

# partners *in* POULTRY SCIENCE

Newsletter of the Center of Excellence for Poultry Science • University of Arkansas • Division of Agriculture

## From the *director*



Dr. Walter Bottje,  
Center of Excellence  
for Poultry Science  
Director

For all those who were at the dedication of the Broiler Breeder Farm you know we got the chicken coop rockin.' Did we have a good time or what? The first flock of birds are scheduled to be moved onto the farm in February. The Broiler Breeder Farm is yet one more facility that positions the Center to be uniquely qualified to answer questions in

many facets of the poultry industry.

I am very pleased that Dr. Robert Wideman, Jr., has agreed to serve as Associate Director of the Center. His involvement in national organizations, his international reputation, and appreciation of the poultry industry and all areas of the land-grant mission will help serve the Center well.

We are grateful for the support for the recruiting program through the Harold Ford Foundation. As mentioned below, part of these funds have been used to develop a new recruiting CD that will be 'launched' at the International trade show in Atlanta.

We celebrate the accomplishments of our students, such as Ph.D. student Kerri Guenther and our judging team that got second place in

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UNIVERSITY OF ARKANSAS

UofA UNIVERSITY OF ARKANSAS  
DIVISION OF AGRICULTURE

## New UA Broiler Breeder Research Unit Dedicated

FAYETTEVILLE, ARK. - Facilities for a new broiler breeder research farm made possible by Tyson Foods, Inc., subsidiary, Cobb-Vantress, Inc., were dedicated at the University of Arkansas Division of Agriculture research complex near Savoy, west of Fayetteville on Sept. 15. On hand to speak at the special event were James Bell, president of Cobb-Vantress, Leland Tollett, former CEO and representative of Tyson Foods, Inc., Milo Shult, Vice President of the Division of Agriculture, Gregory Weidemann, Dean of Bumpers College and Walter Bottje, Center Director.

Over 300 people attended the dedication ceremony, which took place inside one of the new breeder houses.

After a brief dedication ceremony, guests enjoyed a dinner catered by AQ Chicken in Fayetteville and then a concert by the Boston Mountain Playboys; a band spearheaded by Howard Lester, co-manager of the poultry science research farm.

A special thank you to all of the people who spent long hours making this event and facility a reality. Special guests at event were the 50 participants in Cobb's International World Tech School.

### DINNER IN A CHICKEN HOUSE? -

Right is a shot inside one of the houses where a catered dinner was served just following the dedication ceremony. The house is part of the state-of-the-art broiler breeder research facilities and served as a perfect venue for the dedication.



THANK YOU - James Bell (right) president of Cobb-Vantress, Inc., and Leland Tollett of Tyson Foods, Inc., stand by a sign thanking all of the vendors who worked on construction of the new broiler breeder research facility.



## *in this issue*

Student wins Award  
Dept. receives \$13K  
Judging Team takes 2nd



Wideman named Assoc. Director  
Short Course held at Center

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the National Judging contest (missing first by just 15 points out of 4000). But we are also reminded to always keep things in perspective when we mourned the loss of another student, Satish Pradhan, who was tragically killed in a car accident in Oklahoma on October 3rd.

We are continuing to build our programs, continuing to win awards, and of course continuing to keep the chicken coop rocking. Stay tuned.

**EDITOR'S NOTE:** In the last issue of *Partners*, Zero Mountain was left off the list of hole sponsors for the Poultry Science Scholarship Golf Tournament. We regret the error and appreciate Zero Mountain's generous support of students and the Center of Excellence for Poultry Science.

**Partners** is a newsletter for faculty, staff, students, alumni and friends of the Center of Excellence for Poultry Science, University of Arkansas Division of Agriculture and Dale Bumpers College of Agricultural, Food and Life Sciences, UA-Fayetteville.

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## Department receives over \$13,000 from Ford Foundation

The University of Arkansas Department of Poultry Science received a donation in the amount of \$13,009 from the Southeastern Poultry and Egg Association Harold E. Ford Foundation on Oct. 23. Southeastern Poultry and Egg representative and UA alumnus James Bell, president of Cobb-Vantress, Inc., presented the check to Walter Bottje, department head of the Center of Excellence for Poultry Science.

The Harold E. Ford Foundation, named for a former executive with the U.S. Poultry and Egg association, provides funds to train and educate students for the advancement of the poultry industry. This support enables the department to develop an effective student recruiting strategy to recruit and retain top students and faculty members.

The UA Department of Poultry Science uses donations from the foundation to support projects such as the annual Poultry Science Youth Conference, the youth broiler show at the Arkansas State Fair, in-service programs and civic education programs. Last year a portion of the funds were used to produce a new recruitment video, something the department uses at programs all across the state. This year, a portion of the funds are earmarked to produce a very special recruitment tool, an interactive CD.

"The support the Harold E. Ford Foundation provides for our department is outstanding. We're so thankful for their generosity and foresight. This gift will impact our students as well as the future of the poultry industry," said Bottje.

The Harold E. Ford Foundation was founded in 1995 and has disbursed over \$846,000 to poultry science departments across the nation.

**CHECK PRESENTATION** - James Bell (right) president of Cobb-Vantress, Inc., and a UA alumnus ('76) presents a check for over \$13,000 to Walter Bottje, director of the Center of Excellence for Poultry Science, on behalf of the Southeastern Poultry and Egg Harold E. Ford Foundation. Funds are to be used in recruitment of students to the poultry program at the U of A. Bell was very excited to be involved in donating funds to support his alma mater.



**THANK YOU LUNCHEON IN HONOR OF ROBERT BARNWELL** - From left, Keith Bramwell, James Denton, Robert Barnwell, Walter Bottje and Craig Coon. Faculty members gathered to honor Robert Barnwell at a special luncheon thanking Barnwell for his hard work coordinating construction on the new UA Broiler Breeder Research Facility just completed at Savoy.

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## Grad student takes top honors for disease research

University of Arkansas poultry science graduate student Kerri Guenther of San Antonio, Texas, recently won The B.S. Pomeroy Award and \$200 at the 54th Annual North Central Avian Disease Conference held Sept. 21-23 in Cleveland, Ohio.

This award is given in recognition of student achievement in avian disease research. Guenther's presentation was titled "Evaluation of the immunological and histological effects of sequentially passaged hemorrhagic enteritis virus vaccine stocks on susceptible turkeys." The Pomeroy Award is the only award given to students at this particular conference.

"Kerri was very deserving of this award. She worked hard, did terrific research and nailed her presentation," said Lisa Newberry, research asst. professor of avian disease at the U of A. "The other universities are much larger and have better-funded programs for avian disease research. The superiority of her research and presentation won out in the end." Other universities with students participating in the presentation competition included Ohio State, Minnesota and Purdue.

Newberry also said that students were required to defend their research and findings against a host of experts in avian research during a formal question and answer period. "Kerri fielded every one of their questions with certainty and ease," said Newberry.

One other U of A graduate student, Sumanth Putta of India, also presented his research "In vitro characterization of histone expression in MSB-1 cells in the presence or absence of chicken infectious anemia virus" during the conference.

The Department of Poultry Science hosts a total of 43 poultry science and 13 cell and molecular biology students in its graduate program. If you would like more information about

graduate studies in poultry science, please contact Dr. Michael Slavik (e-mail: [slavik@uark.edu](mailto:slavik@uark.edu)) or call Carol Frederick at 479-575-4952. You may also check out our web site: <http://www.uark.edu/depts/posc>.



**TOP HONORS** - U of A doctoral student Kerri Guenther, shown here in the Poultry Health Laboratory on campus, recently won The B.S. Pomeroy Award for avian research. The plaque she received at the conference is displayed in the background.

## Meet our very newest addition



Congratulations to **Jason Emmert** (associate professor) and his wife, Laurel on the arrival of their very newest Jared Alexander who was born September 29th at 10:21 a.m. Jared measured 21.25 inches long and weighed 7 lbs. 13 ozs.

## Emmert inducted into the U of A Teaching Academy

Congratulations are also in order for **Jason Emmert** who was recently inducted into the University of Arkansas Teaching Academy at a ceremony Nov. 12th at the Fayetteville Country Club. Emmert joined the U of A poultry science department in 1997 and was promoted to associate professor in 2002. He currently serves as the undergraduate curriculum coordinator for the department and is on the U of A curriculum committee as well.

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## Happenings at the Center...



### KFC ANTIMICROBIAL SYMPOSIUM -

The Center of Excellence for Poultry Science played host to Poultry Quality Assurance group of KFC and its vendors for a one-day presentation opportunity Oct. 22nd. The purpose was to have the major companies that market antimicrobial treatments to poultry processors make presentations to the industry. The meeting was coordinated by John Marcy, second from the left in the above photo of the event.



**NUTRITION CONFERENCE -** From left, Phil Maynard, David Young, Obie Oliver and Casey Owens enjoy refreshments during a break of the Arkansas Nutrition Conference held Oct. 16th.



**COOKING OMELETS -** Members of the UA Poultry Science Club cook omelets for the Arkansas Nutrition Conference in order to raise money for service projects.

## UA Poultry Judging Team Takes Second Place in National Collegiate Poultry Judging Contest

FAYETTEVILLE --- The University of Arkansas Department of Poultry Science judging team took second place, just 15 points behind the leader out of a possible 4000, at the 38th Annual National Collegiate Poultry Judging Contest Nov. 2-4 on the UA campus. Members of the team were Jana Cornelison, Russ Harding, Britney Jackson and Drew Parker. Nine schools from across the country participated in the event.

Team scores as well as individual scores are tabulated and the following are the results of the competition: Texas A & M University (TAMU) first place; University of Arkansas (UA), second place; Louisiana State University (LSU), third place; Kansas State University (KSU), fourth place; and Mississippi State University (MSU) fifth place.

Top 10 individuals for high score were: Cheyenne Campbell, TAMU, first place; Jayme Mair, TAMU, second place; Britney Jackson, UA, third place; Drew Parker, UA, fourth place; Jana Cornelison, UA, fifth place; Christine Grabouski, TAMU, sixth place; Kelly Dobbeleare, KSU, seventh place; Michael Applewhite, MSU, eighth place; Jamie Ducote, LSU, ninth place; and Jennifer Dowden, LSU, tenth place.

The nine teams that participated were: Kansas State University, Louisiana State University, Mississippi State University, North Carolina State University, Oklahoma State University, Texas A&M University, the University of Arkansas, Virginia Tech University and Western Virginia University.

Sponsors for the event were The Poultry Federation, Butterball Turkey, Cal-Maine Foods, Inc., Cargill, Inc., George's, Inc., Green Forest Egg Co., Peterson Farms, Inc., Simmons Foods, and Tyson Foods, Inc. Special assistance to the contest was also provided by The Poultry Improvement Committee.

### SWEET SECOND -

The U of A poultry judging team recently took second place overall in the National Collegiate Poultry Judging Contest. Team members are (front L-R) Britney Jackson, Jana Cornelison, LeAnn Layman (asst. coach), (back L-R) Russ Harding, Drew Parker and Coach Jason Emmert.



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## Short course on Modern Poultry Production held at the Center of Excellence

FAYETTEVILLE --- Participants from around the world attended the University of Arkansas Division of Agriculture's International Short Course on Modern Poultry Production at the Center of Excellence for Poultry Science in September. The week-long program of concentrated study, hands-on exercises and tours of poultry companies in the area was held on the University of Arkansas campus.

"The Division of Agriculture began the short course in 2000 to help provide a wider audience with a 'big picture' overview of the commercial poultry industry," said Frank Jones, Cooperative Extension Poultry Section Leader. "This course provides participants with the 'mental framework' necessary to understand both where information fits within the industry and how the various parts of the industry are connected."

Most participants in the short course are allied industry technical representatives, poultry industry representatives, who want to gain a broader knowledge of poultry production methods, and international poultry producers. This year the international participants came from England, Uganda and Switzerland. In the past three years there have been participants from 10 countries worldwide.

"The short course is truly a team effort," said Jones. "We employ several techniques to teach participants about the industry including lecture, demonstration, hands-on exercises and field trips to commercial poultry facilities in operation. The lectures, demonstrations and exercises are conducted by UA poultry faculty, which in my opinion are some of the most qualified in the world, while the tours are made possible by industry cooperators."

Some of the hands-on workshops include the following: industry structure; anatomy and physiology of the chicken; breeders and breeder management; hatchery management; broiler production; processing; further processing; food safety and economics of decision-making.

Dates for next year's short courses are Feb. 23-27 and Sept. 27-Oct. 1, 2004. For more information about the International Short Course in Modern Poultry Production, contact Frank Jones through e-mail, [ftjones@uark.edu](mailto:ftjones@uark.edu), or by phone (479) 575-5443.

## Ozark Poultry Producers Symposium on campus



The Ozark Poultry Producer Symposium took place on Tuesday, Oct. 7 at the Pauline Whitaker Animal Science Center on the University of Arkansas campus. This symposium is an annual event and is open to growers, poultry producers and the poultry industry as a whole.

Of note during the symposium was a session titled "National Resources Conservation Services (NRCS) Assistance to Growers." The speaker for this talk was Glenn Carpenter, who is a representative of the national animal husbandry program for the USDA.

"This was a tremendous opportunity for growers to have access to someone nationally recognized in animal husbandry," said Susan Watkins, extension poultry specialist and organizer of the event. "This type of opportunity doesn't occur very often and we're delighted Glenn made himself available for our conference."

Other topics of interest during the one-day symposium were: 1) Do your birds have enough water and how can you tell? 2) The new environmental laws for Arkansas 3) Getting the most out of brooding 4) Preparing for winter production 5) On-farm biosecurity: Why it is important to you and the industry? 6) Litter treatment options for improving flock health and the environment, and 7) Drinking water sanitation: Making it work on your farm.

### SHORT COURSE -

From left, Doug Archer, assistant hatchery manager for George's Inc., explains to Eugene Rodberg (hidden), senior marketing manager for DSM Nutritional Products, Inc.; Traci Sayer, laboratory manager for Anitox, and Gilbert Weber, Global Technical Services, the operation of an Inovoject® system, which injects chicks with vaccines prior to hatch.



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## Alumni dinner and gathering held at Whitaker Arena during homecoming weekend...



**HOMECOMING GATHERING** - Above from left, Sari Bottje (Dr. Walter Bottje, POSC Center Director's wife) visits with Terry and Phil Smith (B.S. '79; M.S. '81 and Ph.D. '95). Phil is going to serve as our newest Poultry Science Alumni Board Director.



**NEW ADJUNCT** - From left, Frances Yan, research associate; Gordon Rosen, recently named adjunct faculty of our dept.; and Park Waldroup, university professor enjoy a visit about upcoming collaborative projects. Rosen is from Wimbledon, England.

## Grad student Satish Pradhan dies in auto accident

TULSA, OK. - Satish Prakash Singh Pradhan of Kathmandu, Nepal, died Friday, October 3, 2003, after receiving injuries from a car accident outside of Tulsa, Okla. Pradhan was a poultry science graduate student at the University of Arkansas.

Pradhan received his Bachelor of Technology degree in food science from the Central Campus of Technology, Tribhuvan University in Dharan, Nepal. Before joining the U of A in August, Pradhan was a food technologist at Swiss Gourmet Food company, a producer of meat products, in Kathmandu. Pradhan's area of research focused on evaluating muscle metabolism and meat quality of poultry. He was in the process of evaluating tenderness of minimally aged broiler breast fillets and bone strength from five genetic broiler strains.

Casey Owens, Pradhan's major professor in poultry products, said "Satish had only been here for two months, but he had already made a great impact on us all. He was a caring, respectful person who strived to do his very best each and every day. As his professor, I was impressed by how easily Satish understood complex concepts and put them into action. He was also a pleasure to be around."

Pradhan's uncle, Subarna Pradhan of Downer's Grove, Illinois, coordinated the funeral arrangements in Chicago. A memorial gathering was held at the Center of Excellence for Poultry Science Monday, Oct. 6, at 2:30 p.m.

Pradhan, a passenger in a car, was traveling to Wichita, Kansas, to visit friends when the accident occurred outside of Tulsa.

Pradhan is survived by his parents Ananda and Nanichhori Pradhan, one brother, Anish and one sister Mumukshu, all of which are in the food processing business in Nepal. His father is the first person in Nepal to have earned the Master of Science in Food Technology and is one of the pioneers in the development of the food science and technology sector in that country.

After earning his degree, Pradhan had hoped to set up a meat-processing project as an extension of his family's food business. This project was to be a platform to bring more people together to emphasize the contribution and importance of food science in the development of agro-based nations.

At the recent Diwali Banquet or "Festival of Lights" held by the International Student Organization on the U of A campus Nov. 8, Satish was honored with moments of remembrance and silence.

His poultry science "family" here at the Center of Excellence miss Satish and wish his family in Nepal condolences on this tragic loss.



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## Wideman named Associate Director of the Center

FAYETTEVILLE, ARK. -Milo Shult, University of Arkansas vice president for Agriculture, announced the appointment of Robert (Bob) Wideman, Jr., as associate director of the U of A Division of Agriculture's Center of Excellence for Poultry Science.

Wideman is a distinguished professor of physiology in Dale Bumpers College of Agricultural, Food and Life Sciences. He joined the U of A in 1993 as the newly-established Arkansas Poultry Federation Chair.

Wideman received his B.S. in biology from the University of Delaware in 1971 and his M.S. and Ph.D. degrees in regulatory biology from the University of Connecticut in 1974 and 1978, respectively.

"While it is an honor to be asked to serve in the capacity of associate director, I also feel it is a duty and an obligation," Wideman said. "As a faculty member, it is my responsibility to do all that I can to assist (director) Walter Bottje in making our Center the best in the nation. I do not take the position lightly, but instead see it as a challenge to expand my focus beyond my own research and laboratory functions in order to promote the center as a whole."

Earlier this year, Wideman was appointed by U.S. Secretary of Agriculture Ann Veneman to serve on the Research, Education, and Economics Task Force. This task force was formed in order to evaluate the merits of establishing one or more national institutes focused on disciplines important to the progress of food and agricultural research.

In 2002, Wideman was selected to serve on the Division of Agriculture's search committee for an associate director of the Arkansas Agricultural Experiment Station. In 2001, Wideman served on the Poultry Science Ph.D. Program Assessment Committee for the Arkansas Department of Higher Education and was president of the Federation of Animal Science Societies.

Wideman is currently serving on several committees in the department and college including the Curriculum Committee, the Poultry Science Promotion and Tenure Committee, the Poultry Science Graduate Admissions Committee, the Farm Energy and Utilities Committee and the Farm Policy Committee. He is also serving as a section editor of physiology and reproduction for the Journal of Poultry Science, a position that requires him to review and edit about 50 manuscripts annually for publication in the scientific journal.

"Dr. Wideman epitomizes one who has embraced the land-grant mission in teaching, research and extension. He is recognized as one of the premier poultry scientists in the world, is an outstanding teacher, and has helped solve major problems in the poultry industry. His role as associate director will be instrumental in guiding us into our second decade as a Center of Excellence," said Walter Bottje.

In June 2003, Bottje was named director of the Center, vacating the associate director's position now held by Wideman.

The Department of Poultry Science is housed in the Center and has recently been ranked fourth among the 10 best meat and poultry-related programs and first in poultry processing in the nation by *Meat and Poultry* magazine. The magazine, which is circulated throughout the United States and Canada, ranked the U of A fourth for the quality of its programs in poultry science and animal science. It also counted the contribution of the food science, biological and agricultural engineering, and agricultural economics and agribusiness departments for the quality of graduates entering the work force. The department is home to 73 undergraduate students and 56 graduate students, including 13 in the cell and molecular biology program.



## Grants Received:

Grants are listed in order of receipt...

**John Kirby/Wayne Kuenzel**  
National Science Foundation ..... \$ 15,000

**Robert Wideman/Gisela Erf**  
USDA CSREES ..... \$184,000

**Wayne Kuenzel**  
National Science Foundation ..... \$96,506

**Billy Hargis/Lisa Newberry**  
Cargill, Inc. .... \$21,658

**Casey Owens**  
USDA SARE ..... \$9,940

**Dustan Clark**  
Embrex, Inc. .... \$8,500

**John Kirby/Wayne Kuenzel**  
National Science Foundation ..... \$74,719

**Susan Watkins**  
Cargill, Inc. .... \$15,000

**Billy Hargis**  
Titan Corp. .... \$3,700

**H.David Chapman**  
Con Agra, Inc. .... \$11,800

**Ron Okimoto**  
Cobb-Vantress, Inc. .... \$2,196

**Park Waldroup**  
BioResource International ..... \$24,000

**Philip Moore, Jr.**  
Lidochem, Inc. .... \$9,400

**Casey Owens/Jason Emmert**  
USDA CSREES ..... \$249,956

**H.David Chapman**  
American Scientific Laboratories ..... \$3,000

Totals on Grants received in Poultry Science since the new fiscal year started:  
**TOTAL ..... \$729,325**

Just shy of the halfway mark on our fiscal year, this amount is 55% of last year's **total grants** received. Congratulations to the recipients and thank you to the industry that supports research.

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## FACULTY NOTABLES:

**David Chapman** was invited to speak about coccidiosis control at the Poultry Production and Health Seminar meeting in Memphis on Sept. 17.

The following are activities that **James Denton** has participated in over the past quarter: **Denton** served as Chairman of the National Alliance for Food Safety Operations Committee in meeting July 23. **Denton** also served on the IFT Task Force on Mentoring for development of strategy and implementation plan for mentoring within the Institute of Food Technologists. He served as Chairman of the Board of Directors for the National Alliance for Food Safety (NAFS) in Annual Meeting on Aug. 8, Operations Committee and Center Directors Meeting and the NAFS Mini-Symposium on Aug. 9, in New Orleans. **Denton** served as President of the Poultry Science Association (PSA) Foundation Board of Trustees during the preparation of the PSA Foundation Brochure. **Denton** served as Chairman of the Food Safety and Quality Program Steering Committee on Aug. 27. **Denton** gave an invited presentation, which was a summary of the U of A's Food Safety Research and Education Program in a meeting with the Battelle Memorial Institute and the UA Medical Sciences in Little Rock on Oct. 3. **Denton** served as the Moderator for the Retail Food Industry Food Safety Symposium held in conjunction with the Food Safety Consortium (FSC) in Fay., on Oct. 14. He also served on the Steering Committee for the FSC. Finally, **Denton** gave an invited presentation at the National Food Safety Update for the Arkansas Poultry Processors Workshop on Oct. 16.

**Dan Donoghue, Gerry Huff** and **Billy Hargis** gave presentations at the Food Safety Consortium's Annual Meeting in Fayetteville Oct. 12-14.

**Jason Emmert** was inducted into the University of Arkansas Teaching Academy on Nov. 12 at the Fayetteville Country Club.

**Brian Haggard** was honored this summer at the American Society of Agricultural Engineers Annual Meeting in Las Vegas as an outstanding technical reviewer for the soil and water division of Transactions of the American Society of Agricultural Engineers. **Haggard** also gave an invited presentation at the same meeting titled "BMP Effectiveness: Response of Aquatic Systems." **Haggard** gave an invited presentation at the Arkansas Water Resources Center

## NOTABLES continued:

annual research conference titled "Phosphorus Release from Stream Sediments: Effect of Chemical Amendments."

**Billy Hargis** presented at the International Food Technologists' Food Safety and Education Conference in Orlando Nov. 4-6.

**William Huff** was invited to attend the Elanco Animal Health Meeting, in order to introduce the concept that bacteriophage can be used to prevent and treat animal diseases, and to reduce foodborne pathogen contamination of agricultural products Oct. 27-28, 2003, Indianapolis, IN.

**John Marcy** conducted two HACCP workshops for Poultry in Indiana plus participated in the 2nd Poultry HACCP roundtable at Purdue University. **Marcy and Jon Porter** (adjunct professor) conducted three HACCP workshops for OK Foods in Fort Smith. In addition, **Marcy, Porter** along with Rich Linton from Purdue University, conducted a HACCP workshop at the U of A, which included USDA and FSIS Consumer Safety Officers. **Marcy** and **Rong Murphy** (BAEG) conducted a three-day Thermal Process Validation Workshop in cooperation with the American Meat Institute Foundation. **Marcy** and Dale Fredell of Ecolab conducted a Principles of Cleaning and Sanitation workshop at the U of A. Finally, **Marcy** conducted the 4-H Day at the Arkansas State Fair that had 35 kids cooking poultry. Chicken was provided by George's Inc., and turkey was provided by Cargill Turkey Products.

**Philip Moore, Jr.** was invited to attend the Third International Conference on Air Pollution From Agricultural Operations and to participate as an invited panelist Oct 13-15 in Raleigh, N.C. **Moore** was also invited to speak in South Korea at Daegu University at an international animal waste conference Nov. 21.

**Lisa Newberry** presented two papers at the American Association of Laboratory Animal Scientists meeting in Seattle, Wash., on Oct. 11-16.

**Susan Watkins** coordinated the second annual Ozark Producer Symposium at Whitaker Animal Science Arena in Oct. **Watkins** was also an invited speaker for the following events: The Southern Region Extension Water Quality Conference, Ruidoso, N.M.; The Annual Turkey Committee Meeting sponsored by The Poultry Federation at Eureka Springs in Sept.; The 2003 Poultry Production and Health Seminar sponsored by U.S. Poultry and Egg in Memphis in Sept.; The Alabama Broiler Workshop in Auburn in Oct.; The 27th Annual North Carolina Turkey Industry Days and Poultry Supervisors' Short Course in Raleigh; The Cobb-Vantress International Short Course in Sept.; The Delmarva Breeder, Hatchery and Grow-Out Conference in Delmar, M.D.; Two Pilgrim's Pride Grower meetings, one in Hope and one in Mt. Pleasant, Texas; and The 2003 Virginia Poultry Health and Management Seminar in Roanoke, V.A.

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