

IOWA STATE UNIVERSITY
College of Agriculture and Life Sciences

STORIES

IN AGRICULTURE AND LIFE SCIENCES VOL. 4 NO. 2, 2010

GLOBAL CONNECTIONS



4 Building cross-cultural ease

14 Improving nutrition in India

31 Working together for rural development

STORIES

IN AGRICULTURE AND LIFE SCIENCES

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FOREWORD

My grandmother had a wall map where she placed a thumbtack on every location she visited around the globe. I remember as a child falling asleep looking at that map imagining my snow-haired grandma trekking through the Holy Land, hiking up a mountain in Chile and getting henna tattoos in Morocco. Grandma used to say she’d rather eat beans and rice for a month than miss a trip. I thought international travel was only something you did when you were retired, or if you were wealthy. That is, until I became a freshman in the College of Agriculture and Life Sciences. Then I learned there were scholarships to help pay for international experiences. I earned my first thumbtack abroad as a freshman in the college. Thanks to that first international experience I gained a bit of “cross-cultural ease” Shelley Taylor talks of instilling in students. I’ve placed many more thumbtacks since, and my worldview is better for it.

The breadth of the college’s impact through its people and programs is impressive—a look at the map on pages two and three will show you that. What’s amazing is that each dot on that map isn’t just a tourist stop. The dots represent meaningful connections ranging from research partnerships, to student exchanges, to immersive study abroad programs or service projects.

This issue will provide insight to some of those dots, those cross-cultural connections. Stories that will disprove anyone who thinks today’s college students are apathetic. And that show how college faculty use science to address big issues facing global society. Stories that express the commitment of our college towards global issues. And, as always, our alumni profiles feature a few of our amazing graduates who use science and diplomacy to build relationships, battle hunger and advance science.

We hope you enjoy this trip around the world learning about the college’s service to global society and how our students are becoming responsible citizens of the world.

Kind regards,

Melea Reicks Licht



Photo: Bob Elbert



Contributed Photo

ON THE COVER

University Professor **Richard Schultz** develops and leads study abroad trips for students like **Ian Herrmann**. Here they trek through a desert in China.
Read more on page 5.

When I interviewed for the dean's position in 2005, I felt so strongly about the importance of providing students with international experiences that I declared every student who enrolled in the college should bring a passport.

That's never been an official requirement, but it sends a message that studying abroad is a key indicator to measure the success of our college and our students. I credit much of the college's progress to the vision and passion of David Acker, our associate dean for academic and global programs, who you'll read more about in this issue.

"Life-changing" is applied to all sorts of situations, but it's precisely how to describe what happens when student or faculty members use their passports.

When I became dean, I went to Africa. I thought I'd understood hunger and poverty. But to visit people who never have enough food, who are sheltered by sticks and mud, who simply don't have anything—it's deeply affecting. Understanding began to replace the incomprehensible. My life was changed.

It was changed in this way, too: I saw our faculty and students working in programs that provide African communities with tools and education to use the tools. I saw people go from abject poverty to the ability to raise their own food and even generate an income. I saw students realizing how change occurs and how to make a difference. They come back home, knowing they're capable of achieving extraordinary things in their own lives.

They begin to see how interconnected the world is, whether their future is farming in Iowa and exporting what they produce overseas, or working in finance or research for a multinational corporation, or setting up an entrepreneurial business that reaches online customers in farflung lands.

It starts here at Iowa State, with the classroom context, the faculty mentors shaping issues in meaningful ways and the plentiful opportunities to pull out that passport.

By 2018, half our graduating students will have an international experience: That's our goal. We'll need the support of alumni and friends to continue to grow study-abroad scholarships and aid. We'll work diligently to make this a reality for more students.



Wendy Wintersteen
Endowed Dean of Agriculture and Life Sciences

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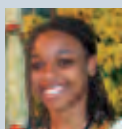
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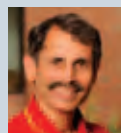
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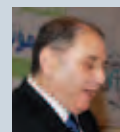
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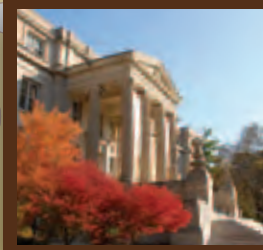
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CROSS-CULTURAL CONNECTIONS GLOBAL IMPACT

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- **STRATEGIC PARTNER:** UNIVERSITY OR ORGANIZATION
- **INTERNATIONAL VISITOR TO THE COLLEGE**
- **STUDY ABROAD PROGRAM**
- **SERVICE LEARNING PROGRAM**

Each dot indicates a cross-cultural connection with that country in 2010 and 2011. For more details about our Global Agriculture Programs, visit www.ag.iastate.edu/stories.



IOWA STATE UNIVERSITY

This fall the College of Agriculture and Life Sciences is home to 246 international undergraduate and graduate students from 45 countries. The highest percentage hail from China. Our alumni live in 107 countries; the largest number reside in Canada.



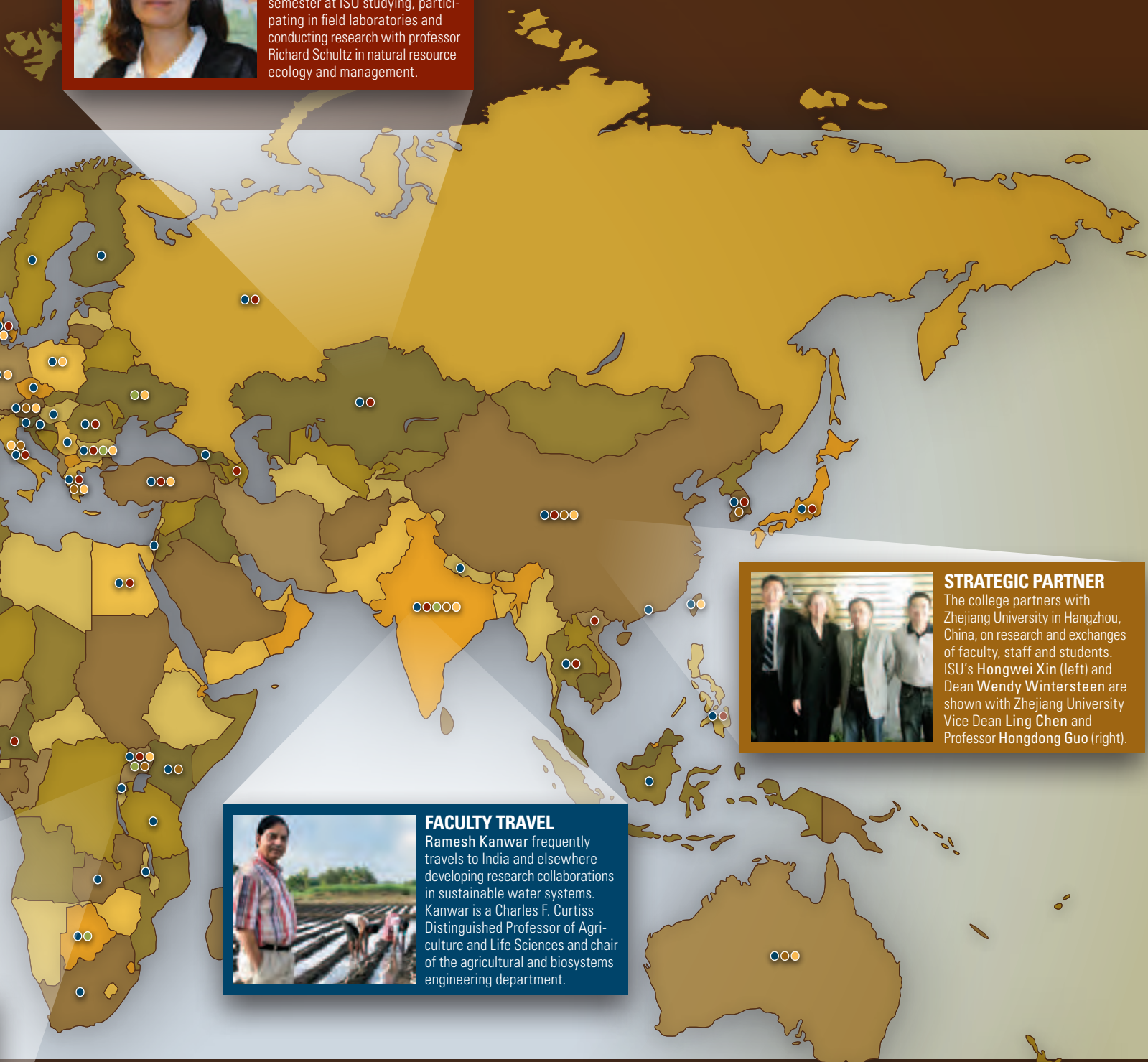
SERVICE LEARNING

Katie Taylor (right), senior in agronomy and global resource systems, and a Ugandan university student assess termite damage on a eucalyptus seedling. Taylor is one of several students who helped develop a school garden in Namasagali.



INTERNATIONAL VISITOR

Nurgul Ramzanova, Ph.D. candidate in agroecology from Eurasian National University in Kazakhstan, is spending fall semester at ISU studying, participating in field laboratories and conducting research with professor Richard Schultz in natural resource ecology and management.



STRATEGIC PARTNER

The college partners with Zhejiang University in Hangzhou, China, on research and exchanges of faculty, staff and students. ISU's Hongwei Xin (left) and Dean Wendy Wintersteen are shown with Zhejiang University Vice Dean Ling Chen and Professor Hongdong Guo (right).

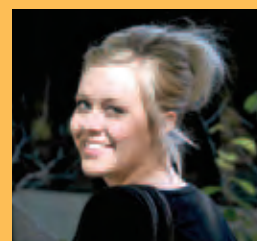


FACULTY TRAVEL

Ramesh Kanwar frequently travels to India and elsewhere developing research collaborations in sustainable water systems. Kanwar is a Charles F. Curtiss Distinguished Professor of Agriculture and Life Sciences and chair of the agricultural and biosystems engineering department.

STUDY ABROAD

Allix Tenold, senior in agricultural systems technology, heads to New Zealand this fall where she'll learn about agricultural systems as part of a course led by the agronomy and animal science departments. It will be her third study abroad experience.



GRADUATING GLOBAL CITIZENS

By Barbara McBreen

Students taking a study abroad program in the College of Agriculture and Life Sciences earn a passport stamped with experience. That's key to graduating global citizens, says Shelley Taylor, director of the college's study abroad program.

"Students need to have cross-cultural ease, an understanding of the interconnectedness of the world and a view that encompasses multiple perspectives," Taylor says.

Currently, more than 25 percent of the college's graduating classes study abroad. The goal is to have at least 50 percent.

Taylor says the college's program is one of the best in the nation. She credits the strategic planning, leadership and support of its administrators.

"We have progressive thinking leaders who understand the value of a global view," Taylor says. "We also couldn't do this without the involvement and dedication of our faculty."

During her 11 years in the ag study abroad office, Taylor has seen the transformation of students returning from study abroad trips. The academically intensive program isn't about being a tourist. It's

about immersing students in other cultures and working with organizations like the Food and Agriculture Organization of the United Nations to solve problems.

Taylor also serves as assistant director of Global Ag Programs. She tracks global issues, which helps her office coordinate study abroad plans for students and faculty. She also meets and collaborates with educators around the world to discuss academic experiences and opportunities for students.

Weaving together cultural experiences and analytical skills helps students understand complex global issues. Taylor says one student who traveled down the Yangtze River appreciated the insights she gained about the controversy surrounding the construction of the Three Gorges Dam.

Getting students to experience situations outside their comfort zone also builds confidence and problem solving skills, Taylor says. Students begin developing and practicing those skills when faced with simple challenges that involve food, traffic, currency, customs and language or the more complex challenge of interpreting a new culture.

She recalls one student's semester in Brazil. The student had never been in a situation where he was in the minority, so he didn't understand why everyone was asking him questions about his background.

"He finally realized that he was 'the foreigner' who looked and spoke differently than everyone else and that realization helped him see things from a different perspective," Taylor says.

Another student was visiting a country where one of his favorite fruits was grown. Taylor says the experience gave him the global perspective on how produce is moved throughout the world. It also gave him an understanding about "fair trade" and the economics behind trade issues.

Studying abroad is an investment in a student's career because a global view is an important asset for both employers in the U.S. and abroad. In fact, Taylor says, "students packing to go to college should consider a passport as essential as a computer." 📖

"Students packing to go to college should consider a passport as essential as a computer."



Contributed Photo

Shelley Taylor, director of the college's study abroad program, traveled to Rome in May as an adviser for the Dean's Global Agricultural and Food Leadership Program.

ONLINE EXTRAS: www.ag.iastate.edu/stories

Visit the Agriculture and Life Sciences Study Abroad Office online.



Richard Schultz takes a turn pushing a wheelbarrow along a strawberry field in Hangzhou, Zhejiang Province, China during one of his early visits to the country. After this trip he was encouraged to start his study abroad programs. He's pictured with professors from the life science college at Zhejiang University and Hangzhou, China.

STARGAZING, SHOWING STUDENTS A DIVERSE WORLD

By Susan Thompson

RICHARD SCHULTZ'S INTERNATIONAL CONNECTIONS ARE ALWAYS WITH HIM—ALL HE NEEDS TO DO IS LOOK UP.

"It is exciting to look at the stars at night and know that thousands of miles away there are friends who live on the steep hillsides along the Salween River in China, or in grass and mud huts in central Uganda, or in the new capital of Kazakhstan, or the Himalayan Mountains of Nepal, who can see the same stars," he says.

Schultz ('65 forestry, '68 MS and '70 PhD forest biology), a University Professor of natural resource ecology and management, wants to give his students the same type of feeling.

"My motivation is student-centered, exposing undergraduates to the diversity of peoples, places, lifestyles and living standards on our planet," he says. "At the same time, I want them to appreciate the similarity of people around the world."

Schultz began working internationally in the mid-1990s by hosting visiting pro-

fessors from South Korea and Venezuela.

While he continues to host visiting professors and students, his main focus now is helping develop and conduct study abroad trips for students in Iowa State's College of Agriculture and Life Sciences.

"Dick has been an incredible group leader," says Shelley Taylor, director of the college's study abroad programs. "He develops programs in non-traditional study abroad locations with an eye for what will be interesting and relevant to students. He strives to provide them an academic adventure that also is fun."

Schultz has led three student groups to Korea, guided groups to China each of the last six years and is one of three faculty members who have led an experiential program for students to Uganda twice. In 2011, he will lead student groups to Turkey and Greece, plus China and Uganda.


"I get tremendous satisfaction when I watch the transformation of students as they begin to sense the awe and wonder of other places and cultures," Schultz says.

"These are life-changing experiences."

A testament to his teaching ability came in 2008, when Schultz was one of six regional recipients of the USDA Food and Agriculture Sciences Excellence in Teaching Award.

Schultz teaches courses in ecology, soils, watershed management, plus a new course in resource systems of developing nations. Students in all his courses develop class presentations on global natural resource issues.

His involvement in international programs has made him a better teacher, Schultz says. "I believe international work gives me a better perspective of what goes on in the world, and provides me with many examples I can share with students."

When he's not teaching and traveling, Schultz is active in outreach activities that support his research program, which deals with the placement, design and installation of conservation buffers in agricultural landscapes. 

“Globalization is accelerating and the need to understand the world is more important than ever...”

ACKER: AGRICULTURE IS POWERFUL TOOL V

By Melea Reicks Licht



Photo: Bob Elbert

David Acker helps align college priorities with issues facing global society and ensures quality academic experiences for students.

Landing in Greece with 10 Greek words in his vocabulary, David Acker felt like a Boy Scout dropped off in the woods during a survival exercise. In a way, he was.

Acker, associate dean for academic and global programs, learned not only how to survive in a foreign land during his first trip abroad in 1972, but how to thrive.

“I learned the importance of listening and understanding as a first step in operating in a cross-cultural setting and the importance of learning foreign languages as a way to break down barriers and understand a culture at a deeper level,” he says.

His dedication for international agricultural development took root during three years of service as a recent college graduate at the American Farm School in Greece. Later, it grew in Africa where he worked for four years in farmer training and rural development after earning his master’s degrees.

“My experience in Tanzania showed me the importance of education for farmers with limited resources,” he says.

Before he was 20, Acker had spent time working and living in the South Bronx and Appalachia, which sparked his interest in how communities cope with poverty. In Appalachia he discovered the way agricul-

ture could empower the poor, and in rural Greece and Tanzania he realized the universal nature of its power.

“Agriculture is the principal basis for rural economic development. It is a tool individuals can use to work themselves out of poverty,” he says.

It was that sense of empowerment that attracted Acker to work in international agricultural development and education.

After working for Tanzania’s ministry of agriculture, Acker joined the staff of Oregon State University. He continued his efforts in Africa through a U.S. Agency for International Development research contract. He went on to serve as Oregon State’s director of international research and development.

Acker landed at ISU as the director of the college’s international programs in 1995 and became assistant dean in 2001. His role was expanded to include academic programs in 2004. The change allowed more international activities to be integrated into the academic mission of the college. The college is one of the



David Acker visits with two farmers from Kamuli District, Uganda. Acker says, "We have a responsibility to contribute to the food security of our state as well as the world we live in."


S. POVERTY

nation's leaders in sending students abroad to study.

"Globalization is accelerating and the need to understand the world is more important than ever, but our resources to give students the necessary experiences are more limited," he says. "Fortunately, private donors are stepping up and allowing us to meet this challenge."

Acker's coordination of academic programs includes distance education, outcomes assessment, student services, student recruitment and retention, career services, multicultural programs, scholarships, study abroad programs and international partnerships.

He has been a Fulbright research fellow, served as a consultant in eight countries and has served as the president of the Association for International Agricultural and Extension Education.

Acker remains involved with the American Farm School in Greece that sparked his passion. He currently serves on their board of trustees. And he's very comfortable conversing in Greek. 

DAVID ACKER: COMPASS POINTS

Titles: Associate dean of academic and global programs, Raymond and Mary Baker Chair in Global Agriculture, professor of agricultural education and studies

Alma maters: Alice Lloyd College (AA '73 sociology); Wilmington College (BA '75 agriculture/sociology); University of California, Davis (MS '80 international agricultural development; MEd '80 agricultural education); Oregon State (PhD '89 vocational education)

Why he does what he does: "We have the top food and agriculture experts in the world working at ISU. If we can't address world hunger now, then who and when? We have a responsibility to contribute to the food security of our state as well as the world we live in."

What he sees in our students: "Our students won't just be prepared to work for the World Bank and the United Nations, they'll be prepared to lead those organizations."

Comprendo? Has studied Latin, Greek, Spanish and Swahili

Up in the air: Travels 70 days per year, visited 12 countries last year

Pen to paper: Acker and Lavinia Gasperini wrote *Education for Rural People: The role of education, training and capacity development in poverty reduction and food security* in 2009, published by the Food and Agriculture Organization of the United Nations, available in English, French, Spanish and Italian.

Dream destination: "I have visited approximately 50 countries out of a total of more than 200 countries in the world so I have a lot of territory left to explore. I enjoy working most in East Africa largely because I enjoy the people we work with from farmers to politicians."

Boy Scout Rank: Eagle



LIFE CHANGING CULTURE SHOCK TO CULTURAL CONNECTION

By Susan Thompson

BRIAN STEWARD CALLS HIS PERSONAL INTERNATIONAL EXPERIENCES "INCREDIBLY LIFE-CHANGING." HE WANTS HIS STUDENTS TO HAVE THE SAME LIFE-CHANGING EXPERIENCES.

Steward, an agricultural and biosystems engineering associate professor, traveled abroad for the first time at the age of 25. He went to China and says he was overwhelmed by culture shock.

Later, he and his wife Stacia lived in China for a year while teaching English.

"These first international experiences, while being very challenging personally, helped me realize how little I know about the world, and how blessed I am to live in this country," he says.

Now Steward provides leadership to international programs in his department. "I like to help students have these types of experiences and gain similar perspectives," Steward says.

Outside of the classroom, Steward's research focuses on information technologies needed for precision agriculture.

His research, interest in international travel and desire to show students the world all got a boost when he was awarded a Fulbright Scholar grant to spend the 2009-2010 academic year at the Federal University of Viçosa in Brazil.

"In Brazil, I was learning a new modeling language for virtual prototyping, plus teaching a course in which the students used this

language to model a variety of systems in agriculture and biosystems," Steward says. "Virtual prototyping uses more computer models in the design process, pushing back the need to build a physical prototype."

Steward also organized and led a two-week study abroad trip for 10 students from Iowa State and eight from the University of Kentucky. The study tour focused on the development, adoption and use of engineering technology in agricultural and bioenergy production in Brazil.

It included a visit to the Federal University of Viçosa, one of the leading agricultural universities in Brazil, which was founded in 1921 by Iowa State alum Peter Henry Rolfs.

In 2002, Steward visited a former classmate who was a professor at the Brazilian university. That led to the development of a student exchange program between Iowa State and the Federal University of Viçosa, several other joint student and research projects and Steward's Fulbright assignment.

Steward says there are many global challenges for which he hopes Iowa State students can help find solutions. "Feeding a growing population, providing sustainable energy to a world of growing affluence, managing nutrients and wastes in an environmentally responsible manner—if our students don't have an understanding of the world, they will be ill-equipped to deal with these issues," he says.


"Engineering is not done in just one location anymore, but by teams of people across the globe communicating daily with one another," Steward says. "Our students need to understand the globally connected nature of our world, and how to interact effectively with people from different cultures and countries." 



Photo: Bob Elbert

Brian Steward (center) teaches a course in sustainable engineering and international development. Two students in the fall session are **Greg O'Brien**, who spent last spring studying at the Federal University of Viçosa, and **Lara Oliveira**, a student from the Federal University.



Gerald Klonglan enjoys a warm send-off from members of the Shighatini Lutheran Parish in Tanzania. The associate dean emeritus heads his church's outreach program for the parish.

ENDURING RELATIONSHIPS, LASTING LEGACY

By Melea Reicks Licht

In the shadow of Mount Kilimanjaro, Sophia drafts a letter to a friend. She thinks about translating each word from her native Swahili as she carefully prints in English.

"Thanks for your letter... I failure to answer your letter immediately because my last-born Aman was very serious sick with malaria. I always remember your kindness and love which you show me... Many regards to your family and friends."

Building relationships like that between Sophia and her American friend Eileen are the heart of Gerald Klonglan's work in Tanzania. In fact, they've been the heart of his life's work.

As chair of the Bethesda Tanzania Ministry Team at Bethesda Lutheran Church in Ames Klonglan ('58 rural sociology, MS '62, PhD '63) fosters the relationship between the Shighatini Lutheran Parish in Tanzania and Bethesda.

Klonglan is a professor emeritus of sociology and former associate dean for national programs and research. His boundless enthusiasm hasn't diminished since his retirement in 2001. He continues to put his idealism and practical know-how to work bringing people together across continents for the betterment of society.

"It's about accompaniment—walking side-by-side," Klonglan says. "This is not a business trip or a vacation, it is a human development trip for both them and us."

With apparent joy, he recounts how the relationship has grown and how the Bethesda team supplies basic needs and assists residents of Shighatini while learning from them as well.

"We no longer send missionaries abroad to 'educate.' We work with residents to support their needs as a society," he says. "We bring experts with us to focus on improving health, agriculture and education systems. Projects are not pursued unless both sides agree."

Bethesda's projects in Shighatini benefit all residents regardless of religious affiliation. Together they have established gravity flow water systems, improved dairy production, introduced crops and improved poultry production. Their efforts have been funded privately by the Bethesda congregation and gifts from The Rotary Club of Ames.

Klonglan also helped form a nonprofit organization, Empower Tanzania, to connect communities in the U.S. with those in rural Tanzania.

Prior to his work in Tanzania, Klonglan's career in sociology took

him around the world and often to the center of history.

He is most recently known for his work in college administration establishing relationships with historically black land-grant colleges and the tribal colleges. And his efforts with funding agencies led the college to become number one in the nation for earning U.S. Department of Agriculture external grants in 1999.

In retirement, Klonglan is an oft-requested speaker on the legacy of George Washington Carver, he hosts groups for the ISU Alumni Association and he continues to foster friendships and serve communities like Sophia's. ■



A sculpture from Tanzania represents the covenant between the congregations in Ames and Africa.

ONLINE EXTRAS: www.ag.iastate.edu/stories

- Read more about Gerald Klonglan, Empower Tanzania and Bethesda at STORIES online.

AURELIO CURBELO RECEIVES LEADERSHIP AWARD

Aurelio Curbelo ('02 ag and life sciences education, MS '06), minority liaison officer for the multicultural programs office in the college, received the 2010 Veishea Leadership Award for Excellence. The award recognizes faculty and staff who have been instrumental in improving leadership on campus. Curbelo works with students to promote diversity,

facilitate internship opportunities and encourage research experiences in agriculture, science, technology, engineering and mathematics.



HEARTY HELLOS

Jennifer Bousselet ('01 plant health and protection, '03 MS sustainable agriculture), joined the horticulture department as a lecturer and coordinator of the Iowa Master Gardener Program.

Jay Lampe ('01 animal science, '04 MS) is the manager of the swine farms overseeing the swine teaching, nutrition and research farms.

FOND FAREWELLS

Mary de Baca, director of college diversity programs, retired in August after 51 years at Iowa State University. She served on the faculty in human development and family studies and became involved in international agriculture programs in the early 1990s.

Robert Jolly, professor in economics, retired after a 31-year career at Iowa State. In addition to his research, teaching, extension and international work in the department, Jolly served in various administrative roles for the college and university.

Jon Tollefson ('75 PhD entomology), professor and former chair in the entomology department retired in June. Tollefson joined Iowa State in 1975 and specialized in research on the management of the corn rootworm.

For a complete list of new faculty and staff in the college visit www.ag.iastate.edu/stories.

PROF JOINS RANKS OF TOP ANIMAL SCIENTISTS

Don Beitz ('67 PhD dairy science) received the Frank Barron Morrison Award in July at the American Society of Animal Science conference. Beitz, an Iowa State animal science and biochemistry distinguished professor, received the honor for outstanding research that is important in livestock production. He is the sixth Iowa State professor to receive the honor since Jay Lush, an Iowa State animal science professor, first received it in 1946.



BIRRELL AND WHITE RECEIVE NEW PATENTS

Stuart Birrell, agricultural and biosystems engineering, was issued a patent in June for "Air Movement Unit for Biomass Conveyance, Separation or Combine Performance Enhancement."

Pamela White ('81 PhD food technology), food science and human nutrition, received a patent issued in May for "Terpene Ester Compounds as Autoxidation Inhibitors for Frying Oils."

INAUGURAL KOLMER AWARD PRESENTED TO MALLARINO AND TIMMS

Antonio Mallarino (MS '81 agronomy, '88 PhD), soil fertility professor and extension specialist, and **Leo Timms**, animal science professor and dairy extension specialist, received the Dean Lee R. Kolmer Award for Excellence in Applied Research. The new award, made possible by a gift from Lee and Jean Kolmer, recognizes faculty and staff within the college who have made significant contributions to improving the welfare of the people of Iowa through applied research.



A LEGEND INDUCTED INTO MEAT INDUSTRY HALL OF FAME

Professor emeritus **Bob Rust**, animal science, is one of 12 "legends" chosen as the Meat Industry's best of the best. Rust was inducted into the Meat Industry Hall of Fame Class of 2010 in October. Rust developed the meat science extension program at Iowa State including the development of the processed meat short courses.

RECENTLY NAMED TO ENDOWED POSITIONS

- **Lance Baumgard**, animal science, Norman L. Jacobson Endowed Professorship in Dairy Science
- **Suzanne Hendrich**, University Professor, Charlotte E. Roderuck Faculty Fellow in Food Science and Human Nutrition
- **Joseph Sebranek**, animal science and food science and human nutrition, Morrison Chair in Meat Science
- **Jan Thompson**, natural resource ecology and management, Harmon Family Professor in Forestry

FACULTY NAMED FELLOWS OF NATIONAL PROFESSIONAL SOCIETIES

- **Steven Hoff**, American Society of Agricultural and Biological Engineers
- **David Hennessy** ('93 PhD economics), Agricultural and Applied Economics Association
- **Maynard Hogberg** ('66 ag education, MS '72 animal science, PhD '76), American Society of Animal Science
- **John Patience**, American Society of Animal Science



Aurelio Curbelo (left), director of the Ag Multicultural Programs Office, and **Brian Castro**, lead the March of the Flags parade in September. Castro is president of ISU Minorities in Agriculture and Natural Resources and Related Sciences and involved in the Latino Heritage Committee.

Photo: Ryan Damman, Iowa State Daily

CELEBRATING CULTURES, SERVING OTHERS

By Barbara McBreen

MOVING FROM CHICAGO'S SOUTH SIDE TO AMES, IOWA WAS A CULTURE SHOCK FOR BRIAN CASTRO.

"I could hear myself breathe," says Castro, a sophomore with a double major in animal science and global resource systems.

In Chicago, the third largest city in the nation, traffic, people and noise are a constant. Castro says it took a while to get used to the open horizons and acres of corn.

Immersing himself into new situations isn't something new for Castro. He's a first generation American and his first language is Spanish. His parents moved from Mexico to pursue the American dream in Chicago before he was born. Castro says he often surprises others when he answers his cell phone and speaks fluent Spanish.

"When people first meet me—they hardly notice that I have an accent," Castro says. "Then my phone rings and I speak Spanish a hundred-miles a minute."

In Chicago, Castro attended the Chicago High School of Agriculture. The high school

attracted Castro because of his interest in animals. That interest and the guidance of Aurelio Curbelo, the College of Agriculture and Life Sciences multicultural coordinator, brought him to Iowa State.

"We kept in contact all four years and he kept me informed about opportunities at Iowa State," Castro says.

In high school, he was an avid fan of the FFA. He says the FFA taught him valuable leadership and communication skills. During his senior year he served as president of the FFA chapter, which is the largest in Illinois and the fourth largest in the United States.

Being involved is important, Castro says, and he leads by example. Castro is the president of the Iowa State chapter of the Minorities in Agriculture and Natural Resources and Related Sciences (MANRRS). In October, he helped organize a welcome breakfast for the largest ag career fair in the nation.

Castro also serves as the treasurer for the Latino Heritage Committee. The

group celebrated Latino Heritage month in September with a parade of flags, dances, dinners and a fiesta.

"We like to show people what our heritage is about, so we host events to celebrate our Latin background," Castro says.

From picking up cans at tailgates for charity to cleaning up the Skunk River, service and involvement top Castro's list. He's a pledge with the Phi Kappa Psi fraternity because of its extensive philanthropic goals, including helping with events to raise funds for the Girl's and Boy's Club in Ames.

Last summer, Castro took another cultural plunge and joined a group of his peers in Uganda as part of the ISU-Makerere University Uganda Service Learning Program. He says the experience broadened his understanding about the problems related to nutrition throughout the world.

"Now, I want to focus my studies on international nutrition," Castro says, "especially protein deficiency in children." ■

EXPERIENCING DIVERSITY

By Ashlee Hespen

FIRSTHAND

Ashlee Hespen, junior in public service and administration in agriculture from Conrad, Iowa, spent four months of 2010 as an exchange student at American University in Bulgaria. She blogged about her experience, and the following account is her entry for Feb. 23, 2010. For a link to her blog visit www.ag.iastate.edu/stories.



Photo: Lili Gavrilashka

Ashlee Hespen visits the Church of Annunciation in the oldest quarters of Blagoevgrad, the Bulgarian city that is home to American University.


Now that I've been here for a month and a half, I'm truly beginning to realize the diversity sitting right in front of me. American University in Bulgaria (AUBG) is more diverse than I could have ever imagined. Students from various countries across the world attend this private university of 1,000 students. In the main building, which previously hosted Soviet headquarters, hang the flags from all the countries, which have had students attend AUBG in the past and present. So far, I've met students from over 20 countries!

In the last week, I've taken the initiative to jump outside of the group of exchange students and spend time with full-time students. This past Friday, I was invited by a Bulgarian friend to join his group of friends. So I jumped right in to my greatest evening of diversity yet! There were about 20 students there, from Bulgaria, Serbia, Macedonia and a couple other countries.

This evening was so special because the friends took turn playing the guitar and singing songs from their own countries. It was so interesting to sit there and listen to the different music being played and feel the emotion of the music without understanding a single word. It was also neat because their languages are Slavic, so

they understand each other. And luckily enough, my friend was kind enough to translate the jokes and conversations for me. There were Serbian snacks shared throughout the night and it was peaceful as we listened to the Bistritsa River flow near us. During many of the songs, the whole group would join in and they also played a couple American songs.

In class the following Monday, we watched a video "A Class Divided," about Jane Elliot, an Iowa teacher who did an exercise with her third grade students shortly after the assassination of Martin Luther King, Jr. It made me reflect on my life back home. Friday was probably the first time I've ever felt, even in the slightest way, a minority. Although there were times I couldn't understand anything going on, I was able to enjoy the company and experience a variety of new cultures.

I am so happy to have this study abroad experience in such a diverse setting and am looking forward to all there is to learn from my newly found Bulgarian friends, as well as all of the students I can befriend while I'm here. Each day, I appreciate the diversity even further and I'm looking forward to going home with a broader worldview! 

CHANGING THE WORLD ONE BEEHIVE AT A TIME

By Barbara McBreen

An op-ed piece for the Ames High School newspaper landed Sam Bird in Uganda, where he has taught students how to build beehives.

Bird, a senior in global resource systems, says he wrote the op-ed because all of Iowa is tied to agriculture, “but the average student in Ames didn’t appreciate that connection.”

The letter caught the attention of David Acker, associate dean of academic and global programs in the College of Agriculture and Life Sciences.

Bird says he was originally headed to San Francisco to attend college. That changed when Acker contacted him and explained the global resource systems major at Iowa State.

Students who choose the major focus on an interna-

tional region of their choice. Before graduating they learn the language and an understanding of the region’s issues.

Bird was one of the first students to sign up for the major. He also was one of the first student peer mentors in the major’s learning community. He says it’s amazing what he’s learned from other students.

“They go to Thailand, Morocco, India, China, all over the world,” Bird says. “It’s what my classmates do during the summer.”

Uganda was Bird’s choice because he’d already spent three weeks there during high school. During that visit he met students younger than he was caring for entire families.

“If you ever see the issues these families have to deal with—it really hits you,” Bird says.

The summer after his first year in college he returned to Uganda with the ISU-Makerere University Uganda Service Learning Program, which is organized by the Center for Sustainable Rural Livelihoods (read more about this partnership on page 31).

Students from both universities worked together to teach English, improve the school garden and formed teams to teach specific skills. Bird’s group decided to teach beekeeping.

The Makerere University students suggested teaching beekeeping because the children could use their basket weaving skills to weave beehives. Also, establishing hives at the school would help teachers continue lessons on beekeeping. And the products, like honey, could be harvested and consumed or sold.



Contributed Photo

Learning the xylophone from pupils at Namasagali Primary School was part of Sam Bird’s experience during the Uganda Service Learning Study Abroad Program.

Bird says he didn’t think the students had caught on, until one morning they noticed an extra beehive.

“One student came over and said he had made the beehive,” Bird says. “Little bits of progress, like that beehive, is how to start to make a difference, whether it’s in Uganda or Iowa.”

The message Bird shares with his peers, international students and even United Nations leaders, is that we all have to work together to make the world sustainable. It’s an issue that’s interwoven with agriculture because he says, “we all need to eat.”

Bird participated in the United Nations Commission on Sustainable Development in 2009 and was recently selected as a Udall Scholar. He plans to attend graduate school to study applied economics and its implications for agriculture and economic development in sub-Saharan Africa. 📖



Contributed Photo

Sam Bird poses in front of Rome’s Coliseum on the Dean’s Global Food and Agriculture Leadership Program.

ONLINE EXTRAS: www.ag.iastate.edu/stories

Visit **STORIES** online to read more about Sam Bird and the global resource systems major.



Briana McNeal serves rice in a school in H.D. Kote, India, where she studied the nutritional needs of women and children.

Photo: Rachel Farhat



Photos: Rachel Farhat

DREAMING BIG FROM THE FOOD NETWORK TO FOOD AID

By Barbara McBreen

BRIANA MCNEAL BELIEVES IN DREAMING BIG.

Before the junior in global resource systems and dietetics enrolled at Iowa State she thought she would become a famous chef like Emeril Lagasse. But now she feels she can help more people by teaching them how to cook and eat nutritiously.

"I wanted to own a fancy restaurant and use the profits to fund a gourmet soup kitchen, so people who couldn't afford that food would be able to get it," McNeal says. "Now, I think I can help more people by teaching them how to eat."

In high school in Austin, Texas, McNeal listed the Nobel Peace Prize as one of her lifelong goals. When she moved to Ames she was delighted to hear about the World Food Prize ceremonies in Des Moines, an event she plans to attend someday.

Traveling to India has been a dream of McNeal's since the second grade. That's when her best friend's mom, who was from India, dressed her in a saree as part of a class presentation. "It was the best moment of my life," says McNeal.

Her dream to travel to India came true this summer when she spent four weeks

in Karnataka, India on a summer travel course. During her stay she and 12 other students studied the nutritional needs of women and children.

In an area where 46 percent of the children are malnourished, McNeal says their goal was to understand why. At one stop during the trip she served rice from a metal bucket to students attending a middle school. McNeal noticed that the students were much smaller than children the same age in the United States.

"We looked into whether they were having transportation or financial barriers," McNeal says. "We also provided some cooking tips to increase nutrients."

Cultural compliance was something her group also considered. Telling people to decrease rice and increase vegetables is easy, but since rice is an ingrained cultural tradition it's not a simple change.

"They have no reason to listen to us because we have not lived in their shoes," McNeal says.

The students also visited small farms. McNeal talked to one farmer who took home a

six-figure salary or 9 million rupees from just two acres. McNeal doesn't have a farm background, so she says it was a valuable experience to talk to farmers.

Traveling through southern India was an inspiring and jaw-dropping experience for McNeal. At one stop she posed for a photo in front of a 300-year-old jackfruit tree. McNeal says the owner knew the name of his ancestor that planted the tree nine generations earlier.

This year she's continuing to study India and plans to return to do her internship before she graduates. As part of her global resource systems major she'll continue to monitor events in India's southern region and learn the Hindi language. **S**



Photo: Rachel Farhat

Briana McNeal poses next to a 300-year-old jackfruit tree.

BORLAUG LEGACY LIVES ON THROUGH INTERNSHIP

Mary Foell, senior in public service and administration in agriculture, spent her summer creating a curriculum that teaches Norman Borlaug's legacy. Foell is the



Borlaug Scholar Award and Internship recipient, made possible by the college and the ISU Agricultural Endowment.

Learn more at www.ag.iastate.edu/stories.

FORESTRY STUDENTS REVIVE VEISHEA TRADITION, FRIENDLY RIVALRY

As part of Veishea 2010 festivities, forestry students revived a tradition from the 1960s by facing off against civil engineering students in a tug-of-war competition. The forestry students were victorious and were presented with the coveted double-bit axe trophy that also dates back to the early years of this event. Faculty speculate the tug-of-war tradition may have grown out of the friendly rivalry between forestry and civil engineering students within a surveying course that was required for both disciplines; no one is sure why the tradition was suspended. Current forestry club members challenged the student chapter of the American Society of Civil Engineers after they came across the double-bit axe cleaning a storeroom. The civil engineers were eager to take up the challenge. Read more and see more photos at www.ag.iastate.edu/stories.



DAIRY SCIENCE CLUB HONORED FOR SERVICE TO STORY COUNTY

The Dairy Science Club was honored for their work with Food at First in Ames with a Story County Youth Volunteer Award. Club members served a meal and made a financial contribution each month. "They are energetic young people who want to make a difference in the lives of those who cannot make ends meet ... or the family who is employed but still cannot meet the everyday expenses that so many others take for granted. This is a true example of ISU students doing positive things with and for the community," wrote their nominator.



ADVENTURES WITH BELUGAS, POLAR BEARS AND MORE

Interacting with beluga whales, polar bears, manatees and dolphins was part of the summer's daily routine for **Paul Fenton** and **Breanna King**, both juniors in biology who spent the summer as camp counselors for the Adventure Camps at SeaWorld in Orlando. To read more visit www.ag.iastate.edu/stories.

TEAMS BRING HOME BIG HONORS

- Agricultural and Biosystems Engineering, best student branch, first place Fountain Wars Competition, American Society of Agricultural and Biological Engineers
- Ag Business Club, Outstanding Chapter Award and Creative Club Award, Agricultural and Applied Economics Association
- National Agri-Marketing Association, John Deere Signature Award for overall chapter involvement, second place Outstanding Chapter, fourth place National Agri-Marketing Association Student Marketing Competition
- Crops Team, second place National North American Colleges and Teachers of Agriculture Conference
- Horse Judging Team, third place, National Reining Breeders Classic
- Soils Team, third place team judging, National Collegiate Soils Contest
- Livestock Judging Team, high team overall, high team reasons, high team in cattle, Northern Lights Contest



HAVING A BLAST TRANSPLANTING RICE IN TAIWAN

"I never imagined that I'd be up to my calves in mud, drenched in sweat, transplanting rice and having a blast doing it. I learned far more than I could've imagined, experienced things I'd never even heard of and met some incredible people from around the globe."

Scott Henry, a junior in agricultural business, about his experience in the Exploring Agriculture in Taiwan program. Read more at www.ag.iastate.edu/stories.



TACKLING GLOBAL FOOD ISSUES IN ROME

By Barbara McBreen

*Students in the Dean's Global Ag and Food Leadership Program pose in front of the Piazza del Popolo in Rome. Students include (left to right): **Mary Foell**, a senior in public service and administration; **Emily Zimmerman**, a senior in biology; **Sam Bird**, a senior in global resource systems; **Lisa Tronchetti**, a senior in agricultural business; **Allix Tenold**, a senior in agricultural systems technology; **Emma Flemmig**, '09 agronomy and biology; and **Vivian Bernau**, a senior in agronomy.*

Imagine walking past the Pantheon in Rome on your way to work. Now, imagine you are a college student working with international research centers addressing food and agricultural issues.

That's just what a group of seven Iowa State students did this summer. The students were enrolled in the Dean's Global Ag and Food Leadership Program, which prepares students to address the cultural, ecological and economic aspects of food security issues.

After semester-long preparations the students went to Rome for a four-week working session with Bioversity International and the Food and Agriculture Organization (FAO) of the United Nations. Both groups lead international efforts to defeat hunger.

The students formed two teams. The first team analyzed food production and consumption in Italy for Bioversity International. The team concluded that Italians are moving away from the Mediterranean diet.


The second team focused on the importance of maintaining genetic diversity in animals for food security and developed

educational materials for the Animal Production and Health Division of FAO.

The instructors leading the group included Joe Colletti, senior associate dean in the College of Agriculture and Life Sciences, Steven Loneragan, animal science professor, Gretchen Zdorkowski, agronomy senior lecturer, and Shelley Taylor, of the college's study abroad office.

"Agriculture is the basis of life because food sustains us all," Colletti says. "Our students are working with world-renowned clients to solve problems."

The experience was amazing, says Lisa Tronchetti, a senior in agricultural business and international agriculture. And adds, "I now understand the complexity of food security issues."

The program begins its third year in January 2011. 

ONLINE EXTRAS: www.ag.iastate.edu/stories

Visit STORIES online to view a slideshow of photos with commentary from the 2010 Rome trip.



GLOBAL MIND

FORMIDABLE CHALLENGES AWAIT PREPARED GRADS

By David Acker

OVER THE PAST 20 YEARS, OUR GEOPOLITICAL LANDSCAPE HAS BEEN RADICALLY TRANSFORMED. GLOBAL ENGAGEMENT BY THE COLLEGE OF AGRICULTURE AND LIFE SCIENCES ALSO HAS BEEN TRANSFORMED TO KEEP PACE WITH THIS NEW REALITY.

When the Cold War ended, the college was uniquely positioned to help with the massive economic transitions occurring in Eastern Europe and the former Soviet Union. Our faculty, alumni and industry partners trained a new generation of managers and policymakers to meet the challenges of a modern agriculture sector.

More recently, chronic challenges that transcend borders have taken center stage: poverty, hunger, disease, illiteracy, environmental degradation and human rights. Global security requires that we aggressively pursue solutions to these complex and interrelated problems.

Because 70 percent of the world's poor live in rural areas, we must work in those areas, where agriculture is the principal driver of economic development. More importantly, food security is critical to peace and stability. Famous Iowan and Nobel Laureate Norman Borlaug said, "You can't build a peaceful world on empty stomachs and human misery."

The College of Agriculture and Life Sciences has made a commitment to that kind of building process that Dr. Borlaug refers to. How? Some recent examples include:

- We developed a model for combating hunger and poverty and successfully implemented it in Uganda to improve the lives of rural farm families (see story on page 31).
- We are conducting research to improve the productivity of plants under harsh conditions and to improve the nutritional quality of food crops.
- We have helped educate West African women about the critical importance

of animal source foods in the diets of their young children.

- As you'll read on another page in STORIES (22), we are helping many African countries develop science-based seed trade policies that remove obstacles to sharing quality seed among nations.

A critical component in allowing Iowa and the United States to sustain and expand such efforts will be globally competent college graduates. We embarked on a campaign to increase the number of undergraduates who gain international experience. In recent years, we've increased our numbers five-fold—from 50 per year to today's over 250 per year.

We are proud of the fact that we rank second in the nation among colleges of agriculture and life sciences in the number of students we send abroad each year.

But we need to dramatically increase our efforts. Our goal is to double the number of students with international experience by 2018. We need to raise

SET

private funds to help students afford these experiences.

When I ask alumni whether our college should be devoting more time and energy to international collaboration, I always hear strong endorsements along the lines of:

- The college can and should serve both the needs of the state as well as those in need overseas.
- Helping people in other countries is in keeping with Iowa's values.
- The college's global engagement gives Iowa an advantage in a globally competitive agricultural marketplace and a leg up in a world market where 40 percent of U.S. exports now go to developing countries.

The challenges are formidable. The world's appetite will double in 20 years. If we are to satisfy the demand for food, we will need to make significant investments in both science and in the preparation of the next generation of globally competent agricultural and life science professionals.

Our best technology and our best-trained human resources will need to be harnessed to enable us to feed more people on a finite land mass, while maintaining and improving the environment.

"Civilization as it is known today could not have evolved, nor can it survive, without an adequate food supply."

That's Dr. Borlaug again, placing the importance of our work as a college into perspective.

—David Acker, associate dean of academic and global programs, is the Raymond and Mary Baker Chair in Global Agriculture and professor of agricultural education and studies. (Read more about Acker on page 6.)



Photo: Bob Elbert

WEAR YOUR PRIDE

College of Agriculture and Life Sciences clothing is available for order through the ISU Alumni Association at their member store online.



Select "college specific" in left-hand navigation. More: memberstore.isualum.org

LEAD BY FOLLOWING

Be in the know before anyone else.

Get updates about recent news and events from the College of Agriculture and Life Sciences by following its Twitter news feed online –



"iastate_cals".

NURTURING SEEDS OF A NEW AFRICA

By Brian Meyer

WHEN IT COMES TO SEEDS, MANJIT MISRA SEES PARALLELS BETWEEN IOWA'S PAST AND AFRICA'S FUTURE.

"Africa has many small seed providers scattered in different parts of the continent, all at different stages of education, training and preparedness to adequately provide high-quality seeds for farmers," says Misra, director of ISU's Seed Science Center and holder of the Dean's Chair for Distinction in the College of Agriculture and Life Sciences.

"It reminds me of how Iowa's seed industry evolved. We can bring our experience from the past, especially how public-private partnerships developed, and contribute to the future of seed in sub-Saharan Africa."

The Seed Science Center is partnering with the University of Nairobi, the International Maize and Wheat Improvement Center and private consultants to establish the Seed Enterprise and Management Institute in the Kenyan University's College of Agriculture and Veterinary Sciences.

The three-year project is funded by a \$4.49 million grant from the Alliance for a Green Revolution in Africa, which receives funding from the Bill and Melinda Gates Foundation. The alliance is led by African scientists, economists and business leaders who are working to achieve a food-secure and prosperous Africa through rapid, sus-

tainable agricultural growth based on smallholder farmers. The majority of farmers are women, who produce most of Africa's food with scarce resources and minimal government support.

"When Dr. Norman Borlaug died last year, his last words were, 'Take it to the farmer.' And that's the biggest problem in Africa," Misra says. "Our program is facilitating that goal, to build the capacity needed to take science-based information and demonstration to the women planting those seeds."

"Seed's at the heart of everything. And the biggest impact we can make is in education and improving infrastructure for seed systems," he says.

Iowa State and University of Nairobi experts will teach future leaders to enhance seed production and delivery systems within sub-Saharan Africa. They'll learn how to promote growth and development of the seed industry; how to improve production management and quality assurance; how to facilitate trade; and how to ensure seed is the very best product for farmers.

Participants will get both classroom time and hands-on experiences from

"Seed's at the heart of everything. And the biggest impact we can make is in education and improving infrastructure for seed systems."



Seed conditioning specialist **Alan Gaul** (right) demonstrates a color sorter to the University of Nairobi's **Florence Olubayo** and **James Muthomi** during the first Seed Enterprise Management Institute training workshop held last spring at the Seed Science Center.

Photo: Bob Elbert

national seed agencies, companies and research institutions.

Another thrust will be training plant breeders in seed science, in ways that go beyond variety improvement. "The hope is that more breeders become entrepreneurs, with enhanced knowledge of business, production and policy to make their work more widely available," Misra says.

During planning for the project, Misra says Namanga Ngongi, president of the Alliance for a Green Revolution in Africa, told him what Africa really needs. "He said, 'We want a seed center like yours.'" At last year's World Food Prize events in Des Moines, Ngongi told the assembled audience, "Iowa State's Seed Science Center is probably the best in the world."

The Seed Science Center has a global reputation for education and research in seed issues. It is home to the world's largest public seed testing laboratory, testing more than 300 species and conducting seed health tests for more than 250 pathogens. The center also annually trains scores of leaders and professionals in the U.S. and international seed industries.

The center has conducted projects in nearly 80 countries and is credited for facilitating the harmonization of seed policies in several regions of the world. These efforts help regions overcome challenges that restrict the movement of healthy, high-quality seeds across borders. One effort currently focuses on 19 states in southern and eastern Africa.

Alleviating hunger and poverty in Africa have been goals for many years, but with the Gates Foundation project and other efforts, Misra sees hopeful signs.

"Private foundations and others are once again recognizing agriculture as a solution. All over the world, there's

a realization that food is not just about eating, it's about improving life conditions. It's about human dignity," he says.

Misra came to the U.S. from India nearly 30 years ago when, "we believed the U.S. was out to do good in the world."

"I feel that spirit returning," he says. "I sense the realization in Africa that things can change, not only in science, but also at the leadership and practical levels."

This year the project leaders have conducted training workshops in Africa on seed conditioning and handling, quality assurance and information technology and seed legislation.

"Our method is to bring people together, help them talk about challenges and how to solve them together, all with a respectful attitude," Misra says. "We work hard to earn their trust. For the state of Iowa, the benefits are clear when you do this kind of work. You develop relationships that may pave the way for new markets and new educational opportunities." □



Artwork depicting life-sustaining seed and the science-with-service image of George Washington Carver inspire **Manjit Misra** and the work the Seed Science Center is doing with partners in Africa.

Photo: Bob Elbert



Photo: University Archives

Iowa State University students board a plane in 1964 for a month-long trip to Europe as part of the Ag Travel Course.

AG TRAVEL COURSE

By Susan Thompson

SHOWS STUDENTS THE WORLD FOR DECADES

In the early morning hours of a 1964 summer day, 23 young men boarded a bus in front of the agronomy building to begin a month-long trip to Europe. That international trip—dubbed “The Ag Travel Course”—was a model for the many study abroad travel courses offered through the college today.

The trip was a partnership between the animal science and agronomy departments. Two professors led the group. Jim Kiser ('42 animal science) and Roger Mitchell ('54 agronomy, PhD '61) chose Europe for that year's annual travel course because, as Mitchell tells it, “We felt the European Economic Community was going to have a significant impact on U.S. agriculture.”

A student on the trip, Roy Bardole ('65 farm operations) brought home ideas he could use on his family farm near Rippey,

Iowa. “Grazing techniques, the intensity of their agriculture, their hog production facilities—all were things that impressed me,” he says.

James Tiedje ('64 agronomy), now a university distinguished professor and director of the Michigan State University Center for Microbial Ecology, says that for him the course was “a unique opportunity. I wanted to see the world, without a gun. I was so motivated I took out my first loan. At that time, foreign study experiences were very rare.”

Gary Muller ('66 agricultural business), who farmed in southwest Iowa before retiring to Arizona, says he learned the price of land in Europe had nothing to do with productivity. “Land was valued at \$3,000 to \$4,000 an acre, but we were told land didn't sell. If you wanted land, you had to inherit it,” Muller says.

Many of the participants had never been outside of Iowa. Muller now has traveled to more than 50 countries and calls the ag travel course a “springboard to a life of travel. Once your mind has been expanded by a new thought, it will never return to its original shape. That trip expanded our minds and we were never the same.”

Bardole has traveled to Europe extensively as an officer with the American Soybean Association. Tiedje often travels internationally, and is involved in the World Class University program in Seoul, South Korea, where he spends two months each year.

Mitchell, retired dean of the College of Agriculture, Food and Natural Resources at the University of Missouri, continues to encourage undergraduates by sponsoring an annual scholarship for Iowa State agronomy students with



Contributed Photo



Mary Wiedenhoef was a student participant in 1978 (center). Now an agronomy professor at ISU, she leads a study abroad course.

preference for those interested in pursuing international experiences.

In the summer of 1972, Ron Mortensen ('73 agricultural education and studies) participated in an ag travel course that took students to 13 European countries.

"I remember being at each of the Communist country borders waiting for at least an hour to have the officials look at our passports," Mortensen says. "It showed us the value of our freedom in the United States."

After graduation, Mortensen spent 12 years as a banker in Iowa and Chicago, with the last 25 years in Fort Dodge as a market consultant for farmers. "That trip gave me a great perspective of what it is like in other agricultural regions of the world," he says. "It was my first big trip overseas. Since then I have been back to Europe numerous times and also traveled to Argentina, Brazil and Japan."

Mary (Hagemann) Wiedenhoef ('80 agronomy) has the unique perspective of having been both a student participant and later a faculty leader. In 1978, she spent a month in Europe where she says the group traveled "behind the Iron Curtain."

"Eastern Europe looked very different from Western Europe and that made a great impact on us," Wiedenhoef says.

"(The trip) was a springboard to a life of travel. Once your mind has been expanded by a new thought, it will never return to its original shape. That trip expanded our minds and we were never the same."

"It was clear our lives are influenced not only by our natural environment—climate, landscape, soil resources, water resources—but also by the political environment."

Now an agronomy professor at Iowa State, Wiedenhoef teamed with Leo Timms, animal science professor, to lead students to New Zealand in 2007 and again this fall.

"I know students' lives are changed when they step out of their comfort zone," she says. "They learn about different cultures, natural environments, political

environments, ways of doing things. They also learn about themselves."

While agronomy and animal science have continued to partner on travel courses since the early 1960s, other departments have gotten in on the act. Twelve to 15 trips are offered each year through the College of Agriculture and Life Sciences.

Each has its own academic theme and is as different as the faculty who lead them. Some are done in partnership with other colleges at Iowa State while some are collaborations with other universities. **S**

AG TRAVEL COURSE: STATESIDE

A version of the "Ag Travel Course" also took students to farms and agricultural sites throughout the U.S. **Terry McClain** ('78 agricultural business) participated in such a 1975 trip through the Eastern U.S. and recently shared a letter about his experience. He's shown here at center with Bobby and Carolyn Judice.

"There were 32 students and two professors, Brent Pierce from agronomy and Marshall Jurgens from animal science. We stopped three to four times a day to see agriculture and ag-related industries, assisted by extension agents in the 19 different states we visited. The best part of the trip was my visit with Bobby and Carolyn Judice and their family. He is a third generation sugar cane farmer. Our families have stayed in touch and visited each other's homes and farms on numerous occasions in the past 35 years. We talk often and established a very strong bond. For example, my first wife, Pam, and I spent some time with them on our honeymoon in 1982. Bobby and Carolyn came to visit in the winter of 1984, played in our snow and gave our infant daughter Ashley a bath in the kitchen sink. Pam passed away in 2005 and Carolyn came to the funeral. Carolyn also came to Ashley's wedding and visited shortly after my wedding to Gladys in 2006. I count our friendship as one of the greatest blessings in my life."

To read McClain's complete letter visit www.ag.iastate.edu/stories.



ENSMINGER'S LEGACY

BRINGING ANIMAL SCIENTISTS TOGETHER

By Susan Thompson

Iowa State University animal scientists provide the leadership for a series of international animal science conferences known as Ensminger Schools.

The most recent conference in Spain in May 2010, organized by Iowa State University and the University of Lleida, brought together 150 people from 16 countries to discuss the future of animal production.

"These schools are designed to help provide cutting edge solutions for people in the region," says Max Rothschild, Charles F. Curtiss Distinguished Professor of Agriculture in animal science who leads the Ensminger Schools as the Ensminger International Chair.

Marion Eugene Ensminger was dedicated to animal agriculture education and served on the faculty at four universities. In 1964,

he launched a series of technical agriculture seminars held in more than 70 countries.

Iowa State faculty got involved with the Ensminger Schools in 1990. An endowment left to the ISU Foundation following the death of Ensminger and his wife Audrey helps finance the continuation of the conferences.


"The conference in Spain looked at the challenge of feeding people in the future," Rothschild says. "Talks addressed issues of technology, genetics, water and waste, animal behavior and training future animal scientists."

"The next generation of animal science professionals must have a global perspective," says Maynard Hogberg, animal science department chair. "We must double food production in the next 40 years to keep up with population demand. And we must



Contributed Photo

Participants in the 2010 Ensminger School don sanitary gowns to visit a modern meat processing plant near Lleida in Spain. Max Rothschild, who leads the schools, is the first person in the second row.

do it in a way that minimizes environmental impact, improves food safety and uses appropriate animal welfare standards." 

ONLINE EXTRAS: www.ag.iastate.edu/stories

More details, including the conference proceedings, are available at **STORIES** online.

BOOSTING BEANS'

NATURAL NITROGEN FIXATION

By Ed Adcock

College researchers are working to boost the productivity of common beans growing on the nutrient-poor soils in sub-Saharan Africa. The goal is to improve the diets of the people who live there.

The common bean, the kind grown most often in the study countries of Uganda, Rwanda and Tanzania, is an important source of protein for low-income families in rural and urban areas providing about 38 percent of protein and 12 to 16 percent of daily caloric requirements.

Unfortunately, it does a poor job of accumulating nitrogen on its own. Improving the biological nitrogen fixation of beans would help build soil productivity without the use of commercial fertilizer, which is too expensive for most small landholder farmers.

"Increasing legume production provides a strategic opportunity to help meet the United Nation's Millennium Development Goal targets of reducing rural hunger and poverty," says Mark Westgate, agronomy professor and director of the Center for Sustainable Rural Livelihoods.


Westgate and his colleagues are inoculating bean seed with a new product made

by the Ames-based Becker-Underwood Inc. in hopes of improving common bean's nitrogen-fixing potential.

The inoculant is "stacked" with plant growth-promoting rhizobacteria and other compounds that promote plant growth and overall health. It costs less than fertilizer.

Researchers also are seeking to develop bean germplasm that benefits most from inoculation.

Multiple sites will be used to evaluate popular bean cultivars for response to different inoculant treatments. Site selection will be determined by where beans are already grown and consumed, and will encompass the range of soil types and weather conditions at each site.

Measurements of biomass, seed yield and the nitrogen content of plants and seed will be used to evaluate the biological nitrogen response of the different genotypes and treatments. 



Contributed Photo

Ugandan farmers sort a popular variety of common beans for sale in the market. Demand for bean seed has increased due to poor harvest and the need to change feeding habits from animal protein to more of a plant-derived source.



Soil physicist **Anwar Battikhi** is currently president of the Jordan Society for Scientific Research, which brings together public and private sector researchers for discussions like this Conference of Research involving nearly 1,500 scientists.

ADVANCING SCIENCE & EDUCATION IN JORDAN

By Melea Reicks Licht

Ask Anwar Battikhi where he's from and he'll offer an oratory of familial descent beginning with his great grandfather's emigration from Syria to Jordan in the mid-19th century.

It's clear roots run deep for this world-renowned soil scientist who has a knack for storytelling as well as agricultural research, educational leadership and policymaking.



Anwar Battikhi

Battikhi ('77 PhD soil physics) of Amman, Jordan is a professor of soil physics and irrigation at the University of Jordan and a recognized expert in several agricultural disciplines.

He also serves as president of the Jordan Society for Scientific Research, which has about 600 members. The group holds bi-weekly activities for its members in various fields to share problems, brainstorm solutions and make those leading the private and public sectors aware of hurdles facing researchers.

As the former Secretary General of The Higher Council for Science and Technology, he represented that organization and the Kingdom of Jordan before Arab, regional

and international institutions and bodies concerned with science and technology.

"The Higher Council for Science and Technology is where all the plans are set for Jordan for future research and to solve current problems," he says.

Prior to his current position, he served as a faculty member and administrator at the University of Jordan for 20 years, before being appointed vice president for Jordan University for Science and Technology, then president of the Hashemite University. He made significant changes during his tenure as president that led to exponential growth in numbers of faculty and students. He also established an institute for water and environment and seven other schools.


"I introduced new departments needed to solve the unemployment problem and to inject a new blood in the working force with new specialties, high qualifications and with new ideas," Battikhi says.

Battikhi was presented with the Award of Excellence in Education in the Kingdom of Jordan and received the Abd el Hamid Shoman Award for Best Young Scientist in the Arab World in 1986. He received the ISU Distinguished Alumni Award in 2009.

He holds his experiences at Iowa State in high regard, especially those with the late Don Kirkham. "Professor Kirkham

was the father of soil physics in the United States and even in the world," Battikhi says. "He taught me dedication and the science of research methodology in soil water."

But, he says it was what he learned at Iowa State besides the science that was most important to his career successes.

"I grew personally and developed leadership skills," he says. "I learned how to listen to others, how to have mutual respect between students and instructors and how to be objective – all essential in the positions I held during the last 35 years." 

ONLINE EXTRAS: www.ag.iastate.edu/stories

Battikhi received the ISU Distinguished Alumni Award in 2009. The following excerpt is from his acceptance speech. The complete text can be found in **STORIES** online.

"I believe that through the power of knowledge and science, we can unite to create a more coherent and happier world for us to live in. What if all resources wasted in wars and killing are invested to further develop humanity? Our earth has become a small village, so what if peace and understanding become the domineering power that holds it together?... This will help us see beyond our differences and focus on the value of the human being."

BRINGING^{the} NUTRITION

By Melea Reicks Licht

OF MILK TO MILLIONS

To combat malnutrition, the president of Zambia promised one pint of milk per day to each school-age child in the country. He soon found his promise impossible to keep. Thankfully, Alex Buchanan was able to help.



Photo: Melea Reicks Licht

Alex Buchanan samples a few fortified biscuits with global resource systems student Briana McNeal (profiled on page 14). Buchanan met with a group of students during a recent visit to Iowa State to share lessons learned during his career developing nutritional supplements.

It was the early 1970s, and Buchanan ('60 MS dairy bacteriology and agricultural economics) had recently developed nutritionally fortified biscuits that would help the president keep his promise.

Promoted with the slogan, "eat more milk," an intense publicity campaign encouraged people to feed the nutritious biscuits to their young children. The president wore the ring-shaped cookies on a string around his neck, and Buchanan was photographed feeding them to his own daughter.

The nutritional biscuits Buchanan developed more than 35 years ago still are used today in developing countries and for disaster relief.

Buchanan recently sat down with a group of global resource systems students at Iowa State. He shared lessons learned during his life's work bringing the nutritional benefits of milk to those without access due to location or circumstance.

As he looked across the table Buchanan saw a little of himself in the burgeoning scientists, many bent on finding ways to improve food systems in developing

countries. The secret to his success, he shared, was getting to know the locals and customizing each product to the region's tastes, culture and nutritional needs.

"When I started my research they had tried to offer milk powder to developing countries. It turns out locals weren't used to the flavor, they didn't have refrigeration once it was mixed—assuming they had safe water to mix it with—and many were lactose intolerant," he says.

With the support of the Australian Dairy Board, he and his research team at the Commonwealth Scientific and Industrial Research Organization dairy research laboratory in Melbourne chose a new focus. They created a fortified biscuit with all the nutritional value of milk, and it improved children's health immediately.

"I heard over and over again that once the kids started eating the biscuits they would stay awake all morning in primary school," he says. "Kids put on a tremendous amount of weight – a couple of kilos in a few weeks. And the most heartening result was vitamin A deficiencies disappeared quickly."



Alex Buchanan developed nutritionally fortified biscuits more than 35 years ago that are still used today for disaster relief as with these two Haitian children following the earthquake in January.

In a feeding trial with Ethiopian AIDS orphans in 2005, Buchanan says researchers noticed a similar dramatic improvement in weight and body mass index.

The high-protein Australian milk biscuit and a second high-energy biscuit they also developed still are staples of his country's international food aid program, Buchanan says. Six biscuits are nutritionally equal to one pint of milk. Each biscuit is 20 percent fat, 20 percent protein and 55 percent carbohydrate with the remaining percent in moisture, vitamins and minerals.

Buchanan also developed an affordable infant food made from rice and soy flour as part of his work at Kasetsart University in Bangkok, Thailand.

"Post-weaning infants were experiencing serious brain damage due to malnutrition, a problem that affects more than half the world's children.



Alex Buchanan, consultant editor and professorial fellow at Victoria University in Melbourne, says his experience at Iowa State paved the way for his renowned career in global food research.

We produced a weaning food that suited them. It was equivalent to milk, but it was distributed widely and the kids liked it," he says. "That was 35 years ago and they're still producing it in Bangkok for \$1 per pound."

During his conversation with ISU students, Buchanan told them it is possible to marry science with public policy to make a difference.

"You need to pay attention to conflicting science and take a multidisciplinary approach in case the answers change, as it did in our case," he says. "And you need to gain support of influential people making public policy."


An active Rotarian, Buchanan came to Iowa State as a Fulbright Scholar and Rotary Ambassadorial Scholar in 1959. He says dairy bacteriology professor Gene Nelson talked him into staying for his master's degree, which he pursued at a feverish pace and completed in just nine months.

Buchanan credits his degree at ISU for opening the door for him to change

his career from a dairy factory manager to food research for the premier research organization in Australia.

He also is former executive director of the Crawford Fund, a division of the Australian Academy of Technological Sciences and Engineering that promotes technological expertise and agricultural research to increase sustainable global food production. And for over a decade he managed food research projects for the ASEAN-Australia Economic Corporation.

Buchanan now is a consultant editor and professorial fellow at Victoria University in Melbourne.

He was recently honored with the Rotary Foundation Global Alumni Service to Humanity Award and has been named a member of the Order of Australia for his service to food science and technology and to the community. 

ONLINE EXTRAS: www.ag.iastate.edu/stories

Find a link to the lecture podcast, "Food Science and Humanitarianism," Alex Buchanan presented at Iowa State University.

WORKING SIDE-BY-SIDE By Melea Reicks Licht FOR HONDURAS

As a volunteer manager for Peace Corps in Honduras, Alejandrina Carrasco looks at her job as a way to bring two cultures together for a common good.

“The Peace Corps has a beautiful mission to provide technical assistance to countries that require support. It’s a cultural exchange—volunteers come to share American culture and learn about Honduran culture,” she says.

Carrasco (’01 PhD agricultural education) is the manager of the Peace Corps municipal development project in her

native country. She serves as liaison to the Government of Honduras to determine their interests, needs and potential for cooperation. It is her job to ensure her volunteers’ efforts are consistent with those of the government and Peace Corps philosophy. She oversees 35 volunteers in the field, develops training and evaluates programming for the volunteers.

Her programs include mentoring mayors to improve services to citizens, leadership training for community-based organizations or initiatives to improve participation

in municipalities. Carrasco says she enjoys working in different parts of Honduras, facilitating technical assistance in the field and training volunteers.

“Everything is related to human development in my eyes—that’s how this work is special to me,” she says. “I supervise work in the field and can also provide my own advice. I’m helping

Hondurans through my volunteers who work side-by-side with Hondurans.”

Carrasco has degrees in technical agriculture and agronomy from Zamorano, Pan-American School of Agriculture in Honduras. She says her degrees served her well in her work in extension and agricultural training. But she wanted to learn more about how to transfer her technical knowledge and apply it for the benefit of her fellow Hondurans.

“When I worked in a rural community after my first degree, I realized people don’t have the means to get the latest technology or sometimes the openness to accept technology,” she says. “I had the knowledge, but didn’t know how to transfer what I know to these people, or how to get it to work with their means so I became interested in extension education.”

Carrasco learned English so she could pursue higher education in the United States. After completing her masters at Louisiana State University she came to Iowa State. She returned to Honduras and joined the Peace Corps staff in 2002. Her commitment to her country is apparent to the volunteers she supervises.

“Ale told me she loved her country as well as her family and she wanted to make it a better place,” says returned Peace Corps volunteer Robert Clink, a financial management officer for the U.S. Agency for International Development in the Dominican Republic. “I knew Ale really understood the bigger picture. What I learned firsthand was Honduras is a country with amazing people and so much potential. Extreme poverty is a fact of life in that country, but Ale truly has dedicated herself to making it a better place.”

“Everything is related to human development in my eyes.”



Alejandrina Carrasco (left) leads Peace Corps’ efforts to improve communities in Honduras. Carrasco, Peace Corps volunteer **Brian Sabri** and Marale Vice Mayor **Odalma Gonzalez** established a work plan for Marale.

BREAKING DOWN TRADE BARRIERS WITH SCIENCE



Photo: Bob Elbert

By Melea Reicks Licht

Laurie Hueneker Martens has many tools in her arsenal, but her weapon of choice is science.

As director of international trade policy, sanitary and technical issues for the National Pork Producers Council, Martens' ('01 animal science and international agriculture) mission is to knock down barriers to trade.

When the H1N1 flu virus hit hard last winter, it was Martens who sat down with foreign trade liaisons and negotiated reopening trade with countries that had banned U.S. pork.

In the middle of tough, emotionally-charged negotiations, Martens says she tries to keep each discussion in perspective.

"I don't take discussions personally," she says. "I want to win the war, not the battle, so I always take a strategic approach on how to address each issue, each person. I don't just bring them a problem. I offer a solution."

She says the "sanitary and technical" in her title refers to trade barriers such as antibiotics, feed ingredients and, in

the future, traceability criteria.

"Our trading partners historically use tariffs more often as a barrier to trade, but now they are using criteria based on unscientific information," Martens says. "I work with our trade partners to inform them of the science behind these issues and negotiate trade agreements that increase market access without compromising the competitiveness of the industry."

Martens is based in Washington, D.C., but travels extensively talking with producers, processors and packers at trade industry meetings. She frequently meets with delegates representing trade partners from around the globe and representatives from federal agencies, the Administration and Congress to lobby for legislation and regulation for the pork industry.

A farm girl from eastern Iowa, Martens has the training and experience to back up her negotiations.

She spent three months working on a hog farm in Thailand as an undergraduate, interned for the U.S. Department of Agriculture and as a vet assistant at the

American Farm School in Greece. In addition to her ISU degrees, she has a master's in international agriculture trade and development from Oklahoma State.

Martens worked for a time with her parents' niche meat marketing business and, just prior to her current position, for a medical device company in Minnesota where she established international trade protocols for pig valves used in human hearts.

She credits her mentors, education and experiences afforded her by Iowa State University for helping her do what she set out to do—mesh science and policy for the benefit of American producers.

"The pork industry is a forward-thinking industry. They consider trade a two-way street. This will only be more important as incomes around the world continue to rise bringing meat consumption to entirely new markets," she says.

Martens returns to Iowa State each year to recruit interns for her office to help a new generation gain experience in the expanding global marketplace. 📖

Laurie Hueneker Martens with the National Pork Producers Council works with trade liaisons from across the globe to open markets for U.S. pork.

NEWSY E-NEWS

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ISU HONORS IDALS WATER CHIEF AS "EXTRAORDINARY PARTNER"

The government official who oversees water programs for the Iowa Department of Agriculture and Land Stewardship (IDALS) was honored in July by the college. **Dean**

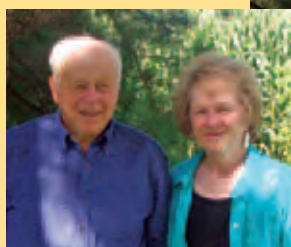
Lemke ('72 agricultural engineering), IDALS water resource bureau chief, was presented the Impact Award for Extraordinary Partnership by Wendy Wintersteen, endowed dean.



MAX AND LORENE SITTING IN A TREE...

Max and Lorene Mugge might not be sitting in their "anniversary tree," but 59 years after they picked up the little seedling from the forestry exhibit at Veishea they still enjoy its shade.

Lorene tucked the tiny tree into her purse while she and her boyfriend Max were visiting Iowa State campus during "Senior Skip Day" in 1951. She carried it back to Cleghorn, Iowa, where she planted it in her parents' backyard. Since she and Max were married that December they consider the tree their "anniversary tree." At 76 years old, Lorene jokes the two of them and that tree have made it through several tough Iowa winters. Their granddaughter Erin Mugge ('07 zoology), a recent College of Agriculture and Life Sciences grad, slipped a photo of the tree under a faculty member's door with a note from Lorene. "We will have our 60th wedding anniversary next year, as will our special tree," Lorene says.



Photos: Krista Mugge

YOUNG ALUMS FLY HIGH ON CURTISS HALL BANNERS

Emma Flemmig ('10 biology, agronomy, international agriculture) and **Charles Stewart** ('00 agricultural biochemistry) are featured in two banners hanging on the front of Curtiss Hall. Stewart works for the Salk Institute for Biological Studies in San Diego, Calif. Flemmig is the world president of International Association of Students in Agricultural and Related Sciences. The banners are being used to showcase the college by sharing alumni stories. Each banner has a URL that links to their stories. Visit www.ag.iastate.edu/stories for a link.



COLLEGE AND ALUMNI ASSOCIATION AWARDS

The following were recognized in October at the 2010 Iowa State University Honors and Awards Ceremony.

- **Glen Mente** ('61 animal husbandry, MS '63 animal nutrition) and Mary Jo Mente, of Ames, National Service Award from the ISU Alumni Association
- **James Borel** ('78 agricultural business), of West Chester, Pa., Floyd Andre Award from the college
- **Dana Robes** ('67 dairy science) of Boca Grande, Fla., Henry A. Wallace Award from the college
- **Rose Marie Boughton** ('58 dietetics) of Bloomington, Minn., George Washington Carver Distinguished Service Award from the college
- **Andrea Falk Sellers** ('94 agricultural biochemistry) of Lake Lotawana, Mo., Outstanding Young Alumni Award from the college
- **Wayne Fuller** ('55 agricultural business, MS '57 agricultural economics, PhD '59) of Ames, Distinguished Service Award from the College of Liberal Arts and Sciences

ALUMNI AND IOWA EGG COUNCIL HONORED

The ISU Alumni Association and the ISU Foundation recognized alumni and an association with its most prestigious honors during the annual Distinguished Awards Celebration in April.



Nancy Cox ('70 bacteriology) and **Roy Reiman** ('57 agricultural

journalism) received the distinguished alumni award, which honors alumni who are nationally and/or internationally recognized for pre-eminent contributions to their professions or life's work. The Iowa Egg Council



received the Order of the Knoll award recognizing outstanding generosity to the university by a corporation, foundation or association.



ALUM'S COMPANY RECOGNIZED FOR INTERNATIONAL PERFORMANCE

Ching Seng Liew ('79 agronomy and pest management), founder and owner of Pacific Agriscience in Singapore, was presented an SME (Small and Medium Enterprise) Growth Excellence Recognition. The company is an exporter and importer of agrichemicals, fertilizers and other crop inputs and was recognized in the international category. SME Growth Excellence Recognition is jointly organized by HSBC Commercial Banking and DP Information Group.



PARTNERS WORK FOR RURAL DEVELOPMENT IN UGANDA

By Ed Adcock

Mark Westgate (left), Henry Kizito and Dorothy Masinde look over common bean plants, a popular crop in Uganda. They work together through the Center for Sustainable Rural Livelihoods to foster rural development.

It doesn't take long during a visit with a Ugandan family for Dorothy Masinde to tell if the Center for Sustainable Rural Livelihoods (CSRL) is having an impact.

"We are very generous in Africa," she explains. "When you come to my house, the first thing I do is offer you food. So if I go to a home and nothing is offered to me, I know there's trouble here. If I come back and we're offered food, we've made a difference—that to me is the joy of my job."

Masinde is the center's associate director for field operations, working full-time in Uganda. She started six years ago when the Iowa State University center was beginning its development programs.

According to Mark Westgate, agronomy professor and director of CSRL, they began with listening to what rural Ugandans need and want.

"We start by working with the local communities," he says, "working with individual farmers and trying to find out what their needs are and help them work on those needs—in terms of

production, getting them into markets, health, nutrition, keeping their kids in school; the kind of thing that will sustain them in the long run."

When CSRL was preparing to begin its development work, Masinde says it sought partners with a similar vision and mission. They selected VEDCO, which stands for Volunteer Efforts for Development Concerns. It is a nongovernmental organization established in 1986 to deal with social and economic turmoil after Uganda's civil war.

About 20 staff members are involved in the Iowa State projects in Uganda's Kamuli district, according to VEDCO executive director Henry Kizito-Musoke. The organization provides extension services, links to regional and national authorities and a connection to the agricultural college at Makerere University.

One project supports small landholder farmers, who till between two and five acres. The assistance includes help with crop production, grain storage and marketing.

"The food we eat here comes from these small farmers who, more often than

not, are poor," Kizito-Musoke says. "So the kind of input that Iowa State and VEDCO are putting together plus Makerere will help these people sustainably till their land, feed their families, feed their communities and then look at regional and national markets for their produce."

The center's service learning project brings together Iowa State and Makerere faculty and students to teach students at rural primary schools how to garden. (Read about one student's experience on page 13.)

CSRL is funded by private gifts through the ISU Foundation; the Henry A. Wallace Endowed Chair for Sustainable Agriculture; the College of Agriculture and Life Sciences and Experiment Station; and government and private grants.

Westgate says another reason the center has been successful is because it has these dedicated people working in the country.

"They know the issues—they are the program in country," he says. "If we didn't have them, CSRL wouldn't be nearly as successful. The ones leading the program are committed to improving the lives of the small landholder farmers and young students." ■

U.S. Army Staff Sergeant Eric Pugh meets with young Afghans near an orchard demonstration project in Kunar province, Afghanistan.



DIRT WARRIORS

DEPLOY ISU TRAINING IN AFGHANISTAN

By Willy Klein

The “Dirt Warriors” landed on Afghan soils in July ready to help rebuild the agricultural infrastructure and increase capacity of agricultural systems in the Kunar province.

The 60 members of the Iowa National Guard 734th Agri-Business Development Team (ADT) coined their own nickname. The Iowa Army and Air National Guard members are also livestock and crop producers, veterinarians, agronomists, engineers, foresters, marketers and agri-business professionals.

Their first order of business was to become familiar with Kunar province land, farmers, agricultural professionals and government officials. ADT senior officers focused on building relationships and learning how the Afghans see their agricultural needs. Such conversations and assessments gave the team solid footing for developing practical, sustainable initiatives to implement relatively quickly.

And training from Iowa State University is helping them put their plans into action.

Col. Craig Bargfrede, commander of the 734th, worked closely with Iowa



Contributed Photo



Photo: Willy Klein



Contributed Photo

John Sawyer, extension soil fertility specialist, tells ADT members that correctly gathering soil samples is the same in Iowa and Kunar province. But, when teaching how to use analysis they must take into account the current knowledge and practices of the farmers which are much different in Afghanistan.

First Lieutenant **Scott Rottinghaus** meets with agricultural officials of Kunar province at the Governor's Compound in Asadabad, Afghanistan.

State to design a training program for ADT in June. ISU faculty and extension specialists covered crops and soils, animal husbandry, small-scale poultry production and vegetable production.

"ISU Extension and the colleges of Veterinary Medicine and Agriculture and Life Sciences gave ADT members a common, basic knowledge they are using in Kunar," says Gerald Miller, interim vice president for ISU Extension and Outreach. "The ADT learned about subject matter, but as importantly they observed professional educators teaching in a variety of learning environments."

Scott Rottinghaus, first lieutenant, and Eric Pugh, staff sergeant, are two ADT members anxious to put their Iowa State University education to work for the benefit of Kunar farmers.

"I always knew that I wanted to work with and around growing things," says Pugh ('91 forestry resource management). "I have great enthusiasm for conservation

and managing landscapes so people can make a living and thrive. I can put that enthusiasm to good use here."

Rottinghaus ('03 ag business) enjoys farming and the military. "This deployment gives me the chance to combine these; something I never expected to happen. This is an opportunity to work directly with the Afghanistan people and government to improve the lives of the people," he says.

The Dirt Warriors are fulfilling their purpose through ADT initiatives like improving an orchard irrigation demonstration farm and a row crop demonstration farm. They plan to help Afghan veterinary professionals promote the value of improving animal nutrition. They also will work to improve the quality and volume of agricultural radio programming and facilitate the development of a small provincial poultry industry.

Iowa State faculty and researchers continue to assist the Dirt Warriors by

providing "reach back"—supporting them electronically as questions arise while they're in Afghanistan.

Miller says the trainings and reach back give faculty and staff a chance to go beyond their normal role to serve the state and nation. "They feel honored to have the opportunity to be involved," he says.

With ISU Extension as stateside support, the ADT is replicating extension outreach by providing education and advice. They hope to improve farming methods in an effort to reduce rural poverty and raise farm incomes. As Pugh says, "What better place to make a difference!"

ONLINE EXTRAS: www.ag.iastate.edu/stories

Find a link to stay in touch with the Dirt Warriors on Facebook.



Contributed Photo

Morgan Wright and Winston Beck spent six weeks this summer on St. John as part of a service learning project.

EXPERIENCING NEW TERRAIN, SERVING OTHERS IN THE TROPICS

By Ashlee Hespen

The hilly land, lush forests, large gullies and rocky soil on the island of St. John are much different from the Midwest terrain that two Iowa State University horticulture students are accustomed.

Morgan Wright and Winston Beck spent six weeks this summer on St. John as a part of a service learning project titled EARTH—Education And Resiliency Through Horticulture. Iowa State's partner in the project is Giffit Hill School (GHS), a private kindergarten through 12th grade school on the island.

The program is funded through a gift commitment from Dana ('67 dairy science) and Martha Robes, who have a residence on St. John.

Located in the U.S. Virgin Islands archipelago, more than half of the tropical land of St. John is a protected national park containing a wide range of plant life. The remaining island is home to approximately 5,000 residents, many of whom are employed in the landscaping and service industries related to tourism on the islands.

According to Michael Reinert, assistant professor of horticulture and program

leader, the purposes of EARTH are “to implement a school horticulture program at GHS as a part of an environmental science program, provide service learning opportunities for Iowa State students and have them serve as ambassadors to recruit GHS students to attend Iowa State.”

Wright and Beck assisted Kris Bennett, faculty member and project coordinator at Giffit Hill School, with teaching her eighth grade science course and a natural history course at GHS. Their classes included plant lessons, garden demonstrations and working side-by-side with students in the work around the school.

“This internship taught me a lot about teaching. It's far harder than I had imagined,” says Beck. “Also, it's a practical lesson in outdoor development, getting students out of the classroom and into an interactive world, while making the outdoors more manageable for teaching and providing to the students.”

Wright adds, “The most rewarding part of this internship has been working with and getting to know the kids. They are all so unique and interesting. It has been a great experience.”

When Wright and Beck weren't busy teaching, they landscaped, designed and created trails on the school's property. Their goals were to incorporate horticulture into the school's curriculum, to show different aspects of the field and connect the upper and lower campuses separated by dense jungle.

As the first students taking part in the EARTH program, they played a large role in networking with professionals and experts on the island. Over the next five years, Iowa State will send two students in the fall, spring and summer semesters for twelve-week immersion service learning projects.

In addition to the practical experience the students are receiving, they are also gaining a new cultural experience. Wright and Beck have spent their free time hiking trails, snorkeling, surfing and making friendships on the island.

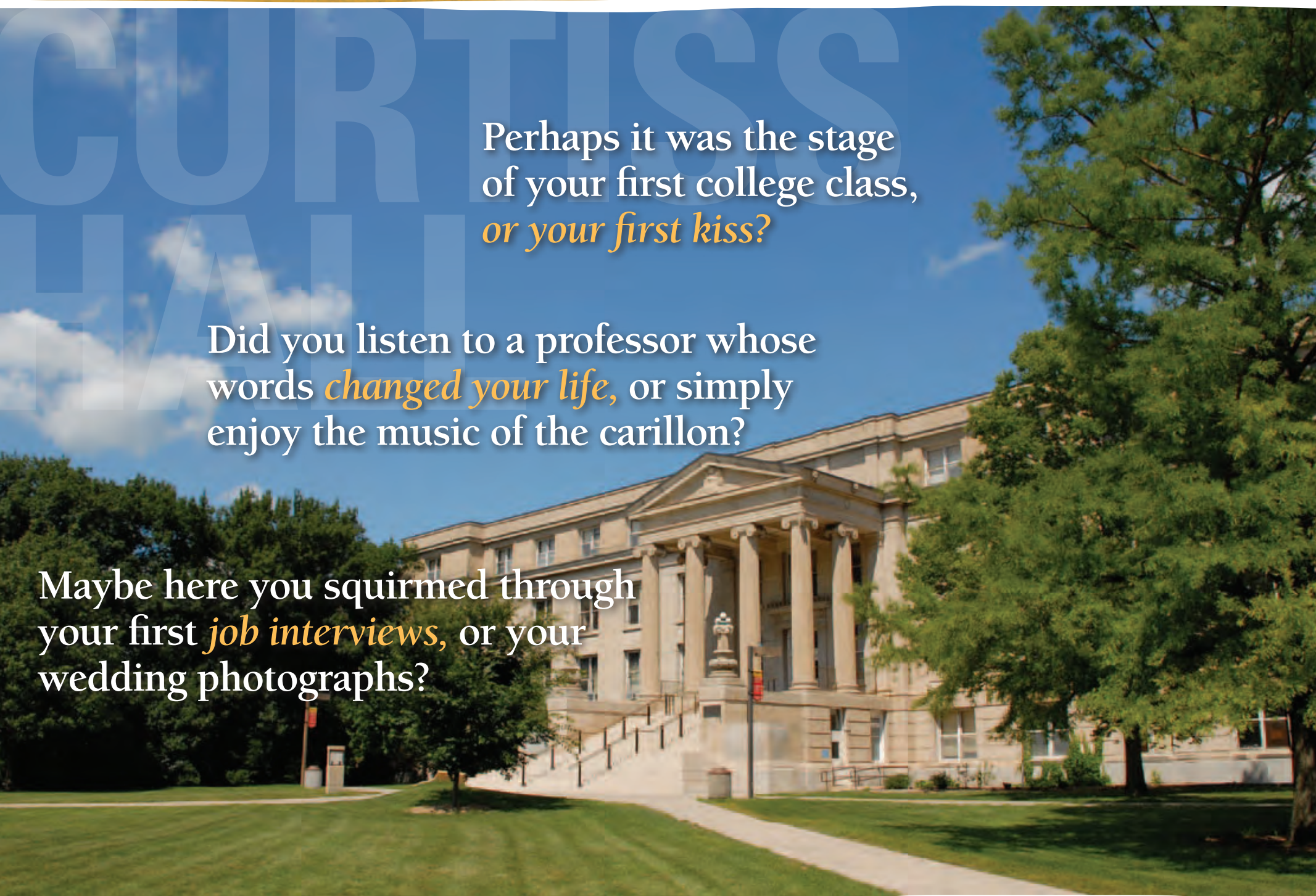
“Living on the island is spectacular. It's a complete flip from all the things we're used to stateside,” says Beck. “Everyone here has a story to tell, each unique and fascinating and the island is a fantastic place to explore.” ■

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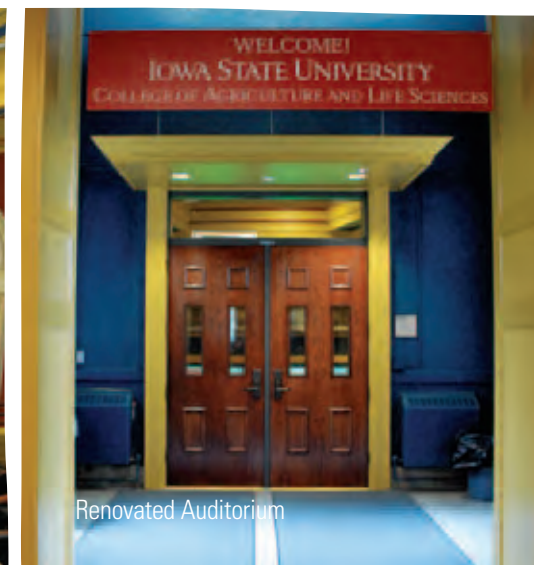
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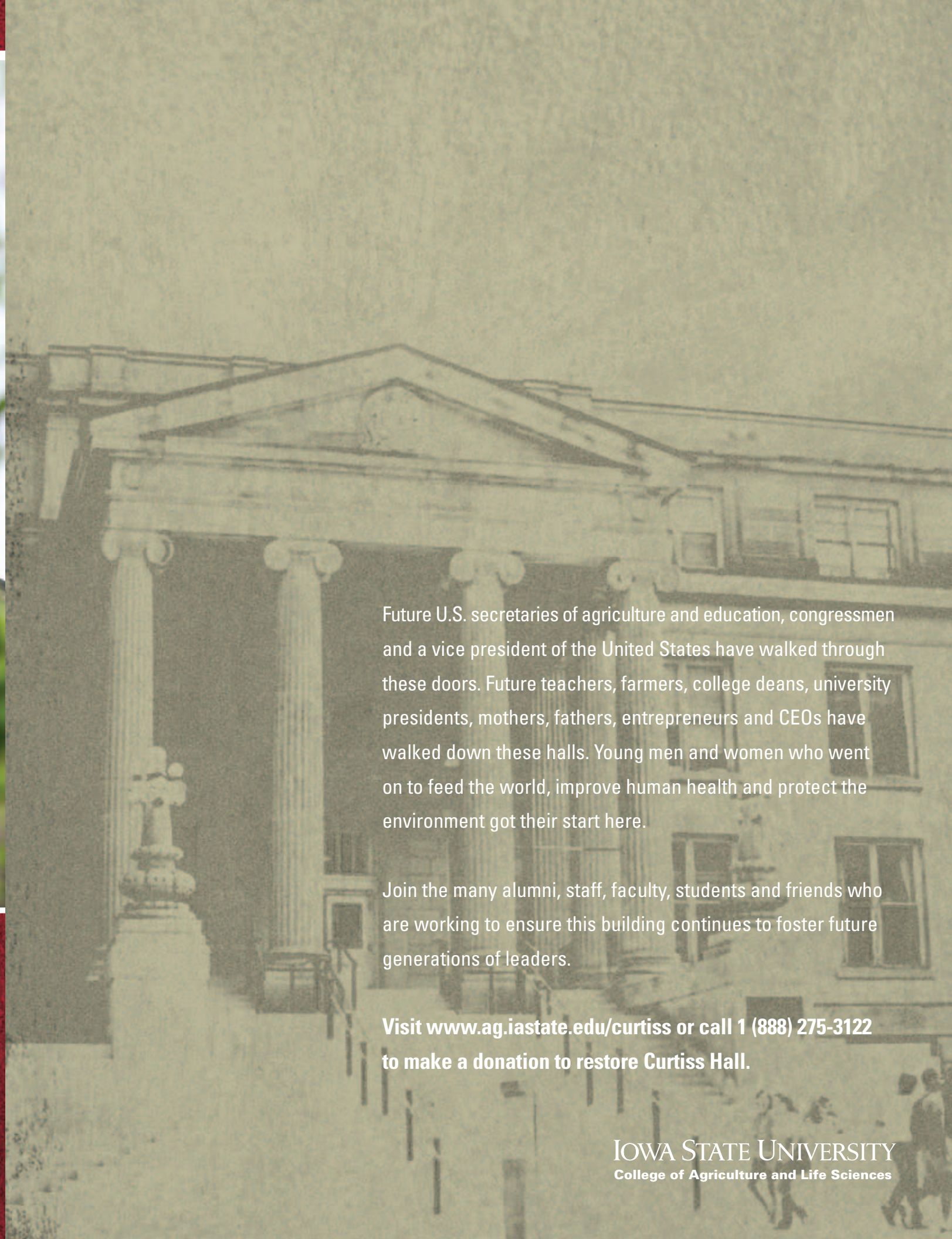




Photo: Jim Heemstra

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ENTREPRENEURSHIP

The next **STORIES** will focus on entrepreneurship and the **SELF-STARTING SPIRIT** of our alumni, faculty and students. You'll read about efforts to **INSPIRE** and equip students with the **SKILLS** necessary to start their own **BUSINESSES**. You'll meet faculty who have created businesses and **INNOVATIVE** alumni making a name for themselves in their chosen fields.

An Apple For Teacher



HORTICULTURE PROFS WIN NATIONAL TEACHING AWARDS

Cindy Haynes (left), received this year's Teacher Fellow Award from the North American Colleges and Teachers of Agriculture at the 56th Annual NACTA/Science and Education Resource Development conference in June. Ann Marie VanDerZanden (right), received the 2010 Outstanding Undergraduate Educator Award from the American Society for Horticultural Science at its annual conference in August.

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Emily always had a knack for **learning farming techniques.**



She discovered she also has a knack for teaching them. Emily was part of a team using a community garden to teach Ugandans agriculture techniques to feed their village. At the College of Agriculture and Life Sciences, we've seen the impact of our global programs on students and around the globe. Students like Emily learn to apply science to solve problems and that one person can make a difference in the world.

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