



page 2



page 5

OKLAHOMA STATE UNIVERSITY DEPARTMENT OF BIOSYSTEMS AND AGRICULTURAL ENGINEERING

Solie wins prestigious Sarkey's award

by Tara Wright

Contributing Writer

John B. Solie, biosystems and agricultural engineering professor, received the Sarkey's Distinguished Professorship in January for his dedication to teaching and his research in precision agriculture.

Professors working in the Division of Agricultural Sciences and Natural Resources are eligible, said Robert Westerman, assistant director of the Oklahoma Agricultural Experiment Station. The Sarkey Foundation established the professorship to recognize faculty for outstanding performances in research and teaching.

"One benefit of the award is people knowing what you have done," Westerman said. "It allows them to see your significant accomplishments." The selection process for the professorship begins with nominations from colleagues along with a recommendation from the department head. The dean and associate deans of the Division of Agricultural Sciences and Natural Resources receive an updated resume and letters of

recommendation for review and final selection, explained Westerman.

The selection is made from a pool of well-qualified individuals, and it becomes very competitive, Westerman said. Every department in the Division of Agricultural Sciences and Natural Resources has the option to nominate a candidate.

The recipients are reevaluated after four years, and if they have maintained their productivity in teaching and research, the professorship can be extended for up to three more years. After seven years, a new recipient is selected.

Since the Sarkey's professorship began, six professors have received the distinguished award. Jacqueline Fletcher, entomology and plant pathology professor, and Chang-An Yu, regents professor of biogenetics, are current recipients of the professorship.

"It is a privilege and an honor to get the award," Solie said. "I feel strongly that it's a reflection of all the people I have worked with over the last 20 years."

Solie said the work he performed with precision agriculture, especially GreenSeeker, probably played a major role in the selection. GreenSeeker is a technology that senses the nutrient needs of plants and simultaneously applies fertilizer at a variable rate as the machine moves across the field.

Since it is a new concept, the team is trying to prove that it works everywhere, not just in Oklahoma, Solie said. He credits the team for the success of the project and the award he received.

"Dr. Solie is a well-dedicated scientist," said Westerman. "He has served as the coordinator of the group for GreenSeeker, and is very well recognized for his contribution." Solie is an adviser for the OSU quarter scale tractor team. He helps students construct a tractor judged on design and ingenuity to compete with other universities, Levi Johnson, biosystems and agricultural engineering junior, said.

"He is a very easy man to get along with," Johnson said. "He helps students develop understanding for solving problems."

Solie takes time to sit down and talk with students, and he spends a lot of his own personal time helping his students develop knowledge, said Johnson.

Teaching and research are two things that Solie said he enjoys. He said he has always liked the university because it is more rewarding than any other work he has done.

"In the back of my mind, I always thought I would want to come back to the university," Solie said.



Mark Your Calendar

Intl. ASAE Meeting

July 27 - 30

BAE Reunion

July 29

Fall Cookout

October 4



A Word from the Department Head

Dr. Ron Elliott
relliot@okstate.edu

On behalf of the department, I'd like to extend greetings and best wishes to each of the recipients of the BAE Update. We hope that our semiannual newsletter helps you stay in touch with the BAE family.

The Student Banquet, a spring tradition in our department, was once again a great success. The attendance of nearly 140 was the largest in recent memory, and we had a good mix of students, parents, scholarship donors, alumni, and faculty. Each year, the ASAE Student Branch does a fine job of planning and directing this event. Thanks to our generous donors, we were able to award over \$22,000 in departmental scholarships to 19 deserving students. We also recognized our 2003 graduating seniors and State Regents Academic Scholars. With the excellent quality of BAE students, the committee that reviews scholarship applications had an especially difficult time this year. We do pretty well, but we wish we had the resources to award more scholarships. If you'd like to help us in that regard, please send a check to the department, made out to the "OSU Foundation – Biosystems & Agricultural Eng." Also, I'm always available to visit if you'd like to discuss the possibility of a scholarship named in honor of a loved one or an organization.

I mentioned the quality of our students. They continue to excel in class work and in extracurricular activities. As one example, Autumn Hood (B.S. in December 2002) was just named the outstanding graduate in ALL of engineering for the 2002-2003 academic year. This is quite an honor!

Despite the downturn in the economy, our graduates are finding work. Several plan to pursue graduate school. Job leads are always appreciated, and you can communicate those to me or other BAE faculty, and/or contact career services at the university.

We have a new president for the OSU system, following the retirement of Dr. Halligan. Dr. David Schmidly came to us from Texas Tech in January. He and all of us at OSU are faced with budget challenges. Across the

country, budgets for higher education seem to be suffering. Despite the fiscal problems, the attitude on our campus remains positive. Students continue to receive high-quality instruction, cutting-edge research is still being conducted, and extension clients are still being served.

Looking ahead to this summer's ASAE meeting in Las Vegas, all alumni and friends

are cordially invited to join us for the (first annual?) OSU BAE reunion. Details can be found on page 7 of this newsletter. It should be fun! Also, please mark your calendar for Saturday, October 4, when we'll have our fall cookout and social. The OSU Cowboys will be playing Louisiana-Lafayette that day.

We would appreciate your help in identifying and recruiting prospective students. Biosystems and Agricultural Engineering is an exciting discipline that is attractive to many young people. We encourage you to help us spread the word. One alumnus, Ricky Heflin (B.S. 1982), recently brought a prospective student and his father to visit our department. That's going the extra mile, but even if you can just provide us with names and contact information for potential students, we promise that we'll follow up.

Hood receives CEAT dean's award



Autumn Hood was the recipient of the Outstanding Engineering Student Award, which is the highest honor in CEAT.

At the CEAT Melvin R. Lohmann dinner on April 16, 2003, Autumn Hood, BAE graduate, was presented with the dean's outstanding engineering graduate award for the college of engineering, architecture and technology.

Hood said about receiving the award, "It's pretty cool."

Hood graduated with a bachelor of science in biosystems and agricultural engineering with a biomechanical option in December 2002. She maintained a 3.99 GPA during her undergraduate studies. She will begin a master of business administration program in the fall.

During her undergraduate work, Hood was involved in Phi Kappa Phi, Tau Beta Pi,

Phi Eta Sigma, Mortar Board Honor Society, Alpha Epsilon, ASAE, Cowboy Motorsports, CEAT Student Council, CEAT Engineering Scholars Program, CREW, Agricultural Student Association and was a student ambassador for the college of agricultural sciences and natural resources. She also received numerous awards and scholarships.

Hood works with Bill Barfield and L.L. Hoberock on the New Product Development Center initiative, and she is also a teaching assistant for Becky Ostermann.

Upon completion of her master's degree, Hood would like to stay in the Midwest and conduct business marketing and consulting for rural agricultural businesses. "Oklahoma is struggling," she said. "The state needs to develop a stronger identity within the state." Her career goal is to help small agricultural companies with development.

Her hobbies include reading, training horses and developing production databases for agricultural producers. She also has a one-eyed dog, Jake.

Hood is the daughter of Keith Hood of Westcliffe, Colorado and Debora Hood of Canon City, Colorado. She grew up on a commercial cattle ranch in Westcliffe. She attended high school at Custer County High School and graduated in 1998 in a class of 26, where she was one of three valedictorians. "I have become so attached to Oklahoma and the Midwest region," she said.

"I have had a wonderful experience here," Hood said.

Mesonet revamped: AgWeather introduced

Oklahoma's two top universities may not always agree when it comes to the rivalry between the Cowboys and the Sooners, but since the creation of the Mesonet, they now have something in common.

The Oklahoma Mesonet is a product of teamwork between Oklahoma State University and the University of Oklahoma. Together these institutions and the Oklahoma Climatological Survey have developed one of the finest weather data collection and reporting systems in the world.

This network consists of 114 automated stations covering Oklahoma. There is at least one Mesonet station in each of Oklahoma's 77 counties.

The name Mesonet is derived from combining the term "mesoscale", which refers to weather events that range in size from a few kilometers to a few hundred kilometers and can last from several minutes to several hours, and "network".



The Oklahoma Climatological Survey at OU receives the observations, verifies the quality of the data and provides the data to Mesonet customers. It only takes 10 to 20 minutes from the time the measurements are acquired until they become available to customers, including schools.

Mesonet brings the expertise from Oklahoma's two major universities to create a single, winning Oklahoma team. Today, no other state or nation is known to have a network that boasts the capabilities of the Oklahoma Mesonet.

Public and private schools are also using the Mesonet as a learning tool. Lessons derived from the Mesonet range from science and mathematics to economics and communications.

Mesonet data is used in a host of meteorological, agricultural and hydrological research projects funded by the National Science Foundation, National Aeronautics and Space Administrations and the U.S.

Departments of Agriculture, Commerce and Energy.

On January 9, 2003, OSU activated a new site that is specifically geared to Oklahoma's agricultural community. [Http://agweather.mesonet.org](http://agweather.mesonet.org) is a totally free Web site, where anyone can obtain information.

The new Web site is easy to navigate and will provide agricultural users with the latest Oklahoma weather and soil information,

decision-making tools, links to commodity markets, access to OSU production publications, links to producer associations, improved insect and disease advisories, spraying recommendations, irrigation scheduling, frost protection, planting and harvesting recommendations and prescribed burn advisories.

It also offers users easy access to products including crop and pest models that have been organized by commodity,

degree-day calculators, improved data charting capabilities for more accurate record keeping, the cattle stress index that takes current Oklahoma weather conditions and calculates the level of stress animals are exposed to, and many more products to help agriculturalists.

The AgWeather site incorporates all the useful information that was formerly offered to agricultural users of the Mesonet Web site; however, there are a few bold, new changes that were made specifically with agricultural and nature resource management in mind.

Access is simple. There are no passwords or subscription fees needed. The site is free to the public. To fully access all the site has to offer, users will need to download "WxScope", a free plug-in that will allow retrieval of the most up-to-date weather maps.

The Mesonet has many agricultural products that will help producers and agricultural service providers make more informed decisions. Check out the AgWeather site by logging on to agweather.mesonet.org.

Where are they now?

Tracking BAE Alumni

FALL 2002 Graduates

David Carment, B.S.
Halliburton
Midland, Texas

Jake Holloway, B.S.
FW Murphy
Tulsa, OK

Autumn Hood, B.S.
Graduate Assistant in BAE
Stillwater, OK

Irina Komjarova, M.S.
Ph.D. student in Belgium

Ivan Kourtchev, M.S.
Ph.D. student in Belgium

Anand Lakshmikauth, M.S.

Bernie Mamosi Mvibululu Lelo, M.S.

Dustin Simmons, B.S.
Halliburton Energy Services
Lafayette, LA.

BAE Welcomes:

Nancy Rogers
David Zavodny
Bobby Flores

And says farewell to:

Dr. Jerald Lalman
Leila Milne-Hickman

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 74078-6016
(405) 744-5431
baenews@okstate.edu

Class projects offer hands-on experience

All universities have curriculum requirements that must be met for degree completion, and within those, departments have specific requirements for their students. BAE 1012, a requirement for the department of biosystems and agricultural engineering turns the classroom into a challenging, fun experience for first-semester students.

Dr. Marvin Stone teaches the introductory class. He says his goal is to develop the students' communication skills and exercise their computer skills in a practical engineering environment.

The first 10 weeks of class are devoted to addressing these skills, then during the last five weeks of the semester, the students put the skills to use in a real-world experiment.

Ideas for projects come from faculty members throughout the department. Stone evaluates the ideas, chooses the most appropriate, then allows his students to submit preferences for the project they would like to develop. Stone assigns the projects to his students based on their submissions.

The faculty members, whose projects are selected, are asked to mentor the team working on their project, as well as assist the team with the completion of the project.

The requirements for a completed project include a poster, and a project report summarizing the analysis.

During finals week, the students display their poster and results for faculty, staff and students to view and evaluate. Faculty and graduate students are given an evaluation form and asked to evaluate the project, which contributes to part of the students' grade.

Students also have to evaluate the contribution of their fellow team members and turn in a report for the second part of their grade. Dr. Stone analyzes each project and assigns his grade for the final portion of the completed grade. After the three scores are compiled, a final grade is given.

The topics of fall 2002 projects included grain bin temperature profiles, bulk density of various grains, perceptions of ethanol-blended gasoline, and sensor-to-sensor error.

Other projects also showcased how various infiltrometer diameters affect soil percolation rates, effects of processing on quality and stability of watermelon juice, analysis of temperature profiles of continuous food processing ovens, reducing error in GPS data, and comparison of 4WD vs. 2WD $\frac{1}{4}$ scale tractors.

Stone said, "My students are very competitive. I feel that they learned a lot...a lot of different aspects of the field of biosystems engineering."



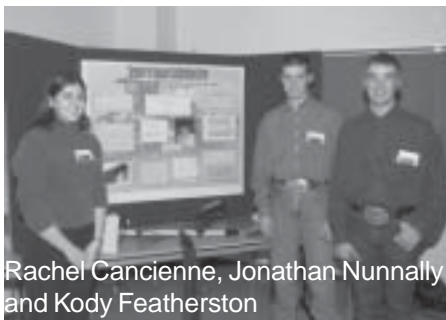
Jason Unruh, Jason Breakfield, Sara Sherman and Lynn Chai



Brian Dillard, Shane Ice, Ryan Haar, and David Mercer



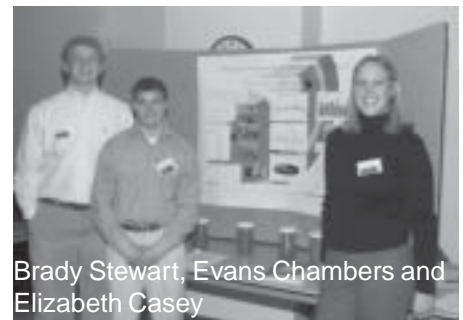
Lance Klement, Justin Hurst, Shawn Moore and Cole Gallaway



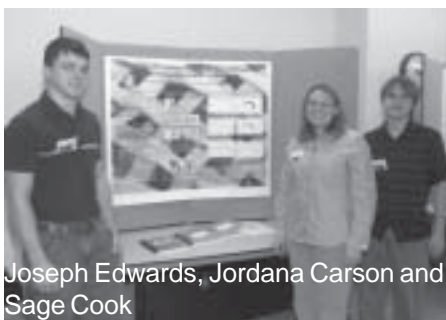
Rachel Cancienne, Jonathan Nunnally and Kody Featherston



Ryan Woolbright, Cory Treece, Daniel Edmonds and Taylor Miller



Brady Stewart, Evans Chambers and Elizabeth Casey



Joseph Edwards, Jordana Carson and Sage Cook



Tyler Washmon, Adam Gossen, Joe Biggerstaff and Dustin Holden



Dustin Conner, David Bevill, Frank Burton and Brody Buzzard

BAE Professor creates new ASAE competition

by Tara Wright
Contributing Writer

OSU biosystems and agricultural engineering students will participate in Fountain Wars, a design competition similar to the Discovery Channel's Junkyard Wars, this summer.

Steven Fowler, Derek Storm, Matt Simpson, Cash Maitlen and Taylor Miller will travel to Las Vegas to compete against other teams nationwide.

This first year contest is sponsored by the American Society of Agricultural Engineers. Fountain Wars will debut at the International ASAE meeting at the end of July in Las Vegas.

In 90 minutes, BAE students will construct a fountain to suspend a beach ball and uniformly spray water. Preparation for the contest helps students learn how to apply the techniques learned in class, said Mike Kizer, biosystems and agricultural engineering professor and team adviser.

"Students learn more with hands on experience," Kizer said. "It's kind of like a design competition your engineering firm might use when trying to win a contract."

During the contest six team members will construct the fountain. OSU has seven students currently working on the project.

Fowler, BAE senior and team chairman, said working on the project is helping him learn how to make ideas work. The team has constructed a workable design since their first meeting in September, said Fowler.

The contest is in its first year so the rules are not well defined, Kizer said.

"It is basically who can bend the rules the



Members of the fountain wars team are working to perfect their design for the Las Vegas competition.

most to get the most use out of the pump," Fowler said.

Contest originator, Glenn Brown, biosystems and agricultural engineering professor from OSU, is trying to avoid any conflicts of interest by keeping his distance from OSU's team.

Fountains will be judged on the height that a water stream can suspend a beach ball, the uniformity of the water distributed into a series of containers and the aesthetics of the design, Kizer said. The team's biggest challenge will be making their fountain aesthetically pleasing.

The contest guidelines state that written reports over the fountain design must be submitted one month prior to the contest, and a five-minute oral presentation promoting the fountain design is also required.

Resources are limited at the contest because teams can bring only two bags small enough to be checked on a commercial airline, according to the contest guidelines. A pump, reservoir and PVC pipe will be provided on-site.

Concerns about the effects of the wind on their design challenge the team, Kizer said.

"It's going to be interesting with the wind," Taylor Miller, BAE freshmen, said. "It is hard to prepare for and think about what could happen. It really makes you use your creative side."

Fowler said the team meets once a week with time varying from 30 minutes to five or six hours. During that time, he said the team has managed to spray the ceiling of the laboratory, and rarely leave without being soaked. The biggest challenge facing the team is conflicting schedules, said Fowler.

"It is difficult because we have four seniors, one junior and two freshmen," Fowler said. "We are all at different stages in our education, and finding one time to meet is hard."

Fowler is confident in the team's design for beach ball suspension.

"If we can get our idea on the beach ball to work, I don't see many schools developing a better design," said Fowler.

Obituary

James Netherton

James D. Netherton died Sunday, January 26, 2003.

He was born in Headrick, June 26, 1930. Netherton graduated from Warren High School, Altus Junior College, Oklahoma State University and the University of Chicago. He held two degrees from the department.

Netherton served in the Army from 1950 to 1952. He was an extension agricultural engineer at North Carolina State University from 1958 to 1959. Netherton then became the extension education specialist from 1959 to 1970 at the University of Arkansas. In 1970, he returned to his alma mater and became an associate professor and coordinator of personnel development and field studies.

He retired from OSU in 1991 as a professor and assistant to the dean for personnel and affirmative action in the Division of Agricultural Sciences and Natural Resources.

Retirement was short-lived. Netherton became an emeritus professor in the Division of Engineering Technology with the Ground Source Heat Pump Association. He was also employed at OSU Community Federal Credit Union.

Netherton is survived by his wife, Sue Bonner; daughter, Susan Parker and her husband Frank of Chesapeake, Va.; son, Paul Netherton of Pasadena, Calif.; Tressie (Bonner) Platt and her husband, Darrell of Tulsa and Amanda Bonner of Stillwater; three granddaughters, Madeline Parker, Caroline and Caitlin Platt; and a grandson, Cade Platt.

Memorials may be made to the William F. Taggart Scholarship Fund, Oklahoma State University, Division of Agriculture Sciences and Natural Resources, 139 Agriculture Hall, Stillwater, OK 74078.

CORRECTION

The BAE Update's e-mail address is baenews@okstate.edu. Last semester's news letter reported it was baeupdate@okstate.edu, which is too long for OSU's system. Please send all correspondence to baenews@okstate.edu.

OSU ASAE Banquet



Ron Elliott presented Ryan Haar with the E.W. Schroeder Endowed Scholarship.



Rachel Cancienne accepted the Dudley Barefoot Memorial Scholarship, which was presented by Betty Barefoot.



Tom and Jan Haan presented Mary Elizabeth Womack with the Tom and Jan Haan Endowed Scholarship.



BAE's incoming students for fall 2003 are shown above with their awards. Pictured is back row: (L to R) Jacob Hall, Joshua Grundmann, Amanda Nida and J.K. Evicks. Front row: Sarah Cook, Kristin Stephens and Meagan Armstrong.



Pictured from L to R is: back row: Jacob Hamburger, Levi Johnson, Taylor Miller, Joe Biggerstaff, Adam Steinert and Colby Funk. front row: Daniel Edmonds, Ryan Haar, Mary Elizabeth Womack, Candi Johnson, Steven Fowler and Rachel Cancienne.



Scott Schneider, Mickey Friedrich and Chad Fisher will be graduating in May 2003. Mary Crawford will be graduating in December 2003.



Gerald Brusewitz presented Colby Funk with the Gerald Brusewitz Scholarship.



Jacob Hamburger received the Lawrence O. Roth Endowed Scholarship.



Daniel Edmonds accepted the Oklahoma Municipal Power Authority Scholarship from Roger Farrer.

VIVA Las Vegas!

Come to a reunion:

Reunion to be held at International Meeting in Las Vegas

Attention all Alumni! BAE is holding a reunion at the International ASAE Meeting in Las Vegas. On Tuesday, July 29, OSU alumni, friends and guests are invited to join us for an evening out at one of Las Vegas's local restaurants.

The evening will begin in the Capri 116 room of the Riviera



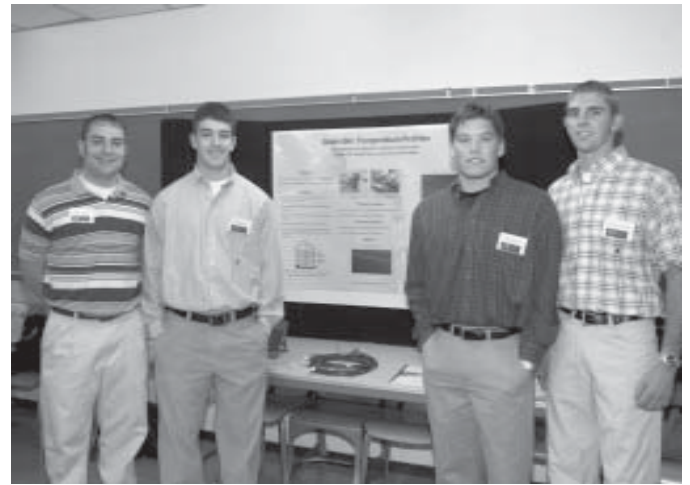
hotel with a meeting. After adjourning, a dinner will be provided at one of Las Vegas's many restaurants. The cost is \$10 per person. For more information, contact Becky Ostermann at (405) 744-8394.

OSU team to compete



The Fountain Wars team is traveling to Las Vegas to compete in the new competition. Pictured from left to right: Derek Storm, Steven Fowler, Matt Simpson and Cash Maitlin. Taylor Miller is not pictured, but will be joining the team in Las Vegas. For more details, turn to page 5.

Grain bin profiles project to be entered in Las Vegas



David Bevill (second from left), who worked with a team to construct the grain bin temperature profile project, will be traveling to Las Vegas to enter it in the preprofessional poster contest at the ASAE International competition.

David Bevill, BAE freshman, will be traveling to Las Vegas, NV to compete in the preprofessional poster competition at the ASAE International Meeting. The meeting will be held from July 27 - July 30 at the Riviera Hotel.

Bevill completed the project with classmates in Marvin Stone's BAE 1012 class. He said he learned about grain cooling, using suction and pressure, electronics, and thermocouples.

The team spent 20 hours gathering data for their project.

Bevill said he is excited about attending the conference.

"It will give me presentation experience and allow me to get more involved," Bevill said. "Just the chance to go to the conference is great!"

Meet BAE's Research Engineers



A few research engineers take time out of their busy schedules to pose for the Update. Pictured from left to right: Hector Cumba, Carol Jones, Kim Hornbuckle, Roshani Jayasekara and Bruno Cateni.

The BAE department is fortunate to have some very capable and dedicated individuals working in support of faculty research programs. Research engineers are professionals who work full-time for the department, while pursuing graduate degrees at a more deliberate pace. Research engineers remain with the department longer than a conventional graduate student, and this continuity is extremely beneficial to faculty in conducting their research activities. Typically, a research engineer divides his/her time between two faculty members, and is assigned a variety of important responsibilities. Thanks to all of our research engineers for the great work that they do!

Jeyam Subbiah is a research engineer for Ron Noyes and Glenn Kranzler. Subbiah helped Noyes develop and conduct several grain elevator workshops. He and a colleague developed a simple computer program with easy-to-use templates for changing variables. The program was introduced as the "OSU Grain Blending Model" at the National Stored Product IPM Training Conference at Manhattan, KS in August 2002. Subbiah will present a technical paper on the program at the International ASAE Meeting in Las Vegas this summer.

Carol Jones is a research engineer for Marvin Stone and Paul Weckler. She also works with Gerald Brusewitz and Tim Bowser. Her specialty is in postharvest fruit and vegetable technology. Currently, Jones is working with active and passive reflectance sensors and

multispectral cameras that detect reflectance from plants and soil. This data is used in calculating NDVI and subsequently determining different statistics about the health of plants, including the need for nitrogen fertilizer. Jones graduated from OSU in 1977 with a B.S. in agricultural engineering and is planning to receive her master's by 2004.

Bruno Cateni is working with Ray Huhnke in the renewable energy field. Cateni is currently involved in the Grassohol project, which involves several departments from OSU and OU. The goal of the Grassohol project is to transform biomass such as switchgrass into ethanol fuel through gasification and bioreaction processes. Cateni is currently a Ph.D. candidate in biosystems engineering, (food and bioprocessing option) at Oklahoma State University.

Kimberly Hornbuckle works in subsurface irrigation in arid climates. She assists Mike Kizer. Kim graduated with a B.S. in Biosystems Engineering from OSU in May 1998 and is now working on her master's degree.

Roshani Jayasekara is currently working on sensing plant health by using a multispectral camera. She is also developing pressure controllers for variable rate sprayers. Jayasekara works with Marvin Stone, John Solie and Paul Weckler on these projects. Her education includes a B.S. and M.S. from OSU. Both are mechanical engineering degrees.

David Zavodny works for John Solie and assists him in performing tests and improving

and maintaining equipment for intelligent machinery systems related to agriculture. Currently, Zavodny is working with the GreenSeeker sprayer for precision application of fertilizer to grains and grasses. Zavodny holds a B.S. in agricultural engineering and is working toward a master's. His activity away from work is the Stagecoach Community Theatre in Perry.

Tim Propst is an Extension Engineer/Environmental Scientist with the Oklahoma Cooperative Extension Service Water Quality Program. He assists the program coordinator, Mike Smolen with project management, preparation of educational materials and technical reports, maintenance of the Program's Web site, and the maintenance of the library of water quality materials. Propst has a bachelor of arts in biology from Wabash College in Crawfordsville, IN and a master of science in wildlife and fisheries ecology from OSU. Propst was part of the stream trailer team that received a national recognition award for National Resources/Environmental Stewardship from the National Association of Extension 4-H Agents in 2001.

Hector Cumba is working on animal waste management and bioconversion with Doug Hamilton and Danielle Bellmer. He conducts background investigations in the current state of research on animal waste and other control management. Cumba also designs and develops experiments and experimental apparatuses and conducts laboratory and field scale studies. He has a B.S. in mechanical technology, an M.S. in biosystems engineering and is a Ph.D. candidate for fall 2004. In Cumba's spare time, he plays baseball, softball and racquetball.

Mike White is a research engineer for Dan Storm. White performs watershed analysis using geographic information systems and hydrologic models. He is responsible for the laboratory portion of the BAE 5313 course. White is currently working on the analysis of BMPs to meet TMDL requirements in the Cobb Creek Basin. He has also worked on Stillwater Creek, Illinois River, Lake Eucha and the Great Salt Plains Reservoir basin projects. White completed both his bachelor's and his master's degrees in biosystems engineering from OSU. He is currently pursuing a doctorate. White is from Asher, Okla. and likes to hunt, fish, garden, brew beer and work with amateur science. His wife, Mellanie also works for OSU.

Alumni Success Stories

Ed Bevers 1980

Ed Bevers graduated from Oklahoma State University in 1980 with a bachelor's degree in mechanized agriculture. After graduation, Bevers was employed full-time in the Ag Engineering Research Laboratory as a research equipment specialist.

His current position is with the Rural Electric Cooperative, Inc., where he has been employed for over 18 years. Bevers's first job at the REC was line staking and system planning. In 1988, he became the Planning Engineer and modeled the electric distribution system using engineering software. Bevers also coordinated a three-year system inventory, which made him focus on rate analysis and system upgrading, preparing cost-of-service studies and construction work plans.

In 1996, REC combined the engineering and operations functions and named Bevers as department head. He now coordinates and implements all construction; maintenance and system upgrade projects and works with electric customers on a daily basis. His responsibilities also include budgeting, staffing and monitoring the quality of service for the REC.

Much of Bevers's time is spent in the area of reliability and conducting maintenance programs. He has been involved with the National Rural Electric Cooperative Association's "Cooperative Research Network" (CRN), which funds the exploration of solutions to the challenges rural utilities face. Bevers says, "Because of my experience at the Ag Engineering lab, I am attuned to the process and the needs of research, as well as, the practical goals we try to reach in the rural electric program. This road has led me to be involved in the Canadian Electric Association Power Quality Interest Group (CEA PQIG)." As a result, Bevers has been on several trips to Canada and various locations across the U.S. to attend meetings.

During the summer of 2002, Bevers's home was used as a test site for a prototype residential fuel cell, part of another research and development project between H-Power Enterprises of Canada and a group of electric cooperatives. Together the groups generated usage data and runtime experience with the fuel cell and hope this project aids the

development of a reliable unit capable of stand-alone operation for remote rural sites.

Bevers and his wife, Theresa, also an OSU graduate, live south of Lindsay, Okla. with two daughters, Amanda, 17, and Allison, 12. In his free time, Bevers likes to fish and spend time camping outdoors and cooking with Dutch ovens. He also enjoys riding his mountain bike.

Ming Yu 1996

Ming Yu graduated with a Ph.D. in 1996 under the advisement of Dr. Brown. Immediately after graduation, Yu started working in the permit section of the Air Quality Division of the Oklahoma Department of Environmental Quality.

Two years later, Yu transferred to the NPDES section of the Water Quality Division of the same department, where she worked on industrial and municipal permits, water quality modeling and environmental impact assessment.

In 2002, Yu purchased her own environmental laboratory and named it Red River Environmental Laboratory and Consulting Company. She resigned from the Department of Environmental Quality and now operates her laboratory full-time. Yu is able to analyze wastewater and soil samples, prepare permit applications for municipal and industry, interpret federal, state, and local environmental regulations and enforcement issues are met, and model water and air quality.

She can also design wastewater discharge/disposal systems and conduct environmental impact assessments.

At Yu's lab, she is able to work with Enos Stover on his projects of industrial/municipal wastewater engineering and operations including treatability and pilot studies, concept and process engineering designs, operations trouble shooting, and assistance on an international level.

Yu is married to Jim Luo, who works as a chief computer architect at C2 Technology Company in Oklahoma City. They have three children, Brooke, 9; Rynel, 5; and Brad, 2. You can check out Yu's company Web site at www.RedRiverELCC.com.

Ricky Heflin 1982

Ricky Heflin completed his bachelor's degree in agricultural engineering in 1982.

After graduation, he was employed with Charles Machine Works, Inc. (aka Ditch Witch) of Perry, Okla. until 1989. At Charles Machine Works, Heflin was employed in the Attachment Design Group as a design engineer and finished his career there as a design group leader for the Current Products group.

Heflin and his wife, Amber, moved to Mooreland, Okla., in 1989. He then went to work for Waldon, Inc. in Fairview. Heflin was the design engineer for loaders and eventually became the vice president of engineering. He was employed there until 2000.

Waldon, Inc. was purchased by Collins Industries, Inc. of Hutchinson, Kan., and a new company, Mobile Products, Inc., was formed. Heflin was named vice president of operations.

He recently joined Davis Precision Design, Inc., an engineering company in Fairview. He does design engineering work out of his home for manufacturers in Oklahoma and Kansas.

Heflin and his wife have one daughter, Rose Ann, who is 17-years-old. Heflin has served as a member of the BAE Advisory Board. He is also a member of the Indian Meridian Vo-Tech Advisory Board on manufacturing.

Ken Jones 1982

Ken Jones completed his bachelor of science in 1973, his master's in 1974 and his Ph.D. in 1982, all from Oklahoma State University.

After graduation, Jones worked as an engineer in the private sector for 10 years. Jones then accepted a university position, and he has been at Lubbock Christian University, a liberal arts school, in Lubbock, Texas.

Jones is currently the president of LCU. Jones traveled to Austria in 1993. He resides in Lubbock with his wife, Susie, and his two children, Jennifer and Mitchell.

Alumni Success Stories

Floyd Dowell 1984

Floyd Dowell has two degrees from Oklahoma State University in agricultural engineering, a B.S. in 1984 and a M.S. in 1985. He also received a Ph.D. from the University of Illinois in 1988.

While attending OSU, Dowell was involved in ASAE Student Branch, church and courting his girlfriend, Gayle, who is now his wife.

Currently, Dowell serves as the leader of the Engineering Research Unit I for the USDA agricultural research service in Manhattan, KS. His responsibilities are to guide research to develop technology to rapidly measure grain quality and to develop improved handling and storage systems for grain. Dowell's personal research includes developing sensors and automated systems for measuring grain attributes such as protein, internal insects, toxins, Karnal Bunt, GMO's and traits related to biosecurity.

From 1988 to 1995, Dowell was the lead scientist for automating the peanut inspection system at the USDA ARS National Peanut Research Lab. From 1995 to 1999, he was the scientist responsible for measurement of single wheat kernel quality using VIS and NIR technology at the USDA ARS Grain Marketing and Production Research Center in Manhattan, KS.

Dowell has written or contributed to over 100 publications. He was one of 16 ARS scientists nationwide selected to attend a 15-week intensive training program in systems

E. Silvo Echverry 1958

E. Silvo Echverry graduated from OSU with a bachelor's degree in agricultural engineering in 1958. Echverry is currently living in Nicaragua, where he is in charge of the Delegation of the Ministry of Environment and Natural Resources (MARENA) for the State of Carazo. He is also a Professor Emeritus at the Universidad Nacional Agraria (National Agriculture University), which is located in Managua. Echverry travels to California often to visit family.

engineering. He has also received many awards including, USDA Honor Award, ARS Engineer of the Year, and the USDA ARS Senior Scientist Award.

Over the years, Dowell has visited England, France, Japan, Chile, Australia, Zimbabwe, Mexico, Russia and Hungary.

Dowell is married to Gayle, and together they have two children, Kayla, 9, and Christine, 7. In his spare time, Dowell enjoys playing with his children, water and snow skiing, hunting and fishing and any other outdoor activity. He is also very active in church activities, mission trips and Tractors for Our Daily Bread, which is a charity that refurbishes 8N Ford tractors and delivers the tractors and equipment to missions in underdeveloped countries.

Mark Stacey 2000

Mark Stacey obtained his degree in biosystems engineering in 2000. He now resides in Palm City, FL and works for CPH Engineers. At CPH, Stacey develops site projects for McDonalds, Wal Mart, Home Depot, Lowe's, etc. He is also trying to start SWPPP service through the CPH satellite office.

Richard Nelson 1989

Richard G. Nelson received his Ph.D in 1989 from the department of biosystems and agricultural engineering. Since then, he has been employed at Kansas State University, where he was recently named as the department head and director of engineering extension.

Nelson's position requires him to write grants to perform applied research in the areas of renewable energy, environmental analysis and other agricultural related issues.

Nelson has traveled to Scotland and Germany to present papers at energy conferences. Nelson, who is married to Kris, has two children, Jackie, 16 and Kelley, 13.

He enjoys reading, sports and community service in his spare time.

Jim Loftis 1974

Jim Loftis graduated from Oklahoma State University in 1974 with a bachelor of science in agricultural engineering. For the past 24 years, he has been a professor at Colorado State University. Loftis's duties at CSU include teaching, research and extension in the general area of water quality.

Loftis was involved in the Egypt Water Use Project in 1979, and he took a sabbatical leave for a year to New Zealand in 1990.

Loftis married Judy Billica and together they have two children, Sam and Sarah, who are both 7 years old.

Kevin Cook 1991

In 1991, Kevin Cook received his bachelor of science degree in agricultural engineering.

During his time at OSU, Cook was involved in the student branch of ASAE, CEAT student council, intramural sports and the college bowl.

After graduation, Cook was employed as a hydraulic engineering technician for two years at the USDA-ARS Hydraulics lab in Stillwater, Okla.

For the past nine years, Cook has held the Agricultural Engineer position for the USDA-ARS. His job consists of construction and testing of hydraulic models and apparatuses.

Cook attended the ASAE International meeting in Toronto in 2000. He enjoys OSU sports, golf, his children and old cars.

He and his wife, Shelly, have two children. Brent is nine-years-old and Lyndsie is six. They reside in Stillwater, Okla.

We want to know about you...
Your news is good news!

Return this form to BAE Update,
111 Ag Hall, Oklahoma State University,
Stillwater, OK 74078-6016
baenews@okstate.edu

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.

Name _____
Home Address _____
City _____ State _____ Zip _____
Home Phone _____ Fax _____
Business Address _____
City _____ State _____ Zip _____
Business Title _____ Business Phone _____
Fax _____ E-mail _____

What year and degree level did you obtain your Biosystems Engineering, Agricultural Engineering or Mechanized Agriculture degree(s)? _____

Other information _____

Congratulations! Thank you, Donors!

Gabriel Senay, senior scientist at EROS Data Center in Sioux Falls, SD and his wife, Yodit, proudly announce the birth of a son, Yonas. He weighed 7 pounds and 9 ounces and was born on January 28, 2003.

Tim Propst, extension engineer, and his wife Rebecca announced the birth of their second child, Colby Tait, on March 9, 2003. Colby weighed 7 pounds and 14 ounces. He was welcomed by big brother, Dillon.

Sridhar Venkataramana and his wife, Gayathri announce the birth of their son, Vishvesh Sridhar on December 24, 2002. He weighed 6 pounds and 2 ounces. Sridhar and his family live in Seattle, WA, where he is a post-doctorate research associate at the University of Washington.

Hector Cumba's wife, Arleen, gave birth to a daughter, Andrea Isabel Cumba. She was born March 24 and weighed 6 pounds and 14 ounces and was 20 1/4 inches long.

Randy Price, BAE professor at Louisiana State University and OSU BAE alumnus, wed Laura Finch of Lynn Haven, Fla. The couple were married on March 1, 2003 in Las Vegas, Nev.

The scholarship program of the Biosystems and Agricultural Engineering Department is entirely dependent on contributions to the OSU Foundation and designated for the Biosystems and Agricultural Engineering Development Fund. The Department and the scholarship recipients are grateful to all donors. The following is a list of donors contributing \$50 or more since last year's banquet:

- | | | |
|-----------------------------------|---------------------------------------|--|
| A & B Professional Services | Daren Harmel | Okla. Municipal Power Authority |
| Barry Allred | Randy Haynes | Clint and Kenya Olson |
| Bill and Annette Barfield | Scott and Jeannine Henderson | Jay and Ernestine Porterfield |
| Brent and Gina Bolay | Hsuan-Tsung Hsieh | Sandeep Prabhu |
| Fred and Leatrice Bouse | Ray and Sandy Huhnke | Charles and Ladonna Rice |
| Sherry Britton | Dwight and Margaret Johnston | Mike and Michelle Rigney |
| Glenn and Barbara Brown | W.B. Johnston Grain Company | Kerry and Jennifer Robinson |
| Jerry Brusewitz & Glenna Williams | Kem and Teresa Kadavy | Larry and Jo Roth |
| Indrajeet and Shraddha Chaubey | Mike and Sheryl Kizer | Julie Smith |
| Cisco Systems, Inc. | Glenn and Kelley Kranzler | Robert and Kathy Stafford |
| Bob and Betty Day | Pat and Earline Lewis | Don and Marcia Sternitzke |
| Don and Sarah Day | Jim Loftis | Marvin and Bonnie Stone |
| Floyd and Gayle Dowell | Harry Manges | Al and Regina Sutherland |
| Robert Edling | David and Irene McKay | Aditya Tyagi |
| Ron and Judith Elliott | Ronnie and Sharon Morgan | Bruce Wilson |
| Armand Evers | Douglas and Jennifer Mynear | Dean Yoder |
| Jim and Ruby Garton | Ron and Zona Noyes | Ming Yu and Zhongxiang Luo |
| Tom and Jan Haan | Okla. Assoc. of Electric Cooperatives | Peng YueJinhui Zhang and Jiansheng Yan |
| Halliburton Foundation | Oklahoma Grain & Feed Association | |

If we have inadvertently omitted anyone from this list, please accept our apology and gently remind us of that fact. We also realize that some friends gave less than \$50 and we also appreciate those gifts.

Oklahoma State University
Department of Biosystems and Ag Engineering
111 Agricultural Hall
Stillwater, OK 74078-6016

Address Service Requested

Non-Profit
Organization
U.S. POSTAGE
PAID
Stillwater, OK
Permit No. 191

In this issue:

AgWeather Introduction	3
Freshmen Projects	5
ASAE Banquet	6
Viva Las Vegas!	7
Research Engineers	8
Alumni Updates	9 - 10

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

Biosystems and Agricultural Engineering
Oklahoma State University
111 Ag Hall
Stillwater, OK 74078-6016
(405) 744-5431
baenews@okstate.edu

Editor

Afton L. Jameson
Agricultural Communications senior
alj317@yahoo.com

Oklahoma State University, in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, Title IX of the Education Amendments of 1972, Americans with Disabilities Act of 1990, and other federal laws and regulations, does not discriminate on the basis of race, color, national origin, sex, age, religion, disability, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid and educational services. This publication is printed and issued by Oklahoma State University as authorized by the Dean of the Division of Agricultural Sciences and Natural Resources and has been prepared and distributed at a cost of \$1279.07 for 1000 copies. #1995 0302.