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Dale Bumpers College of Agricultural, Food, and Life Sciences (University of Arkansas, Fayetteville). Center of Excellence for Poultry Science

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Big Winners

FAYETTEVILLE, Ark. — Two University of Arkansas faculty members, three graduate students and one undergraduate student recently took top honors at the Poultry Science Association’s (PSA) annual meeting at Edmonton, Canada. The awards are for research sponsored by the Center of Excellence for Poultry Science in the University of Arkansas Systems’ statewide Division of Agriculture.

Annie Donoghue received the Helene Cecil Leadership Award. This award is given to a female PSA member for scientific contributions in the field of poultry science or for significant leadership in the promotion or development opportunities for women in poultry science. Donoghue’s research is in the area of improving the reproductive efficiency of poultry. She is the Research Leader for the USDA Poultry Production and Product Safety Research Unit (PPPSRU), part of the USDA Agricultural Research Service.

Steven Ricke, a microbiologist and holder of the Donald “Buddy” Wray Chair in Food Safety, was presented with the American Egg Board Research Award. The award is given to increase interest in research pertaining to egg science technology or marketing. His main research focus has been on virulence and pathogenic characteristics of foodborne salmonellae. Ricke is also the Director of the Center for Food Safety in the Institute of Food Science and Engineering at the U of A.

Poultry science graduate students winning awards at PSA were Olivia Bowen, Fausto de los Santos and Jianwei “David” Lu. An undergraduate poultry science student, Valerie Brewer, also won an award competing with graduate students in the area of poultry nutrition. In order to win in their section, students were asked to give oral presentations and then field questions from a professional audience regarding their research.

Bowen is a master’s student from Fayetteville and her major professor is Dr. Gisela Erf. She won in the area of immunology.

De los Santos is a Ph.D. candidate from the Dominican Republic and his major professor is Dr. Dan Donoghue. De los Santos won in the area of physiology, endocrinology and reproduction.

Lu is a Ph.D. candidate from China and his major professor is Dr. Craig Coon. Lu won a research award in the area of metabolism and nutrition.

Brewer is a senior from Farmington and her major professor is Dr. Jason Emmert.
FAYETTEVILLE, Ark. -- Glycerine, a byproduct of biodiesel production, can be used as a dietary supplement for growing broiler chickens, according to research by University of Arkansas Division of Agriculture poultry scientists.

Finding valuable new uses for glycerine will become increasingly important as biodiesel production increases, said Park Waldroup, poultry nutritionist for the U of A Center of Excellence for Poultry Science.

“There is a rapid increase in the production of biodiesel in the United States, with about 354 million gallons produced annually and additional plants under construction that will nearly double U.S. production capacity,” Waldroup said. “Glycerine, a carbohydrate molecule that makes up 10 to 12 percent of a typical fat, is a byproduct of the manufacture of biodiesel from fats and oils.”

The growing production of biodiesel will soon overwhelm traditional uses for glycerine in cosmetics and other products, Waldroup said. So he and his research group are exploring the value of glycerine as an energy source in typical U.S. broiler diets.

“Glycerine is recognized as a safe feed additive,” Waldroup said. “It is a pure calorie source that can provide energy to a body for maintenance and growth.”

In a short-term preliminary study Waldroup and his research group found that they could feed up to 10 percent glycerine to chicks up to 16 days of age without impairing performance. This was followed by a full-term feeding study with chicks grown to market age to evaluate the effects not only on live performance but also on meat quality.

“Results of the study showed that diets with 5 percent glycerine supported good performance, but when 10 percent was added to the diets the flow rate of the feed was slightly reduced, hampering feed intake,” Waldroup said. “Neither level of glycerine had any adverse effects on meat quality.”

Results of these studies indicate that glycerine can be used as an energy source for broiler diets, Waldroup said, but additional research is needed to evaluate quality issues associated with its use and the effects on such features as feed texture and pellet quality.

“As the biodiesel industry continues to grow, this should provide additional feed sources for broiler producers and improve profitability of biodiesel production,” Waldroup said.
FAYETTEVILLE, Ark. --- A record 37 high school students from around the state experienced college life first-hand at the University of Arkansas while attending the 10th annual Poultry Science Youth Conference sponsored by the Center of Excellence for Poultry Science at the University of Arkansas July 11-14.

The conference is designed to foster interest in the poultry industry, the University of Arkansas and the UA poultry science department through hands-on experiences, tours and industry presentations.

The theme of this year’s conference was “CSI: Chicken Scene Investigation.” Students were divided into six groups and each group came up with a unique product made out of chicken or turkey. The students determined their target market and were shown how to take their product from raw poultry to ready-to-serve products at the UofA’s pilot processing plant.

Gary Davis, undergraduate recruiter said, “We wanted students to get a feel for how enormous the poultry industry is. If they are interested in working in production, product development, sales, whatever they like, the poultry industry has positions available. Majoring in poultry science can open up tremendous opportunities for students.”

Student groups gave their group presentations before faculty members and parents during a closing ceremony in the Leland Tollett Auditorium in the Poultry Science Building.

Sponsors of the conference were the Farm Bureau, Harold E. Ford Foundation and the Center of Excellence for Poultry Science.

Next year’s conference will again be held in July. For information, e-mail Gary Davis, poultry science undergraduate recruiter, at gddavis@uark.edu. All students completing the 10th and 11th grades are invited to attend. Space is limited.
BEER AND CHICKEN HAVE SOMETHING IN COMMON? -- All beer contains two types of hops. Research suggests herb used in beer might be substitute for growth-promoting antibiotics in broiler diets.

“Kiss of the hops” may stimulate broilers

FAYETTEVILLE, Ark. - Poultry scientists at the University of Arkansas Division of Agriculture have found that hops, an herb used in brewing beer, might work as a substitute for growth promoting antibiotics in broiler diets.

UA scientists Susan Watkins and Park Waldroup, along with graduate students Jana Cornelison and Frances Yan, conducted the research at the Division of Agriculture’s Center of Excellence for Poultry Science.

Results of the study, published in the International Journal of Poultry Science, (Vol. 5 pp. 134-136. 2006) indicated that addition of ground hops to poultry feed improved early growth rate of broiler chicks and reduced the overall feed needed to produce a pound of gain.

Working with Lloyd Rigby, a hops chemist from Yakima, Wash., and John Segal, a leading grower of hops in Grandview, Wash., the Arkansas team conducted a feeding trial in which broiler diets containing either hops or a growth promoting antibiotic were compared along with a control diet with neither treatment.

Although the response from the addition of hops was not as great as that obtained from the antibiotic treatment, it was significantly greater than that of birds fed the control diet.

“Over the past several years we have been exploring a number of alternative products for replacing antibiotics in broiler diets, including many herbs, spices, organic acids, and other similar products. This is the first product that we have found that resulted in performance improvement of this magnitude,” Waldroup said.

Waldroup said additional work is needed to determine how consistent the response to hops might be under more stringent growth conditions and any effects on the broiler meat.

“Many herbs and spices may flavor poultry meat, and the fact that hops lend bitterness to beer might mean that it could possibly impart some off flavors to poultry meat,” said Waldroup.

“We recognize hops primarily for their role in the brewing industry, and that is precisely the reason we felt that they might be beneficial in poultry feeds.” Waldroup said. “They serve as an antimicrobial to keep beer from spoiling, and there are a number of U.S. patents relating to the use of hops as an antimicrobial for several food products.”

Culinary school at U of A continues to be a success

COOKING -- From left, Chef Todd Seyfarth leads Bill Clift, both of Tyson Foods, Inc., to perfect his recipe and technique during the Culinary School at the Center of Excellence for Poultry Science the week of July 11th. The culinary experience continues to be a great success, with more classes forming in the future.
Poultry Festival once again a highlight of summer events

Story by Karen Eskew, Communication Specialist

LITTLE ROCK, ARK. — The 47th Annual Poultry Festival was held in Little Rock June 8-10. Attendees from all over Arkansas, Missouri and Texas attended the three-day event designed to foster relationships, further poultry interests in the area and raise money.

During the festival, University of Arkansas poultry science students, staff and faculty worked at several events helping make this year’s festival a success. The students took temperatures of all chicken product cooked during the industry’s annual barbecue, theme and skit contest.

“In order to ensure that all products prepared during the contest on Saturday are cooked to the proper temperature, the Federation has our students take internal temperatures of products and actually sign off on it before it is collected and served,” said Casey Owens, associate professor.

Students also assisted in “showing” auction items during the Allied Industries Silent and Live Auction held on Friday night. Proceeds from the auction go towards poultry science scholarships.

Jerry Wooley, an extension specialist with the department, and Danny Williams of WYNCO, served as co-chairs for the 4-H state barbecue contest held Saturday morning.

UA students, faculty and staff were also available to register participants, mark the fun dash race route and help award the winners during the 5K Fun Run. Gary Davis, undergraduate recruiter for the poultry science department, served as co-chair of that event with industry partner Jean Allard of O.K. Foods.

TAKING A BREAK -- University of Arkansas undergraduate and graduate students take a break on the back of an ice cream truck to avoid the hot temperatures during the Poultry Festival’s barbecue contest. Student workers were asked to take temperatures of poultry product cooked during the contest in order to ensure food safety at the event.

4H BARBECUE CONTEST -- Extension specialist Jerry Wooley, left, and Danny Williams of WYNCO, co-chairs for the 4H barbecue contest held during the Poultry Festival in Little Rock, are shown with one of the younger contestants in the event during the Saturday morning cook-off. All contestants who participated are shown in the photo below.

Poultry judging team results

BATON ROUGE, La. – The University of Arkansas Department of Poultry Science judging team took fourth place at the U.S. Poultry and Egg Association National Poultry Judging Contest April 6-7 in Baton Rouge. Twelve teams participated in the two-day event.

Ashley Swaffar, from Farmington, had the sixth highest individual score overall. In the Individual Production Section, Sawyer Deakins, from Harrison, placed fifth; Regina Finley, from Searcy, placed sixth; and Amanda Hancock, from Farmington, placed ninth.

Swaffar placed fourth in the Individual Breed Selection Section. In the Individual Market Products, Swaffar placed first, Hancock placed ninth and Finley placed tenth.

The team placed fifth in the Team Production Section and third in Team Market Products.

Coaches were Dr. Jason Emmert, associate professor and Valerie Brewer, of Prairie Grove, as assistant coach.

Allied Industry donates money to department

FOR A GOOD CAUSE -- Bob Ickes (left) signs the bid he won while Bob Rochelle looks on during the scholarship auction held at the Poultry Festival. This year the Allied Industries made a donation of over $18,000 for student scholarships to the UA Department of Poultry Science. Thank you to the Allied Industry for your support!
National Egg School held at poultry center on UA Campus

Story by Karen Eskew, Communication Specialist

FAYETTEVILLE, Ark. -- The University of Arkansas was the site of the 2006 National Egg Products School (NEPS) July 31 - Aug. 2.

This nationally recognized school provides participants with an introduction to production, processing, functions in food and quality characteristics of liquid egg products.

The NEPS includes lectures, group discussion, hands-on laboratory exercises and a field trip to a breaking plant. The laboratory exercises focus on the functions of eggs in foods and included the production of foods - many of which were consumed by the class members.

NEPS participants must take a competency test at the end of course and those who pass the test receive a certificate of completion.

The director of the 2006 CEPS was Dr. Pat Curtis of Auburn University. The nine instructors for the school were all regarded as the top egg products researchers in the U.S. Thirteen participants attended this year’s school, coming from six different states.

Originally the NEPS was held in various locations at hotels. It was moved to college campuses in order to use laboratory facilities to enhance the hands-on exercises. This year NEPS officials commented that they chose the UofA for its tremendous facilities, in fact, several commented that the Center of Excellence for Poultry Science’s facilities were probably the best in the country.

MIXING AND LEARNING -- Participants from the 2006 National Egg Products School conduct a hands-on experimental project at the Center of Excellence for Poultry Science. Visitors from around the nation gathered on the U of A campus in July for the week-long workshop, which is held annually.

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Newly-redesigned Partners newsletter takes FIRST PLACE!

At the 2006 Publications/Projects Competition sponsored by The National Agricultural Alumni and Development Association, the Partners newsletter received first place honors in the category of Print Media Four-Color Newsletter.

We hope to continue providing you with award-winning coverage over the next year. If you have information you would like to see, please e-mail keskew@uark.edu

Time to Tee-off for Poultry Science Scholarships

FARMINGTON, Ark. -- The University of Arkansas Department of Poultry Science is hosting the 7th Annual Poultry Science Scholarship Golf Tournament on Tuesday, Oct. 3 at Valley View Golf and Country Club in Farmington.

The golf tournament runs in conjunction with The Poultry Federation’s Annual Symposium, which is held Tuesday and Wednesday, Oct. 3-4 at the Holiday Inn in Springdale.

Participants can enjoy a shotgun start in either a morning or afternoon flight.

Teams of four can play for only $500 and hole sponsors are available at only $1500.

The major sponsor of this year’s tournament is Cobb-Vantress, Inc.

For more information on the golf tournament or how you can register a team, you may log onto our web site at: www.poultryscience.uark.edu/golf.html or you may call Diana Bisbee, tournament director at (479) 575-2025. You may also e-mail Diana at dbisbee@uark.edu. We hope to see you there!!

Grants Awarded

Listed in order of receipt

Park Waldroup. Cobb-Vantress, Inc. Effects of dietary levels of calcium and nonphytate phosphorus in broiler starter diets on live performance, bone development and growth plate conditions. $24,388.


Nick Anthony. Midwest Poultry Research Program. Growth and development of the commercial pheasant reared under different environmental conditions. $10,000.

H.L. Goodwin, Jr. USDA NRCS. Feasibility assessment of establishing the Ozark Litter Bank. $222,750.


Jerry Wooley receives 30-year service award for job well done

THIRTY YEARS OF SERVICE -- Dr. Robert Wideman, Jr., (left) is shown presenting a 30-year service award to poultry extension specialist Jerry Wooley.

WHO ME? - Jerry Wooley, right, is surprised by a presentation for his 30 years of service during the Poultry Science Youth Conference. Wooley was unable to attend his special luncheon in Little Rock because he was hard at work at the youth conference in Fayetteville. Wooley has been instrumental in Arkansas poultry youth programs.

Upward Bound student participates in research on poultry this summer

MICROSCOPIC RESEARCH-- Albious Latior, a senior at Springdale High School, is shown looking through a microscope in a lab at the Center of Excellence for Poultry Science. Latior participated in the Upward Bound program this summer on the U of A campus. Upward Bound participants commit to the program until high school graduation and participate in both a six-week summer residential program and an academic year component. Being curriculum-based, the program provides exposure to a wide variety of academic, cultural, and social opportunities simulating a college experience. Latior worked in Dr. David Chapman’s laboratory at the poultry science center this summer.

USDA/Center win technology transfer award

FAYETTEVILLE, Ark. -- Laboratories from the USDA-ARS Poultry Production and Product Safety Research Unit and the Center of Excellence for Poultry Science received the Excellence in Technology Transfer Award from the Federal Laboratory Consortium for Technology Transfer Mid-Continent region.

The laboratories involved in the award-winning probiotic research were those run by Drs. Annie Donoghue, Dan Donoghue and Billy Hargis.

Owens receives promotion

TENURE -- Dr. Casey Owens was recently given a promotion to Associate Professor with tenure. Owens research is in the area of poultry products and she is a graduate of Texas A&M University. She joined the U of A in 2000.
FACULTY NOTABLES:

**Dustan Clark** did a video newsletter with the Farm Bureau on Avian influenza in May. He also did an AI presentation to a Chinese delegation visiting the states on June 9. On June 11th, Clark gave an invited presentations “Preemise Identification,” “Bird Flu” and “The National Animal Identification System” in Fort Worth, Texas

**Gary Davis** served as co-chairman of the 5-K Poultry Dash held in conjunction with the Poultry Festival in Little Rock.

**Annie Donoghue** led a discussion group “Animal uses for probiotics and prebiotics: impact on antibiotic use” during the International Scientific Association for Probiotics and Prebiotics in Coleraine Northern Ireland, U.K., June 16-18. Donoghue also participated in the Agricultural Research Service Salmonella Summit June 28th in Washington DC.

**Jason Emmert** was part of an internationally-renowned scientific jury selected by Adisseo to choose three winners for Adisseo’s Rhodiment Research Grant. The three other jury members were from Brazil, China and France.

**Karen Eskew** recently won several publication and display awards, they are as follows: the Silver Award for Displays/Exhibits from the Association of Communication Excellence for the antique incubator displayed on the 2nd floor and the poultry health products display on the first floor of the Center. Eskew also took First Place for the Partners Newsletter; Third Place for the 2005 Annual Report “Putting the Pieces in Place to Succeed,” and Third Place for 10th Anniversary of the Center Event from the National Agricultural and Alumni Development Association (NAADA).

**Bill Huff** gave an invited presentation at the American Society for Microbiology Annual Meeting, held in Orlando, Fl. The title of the presentation was “Bacteriophage: A Natural Alternative to Antibiotics to Prevent and Treat Animal Diseases and Reduce Food Borne Pathogens on Animal Products.” Huff was invited to be an External Examiner for Nibham Jamalludeen’s Ph.D. Final Defense, and give a talk entitled “Bacteriophage: An alternative to antibiotics in animal agriculture” at the University of Guelph, Guelph, Ontario, Canada on May 15-17, 2006.

**Geraldine Huff** was invited to present a paper entitled “Effects of a dietary yeast extract on the response to transport stress of turkey poults previously challenged with Escherichia coli” for the AAAP/AVMA Meeting, on July 14-21, 2006.

**Frank Jones** wrote two articles “Quality Control in Feed Manufacturing” and “Control of Toxic Substances” for Feedstuffs magazine. The articles will appear in the September 2006 issue. Jones and Casey Owens also gave presentations and taught courses during the National Egg Products School held at the U of A July 31- Aug. 2.

**John Marcy** hosted a culinary institute week-long training in the Center of Excellence for Poultry Science the week of June 12-16.


**Casey Owens** was an invited speaker at the USPEA Poultry Processor Workshop in Atlanta on May 17 –18. Her presentation was titled, “Muscle to meat conversion: Impact on yield and quality.” Owens also hosted Poultry 101 on May 23-25 at the Center of Excellence for Poultry Science.

**Susan Watkins** served as the director for the 2006 National Egg Quality School held May 22-25 in Memphis. There were 50 attendees from all over the United States, Puerto Rico and Mexico. Watkins also served as keynote speaker for a series of grower’s meetings hosted by Pilgrim’s Pride in El Dorado. In June Watkins hosted eight poultry managers from China, whose trip was sponsored by the National Renders Association.

**Jerry Wooley** was chairman of the 4-H youth poultry barbecue contest during the annual Poultry Festival held in Little Rock June 10th.

STUDENT NOTABLES:

**Sujata Sirsat**, Ph.D. student of Dr. Steven Ricke’s won an American Society for Microbiology Travel Award to attend the organization’s annual meeting this past May.

The Outstanding Senior and Graduate Students for poultry science were announced at the Honors Day Convocation held by Dale Bumpers College of Agricultural, Food and Life Sciences this past April. Winners of the awards were **Tamara Leonard** and **Ixchel Reyes-Herrera**, respectively.