Collections are another key trait of arboreta which are a deliberate acquisition of certain genera of plants. During their summer internship, Baker interns complete a genera project which involves finding assigned genera specimens, assessing plant health and location, making field notes about observations, and recording coordinates of previously unmapped/since moved specimens. Upon turning in an Excel spreadsheet and updated GIS map of the specimens, the arboretum accessionist can update the database and tend to any plants that need maintenance of tags. Working at the arboretum provides interns with real life application of concepts taught in class at Western. Suddenly, you find yourself using topics from Dr. G's soil science class in a real-world problem. This internship is known for being one that participants never forget. Dr. Martin Stone has said, "You will be lucky if you ever work at a place more beautiful than this one," in reference to Baker Arboretum. Taylor Pendleton says, "Baker Arboretum is a place of infinite beauty, knowledge, and peace. The experience of being an intern is truly an honor and has enriched my soul. There's nothing more satisfying and peaceful than working in nature, caring for, and learning about beautiful plants." Not to mention, students of the horticulture concentration receive scholarship money from the late Jerry E. Baker. When Mr. Baker passed away a few years ago, he left a 10 million dollar endowment to WKU for programs he loved. Mr. Baker believed horticulture to be another form of art and beauty. His love for all things beautiful is what we can thank for a beautiful slice of Heaven on Earth. Baker Arboretum is open 9-5 during the summer from Tuesday through Saturday and closed every national holiday. Visitors are welcome anytime to admire the beautiful beds, landscape, and containers designed by the annual interns.

Submitted by: Taylor Rae Pendleton

2020-2021 Agricultural Ambassadors



Logan Tory Burdick
Essex, CT
Junior
General Agriculture



Ariel Camm
Ramsey, IN
Freshman
Agriculture Education



JW Cox
Flemingsburg, KY
Sophomore
Animal Science– Pre-Vet



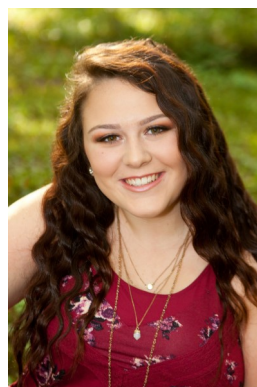
Miranda Maestle
Cave City, KY
Senior
Equine Science



Susan Spinks
Columbia, KY
Junior
Agriculture Education



Will Tolley
Fredonia, KY
Senior
Horticulture



Brianna Webb
Edmonson County, KY
Junior
Agribusiness



Shelby Winchell
Hawesville, KY
Junior
Agronomy Plant & Soil
Science with a minor in Sales

Friend of the Year



Bob Huttick, Kentucky BioScience International, has been very kind to our department by supporting hemp research over the last few years with Drs. Woosley and Willian. More recently, Bob has provided internship opportunities to two of our students, hired one of them to a full time job upon graduation this fall, and continues to support research. When he heard that Brodie's FUSE application would likely not be funded due to economic woes in the COVID age, Bob decided he would completely fund the work out of his own pocket including providing plants, materials, and even paying for chemical analysis (at \$75 per sample and there will be 15 samples). It is important to note that he was not asked to support the work, he volunteered! Every time one of us asked for his help, his answer has always been yes. You can learn more about Bob and his company here: <https://www.kybioscience.com/about/>

WKU AREC News

We have two new staff additions to AREC this year. Israel Mullins is a Lincoln County native and a graduate of University of Kentucky's animal science program. Israel grew up on a farm where he and his family maintain a beef cattle herd. At UK, Israel worked in the dairy on various research studies. He is currently pursuing his M.S. degree in Agriculture here at WKU. Israel is serving as AREC's Livestock Technician. He has continued the cooperation with Select Sires and the young sire program to improve the genetics in both the pure-bred Angus and commercial herds. In addition, he has been working on the renovation of the livestock handling facilities.



Our other new staff member is Creste Jean. Creste is a WKU Agriculture Alumni. Additionally, she is a U.S. Army Veteran and holds a M.S. in Homeland Security from WKU. While at WKU as an undergraduate, she specialized in equine science and participated with the Equestrian Team. She served in the Middle East and later was stationed on the west coast where she oversaw the boarding facilities at her military base. She currently serves as AREC's Equine Technician. Creste has been working diligently on improving the usefulness of AREC's horses by finding homes for aging horses while bringing in younger, trained horses to service equitation courses. Additionally, Creste has worked hard to restart the Equestrian Team. She and the students are working hard preparing for upcoming scheduled competitions this fall, provided Covid-19 allows.

Finally, I will say that though the University shut down in March, AREC continued business as usual. Livestock still needed to be fed and milked, crops still needed to be planted and managed, hay still needed to be harvested, compost still needed to be made and sold, and grass still needed to be mowed. With most of our students not on campus, keeping AREC operating was a daunting task. However, the staff doubled their efforts. Additionally, we had several faculty volunteering their time this summer. These individuals are solely responsible for AREC's success during these difficult times. I hope as WKU Alumni, you can take pride in the effort and accomplishments of this group of individuals. Finally, I will close with this: on several occasions, I was amazed how other faculty, staff, and students outside of agriculture handled living in a pandemic. It was obvious they had little experience of not being able to control a situation. I was asked how we in Agriculture were coping with the situation. My response: we can't control the weather, the cost of our inputs, nor the price at which we can sell our goods in Agriculture, yet we find ways to overcome and be successful. It is just another day for those of us in this field.

I hate that we will not be able to get together as normal this fall. I hope you and your families are well and healthy.

Go Tops!

Paul Woosley
Professor, AREC Director

Agriculture Spirit Award



Fran McCall is a WKU Agriculture Alumni ('06). While at WKU, she was extremely active in Block and Bridle and competed on the Livestock Judging Team. Upon graduating WKU, she pursued graduate school at the University of Kentucky and served as their Livestock Judging Team Coach. Fran has always been very active in 4-H and took a position as McLean County's 4-H Agent. She currently holds the position of Commodity Specialist with the KY Farm Bureau Federation. Fran embodies "The Spirit Makes the Master" mantra in her professional life. She is a leader and outspoken advocate for KY Agriculture. Her passion is demonstrated by her efforts to revive the WKU Agriculture Alumni Chapter. She has volunteered her efforts to serve as President and work with the WKU Alumni organization to reconnect our Department with its Alumni. She continues to give back to the Department by her service on its Advisory Board and assisting with Block and Bridle LNA events. She was an easy selection for this year's WKU Agriculture Spirit Award.

Crop Research Update

It has been a successful year for the crop enterprise at the WKU Farm! We harvested several trials for multiple companies since Homecoming last year and continue to conduct additional trials this season of corn, soybeans, and alfalfa. Yields across all acres of the farm last year averaged 190 bushels per acre of corn and 62 bushels per acre of soybeans.

We have successfully established new alfalfa to replace the field that was lost at the corner of Bennett Road and Schneider Lane. We conducted a trial with Winfield United Nutritional products on one of these new alfalfa fields in 2019 and are continuing that trial in 2020. The alfalfa field terminated was to make way for the beginning of the WKU strip trials in both corn and soybean. This year we have 15 corn hybrids from 5 different companies and 18 soybean varieties from 6 different companies. Both of these trials are looking very good and we intend to publish those results this fall for the use of area producers.

In addition to the WKU Strip trials, corn trials this year consist of hybrid strip trials with the following companies:

- Channel – 2 trials – an early maturity and a conventional maturity
- Dekalb
- Helena
- LG
- NK
- Pioneer
- Precision Planting
- Wheat Tech Inc



All of these are repeat cooperators from 2019. We are also cooperating with Bayer on a major company trial this year.

We are conducting several soybean trials on the farm this year. Similar to 2019, we are conducting variety strip trials with the following companies:

- Asgrow
- BASF – 2 soybean variety trials – one April planted and one May planted.
- Bayer
- Channel – 2 trials – a variety trial and an Xtendflex variety trial
- Helena – crop protection trial
- LG
- NK – 2 variety trials – one Roundup Ready Xtend varieties and one with Enlist varieties
- Pioneer – multiple trials – a variety trial, some agronomic trials.



We also have multiple herbicide demonstrations this year in addition to those conducted by Dr. Willian. On each of the variety trials, we have utilized the appropriate company's crop protection products. We would like to extend a special THANK YOU to the companies that provided us product to conduct these trials! Those companies consist of BASF, Bayer, Corteva, Helena, and Syngenta.

We have upgraded our equipment in multiple ways this year. First in the fall of 2019, we were able to harvest the crops with a John Deere S680 combine capable of mapping yields of each field and plot. That data was very beneficial for both companies and us! Later that fall, we ripped multiple fields to reduce compaction that was discovered last summer. This was done with a 5 shank 2100 John Deere ripper we purchased late last summer. In the Spring of 2020, we were able to plant the 2020 crops with a John Deere 1790 planter. It was set up in a 16/31 configuration and we planted 8 - 30" row corn plots and 15 - 15" row soybean plots. This matches up much better with the 8 row corn heads that are about as small as you can get on larger, modern combines. It also matches up well with the new 40' boom that upgraded our 3 point hitch Demco sprayer. The wider sprayer has allowed us to conduct multiple trials we were not able to in the past. Finally, that sprayer would not be much use without a tractor to mount it on. In April, we took delivery of a new John Deere 6130R tractor with AutoTrac and mapping capabilities. This has been extremely helpful in planting, spraying and fertilizer applications. We would like to extend a special THANK YOU to Wright Implement and BASF for assisting WKU with this equipment!

Lastly, I feel I would be remiss not mention the excellent work that Southern States has done for us this season. They have done most of our fertilization and crop protection applications. We would like to extend a special THANK YOU to Southern States – Bowling Green for their cooperation this year! Applying each company's crop protection products to each field was not simple and took a lot of patience and cooperation on their part and we appreciate it very much!! 2020 is shaping up to be another highly productive year. I look forward to harvest to see what these trials yield!

Submitted by: Mike Saxton

Equine News

The horse science program started in 1979 with six donated horses, an open field, and Dr. Charles Anderson's extensive equine knowledge to share with his inaugural training class. The horse science program has grown and evolved over the years and we begin another exciting chapter in its' development this fall semester of 2020.

The WKU Equestrian Team is back on the Hill. The Equestrian team was established in the 1980's and went on to become a nationally ranked team in the 90's. Over the years, the team has provided students' opportunities to stay connected with horses while in college, develop leadership skills, and participate in competitions. The team competes in the Intercollegiate Horse Show Association (IHSA) Western division and is an affordable option for students wishing to be part of an equestrian community. Students do not need to own a horse to participate and all experience levels are invited.

Over the summer, the Equine Unit was fortunate in acquiring several donated horses from Arizona. Two Half-Arabians - Outlaw Kid and Spicy Margarita - are the newest additions to the equine herd and will be instrumental in educating incoming students. We extend a heart-felt thank you to Amber Collier, Cynthia Elias, and Catherine Cole for their important donations.

Success of the equine program would not be possible without the generosity of WKU Alumni and community members. Jim Koostra, WKU class of 88, has donated his time and equine dentistry expertise to our entire herd for the past 14 years. Debbie Shoulders, WKU class of 89, has leased out two personal horses - Wesley and Willie - to use in upcoming classes and provides veterinary consult to our herd. Haley Mullins and Laura Porter have also leased out personal horses - Ann and Diamond - for student use. We are extremely thankful for their kindness and dedication to our program. These contributions will enable students to develop the horsemanship skills necessary to propel them into the equine industry and make many memories of time spent at the WKU Farm.

We look forward to an exciting year at the equine barn. For more information on how you can get involved in the WKU Equine program, please contact Creste Jean at creste.jean@wku.edu.



Outlaw Kid is a 4 year old registered Half-Arabian western pleasure trained gelding.



Spicy Margarita is a 3 year old registered Half-Arabian reining trained mare.



Holly Maupin, Miranda Maestle, Nicole Waters, and Makenzie Raymer help keep horses exercised and ready for classes.

Submitted by: Creste Jean

Dairy News

Adam Blessinger completed his M.S. in May and has decided to continue as the dairy technician after graduation. He has made great improvements over the past 4.5 years at the WKU Dairy and is inching closer towards the goal of 50 total milking cows. The goal is to milk approximately 40-45 cows year-round. We currently have 40 cows and 56 replacement heifers, with 20 of those heifers being pregnant. This time next year, we will have met our goal. Sexed semen has allowed us to increase numbers quickly over the past 3 years and to select for replacements from specific cows. We will continue breeding by artificial insemination using high genomic bulls to increase our herd genetics. The majority of the milk produced is still being sold to Dairy Farmers of America while the rest is being used to make cheese at the WKU Creamery.

The dairy has made some great changes this year. This summer we renovated the sprinkler system in the freestall barn. Keeping the cows cool has increased milk production by several pounds. In May, we began utilizing embryo transfer. This allows us to produce higher quality replacements out of lower quality genomic animals.

Dr. Jeffrey Bewley has joined the faculty as an adjunct to teach Dairy Production this semester. Along with this, he is helping the dairy continue to make improvements. His expertise in cow health and comfort has already made a difference. He is also looking into a heat detection system for the herd.



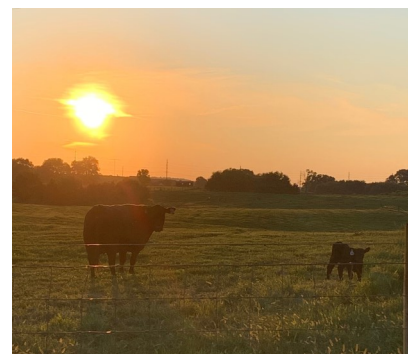
Submitted by: Adam Blessinger

Beef & Goat News

Calving season is officially underway at the WKU Agriculture Research and Education Center. We had our first calf, 0401, a cute heifer, out of 7202 one of our nicest cows. One down... 36 more to go! Calving season will be a little easier this semester because we were able to purchase a calf catcher that mounts on our Gator. This will enable us to catch the calves without the cows being able to get to us as we tag and weigh each calf. The bulk of our herd will calve in September, so we will be busy. We have been genomic testing the entire registered Angus herd and we hope by doing this we will be able to maximize our herd performance in the future by selecting the best replacement animals and continue to improve WKU Beef genetics.

We were able to breed our new billy goat to our 5 nannies. This is very exciting since it's the first goats born on the farm in several years. So far we have 3 healthy male kids. Kids are hard work, especially when they seem to be born escape artists! The other 2 kids are due to be born in late October. We are taking donations in order to expand our flock so that the upcoming Little North American and Animal Science classes may be able to use our own goats for academic and show purposes.

Submitted by: Israel Mullins



USDA Research

IMPROVING SUSTAINABILITY USING COVER CROP GRAZING TO IMPROVE SOIL HEALTH AND FERTILITY WHILE INCREASING GRAIN AND LIVESTOCK PRODUCTION

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Abstract

Cover crops have become an increasingly popular option for alleviating agronomic and environmental concerns, such as erosion. Dual utilization can increase forage use efficiency and increase immediate economic return but understanding the impact on soil health and grain production may affect viability of this strategy. In a two-year study conducted in Bowling Green, Kentucky, soil health was analyzed comparing three treatments: grazed wheat (*Triticum aestivum*; WGR) to un-grazed wheat (W) and grazed tall fescue (*Festuca arundinacea*; TF). Sixteen cow calf pairs were randomly allocated to grazed wheat or tall fescue for two weeks. Soil samples were analyzed following grazing to quantify soil physical and chemical parameters. Grain production was measured for production and quality characteristics. Data was analyzed with treatment x year interaction as a fixed effect and included if significant. pH in fall soil sampling varied in TF from both W and WGR ($P < 0.0001$). Year varied for pH level between all years ($P < 0.0001$). Treatment varied for OM with greater levels in TF compared to W ($P = 0.0002$) and W compared to WGR ($P = 0.0197$). Year varied significantly with 2017 (22.81 g/kg) greater than 2018 (3.03 g/kg; $P < 0.0001$) and 2019 (3.14 g/kg; $P < 0.0001$). TF was greater in N than WGR in both fall ($P < 0.0001$) while W was greater than WGR in both spring and fall ($P = 0.0052$ and $P < 0.0001$ respectively). N was greater in fall 2019 than 2018 ($P < 0.0001$) and 2017 ($P < 0.0001$) and differed between all years in spring sampling. NO_3 varied between treatment in both spring and fall and between years. In spring sampling, 2018 (9.21 ppm) was greater than 2017 (4.40 ppm; $P < 0.0001$) and 2019 (4.06 ppm; $P < 0.0001$). Fall sampling NO_3 was greater in 2019 (11.21 ppm) than 2017 (8.91 ppm; $P = 0.0001$) and 2018 (5.16 ppm; $P < 0.0001$). NH_4 varied between year in fall with the greatest content in 2017 (11.23 ppm) compared to 2018 (3.25 ppm; $P < 0.0001$) and 2019 (4.39 ppm; $P < 0.0001$). Cash crop production traits were not significantly impacted by treatment during this study. N fertilizer application may have contributed to overall increased soil N levels. Differences in OM could have been due to lack of residue in un-grazed wheat. Overall, minimal location x year interaction suggests that grazing had minor impact on soil health after one grazing period. Further research is required to thoroughly investigate the impact of cover crop grazing on soil health.

To read the entire summary: <https://www.wku.edu/agriculture/documents/ewingusdacropsummary.pdf>



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

Here's the update on the matching funds for the Dr. Schneider endowment fund. We only have a little over \$16,000 to go! Thank you for all of your support!



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

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Under Designations type Agriculture

**WKU Homecoming is scheduled for
October 10, 2020.**

**Unfortunately, due to COVID-19, we
will not be having a Homecoming
Celebration this year.**

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