



# New Ground

The College of Agriculture and Technology Newsletter



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### Inside This Issue

- 1 Message from Dean
- 2 Environmental Sustainability Grant Awarded
- 3 A-State Agribusiness Club Studies the Commodity Futures Industry
- 4 Agribusiness Alumni Contribute to the Agricultural Policy Course
- 5 Conserving our Most Precious Resource
- 6 A-State Camelina Field Day a Success
- 7 Up-Coming Events
- 8 Faculty Kudos

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### From the Desk of the Dean



My first months as Dean of the College of Agriculture and Technology (CoAT) have been filled with excitement as my travels allowed me to meet many fascinating and knowledgeable people. The CoAT faculty, staff, and students have welcomed my wife, Joan, and I; likewise, the Jonesboro community has also received us with open arms. We are thankful to be among individuals that have such a strong allegiance to their college and university.

The College of Agriculture and Technology demonstrated its Pack Pride with tailgating activities at the home football games, and history was made when CoAT students, Chad Easton and Stevie Overby, were selected as the 2013 A-State Homecoming King and Queen. Our CoAT undergraduate students took 1st place in the Program of Excellence Fellowship at the Alpha Tau Alpha National Conclave, while graduate students, Erin Kelly and Austin Lewis, garnered 3rd place finishes in the Crop Physiology and Engineering divisions of the 2014 Beltwide Cotton Conference, respectively. I am so proud of our students and appreciate them representing our college at the highest level at professional meetings and student club activities.

Our CoAT faculty demonstrated their leadership through outreach activities such as: the 2013 Camelina Field Day, the 2014 Soil and Water Education Conference, the 2014 Agribusiness Conference, and the 2014 Renewable Energy Conference. Dr. Steve Green was selected as an Associate Editor for the journal Natural Sciences Education and Dr. Rajesh Sharma was elected Chair of the IEEE-IAS Electrostatic Processes Committee (EPC). These are but a few of the accolades received by our faculty this year.

I am very excited about the new Agricultural Systems Technology concentration approved this year. This curriculum prepares graduates to compete successfully in areas of: precision agriculture, machinery management, and other areas that require applied engineering technologies. In addition, two minors were developed that will better prepare CoAT students for an ever-changing agricultural world. The Spatial Technologies and Geographic Information Systems minor will provide additional proficiency in geospatial systems that can be applied in areas such as precision agriculture, forestry, and municipal systems. The Crop Consulting and Agronomic Services (CCAS) minor enhances agronomic proficiencies and should increase our graduate's appeal to prospective employers associated with crop production. Both minors are excellent platforms to prepare undergraduates for graduate studies.

I am appreciative of the financial support of CoAT alumni and friends who increased our college's endowments by over \$700,000 this year. These gifts were instrumental in establishing the new Judd Hill Foundation Doctoral Fellowship and the new FFA State Officer Leadership Scholarship. This outpouring of support will help move us to the next level in teaching, research, and outreach.

## Environmental Sustainability Grant Awarded

The Saline County Regional Solid Waste Management District (SCRSWMD) has presented a research grant for \$13,600 to Dr. Rajesh Sharma, assistant professor of technology, and Dr. Gregory Phillips, professor of plant biotechnology, in the College of Agriculture and Technology at ASU.

The grant was awarded to ASU to develop a process that will provide the Solid Waste District with a more environmentally sound and financially advantageous method to properly dispose of yard waste. Sharma is the principal investigator (PI), and Phillips is the co-PI for the project. Mr. Keith Arnoult, undergraduate student in technology, will execute the grant under the supervision of Drs. Sharma and Phillips. The objective of the grant is to optimize the conditions for turning grass clippings and leaves into an emulsion that can be used as a mulch and soil stabilizer. If successful, the procedure will help to recycle yard waste in a more sustainable and beneficial manner.

On behalf of the District, those announcing the grant were Shane Broadway, director of the Arkansas Department of Higher Education; Jeff Arey, mayor of Haskell, and SCRSWMD board chair; Lanny Fite, Saline County judge; and Michael Grappe, SCRSWMD executive director.

*Those participating in the grant presentation by the Saline County Regional Solid Waste Management District were (from left) Shane Knight, director of operations; Dr. Rajesh Sharma, assistant professor, Keith Arnoult, undergraduate student in technology, and Dr. Greg Phillips, professor, at ASU; Jeff Arey, mayor of Haskell and SCRSWMD board chairman; and Shane Broadway, director of the Arkansas Department of Higher Education.*



## Ag Structures Class

Each year, Dr. Kevin Humphrey teaches the Ag Structures class, and the class project usually involves building or renovating something on the ASU Farm. This year they renovated the Sheep Barn. In the picture to the right, we see the students pouring 4 yards of concrete on the sheep barn project. The Ag Structures students worked on this project from beginning to end and did a great job!



## A-State Agribusiness Club Studies the Commodity Futures Industry

Six members of the ASU Agribusiness Club studied the commodity futures markets in Chicago, IL on November 7-8. After arriving in Chicago by Amtrak on Thursday morning, the group first visited the office of Daniels Trading and met with its President Glenn Swanson. The students then toured the open outcry trading floor of the CME Group and in the afternoon visited the Futures Industry Association trade show.



At the trade show, the students met and visited with Mr. Christopher Ehrman, Director of the Commodity Futures Trading Commission Whistleblower Office. Friday, the group met in the CME Group building for a seminar on commodity futures and how they are used to manage price risk. The seminar speakers were Glen Swanson, Mark Gold of Top Third Marketing, and John Hill of JDH Analytics. Before departing Chicago late Friday, the club members visited the Field Museum and the Michigan Avenue “Magnificent Mile” shopping district.

*The ASU Agribusiness Club visited the CME Group commodity trading floor on November 7. From left to right: Zachary Gallagher, President; Jay Salter; Shelemia Nyamuryekunge; Rachel Williams, Vice President; Tyler Hipp; Taylor Walker; Dr. Bert Greenwalt, Professor of Agricultural Economics; Tommy Spalla, RJO Futures; Charlott Jones, CPA.*

## Dr. Armah has New Publications

Dr. Paul Armah was honored by faculty, students and staff at a reception on September 4, 2013, celebrating the publication of his new book entitled: *Excessive Speculation and Market Efficiency or the Lack Thereof in US and Indian Agricultural -Commodity Futures Markets*, by Velmurugan P. Shanmugam and Paul Armah. Velmurugan was a Fulbright Scholar who worked with Dr. Armah during the 2012-2013 academic year. Dr. Armah also was the first author on a journal article co-authored with Velmurugan entitled: “Price Hikes in US Agricultural Commodity Futures Markets- An Empirical Efficiency Test,” which was published in *Food Distribution Research Journal* Volume 4, Issue 1. Dean Burcham commented: “My thanks to Dr. Armah for his continued leadership in the areas of teaching, research, and service. This publication reflects positively on him, the college, and the university.”



*Dr. Armah at his reception, smiling at the cake decorated to look like his new book*

## Agribusiness Alumni Contribute to the Agricultural Policy Course

Art Singleton, a May 2013 agribusiness graduate, is currently a first year law student at the University of Arkansas at Little Rock. Although the first semester of law school is very demanding, Art took time to contribute to the ASU Agricultural Policy course by twice serving as a guest speaker. The Fall 2013 Agricultural Policy class consisted of students in Jonesboro and Beebe classrooms connected by ASU's compressed video network.



*Art Singleton (right) visits with Dr. Bert Greenwalt (left) at the Riceland Foods Annual Meeting in the ASU Convocation Center, November 21.*

On August 27, Congressman Rick Crawford, a 1996 ASU agribusiness graduate, spoke to the students from the Jonesboro classroom while Art spoke from the Beebe classroom. As a senior, Art served as an intern in Congressman Crawford's Washington office during the spring 2013 semester. On November 5, Mr. Bill Reed, Vice President of Corporate Communications and Government Relations for Riceland Foods, was the guest speaker in Jonesboro while Art was again in Beebe. Art completed a summer internship at Riceland Foods in 2012. According to Professor Bert Greenwalt, "The presentations by Congressman Crawford, Mr. Reed, and Art Singleton help students connect their studies to the real world of politics and business. Learning about Art's intern experiences will hopefully inspire current students to take advantage of similar opportunities."



*Congressman Rick Crawford (at the podium, upper left) speaks to the Agricultural Policy class on August 27.*

## Executive Women in Agriculture

Students Amber Malin and Rachel Williams attended the Top Producer magazine Executive Women in Agriculture conference held in Chicago on December 5 and 6. During the conference, Amber and Rachel met consultant and branding expert Karen McCullough, who spoke on Generations in the Workplace: New Rules Need New Tools. In the photo below, Amber (center) and Rachel (right) also met Tina Marie Hinchley (left), the 2013 Midwest Region Farm Mom of the Year. The Farm Mom of the Year program is sponsored by Monsanto.



## Katie Lisko Completes Doctorate!

Ms. Katherine Lisko (left) graduated with her Ph.D. in Molecular Biosciences from A-State in December 2013. Her research work involved engineering the vitamin C content of rice to improve its stress tolerance. Katie hopes to continue her work in agricultural research. Dr. Lisko and Dr. Bert Greenwalt (right) are both natives of Hazen, Arkansas.



## Conserving our Most Precious Resource

With the global population expected to reach 9 billion by 2050, there has never been a more important time to research our water quality and learn how to better conserve it. At the forefront of this research is Dr. Michele Reba. Dr. Reba is a research hydrologist, working for the National Sedimentation Laboratory, a division of the USDA Agricultural Research Service. Dr. Reba is stationed at our very own Arkansas Biosciences building, here on campus.

Dr. Reba researches both water quality and water quantity issues. Water quality issues are related to excess nutrients running off of our fields, and in turn they influence local and regional water bodies. Water quantity issues are related to ground water levels that are being used up faster than they can be recharged. Dr. Reba focuses on conservation as a means of improving our water quality in the Delta. Dr. Reba's research covers the Delta region with a statewide network of water monitoring sites. She has 10 edge of field sites, with 6 cotton, 4 rice, and 2 bean sites all in Arkansas. She also has around 200 wells in Arkansas with remote monitoring equipment.

Dr. Reba collaborates with a number of other scientists in the region, including our own Dr. Tina Teague. She also is advising master's students in agriculture and doctoral students in the Environmental Sciences Doctoral Program. Thus, she has an impact on some of our college's students and our curriculum. Her students are working to devise state-of-the-art sensors that can be used to monitor soil moisture content and allow producers to manage their irrigation schedules remotely.

With farmers being primary stewards of the land, it is our responsibility to conserve our resources to preserve it. Dr. Reba researches better ways to conserve a resource that many people do not realize is finite. Agricultural irrigation accounts for about 85% of all water used in Arkansas. Her research will help propel Arkansas into a more productive and sustainable agricultural future.

-Zachary Lancaster, senior, Plant Science major

*Dr. Michele Reba, research hydrologist with the USDA-Agricultural Research Service and stationed at Arkansas State University since 2011.*



## Tour of Birdsong Peanuts

College of Agriculture & Technology (CoAT) Agribusiness major Rachel Williams (left) toured the Birdsong Peanuts warehouse near Walnut Ridge with U.S. Senator John Boozman (right) on December 2nd. Rachel was an intern in the Senator's Jonesboro office during the Fall 2013 semester and is the third CoAT student to serve in this position. Nathan Davis, a CoAT alumnus, is Senator Boozman's Northeast Arkansas District Director.



## Homecoming 2013 is an Agri Thing!

The ASU Homecoming Queen for 2013 was our own Stevie Overby, animal science/pre-vet major, and Homecoming King was our own Chad Easton, also an animal science major. The photo below appeared in the Jonesboro Sun.



## A-State Camelina Field Day a Success

Arkansas State University's College of Agriculture and Technology hosted a Camelina Field Day and Bioenergy Seminar on Friday, October 18, 2013, for extension agents, farmers, students, entrepreneurs and agri-business professionals at the A-State farm on Aggie Road in Jonesboro.

Camelina could become an alternative winter crop in Arkansas. The oil from the seed can be used to produce biodiesel or even jet fuel. The meal leftover after extracting the oil can be used as a livestock feed supplement.

Field day activities featured on-site camelina planting and processing demonstrations by BioBased Solutions, an A-State faculty consortium that focuses on aspects of the biomass-to-renewable-products industry. Seminar topics included when to plant camelina in Northeast and Central Arkansas, planting logistics and cultivation practices and was led by Dr. Steve Green. The tour of the microrefinery processing facility was led by Dr. Kevin Humphrey.

Field tours began at 9 a.m. and continued until 11:45 a.m. Over 60 guests attended the luncheon, generously provided by the Craighead County Farm Bureau. The afternoon's bioenergy seminar lasted until 3 p.m. and featured the presentation, "Deconstruction of Biomass: Production of a Fermentable Sugar Stream and Extraction of Valuable Co-Products," by Dr. Julie Carrier, professor of biological and agricultural engineering at the University of Arkansas at Fayetteville.

"Our faculty and student researchers have been working with camelina, or *Camelina sativa*, for over a year now, said Dr. Timothy Burcham, dean of the College of Agriculture and Technology. "We believe it holds significant potential for the bioenergy industry, and we want to share information about its potential as a crop here in Arkansas."

More information is available at the college website for Biobased Products or at [www.biobasedsolutions.org](http://www.biobasedsolutions.org).



*Dr. Steve Green provides planting and cultivation advice at the Camelina Field Day hosted at the ASU Farm on October 18, 2013.*

## 22nd Annual Student Leadership Conference

This year over 50 students participated in the Annual ASU College of Agriculture and Technology Student Leadership Conference, which was held on September 13th at the Cooper Alumni Center in Jonesboro. The conference is designed to help new and returning students prepare to effectively lead their campus organizations and also to provide some basic leadership skills that will help them compete in the world of work. College of Agriculture and Technology alumnus, Mr. Greg Cole, Chief Executive Officer with AgHeritage Farm Credit Services in Little Rock, was the luncheon speaker. The Conference was co-sponsored by the Jonesboro Regional Chamber of Commerce Agribusiness Committee, AgHeritage Farm Credit, the Craighead County Farm Bureau, Midsouth Farm Credit, Poinsett Rice & Grain, Greenway Equipment, Inc. and Crop Protection Services.



*Spring 2014*

Soil and Water Conference .....	Jan. 31	CoAT Honors Banquet.....	April 22
Agribusiness Conference.....	Feb. 12	Golf Tournament.....	April 25 (Sage Meadows)
CoAT Career Fair .....	Feb. 18	Farmers Market Opens.....	May 3
Eastern District FFA CDE's .....	March 4	Spring Commencement.....	May 17
Spring Break.....	March 24-29	Summer Session I.....	June 3
Scholarship Application Deadline:		Summer Session II.....	July 7

March 1 AState.edu/college/agriculture-and-technology/scholarships

- CoAT students Chad Easton and Ganlei Huang were selected as the College of Agriculture and Technology representatives for Who's Who Among Students in American Universities and Colleges in late November 2013!
- CoAT students Ben Gander, Jon Goodson, Kasey Sims, Ashley Jines, Keighley Barber, and Graham Agee are congratulated for their 1st Place finish in the Program of Excellence Fellowship session at the Alpha Tau Alpha National Conclave during late October – early November 2013!
- Plant and Soil Science major James Wade Halk won a \$500 college scholarship for his first place finish on the college exit exam given fall 2013, scoring in the 97th percentile in the nationally-normed ACAT agriculture exam!
- College of Agriculture & Technology graduate students Erin Kelly and Benjamin Watson presented research findings at the Arkansas Entomological Society (AES) Annual Meeting held at Southern Arkansas University in Magnolia during the first week of October 2013. This was the 23rd annual meeting of the society. The title and contributing authors for their presentations are:
  1. Spatial Distribution of Lygus lineolaris in Midsouth cotton grown in heterogeneous soils. Erin Kelly, T. G. Teague, K. Morris, and T. Spurlock.
  2. Late-Season Tarnished Plant Bug Control in Center-Pivot Irrigated Cotton: A Zone Management Approach. Benjamin Watson, T. G. Teague, and E. Kelly.  
In addition, two of Dr. Tanja McKay's (Biology) students made presentations related to her rice - cereal beetle research at the AES Annual Meeting. Dr. McKay is a collaborator on the joint research project between the University of Arkansas Division of Agriculture and the A-State College of Agriculture & Technology. The title and contributing authors for their presentations are:
    3. Effect of temperature and rice fraction on red flour beetle (Tribolium castaneum) development. Rachel Hampton, T. McKay, L. Starkus; F. Arthur, and J. Campbell.
    4. Effects of environmental factors on abundance and distribution of Tribolium castaneum (Coleoptera: Tenebrionidae) at a rice mill in northeast Arkansas. Martine Patience Bowombe Toko, and T. McKay.
- Costa Rica trip planned for June 10-17 of 2013. Contact David Agnew for information on how you can participate or how you can assist students raise the money to participate.
- Your Spring 2013 newsletter is online at the following web address: AState.edu/college/agriculture-and-technology/outreach-programs/

**Bachelor of Science in Agriculture (B.S.A.)**

- Agricultural Business (major) various emphasis areas
- Agricultural Studies (major) Agricultural Education (emphasis) Agricultural Technology Agricultural Science
- Animal Science (major) Various emphasis areas
- Plant & Soil Science (major) Various emphasis areas
- Technology (major):
  - Technical Studies
  - Technology Management
  - Computer Aided Drafting & Design
  - Computer Systems
  - Manufacturing-Industrial Technology

**Bachelor of Applied Science**

Associate Degrees in: Technology

**Endorsements in:**

- Adult Education
- Career Education

— Please cut or tear along dotted line, place in envelope with check, and mail to address below —

Please remember ASU in your Charitable Giving. If you would like to make a gift to the College of Agriculture & Technology or the scholarship fund, please complete the information below, or go to the ASU Web site: Support.AState.edu/OnlineGiving.htm and complete the form online.

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Send all gifts to the ASU Foundation, P.O. Box 1990, State University AR 72467-1990. If you have questions, you may contact the College of Agriculture at 870-972-2085 or the ASU Foundation Office at 870-225-8343



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## Faculty Kudos

Dr. Steve Green contributed to the KASU Radio interview on “Miscanthus being grown for biofuel production in northeast Arkansas.” You can listen to his radio interview here:

<http://www.kasu.org/post/miscanthus-being-grown-biofuel-production-northeast-arkansas>

Dr. Steve Green, Dr. Kevin Humphrey, and sophomore Plant and Soil Science major, Allison Gurley contributed to a feature article in the Arkansas State University Herald regarding biofuels. You can review the article here:

[http://www.asuherald.com/news/professors-grow-plants-for-biofuel-purposes-1.2833042#.Ui4dlrx\\_w18](http://www.asuherald.com/news/professors-grow-plants-for-biofuel-purposes-1.2833042#.Ui4dlrx_w18)

Dr. Rajesh Sharma was recently elected as Chair of the IEEE-IAS (the professional society for electrical engineers) Electrostatic Processes Committee (EPC). Dr. Sharma is joined by executive committee members from Osaka Prefecture University, in Japan; the University of North Carolina at Charlotte; and the Universite' Montpellier, in France. Dr. Sharma will also serve as the EPC Technical Program Chair for the 2014 IEEE-IAS Annual Meeting.

Dr. Elizabeth Hood was recently elected as a Member-at-Large of the American Association for the Advancement of Science section on Agriculture, Food & Renewable Resources. Her four-year term will begin on February 18, 2014, and will run through February 19, 2018.

These two articles in Arkansas Business feature CoAT faculty quotes or research efforts as provided by Dr. Bert Greenwalt and Dr. Steve Green:

<http://www.arkansasbusiness.com/article/95562/michael-pakko-economic-recovery-still-slow-in-arkansas?page=all>

<http://www.arkansasbusiness.com/article/95803/refinery-seeks-to-jump-start-jobs-in-delta?page=1>