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BAE teams receive USDA top honors

Two teams led by faculty from the department of biosystems and agricultural engineering were honored with the USDA Secretary's Honor Award, which is the highest award presented by the United States Department of Agriculture.

Only 11 total awards were given — eight group awards and three individual awards. Two of the eight awards were presented to the OSU - BAE teams.

The Oklahoma Agricultural Experiment Station's GreenSeeker team and the Oklahoma Cooperative Extension Service's Poultry Waste Management Education team were both honored with the prestigious awards at a ceremony held on July 8, 2002, at the Waterfront Centre in Washington D.C.

The GreenSeeker team, led by Dr. John Solie, BAE; and also consisting of Drs. Marvin Stone, BAE; William Raun and Gordon Johnson, Department of Plant and Soil Sciences; and Greg Bell, Department of Horticulture and Landscape Architecture has put 10 years of research and development into the computerized fertilizer system.



The Poultry Waste Management Education team, led by Dr. Doug Hamilton, BAE; was comprised of Erica Cook, Project Coordinator; Jim Britton, Area Poultry Specialist; Mitch Fram, Area Water Quality Specialist; Bob Woods, Area Agronomist; Joe Bullard, Carl Wallace, Tony Johnson, Tony Yates, Roger Williams, Marty Green, Mike Rose, Jason Hollenback, Stan Fimple, and Roy Ball, Extension Educators.

Also serving on the team were Craig Woods, Video Producer/Director; Kathy Conry, formerly of OSU Agricultural Communications Services; Dr. Mike Smolen, BAE faculty member and OCES Water Quality Coordinator; and Drs. Hailin Zhang and Derrell Peel, both OCES State Specialists.

The Poultry Waste Management Education system was developed in response to the Oklahoma Registered Poultry Feeding Operations Act, which required poultry farmers to receive nine hours of initial training covering all aspects of waste management.

The GreenSeeker smart sprayer, designed at OSU, is a revolutionary approach in fertilizing crops. The GreenSeeker has computerized

equipment that uses sensors to read the wheat plants' nitrogen status and calculates the amount of fertilizer needed. The fertilizer system then sets the sprayer valves to spray accordingly.

This is all done in less than a second. The machine travels approximately 10 mph across a field and analyzes and sprays each 2x2 foot area.

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(continued on page 3)

Mark your calendar

Dec. 14

Commencement

Dec. 16-27

Winter Intercession

Jan. 13

Class work begins



A Word from the Department Head

Dr. Ron Elliott
relliot@okstate.edu

Greetings once again from Cowboy Country. Each semester we look forward to sharing some of our departmental news with alumni and friends. And I do mean "some" of the news, because we unfortunately can't include everything in just a few pages.

In April we had another great departmental banquet, with the largest attendance in recent memory. The highlight of each banquet is the awarding of scholarships (refer to page 8 of this newsletter). These recipients are all outstanding students, and we're very grateful to those generous individuals and organizations that support our BAE scholarship program. You are truly difference makers!

Our BAE Advisory Committee met on campus May 2-3 and provided us with valuable feedback on a number of topics. We appreciate the time that each of our committee members devotes to this important assignment. Highlighted at this meeting were the final presentations of our senior design teams. As reported on page 7, each of our two teams successfully tackled a challenging "real-world" project. Our seniors worked hard on these projects over two semesters, and their clients were very pleased with the prototypes that were developed and tested. Dr. Weckler deserves a pat on the back for his excellent leadership of our capstone courses, and other faculty members provide important mentoring for our students.

Curriculum and accreditation matters continue to receive a great deal of attention in the department. We're in the process of implementing some curricular changes that will serve to enhance our students' educational experiences, particularly during the freshman and sophomore years. We've also added a new degree option, "Bioprocessing and Biotechnology," that supplements the core engineering curriculum with additional coursework in biochemistry and microbiol-

ogy. This option should provide an excellent opportunity for those students with strong interest in both engineering and the life sciences.

In the fall of 2003, all B.S. engineering programs at OSU are due to be reviewed by the Accreditation Board for Engineering and Technology (ABET). The accreditation criteria now involve principles of continuous quality improvement, and the department has been actively engaged in this process for some time. Please take a moment to read our program's educational objectives (see the next page), and provide us with any comments or suggestions.

Without a doubt, our department's most valuable assets are its people. Although Regents Professor Jerry Brusewitz officially retired earlier this year, we're very pleased to have him back on a part-time basis. He's doing some classroom teaching as well as continuing to serve as our Graduate Coordinator. We're going to miss Unit Assistant Marge Johnston, who recently left the department to concentrate on grandchildren, a graduate degree, and her home in the country. Marge is known to every one of our graduates over the past dozen years, and the license plate on her car says it all ("BAE MOM").

Unfortunately, this edition of the BAE Update has a full page of obituaries – all dear folks that were a part of the BAE family. I'd like to briefly acknowledge the contributions of longtime faculty member Dudley Barefoot. Dudley was a mentor and friend to me, and he cared deeply about our students. His impact was well described by one of our retired staff members: "His quiet, slow, gentle nature and care for other faculty, students, and staff, made our department a much nicer place to be. And his smile and sense of humor warmed many hearts along the way."

Where are they now?

Tracking BAE Alumni

SPRING 2002 Graduates

Houssam Al Osta, M.S.
Ph.D. student in BAE
Stillwater, OK

Christal Compston Whaley, B.S.
Perramar Consulting
Austin, TX

Elizabeth Willoughby, B.S.
Leggett and Platt
Carthage, MO

SUMMER 2002 Graduates

Shannon Parker, B.S.
Natural Resources Conservation Service
Houston, TX

Ted Kersten, M.S.
Natural Resources Conservation Service
Stillwater, OK

BAE welcomes:

Kerry Chartier
Leila Milne Hickman
Carol Jones
Rachael Kircher
Al Sutherland
Elaina Wright

and says farewell to:

Suzayne Adams
Marge Johnston
Terri Qualls
Stewart Reed
Ron Tejral
Jason Vogel
Carly Washmon

Moved?

Have you moved to a new area or changed jobs recently? Keep us updated, so you don't miss a single issue of the BAE Update. Please write, e-mail or call us at:

BAE Update
111 Ag Hall
Stillwater, OK 74078
(405) 744-5431
baeupdate@okstate.edu

(continued from page 1)

A curriculum was developed for the initial training. It consisted of nine modules that taught waste management in one-hour sessions.

Respondents said in a post-training survey that they learned something new, and they would start doing the tasks required, such as record-keeping.

Hamilton said of the award, "Some people don't think much of receiving awards because they are just 'pats on the back.' I, for one, am tremendously appreciative of Secretary Venneman for recognizing the Oklahoma Poultry Waste Management Education team.

I remember working in the BAE lunchroom early one morning (about 2:00 or 3:00 am), stuffing slides into slide sheets, trying to put together at least one complete curriculum for a county educator to deliver a program in Stigler that afternoon. I had the radio turned up loud in order to stay awake. We had been receiving a lot of flack from producers who didn't think it was right that they had to take the training, and I thought to myself, 'I wonder if anyone will ever appreciate the work we are doing?' This award answered my question."

Kennedy Elected to National Office



Laura Kennedy, a junior in biosystems engineering, was elected as the secretary of the ASAE National Preprofessionals Council.

Kennedy was elected by her peers in July at the ASAE Annual International Meeting in Chicago, Ill.

She and the other national officers will represent the ASAE student branches from over 50 universities in the U.S. and Canada.

OSU biosystems engineering educational objectives

It is our objective to:

*Provide the comprehensive education necessary to prepare students for successful, productive, and rewarding careers in engineering for agricultural, food, and biological systems.

We expect graduates of our program will:

*Be able to apply the mathematical, physical, engineering, and biological principles needed to understand, analyze, and effect solutions to problems in food, agricultural, environmental, and biological systems.

*Be effective in oral, written, and visual communication.

*Be self-motivated in accomplishing tasks, both as an individual, and as a contributor to multi-disciplinary teams.

*Be able to understand the social, environmental, safety, and economic impacts of their work in local and global contexts, and to perform in a professional and ethical manner.

*Be committed to enhancing knowledge and skills through continuing education.

Feedback on these educational objectives is most welcome and should be directed to Dr. Ron Elliott, BAE Department Head.

2002 - 2003 ASAE Student Branch Officer Team

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Obituaries

Emeritus faculty member Dudley Barefoot

Armond Dudley Barefoot died Wednesday, October 2, 2002, at his home.

Barefoot was born to Thomas "Callie" and Bessie Lee (Holt) Barefoot, December 7, 1924, in Hollis where he graduated from high school in 1943.

He then enlisted in the U.S. Air Corps as an aviation cadet and served overseas in the South Pacific.

He graduated as a First Lieutenant and was a navigator of B-29's. He flew 24 combat missions for a total of 360 combat hours in the Central Pacific with the 20th Air Force. He was awarded the Air Medal with two clusters and the Distinguished Flying Cross.

After being discharged, he attended Oklahoma A&M for three years as an engineering student. He was recalled to active duty in the Air Force from April 1951 to 1952, serving in the Korean War. On Jan. 13, 1952, he and Betty Darlene Wurth were married in Shawnee.

He graduated from OSU with a B.S. in Agricultural Engineering in 1953 and a Masters degree in 1968.

Barefoot was Superintendent of the Irrigation Research Station in Altus, Okla. for 10 years.

He returned to Stillwater in 1964 to teach and do research at OSU.

He served at OSU as an Assistant Professor from 1969-1978 and Associate Professor from 1978 until retirement in 1986.

He received the Twenty-Five Years Service Award from the division of Engineering, Technology, and Architecture of OSU in October of 1978 and the Twenty-Five Years Membership Award from the American Society of Agricultural Engineers in 1979.

Barefoot was a member of the American Society of Agricultural Engineers, where he served on the National Student Affiliate Clubs Committee, was Chairman

of the Student Activities Committee at the 1974 National Meeting, and served on the Southwest Region Honors and Awards Committee where he served as Chairman in 1977.

Barefoot was also a member of Cowboy Country Sams and an annual judge at the State FFA and 4-H Club contests.

He and his wife loved to travel in their RV and be with friends. He was an avid OSU fan and attended all sporting events. Barefoot had a notorious sense of humor, outgoing personality, never met a stranger and brought laughter to many lives.

His parents and two brothers, Chester Lee Barefoot and Guy O. Barefoot, preceded him in death.

Barefoot is survived by his wife Betty, Terry Lee Barefoot and his wife Marie, and Rick Lynn Barefoot; two grandchildren, Kerry and Jenny, and many other relatives and friends.

William O. Ree

W. O. (Bill) Ree was born on March 13, 1913, in South Milwaukee, Wis. and passed away on March 23, 2002, in Bryan, Texas. He was 89.

Bill began his professional career in 1929, as a draftsman for Bucyrus-Erie Company in Milwaukee, Wis. in drawing machinery parts. He received his bachelor of science in Civil Engineering in 1935, from the University of Wisconsin and joined the USDA, Soil Conservation Service as a hydraulic structures designer.

He studied grassed waterways at the Spartanburg Outdoor Hydraulic Laboratory, Spartanburg, SC, before helping to establish the Stillwater Outdoor Hydraulic Laboratory in Stillwater, OK, in 1941. Bill

continued to lead the laboratory until his retirement in 1975.

Following retirement, he remained professionally active, publishing a number of papers and serving on the staff of Colorado State University on the Egypt Water Use Project until 1984. Bill's work on the development of design criteria for vegetated waterways has been widely recognized. Included among his awards is the prestigious ASAE Hancor Soil and Water Engineering award in 1991.

Ree served in the U.S. Navy during World War II.

Ree is survived by his wife, Libby, a son, Bill Jr., two grandsons and his brother.

Louise Crow

Louise Crow, wife of former faculty member Frank Crow, passed away in Tacoma, Wash. on March 16, 2002, at the age of 83.

Frank Crow served on the biosystems and agricultural engineering faculty for over 30 years.

Sherman Fry

Sherman Neal Fry, a 1990 mechanized agriculture graduate, died on August 3, 2002.

Fry was born on Feb. 15, 1951, to Charles and Ester Fry. He graduated from Pryor High School in 1969.

He attended the University of Central Oklahoma, Rose State College, and the Northern Oklahoma College, where he earned an associates degree. He graduated from OSU in 1990 with a bachelor of science in mechanized agriculture.

Fry was married to Kathy Godsey in 1980, and they had two sons, Bill Charles Fry and John Edward Fry, and a daughter, Abby Lynn Fry.

He was preceded in death by his parents.

He is survived by his wife, his children, a brother, John Charles Fry and many cousins, nieces and nephews.

Diane Tsala

Diane Tsala, biosystems engineering student, passed away in her native country, Cameroon. She was only 26 years old. Tsala was enrolled at OSU, working toward a bachelor of science degree at the time of her death.

Former BAE Student Builds Revolutionary Robot

A team of Louisiana State University engineers have built a swimming robot that chases birds away from fish. This device is expected to benefit the aquacultural industry greatly.

“Scarebot” is autonomous and moves around in a farm pond to scare birds away. The design imitates the actions of a crocodile and will even squirt water on birds trying to catch the fish.

Randy Price, OSU biosystems and agricultural engineering alumnus, played an intergral role in designing the solar-powered robot.

Price graduated from OSU with a bachelor of science in 1988. He obtained a

master’s from Purdue University in 1992 and a Ph.D from the University of Illinois in 2000, all three degrees are agricultural engineering degrees.

Price has been featured in Newsweek, (August 27th, 2001), Popular Mechanics, (January, 2002), and various newspapers and news agencies around the country.

His awards include a USDA Fellowship, University of Illinois, 1992-1996; 1st Place Southwest Region Design Paper Contest, 1988; 1st Place Team, Microcomputer Contest, New Orleans, Louisiana, 1984; Student Honor Award from the American Society of Agricultural Engineers, 1984-1985; and Soil Conservation

Service “Volunteer Service Award”, 1988.

Price belongs to several honorary Societies: Alpha Epsilon, Tau Beta Pi, Golden Key, Phi Kappa Phi, Phi Eta Sigma.

More information on “Scarebot” can be obtained at <http://www.bae.lsu.edu/research/scarebot.html>

Barfield leads study abroad course

Dr. Bill Barfield, regents science professor in biosystems and agricultural engineering, led a three-hour international study course in Germany from May 11-25, which gave students the opportunity to study abroad and earn college credit.

The course focused on international watershed management and was held at the Fachhochschule--Bingen, a university of applied science in Bingen, Germany. The objective of the course was to teach students principles of management of urbanizing watersheds to prevent degradation of downstream water quality and aquatic life.

OSU students participating in the course were Christopher Cross, Mickey Friedrich, Becky Ostermann, Shannon Parker, Stewart Reed, Scott Schneider, Kyle Vandale and Elizabeth Willoughby.

Reid Hutchinson of Kansas State University, and Justin Koon, Amber Landrum, Kristine O’Connor and Bradly Weeber of Clemson University also participated.

Drs. Ronald Elliott, BAE department head, and John Hayes of Clemson also accompanied the group and assisted in teaching the course.

German families hosted the students during their stay in Germany. The students were treated to local traditions and made long-term friendships.

The key cultural and educational events in the program were a boat cruise down the Rhine river; a tour of the Selz River Restoration Project; a tour of the city of Mainz, including the Guttenburg Museum; a tour of Heidelberg, including its castles and university; a trip through the historic wall-city of Freinsheim; a tour through the Mosel Valley, including the grape growing regions and old historic villages; and a visit to the ancient city of Trier to see the Coliseum and the ancient churches. Several students extended their stay in Europe and visited Munich, Vienna, Salzburg, Zurich and Paris.

Johnston Leaves After 13 Years



Marge Johnston, who was a biosystems and agricultural engineering staff member for 13½ years, has resigned.

Johnston started working in the main office as senior secretary. She was promoted to unit assistant in 1994.

Johnston obtained her B.S. in elementary education from Northeastern Oklahoma State University in Talequah and received her M.S. in curriculum and instruction from OSU.

Around the office and in the department, Johnston was known as “the source” because she kept track of all the students, past and present, and her presence will be greatly missed.

Johnston plans to clean her house and yard, travel with her husband, spend some much-needed time with her grandchildren and go back to school to work on her doctorate.

Johnston said, “I love the professors. I love my co-workers, but I will miss the students the most. They are what have kept me here for 13 years.”





Front row: (L to R) Mary Elizabeth Womack, Laura Kennedy and Mary Crawford. Back row: (L to R) Dr. Danielle Bellmer and Dr. Bill Barfield. Not pictured: Dr. Glenn Brown.

BAE students receive Wentz Scholarship

Three students from biosystems and agricultural engineering were awarded the OSU Lew Wentz Project Award valued at \$4000 each.

Mary Crawford, a senior; and Laura Kennedy, and Mary Elizabeth Womack, who are juniors, received this prestigious award for the 2002-2003 academic year.

Crawford, with the assistance of Dr. Bellmer, has proposed to create a new value-added product from watermelon. Her goal is to create a chewy watermelon candy with a long shelf life. It will resemble a piece of dried fruit and be made basically

just from watermelon and some added sugar.

Kennedy, who is mentored by Dr. Brown, will use laboratory experiments to examine the transport and fate of trace anthropomorphic compounds in the groundwater. This project will help in understanding the movement of health-hazardous compounds in ground water.

Womack's project involves the design of a new management practice for controlling sediment in runoff from urban construction. Specifically, she will study the hydraulic performance of silt fences. Her mentor is Dr. Barfield.

New Product Development Center begins projects

Oklahoma State's department of biosystems and agricultural engineering has played a significant role in launching the New Product Development Center (NDPC). The NDPC initiative is a joint undertaking of the Division of Agricultural Sciences and Natural Resources and the College of Engineering, Architecture and Technology.

The center helps rural Oklahoma manufacturers develop and manufacture new products.

"The manufacturer gives us an idea, and then we develop a prototype for their use," said Dr. Bill Barfield, biosystems and

agricultural engineering professor.

The state has provided the primary funding for the NDPC; however, after the product is in production, the manufacturer has to agree to return royalties on the product. The center has received \$400,000 in funding thus far.

The founders of the NDPC are expecting a return on investment exceeding 40 to 1.

OSU faculty and staff provide engineering expertise through project teams.

In its first year, the center is pursuing the development of four new products for rural Oklahoma manufacturers.

Brusewitz Retires



After 33 years of service to the department of biosystems and agricultural engineering and to OSU, Dr. Gerald Brusewitz officially retired April 5, 2002.

Brusewitz started as an assistant professor in 1969, and rose to the rank of regents professor, the highest honor bestowed on a faculty member by the university.

He taught 14 courses at OSU. He has conducted research in post-harvest and food processing

Brusewitz has served under every department head, except the first one, Leslie Hazen.

His professional experiences include a sabbatical leave at Cornell University, serving as a visiting engineer for the solar energy department of the Kuwait Institute for Scientific Research, and a sabbatical leave at the University of California—Davis. At OSU, Brusewitz has served as interim department head and as graduate coordinator for the department.

He served as departmental ASAE Student Branch Adviser for 6 years and on the departmental graduate committee for 27 years, including 20 years as chair.

His professional activities with ASAE have included serving on the board of directors, and as associate editor of Transactions of the ASAE for FPEI. He served on the Fellows Screening committee. He was also a member of review teams for the Cooperative State Research Service of USDA at Louisiana State University, Pennsylvania State University and the University of Minnesota.

Brusewitz has won many awards and honors throughout his career, including Sarkeys Foundation Elmo Baumann Distinguished Professorship Award as outstanding faculty, Halliburton Foundation Award as outstanding faculty, and Distinguished Service to OSU Agricultural Engineering Students. He was also named ASAE Fellow.

Tractor team off and running

The Oklahoma State University Quarter Scale Tractor Team competed at the ASAE national tractor pull competition June 1-5 in Moline, Ill.

This year, the team placed seventh overall and also placed fourth in pulling. They were pleased with their performance and felt they could have placed above more teams.

The “senior” team now has a four-wheel drive tractor for competition. The underclassmen use the senior tractor from the previous year.

When the underclassmen take the tractor back to competition, there has to be a 20 percent change to the tractor. They also help with the design of the new senior tractor.

Senior team co-director Levi Johnson said, “Having the underclassmen help with the design helps out a lot. It also gives them hands-on experience and an idea for what lies ahead. They get to see first-hand how much work goes into building a tractor.”

The team does their own fund-raising and receives several donations, which aid in building the tractor. Cherokee Trailers donated the trailer for the team’s use to haul the tractor to and from competitions, and Ditch Witch donated an extensive amount of material to aid in building the tractor.

This year, juniors Levi Johnson and David Crossley lead the team.

Every year the team competes in approximately 15 events. The big event is the national competition, but a milestone for OSU is the Kansas State Fair, where the team has defeated Kansas State for the last three years.

The tractor team also participated in the OSU Homecoming Parade held on November 2.



Senior design projects help state businesses

The biosystems engineering curriculum includes a two-semester senior design sequence that provides a real-world design experience. Last year, two student teams worked with Oklahoma businesses and successfully designed and built engineering solutions that fully met the clients’ expectations.

One project focused on designing and developing a machine for variable-rate sprigging of bermuda grass. The students

added hydraulic drive and electronic controls to an existing sprigger, allowing the operator to stay on the tractor while adjusting the planting rate. The students’ industrial client, Bermuda King of Kingfisher, OK, is using the machine as a prototype for a new product line intended to penetrate the golf course and turf grass market.

The other project involved the design and fabrication of a robotic teaser boar for Hanor Farms of Ames, OK. This device is intended to help identify estrus for artificial insemination of sows, and is viewed as a potential replacement for live boars that are expensive and troublesome to manage. The students’ mechanical boar automatically moves down a line of crates, while emitting boar-like grunts and odors. It shows promise for commercial adoption.

The 2002-2003 senior design projects

are already well under way, and we look forward to exciting accomplishments again this year. If you have an engineering problem or opportunity that might make a good topic for senior design, please feel free to contact the course instructor, Dr. Paul Weckler (weckler@okstate.edu).



Dustin Simmons, Jake Holloway and Elizabeth Willoughby with the enhanced sprigger.



David Carment, Chad Fisher, Shannon Parker and Autumn Hood with “Leon” the boar.

2003 Scholarship Recipients

Incoming Students

David Bevill	El Dorado, Ark.	BAE Development Fund Scholarship
Rachel Cancienne	Broken Arrow, Okla.	BAE Development Fund Scholarship
Dusty Conner	Fairmont, Okla.	Oklahoma Grain and Feed Association
Daniel Edmonds	Morris, Okla.	BAE Development Fund Scholarship
Cole Gallaway	Marlow, Okla.	BAE Development Fund Scholarship
Sara Sherman	Casper, Wyoming	BAE Development Fund Scholarship
Tyler Washmon	Woodward, Okla.	W. B. Johnston Grain Company
Ryan Woolbright	Altus, Okla.	BAE Development Fund Scholarship

Continuing Students

Joe Biggerstaff	Medford, Okla.	Ervin W. Schroeder
Chad Fisher	Cache, Okla.	Okla. Municipal Power Authority
Steven Fowler	Newcastle, Okla.	Leon Crain Memorial
Colby Funk	Weatherford, Okla.	Okla. Association of Electric Cooperatives
Jake Hamburger	Weatherford, Okla.	Glenn Morgan Memorial
Autumn Hood	Westcliffe, Colo.	BAE Development Fund Scholarship
Candice Johnson	Ankeny, Iowa	Jay G. Porterfield
Laura Kennedy	Stillwater, Okla.	McKay Brothers
Matt Steinert	Fairmont, Okla.	Lawrence O. Roth
Matt Toews	Enid, Okla.	BAE Development Fund Scholarship

Congratulations

Several congratulations are in order in the department of biosystems and agricultural engineering.

Marge Johnston, biosystems and agricultural engineering unit assistant, is proud to announce the birth of her grandson. James Rider Johnston was born on June 27, 2002 to Danny and Sara Johnston.

Ron Tejral, former biosystems and agricultural engineering research engineer, and his wife, Mary Kate, gave birth to a

son. Andrew Joseph Tejral was born on June 2, 2002.

BAE's new Mesonet extension Associate Leila Milne Hickman was united in marriage with Darrell Hickman on July 27, 2002.

Dr. Ray Huhnke proudly announces the birth of his granddaughter, Riley McKay. Riley was born on October 8, 2002.

BAE Clothes Line

Biosystems and Agricultural Engineering's ASAE student organization is now selling polos, t-shirts and caps. They look great and would make wonderful Christmas presents.

The t-shirts and the caps are \$12.50 and the polos are \$25.00. You can purchase these items from 111 Ag Hall or contact BAE at (405) 744-5431.

Enrollment Increase

The large incoming freshmen class has spurred an enrollment in biosystems engineering.

This fall the total undergraduate enrollment has climbed to about 75 students.

Meet the Applications Engineers



Back Row: left, Doug Enns, P.E., B.S. Mechanical Engineering; Clay Buford, P.E., M.S. Mechanical Engineering; Sam Harp, P.E., M.S. Agricultural Engineering. Front row: left, Win Adams, P.E., B.S. Industrial Engineering and Management; Phil Norton, M.B.A; Jim Friesen, Ph.D., Biological Engineering.

What do the Applications Engineers do?

Applications engineers provide on-site, one-on-one engineering and technology transfer assistance with special emphasis on small rural manufacturers. High quality, timely service to small-fixed and medium-sized rural manufacturing companies is the focus of the program. They work seamlessly with the Manufacturing Extension Agents of The Oklahoma Alliance for Manufacturing Excellence, Inc. to provide framing and appropriate engineering assistance and technology transfer services. They assist manufacturers in implementing technical and engineering-based solutions to problems or opportunities identified.

In order to receive engineering assistance, the client must agree to participate in a post project impact assessment. This impact assessment is done using procedures developed by the National Institute for Standards and Technology for the Manufacturing Extension Partnership. The client is contacted by a third party some months after the completion of an activity and is asked a series of questions designed to assess the impact of the effort. Overall impact of the Applications Engineer program is measured in several ways. One is the economic value of the service to the company. Another measure is the number of jobs created or saved which is translated into economic impact using an income multiplier to compute the direct, indirect and induced effects as result of a change in employment in the manufacturing sector.

The Application Engineer program is a joint activity of the College of Engineering, Architecture and Technology and the Division of Agricultural Sciences and Natural Resources in cooperation with The Oklahoma Alliance for Manufacturing Excellence.

Alumni Success Stories

Sherry Britton 1999

Sherry Britton has two degrees from Oklahoma State University in biosystems engineering, a B.S. in 1999 and a M.S. in 2000. She led OSU's ASAE student branch efforts in capturing first place (1999) and second place (2000) in the national competition for outstanding student clubs. Sherry was also involved in Alpha Epsilon and Omicron Delta Kappa Honor Societies, and the Soil and Water Conservation Society.

Sherry has worked for the USDA Natural Resources Conservation Service in Oklahoma and is currently employed with the USDA-ARS Hydraulic Engineering Research Unit in Stillwater, Okla. She is a Research Hydraulic Engineer.

Her job consists of conducting research and reporting results on the performance of vegetated earth embankments that have been subjected to overtopping and erosion processes. She also develops criteria for the design and analysis of erosion and water control structures to assist the NRCS and others.

Sherry enjoys playing the piano, quilting, and watching OSU sporting events. Her two older brothers, Terry and Berry, also graduated with degrees from the department.

John T. (Jack) Lewis 1973

Jack Lewis completed his bachelor's degree in agricultural engineering in 1973. While in school, Jack was in Karate Club.

He is currently employed as a mechanical support specialist at Avatech Solutions in Omaha, Neb.

Jack's previous jobs included: International Harvester, United Technologies Fluid Power Systems, Danfoss Fluid Power, Environmental Monitoring Systems, Northwest Automation, and Oklahoma Steel and Wire.

Jack's hobbies include acting, shooting, and leather crafting.

Mark Faulkenberry 1983

Mark Faulkenberry graduated from OSU in 1983 with a bachelor of science in mechanized agriculture.

He is currently employed with Western Farmers Electric Cooperative in Anadarko, OK as the Commercial and Industrial Marketing Manager. His main objective is to build an array of products and services to strengthen cooperative relationships with their Key Account customers.

He was previously employed for 14 years with the Alfalfa Electric Cooperative as the Manager of Engineering and Key Accounts Manager.

Mark and his wife, Yvonne, have two children -- Cody, 10; and Hannah, 7.

Mark's free time is devoted to his family and church. He occasionally gets a chance to play a round of golf.

Rob Pollock 1985

Rob Pollock graduated from Oklahoma State University with a bachelor's in agricultural engineering. He is currently employed with O.E.M. Sales Corporation as a field sales engineer. He has been employed there for 11 years.

While in school Rob was involved in the ASAE student branch. He now works to build custom heat exchanger coil designs for original manufacturers. He supports the northeast customer base for coil engineering and sales of air conditioning/refrigeration applications. There is a heavy concentration of engineering support, system performance modeling and custom specifications in his job.

He travels to Ontario and Quebec, Canada regularly.

Rob is married to DeDe with two children, Jake, 15, and KaDe, 8. His hobbies are playing golf and watching his children's sports.

Ray Jordan 1971

Ray Jordan earned his bachelor of science degree in agricultural engineering from Oklahoma State University in 1971. He then received his master's degree in Civil Engineering in 1983. He is a member of the National Association for County Engineers and a member of BOCA.

Ray is employed as the county engineer at the Tulsa County Engineering Department. He has worked there for 31 years.

His job consists of public works engineering, managing, maintenance and construction for Tulsa County Highway Department and managing the Tulsa County building inspections department.

Before his employment at Tulsa County, Ray worked in the OSU Agricultural Engineering Department.

Ray and his wife Sue live in Tulsa and have three sons, Jerry, 38, Jeff, 33 and Doug, 32. In his spare time, Ray enjoys golfing, traveling and fishing. He also traveled to New Zealand four years ago.

Alicia Gilley 2001

Alicia Gilley graduated with a master's degree in biosystems and agricultural engineering in 2001. During her program, Alicia worked for Dr. Hamilton and Dr. Barfield as a research engineer modeling odorous emissions from swine lagoon waste.

Alicia is currently employed at Black and Veatch as a process engineer. Her duties consist of wastewater treatment, processing designs, odor and VOC emissions controls and plant sampling.

Alicia lives in Olathe, Kan. with her husband Robert Dunn. They have a 5-year-old daughter, Chelsey. Alicia enjoys spending time with her family.

Please keep us informed

We want to hear about what you have been doing. Please send your work and personal stories to BAE Update, Department of Biosystems and Agricultural Engineer-

ing, Oklahoma State University, Stillwater, OK 74078-6016. Or you can send an e-mail to baeupdate@okstate.edu.

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Your News is Good News!

We would like to include you in our “Alumni Success Stories.” If you want to participate, please send a letter (or e-mail) to us describing your career (where you work and what you do on a daily basis), as well as any personal information you want to share.

Elliott Named ASAE Fellow

Ronald Elliott, department head of biosystems and agricultural engineering, was named as a Fellow of ASAE.

Elliott was inducted on July 30 at a ceremony at the ASAE Annual International Meeting at the Chicago Hyatt Regency Hotel.

Elliott was recognized for his innovative research involving soil and water engineering, as well as his teaching and educational leadership accomplishments.

Bill Barfield, BAE regents service professor, said, “Dr. Elliott has been a highly productive faculty member and a good researcher and teacher. He helped de-

velop new programs, such as the Oklahoma Mesonet. Without Dr. Elliott, we would not have the Mesonet.”

Barfield continued, “He is doing an outstanding job as department head and this department is fortunate to have him. It (the award) is well deserved and long overdue.”

Only about two percent of active ASAE members will ever achieve the recognition of Fellow.

Elliott is a 28-year member of ASAE and has been an OSU faculty member since 1981.

Pearce

Outstanding Thesis

On April 5 at the CASNR awards banquet, it was announced that Missy Daniels Pearce, BAE Ph.D. December 2001, has been awarded the William’s outstanding thesis in the social sciences/engineering area by the College of Agricultural Sciences and Natural Resources.

The dissertation was titled, “Effects of Normal Force Sample Relaxation, and Tasting Geometry on the Rheological Measurements of Solid Food Products.”

Her dissertation was judged the best in the area for those completed in 2001. Since she was unable to attend the banquet, Pearce was given her award on April 10, 2002, at the BAE graduate seminar.

Pearce’s graduate adviser was Dr. Bellmer.

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BAE Update is published each semester. It informs alumni and friends of the activities in the department of biosystems and agricultural engineering.

We invite you to submit questions, comments, articles, ideas, etc. to:

BAE Update

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