Enhancing the Illinois Experience
Lucas Frye: Up for the challenges of student trustee

Going Deeper through Drawing
Unique teaching technique helps students visualize science concepts

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RAP Celebrates 25 Years of Changing Lives
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We are pleased to be celebrating 100 years of Extension, which was established at the University of Illinois and at other land-grant institutions with the passage of the 1914 Smith-Lever Act. The concept of extending the information and knowledge generated on each campus to potential users across the state has been wildly successful, and it is often cited as a key to the unsurpassed productivity of U.S. agriculture. Other hallmark success stories involve youth development, volunteer gardening networks, and nutrition education, among many other programs driven at local, state, national, and even international levels.

Four years ago, U of I Extension made some significant adjustments in both structure and function. In response to a decline in state support, we consolidated local offices statewide from 77 to 27, eliminated 12 center offices, cut the number of state regions from five to three, and reduced the number of Extension employees. Such downsizing made it essential to prioritize our programs and identify areas where we can have the greatest impacts.

The reorganization of structure and programs should remind us of the critical need to continually evaluate what we do, why we do it, and how it’s done. Much of that evaluation takes place at the county level and is supported in large part through local taxes and an attendant match from the state. Another level of evaluation and support is federal and is often expressed thematically for colleges like ours to consider. And yet another dimension of the “what, why, and how” of Extension takes place here, on campus, and traditionally involves programs carried out by faculty in the College of ACES.

As part of the process of defining—and redefining—Extension in Illinois, I am excited to report a new program that allows faculty and staff across campus, outside of ACES, to provide extension and outreach programs supported by the Office of the Provost and U of I Extension. Last spring, our request for ideas yielded 71 proposals from 16 colleges, institutes, and other units campuswide. The good news about this response is the high interest that it reflects from faculty and staff who want to be part of the Extension mission. The bad news is that we could only afford to fund a few proposals, at the expense of turning away many, many great ideas.

The U of I is a land-grant, flagship institution that serves the state in many different ways. One of those ways is through Extension, reflected in its motto: “Extending Knowledge, Changing Lives.” A responsibility of the state is to recognize, help define, and support this valuable mission. In return, our responsibility as a college and university is to create exceptional value in the programs that extend knowledge and information to all—particularly those throughout Illinois.

Robert Hauser, Dean of the College of ACES
LUCAS FRYE:
Up for the challenges
of student trustee

By Ellen Reeder
For some students, the Illinois experience is largely their name on a U of I diploma and some fond memories with friends. But for others, including Lucas Frye of Easton, Illinois, it is much more. For Lucas it goes beyond the classroom, beyond Illini sports, beyond the walls of his fraternity. It’s an experience worth protecting and perfecting. Elected as student trustee from the Urbana-Champaign campus for 2014-15, Frye is devoted to adding value and enhancing the Illinois experience for those who will come after him.

The Illinois experience is also a family affair for Lucas. His parents, Jay and Noreen, are both graduates of the College of ACES, and his older brothers, Landon and Logan, are alums of the Department of Agricultural and Consumer Economics. Along with their passion for Illinois, Logan says, the brothers enjoy the inevitable brotherly competition, often on the basketball court.

But when it came to Frye’s decision to run for student trustee, his brothers had his back. They were a sounding board during his campaign, and he knows they will be there for him during his year of service to the university.

“As soon as Lucas arrived on campus,” Landon says, “he was looking to make his four years as significant as possible. He truly believes Illinois is exceptional, and he wants to elevate its status by whatever measures his talents can offer.”

Frye has shared those talents as a leader in ACES Council, ExplorACES, Student Alumni Ambassadors, and the Reassemble Assembly Hall committee, as well as on experiential learning trips.

Professor Paul Stoddard has gotten to know Frye and says he has “a natural level of maturity that is quite unusual in students his age; this
...I am optimistic about what can be accomplished by simply engaging regularly with student leaders, alumni, and administrators.

gives him the ability to see the big picture easily. With excellent analytic abilities and extraordinarily refined interpersonal skills, he’s ideally suited for his role as student trustee.

One of Frye’s goals for his term is to establish a “cabinet” of student leaders that will meet once or twice a semester to collaborate, communicate about the bigger university picture, and discuss things they’d like to change or improve on campus.

“I wanted to find a new way to keep our student leadership involved, informed, and active,” he says. “These leaders are all in touch with their student memberships, and I believe this will create a more unified feel across campus.”

As soon as Frye was elected, he began assembling this group. Chris Isenhower, president of Student Alumni Ambassadors, says, “Getting campus leaders engaged in regular discussion will only help improve programs and collaborative initiatives for organizations across the board. Our campus will benefit tremendously from Lucas’s leadership and his drive to improve student life. I am excited to see where he takes us and what students can accomplish together under his leadership.”

Despite his ambitions, Frye knows it is important to be realistic.

"It would be unwise to promise a bunch of things that you think can be done in a role you have never been in," he says. "But I am optimistic about what can be accomplished by simply engaging regularly with student leaders, alumni, and administrators."

Jon Scholl, Frye’s professor for Agricultural Policy and Leadership, describes him as “thoughtful, articulate, and filled with common sense. The university is fortunate to have him not only as a leader, but also as a shining example of the high standard of quality and excellence it aspires to instill in students.”

Although Frye represents the entire campus as student trustee, he is always proud to introduce himself as a College of ACES student majoring in ag finance. His experiences in ACES have shaped him through leadership opportunities and programs like the International Business Immersion Program (IBIP).

“In 2013, Lucas participated in the IBIP class that traveled to Brazil. He proved to be a leader and an explorer,” says Jessa Barnard, ACE experiential learning coordinator. “He was never afraid to ask pertinent questions and would always speak up when it came to interviewing company hosts and experts in Brazil. He is one of the most inquisitive, curious, and professional learners I have had.”

For Frye’s first three years on campus, a typical day started with coffee and classes and progressed to student organization meetings and some pickup basketball with his Nabor House fraternity brothers. His senior year will be anything but typical as he works alongside those who lead the Illinois campus.

“He’s up for the challenge,” brother Landon says. “The calm and humble demeanor with which Lucas approaches his work and responsibilities will allow him to diligently accomplish what he aims to achieve for this campus and his Illini peers.”
A complex scientific idea can often be conveyed with a solitary image, making it possible to quickly communicate lots of information. And of course we've all heard that a picture is worth a thousand words. Either way, Shelly J. Schmidt, a professor in the Department of Food Science and Human Nutrition (FSHN), has long been a proponent of visual explanations in her teaching, using images, graphs, video clips, and any other visual media available to help students comprehend complex scientific concepts.

"About 33 percent of our brain's 'real estate' is devoted to vision," Schmidt says. "In writing an article about harnessing the power of the 'seeing' brain and incorporating our senses into learning, it dawned on me that if visual explanations are so good for students to consume, how much better might it be for them to produce them? That led me onto the path of drawing-for-learning."

Drawing-for-learning is a relatively new concept being promoted in science education to help students understand concepts, not just memorize and recite facts. In drawing-for-learning science activities, students are asked to make their learning visible or explicit through drawing.

Schmidt first worked with drawing-for-learning when she supervised Jackie Boyd Morris, a graduate student who was leading a breakout discussion session in FSHN 120, Contemporary Nutrition. "She taught the students concepts, and then asked them to 'draw back' to her," Schmidt says. "We learned a lot from that pilot study. I applied for and received an ACES teaching enhancement grant to support the implementation of drawing-for-learning in FSHN 101, which I teach each fall."
This introductory class has four sections: nutrition and health; food composition and chemistry; food microbiology and processing; and food law, quality, and the consumer. Schmidt used drawing-for-learning in the middle two sections, historically the most challenging for students. After teaching the material on food composition and chemistry, Schmidt selected four of the basic concepts and allowed students to choose which one they would illustrate. They were given the rubric that would be used to evaluate their assignment and told they could use any visual medium. Some students made posters, some made flipbooks (which animate an idea as the viewer flips quickly through multiple pages), and one student submitted a watercolor painting.

What came out of the process was “very unexpected,” Schmidt says. “I’m not sure what I thought I would see,” she says, “although I hoped they would learn the material better. But what was staring me right in the face were some of the students’ misconceptions. It didn’t happen with everyone, of course, but when it did, it practically jumped off the page.”

One example involves measuring the moisture content of food. That’s simple to measure, but it’s not a good predictor of a food’s stability—whether the food will spoil. A better predictor is water activity, an idea that Schmidt says is new to virtually all students.

“I expected students to show the connection between water activity and food stability, like we learned in class. However, a number tied food stability to moisture content—a serious misconception that came across loud and clear in their illustrations. So I was able to go back into the classroom and correct those misconceptions before students took the section exam.”

Schmidt says many of the students’ projects were outstanding. One young woman chose to illustrate making gravy to explain starch gelatinization. “Gravy is a starch composed of amylose and amyllopectin. The addition of water and heat causes swelling of the starch granules and diffusion of the amylose to create a gel. She aptly illustrated the process of starch gelatinization at both the macro- and microscopic scales.”

“Thinking on a molecular level is new for these students,” she continues. “It’s not tangible, and it’s difficult for them to picture, so when they can visualize a concept on that level, you know they’re learning it.”

Before submitting a drawing, students were required to share it with two of their classmates, who provided peer feedback for improvement. The final drawing was submitted with a one-paragraph explanation. A gallery of the finished pieces will be available on the course website for viewing by future FSHN 101 students.

Schmidt considers her first drawing-for-learning attempt a success. “Students said the drawing-for-learning let them work with the course material in a different way. They’re almost all freshmen, so they’re new to the university, and most classes have been lecture, test, lecture, test. This was different.”

Schmidt says she hopes to enhance these drawing-for-learning activities before the next class begins. “We need to figure out ways to help students learn science at higher cognitive levels. That’s where many of them struggle; they don’t seem to possess a sufficient fundamental understanding of the subject matter to be able to explain how things work.

“Drawing-for-learning provides students an opportunity to be creative and express their learning in a unique form,” she says. “The act of producing the drawing requires the student to more deeply understand the material, and that’s the ultimate goal.”

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Illustrations by Samantha Larocca, sophomore in FSHN
It Takes a Village

It takes a village to raise a child, so the proverb goes. For ACES alum Diana Rodriguez, the village included strong-minded women who pressed her to excel in school and underscored the importance of her heritage.

On both sides of the family, Rodriguez’s grandparents traveled as migrant workers between Mexico and Chicago, where they established a home base. Her parents met in Chicago as teens, and 35 years later, both still work at the first jobs they held there. The family lives in Pilsen, a neighborhood on the city’s lower west side, home to many Latino residents.

As Diana and her siblings, Joe and Ivis, were growing up, their mother made her rule clear: “You go to school, or you go to work.” All three chose to complete high school rather than start working.

But their neighborhood high school faced many hardships, and the atmosphere was discouraging; few students were educated on opportunities in higher education. Fortunately for Rodriguez, her family supplied the encouragement lacking at school.

One of Rodriguez’s grandmothers felt strongly about connecting her descendants to their ancestral home, and for several summers she took her four oldest granddaughters back to Michoacán, the Mexican state of her girlhood.

“My grandmother didn’t want us to forget our culture and where we came from,” Rodriguez says. “When you compared our Chicago lifestyle to our summer trips, Mexico was an adventure. For example, we didn’t have the option to sleep in a comfortable bed there—we slept on the floor. She wanted us to appreciate what we had in Chicago.

“We also missed out on the diversity of meals back in Chicago. We had to adjust our lifestyle during those trips, but we loved them. Those are the childhood memories that I will never forget and will always cherish.”

Experiences like these were uncommon for most Latinas living in Chicago, Rodriguez says, and the trips revealed many insights about her culture.

Meanwhile, always looking for academic enrichment, the Rodriguez parents enrolled their offspring in various opportunities outside of school. During one program in Diana’s freshman year, the teacher handed her an application for the Research Apprentice Program (RAP), a summer experience for underrepresented students at the University of Illinois Urbana-Champaign. But when Rodriguez presented the application to her parents, they refused to fill it out because of the program’s distance from Chicago.

The following week, the teacher told Rodriguez to have her parents ready for a phone call at 7 p.m. that night.

“Sure enough, my teacher called,” Rodriguez says. “However, she had her mother speak to my parents because she wasn’t fluent in Spanish. After talking for an hour, my mom and dad hung up and told me, ‘You’re going to Urbana this summer’.

To this day, Rodriguez has no idea what her teacher’s mother said. But that summer she traveled to Urbana for her first experience with RAP, which is celebrating 25 years as one of the nation’s premier programs in STEM—Science, Technology, Engineering, and Math.

Jesse Thompson, ACES assistant dean of diversity programs, says despite a lot of preparation and contact, Rodriguez’s parents were still hesitant when she first came to campus. They called every day to be sure she was okay.

She was more than okay, Rodriguez recalls. “It was a great experience, getting to do a lot of exploration in agricultural careers. We did animal science, human and community development, and engineering. We worked in a lab and took a computer class.”

“They saw that RAP had changed my views about wanting to excel and go even higher with my education.”
Rodriguez's parents were excited to see the many changes in their daughter when she returned home. "They saw that RAP had changed my views about wanting to excel and go even higher with my education," Rodriguez says.

After being accepted for the second year of RAP as a high school sophomore, she was placed with Dr. Kelly Bost of the Department of Human and Community Development. "Dr. Bost and her graduate students were working on attachment research, interviewing parents about their interactions with their children," Rodriguez says. "I was present for some of the interviews. They taught me how to transcribe information, and it was amazing for me."

After two more summers of RAP and graduating from high school, Rodriguez came to the U of I for college, majoring in human development and family studies in ACES.

Today she is associate director for pre-college and research initiatives for the Hispanic Center of Excellence in Medicine at the University of Illinois at Chicago's College of Medicine. She makes recruitment presentations, translates information on research initiatives into Spanish, and collects quantitative and qualitative data through surveys, focus groups, and interviews.

Years after her RAP experiences, Rodriguez is still promoting the program, and she hopes it continues to prosper.

"Students can take a lot from their RAP experiences, and I hope they spread the word," she says. "Opportunities like this don’t come around all the time. I am very grateful—if it wasn’t for RAP, I wouldn’t be where I am right now."

Rodriguez has taught seminars, encourages families throughout her community, and urges students to apply to RAP and to study in the College of ACES.

Her enthusiasm is unparalleled. "If there is a prouder alum of the College of ACES, I’d like to meet them," Thompson says. "Diana displays that pride through what she does in ‘giving back.’ She’s a breath of excitement and encouragement for our college. If we had as many people engage with us as Diana does, we would be bursting at the seams with students in everything that we do."
The remarkable statistics tell the story. After 25 years of recruiting promising high school students from diverse, underrepresented backgrounds and placing them in summer internships on campus and in companies like Monsanto and Kraft Foods, program director Jesse Thompson can boast that 96 percent of Research Apprentice Program (RAP) participants have completed college degrees, 70 percent at the University of Illinois and 82 percent of those students in the U of I College of ACES.

“But the fact that these young people were never statistics to Jesse Thompson is undoubtedly the secret of RAP’s success,” said ACES associate dean Laurie Kramer.

True enough: Thompson, assistant dean of diversity programs, took a personal interest in each RAP student who crossed his path, sometimes convincing their families to allow them to attend and making sure they received the unique tools they needed to develop their potential and follow their dreams.

RAP alumni—industry leaders, scientists, and educators—returned to campus on August 2 to celebrate the program’s success and the part it has played in their own achievements and to thank Thompson, this visionary founder who mentored the young scholars and convinced corporate sponsors to create internships for them. Among the founding companies eager to hire RAP alums when they became U of I graduates were Monsanto, Cargill, and Quaker Oats (now part of PepsiCo). A USDA Higher Education Challenge grant provided initial funding.

President Robert Easter commended Thompson’s vision and leadership at RAP’s 25th-anniversary gala.

“Nearly two decades before the critical need to expand America’s workforce in science, technology, engineering, and math, or STEM, became part of the national dialogue, the U of I was already leading the way—thanks to RAP—and has now helped steer more than 1,200 minority high-school students toward STEM-related careers since its inaugural summer program 25 years ago,” Easter said.

Easter added that RAP reflects the U of I’s land-grant mission to open the doors of higher education to the children of all classes—not just the elite—and to give every deserving student the life-changing opportunities that a U of I degree provides.

To help these bright and talented RAP graduates meet the increasing financial demands of attending the university, the College of ACES has established the Jesse C. Thompson Scholarship Fund to support RAP alums who are admitted in an ACES major at the U of I. Initial gifts have come from Kraft Foods, PepsiCo, John Deere, and Monsanto, with Hendrick House providing a housing scholarship. An ACES administrator who strongly believes in the mission of this program has issued a personal challenge: gifts of $50 or more will be matched dollar for dollar up to $5,000. Contributions may be directed to the ACES Office of Advancement at 217-333-9355 or Marla Todd at martodd@illinois.edu.

The University of Illinois student chapter of MANRRS—Minorities in Agriculture, Natural Resources and Related Sciences—has been making strides in the College of ACES for 25 years. MANRRS extends the mission of ACES’s Research Apprentice Program (RAP) to prepare underrepresented high school students for careers and further education in research. The organization is populated with many RAP graduates.

At the 2014 national conference, the MANRRS-Illinois chapter received outstanding national chapter honors, and members took first place in three and additional recognition in two of the seven research competitions.

ACES and MANRRS alumna Andrea Wynn says, “Active involvement with the MANRRS-Illinois chapter set the stage for my development as a student leader. It provided me with valuable life skills that, nearly two decades later, I continue to utilize in my professional roles.”
Everywhere you look, advertisements promote investment advice, retirement planning, and financial health. It’s no wonder that the need for financial planners is growing at an astounding rate.

The financial planner certification process was formalized in the mid-1970s, but it wasn’t until the 2000s that the profession soared. According to the February 2014 Forbes, most of the nation’s 300,000 financial advisors are at least 50 years old, and less than 5 percent are younger than 30 years. Forbes estimates that for the next 10 years, 12,000 to 16,000 financial advisors will retire each year.

The Bureau of Labor Statistics predicts “personal financial advisor” to be one of the country’s fastest-growing jobs, increasing 27 percent over the next 10 years, compared to 11 percent for all U.S. occupations.

Even the process of training financial planners is changing. What has been a certification process is becoming a degree program in many colleges. Michael Kitces, an industry consultant, says that a third of those eligible to take the CFP certification exam are graduates of a four-year degree program and notes that the growth in university-based financial planning programs adds to the enthusiasm behind this booming career.

To meet the burgeoning need for qualified advisors, the ACES Department of Agricultural and Consumer Economics created a CFP-accredited program in 2008 as an outgrowth of its longstanding consumer economics degree.

Today more than 100 students are pursuing the financial planning program. Graduates have taken jobs with firms including ING, Ayco Company, Capstone Financial Advisors, State Farm, JP Morgan Chase, Waddell and Reed, and Balasa Dinverno Foltz.

Financial planning majors study finance and economics as they relate to individuals, households, and small businesses. They learn about insurance, investments, tax planning, estate planning, and retirement planning and benefits. In addition, they study credit management, savings and investing, and other risk management strategies as they apply to individuals.

Graduate Colleen Dumke says that the applied nature of the program, including an emphasis on real-world experiences, allowed her to relate concepts of business and finance directly to her interest area.

“I learned the technical skills I needed to be a successful advisor and the soft skills I needed to relate to people,” Dumke says. “I learned what being an advisor would really look like every day.”

Professionals regularly visit classes to share their experiences, and students take field trips to Chicago and area businesses. They also participate in a Financial Planning Association (FPA)–affiliated chapter that has hosted conferences on women’s issues, work in a mid-sized firm, and portfolio management. Students have participated in a case study competition and represent the university at national trade meetings, such as Schwab Impact, TD Ameritrade, and the FPA national conference.

Program growth, interest from industry professionals, and outstanding career placement have showcased the call for financial planning graduates from Illinois. The program continues to expand and gain national attention. Department head Paul Ellinger says he hopes to bring in professional leadership, incorporate financial planning software in the classroom, and increase student scholarships for conference travel and internships.

“The future is bright,” Ellinger says. “Our program has been mentioned in Financial Planning magazine’s ‘25 Financial Planning Programs to Watch’ the last two years. We are meeting the demand and producing graduates prepared to work in the growing industry of applied finance.”

By Theresa Miller
Grow Local, Eat Local

Extension boosts local food economies

By Stephen Wald
Illinois farmers benefit from rich and productive soils, a favorable climate, and perhaps the most advanced and efficient system of cultivation, harvest, and distribution on the planet. Yields per acre have tripled since the 1960s, yet this astounding productivity is a result of intense specialization—95% of the state’s harvested acres grow corn and soybeans, much of it destined to become feed or fuel. In contrast, 90% of the fruits and vegetables consumed in Illinois are sourced from other states and countries.

Yet consumer demand for local food is high and growing fast. Studies show local food appeals to people because of its freshness and variety and the contribution to a sense of place and community. From the farmer’s perspective, fruits and vegetables can yield revenue per acre tenfold higher or more than commodity crops, and the cost of entry in terms of land and equipment is much lower. Deborah Cavanaugh-Grant, part of a team of 16 University of Illinois Extension educators specializing in small farms and local food systems, says the time is right for communities, growers, and entrepreneurs to invest in their local food economies.

“Farmers markets and farm-to-table restaurants have sparked demand, but our studies show the real barriers to scaling up the local food economy are knowledgeable growers, access to land, and access to more robust wholesale markets,” Cavanaugh-Grant says. “Extension is working hard on programs and partnerships that help Illinois communities address all three.”

Extension is well suited to the task. For 100 years, its educators have provided practical knowledge and advice to help Illinois farmers, businesses, and families. Extension programs relevant to small farms and local food systems extend beyond agriculture and include economic development, nutrition, cooking and food preservation, and youth development. Extension educators draw upon and integrate resources across the university, including research from the College of ACES, the College of Business, the Department of Urban and Regional Planning, the Prairie Research Institute, the Smart Energy Design Assistance Center, and others.

“We coordinate with state agencies, local government, community colleges, and nonprofits to align programs and leverage impact,” Cavanaugh-Grant says. “Our statewide scope allows us to work effectively in local settings but also take a wider view, to look regionally and beyond.”

A new generation of fruit and vegetable farmers

With funding from the U.S. Department of Agriculture, U of I crop sciences professor Rick Weinzierl has established an intensive, year-long farmer training program, “Preparing a New Generation of Illinois Fruit and Vegetable Farmers.” The program, which has reached 180 people in its first two years, is offered in English and Spanish in three locations. Classes addressing all aspects of small farm production—business planning, legal issues, pest and weed control, harvest and handling, and marketing—are taught by faculty
and extension educators with expertise in specialty crops, horticulture, small farms, and local food systems. Participants are given access to small test plots at research farms to get started and hone their new skills.

Monica Pierce is a veteran of Weinzierl’s class. A recent ACES graduate, Pierce is also a second-year vocational agriculture teacher for Freeport High School. Most of her students were unfamiliar with farming and food production. With encouragement from her local extension office, Pierce established a student farm and has helped students discover relevance and opportunities in local food systems.

“[Extension county director] Margaret Larson and [local food educator] Grant McCarty have been so supportive,” Pierce says. “They helped connect me to funding sources, including a major Seeds of Change grant, to farmers who have been a resource to my students and to local restaurants that are interested in serving our produce.”

Student interest is booming, growing in just one year from 20 to over 60 students. Pierce’s goals for next year include a new greenhouse, an expanded CSA (community-supported agriculture program), value-added food products such as jams and dried herbs, and offering students college credit.

Expanding scale, growing markets

Mary Ardapple developed her passion for food as an entrepreneur and business owner in Peoria. She also serves as vice chair of the Peoria County board. When the county received a donation from the state of the Hanna City Work Camp, a former prison on a 40-acre parcel, Ardapple and others saw an opportunity to advance Peoria’s burgeoning local food economy.

“It takes a lot more than a love of food or a passion for growing it to make a viable local food sector,” Ardapple says. “You need marketing, aggregation, sorting, grading, delivery, logistics. You need to understand and navigate the regulatory environment. It takes knowledge, know-how, and an organizational structure to bring all of these pieces together.”

Kathie Brown with University of Illinois Extension in Peoria was there to help. Brown and Extension partnered with the county and community to develop a feasibility study for redeveloping the Hanna City site as a food hub. Options include aggregation and distribution functions, so smaller producers can sell into larger wholesale markets such as grocery chains and schools; incubator plots for beginning farmers to test and develop skills; and educational programming. Brown also organized the Greater Peoria Regional Foods Summit, “Seeds2Success,” last March for local producers, investors, and entrepreneurs to network and learn from other regions. Momentum continues to build.

“Our partnership with Extension has been critical, because rather than focusing on the barriers, we’ve brought people together and asked, What can we do?” Ardapple says. “With sound information, thoughtful analysis, and examples from elsewhere, we’re finding the answer is: quite a bit.”

University of Illinois Extension Local Food Systems and Small Farms
web.extension.illinois.edu/smallfarm

New Illinois Fruit and Vegetable Farmers
newillinoisfarmers.org

Freeport High School Student Farm
facebook.com/FreeportStudentFarm

Seeds2Success – Peoria Regional Food Summit
web.extension.illinois.edu/smallfarm/seed2success
New test speeds the search for destructive soybean cyst nematode

The soybean cyst nematode is the most pervasive plant pest in agriculture today. “Producers typically lose 5 to 10 percent of their yield to the soybean cyst nematode,” says Kaustubh Bhalerao, an associate professor in agricultural and biological engineering. “To combat the problem, they need to evaluate their crops each year. Did the resistant variety they used last year work? Should they use a different variety this year, or should they rotate to corn?”

College of ACES researchers have developed a testing system that is some 20 times faster and provides more precise data than current technology. Bhalerao and Farhan Syed, a graduate student in technical systems management, have received a $25,000 “proof-of-concept” award from the university to develop the testing service for soybean cyst nematode.

To make needed management decisions after each harvest, Bhalerao says, most farmers pull 10 soil samples from as many acres and pool the samples to get one reading on the nematode population. “The test costs about $50, so they spend $5 an acre to get one result, or point, of very poor reproducibility, quality, and spatial resolution.”

Bhalerao says the new system can bring that cost down 20 times and increase spatial resolution by 20 times as well. Experts actually recommend having 10 points per acre, and Bhalerao says with properly streamlined operations, they can provide those results for about $20, or $2 per sample.

The system Bhalerao’s team developed includes an “extractor” that processes the samples to extract the eggs.

“The extractor basically makes a milkshake out of a clod of dirt and water,” he says. “The operator inserts a plug of soil, and water is added so that the cysts float and the dirt sinks. Once the cysts float, we raise the water level so the cysts flow out onto a set of sieves, where they’re crushed by an automated roller. The eggs from the cysts pass through the sieves, are washed into a sample container, and are stained and counted.”

A website will allow producers to monitor and organize the data they receive from the new testing and possibly integrate it with other information they collect, such as data from yield monitors on tractors.

Bhalerao hopes to provide the new technologies primarily through soil testing companies. “The average company is testing about 3,000 samples a year,” he says. “With our technology, they should be able to do 30,000 or more.”

The multidisciplinary research team includes Bhalerao and Syed; Allante Whitmore, a graduate student in agricultural and biological engineering; Sadia Bekal, a research associate in the Bhalerao lab; Chinmay Soman, a former postdoctoral researcher in the lab; and Kris Lambert, an associate professor in crop sciences.

The project is a result of experts from multiple backgrounds working together to solve an important problem. “The agricultural industry is showing a lot of interest in this area—it’s kind of the ‘Wild West’ right now, but we’re positioned very well,” Bhalerao concludes. “We’re grateful for the proof-of-concept award; it has enabled us to put a good prototype in the market.”

By Leanne Lucas
While traveling with the meat and livestock judging teams as an ACES undergrad, Doug Hankes decided to go home to stay.

But not because he was homesick, and not because he didn’t enjoy judging—rather, Hankes had an idea for his family’s long-running meat processing business in Galesburg, Illinois.

And inspiration hit in, of all places, a gas station.

“I was on the road with the evaluation teams, which allowed me to try a variety of snack products when we would stop for gas,” Hankes says. “I thought my family could make something that tasted different in terms of snack sticks and jerky. That motivated me to come home.”

After graduating in 2004 in animal sciences, he joined his family at Thrushwood Farms in operating what was, at the time, a state-inspected meat plant. The company soon became a federally inspected plant, allowing them to ship products from coast to coast. And that’s when “things took off in terms of making snack sticks,” Hankes says.

Like many other animal sciences students, Hankes started in ACES planning to become a vet, or possibly pursue medical school. “I had no intention of going back home. But I started taking meat science classes and realized that I really liked the meat industry and wanted to be involved in it,” he says.

Hankes took advantage of the opportunities offered to explore his career possibilities. Along with being on the meat and livestock judging teams, he joined Hoof and Horn Club and worked in the Meat Sciences Lab. He got his first nonfamily experience in the meat industry through an internship with Tyson Foods. Though he enjoyed that experience, his sense of entrepreneurship strengthened the pull back toward the family business.

Hankes comes from a family that he describes as “pretty ACES- and Illini-centered.” His parents, Jim and Kay, are both ACES alums, Jim with a master’s in meat science and Kay a bachelor’s in home economics. And his brother is an agricultural economics major at Illinois. One thing Doug had going for him when he returned to Thrushwood Farms was support for his ideas for expanding the company.

“After that summer working for Tyson, I thought there were areas of the industry where we could make new products, and I wanted the freedom to come up with ideas,” he says. “I knew that if I went to a larger company, corporate culture meant it would be a long time before I could pursue those things. I was really fortunate to have parents who allowed me to look into new areas.”

Though it was important to him to pursue some of the unique ventures he had in mind, he stresses that Thrushwood Farms is more than just snack sticks. “Our products include hams, bacon, and sausage, and we offer private labels for companies. We do sell a lot of snack sticks and jerky products, and we’re constantly growing in that regard.”

The Hankes family started the meat processing plant in Galesburg in 1978. Today, in addition to the 27,000-square-foot plant, the business includes a 4,000-square-foot retail store offering west-
central-Illinois fresh meats, deli products, and specialty items. Through sales online, the company ships to all 50 states. They have also become a fixture in the Galesburg community, holding weekend cookouts and other events with local customers.

And it’s the role they play in customers’ lives that Hankes says gave Thrushwood Farms its trademark motto.

“Once when I was home from college, a customer came in and said it’s great what a memorable impression we make on families. She explained that the holiday meal is a big deal to her family because that’s when her kids come home, and she doesn’t get to see them all the time. To me the holidays were always a really hectic time, and I never really thought about meals like that.

“That conversation made me think about the important role our company can play, and ‘Making Memories Out of Meals’ became our motto,” he says.

Today Hankes, who at age 33 was named president of the Illinois Meat Processors Association and who serves on the board of directors of the American Association of Meat Processors, sees the meat science field changing in innovation and technology. “We are lucky to have a meat science program in the state of Illinois. For me, making sure that we have relationships with that program at the U of I is critical as our industry moves forward,” he says.

“Being able to call a faculty member to talk through a question or an application, whether it’s beef, food safety, or innovative production methodology, is so important. U of I plays a vital role in providing us information, and the connection is personally good because it keeps me involved with the university,” he says.

Though the day-to-day operations at Thrushwood Farms keep him very busy, Hankes tries to make time to think about future products. A few things on the horizon? A website relaunch in the fall will make online ordering easier. And customers can look for some new snack-stick flavors.

For himself, though, Hankes is sticking with sweet teriyaki.

“That was the flavor of snack stick I would buy on the road with the judging team,” he says. “I would think, ‘We can make one that would taste great but be different.’ So we made thousands of pounds of sweet teriyaki snack sticks until we settled on the formulation we sell now.”

Visit the Hankes business at thrushwoodfarms.com, or check out their line of snack sticks at snackstick.com.
As U of I meat scientist Anna Dilger puts it, finding a major U.S. meat or animal pharmaceutical company that doesn't employ an Illinois animal sciences grad is nearly impossible. She recites a list of alumni, their job titles, and their employers to prove it.

But there's a lot for most new students to learn about how producers get meat from the farm to the dinner plate before they can take their place working in the food industry.

In Animal Science 100, Dilger starts with hot dogs.

“We have students taste-test three or four kinds of hot dogs, just plain, without a bun. Most have never eaten a hot dog like this and have never considered the differences. This exercise gets them thinking beyond animal production and on to animal products,” Dilger says.

“From that course, we draw students into the classes taught in the Meat Sciences Lab, covering topics like the processing of animals, processing meat, and the basic science of what goes on inside an animal biochemically that causes it to produce good or not-so-good meat.

“One great thing about meat science is that most students are meat eaters, so they are not naïve to the concept. It's easy for them to relate to it,” she adds.

But with nearly 85 percent of animal sciences students coming to ACES from urban areas, it is common for some entering the meat science program to have had minimal contact with production animals. “Their largest interaction is maybe a 4-H project. One student from Chicago had had no interaction with animals at all, and now she’s getting her master's in meat science. She got involved with the meat judging team and realized there was a whole world out there that she didn’t know existed,” Dilger says.

Both Dilger and Chuck Stites, a U of I meat science researcher and manager of the Meat Sciences Lab, say that about 4 of every 5 animal sciences students start out intending to go to vet school.

“But they’re not all going to get accepted to vet school, so they will have to find something else to do,” Stites says. “I encourage them to use all the opportunities available on campus to help determine what they want to do when they get out of school.”

Students working or taking classes in the Meat Sciences Lab get a front-row seat to life in the meat industry.

“Most of our grads didn’t think about the food industry when they started school, but because of their classes and exposure to what goes on in the lab, they realize there are multiple jobs and opportunities out there,” Stites says.

Through research taking place in the Meat Sciences Lab, many students get to interact with industry research partners.

“Then when it’s time for students to look for jobs, a company is not just a name; it’s a person who works for that company. Industry professionals come through our building and our program a lot,” Dilger says.

Alumni often lecture in meat science courses, describing their career paths. Dilger says there’s a “vibrant” network of alumni—people who are just a call or an email away for collaborating on research, staying current in the industry, and placing grads looking for positions. She credits many of those ongoing relationships to Floyd McKeith, a U of I meat science professor and researcher who recently retired.

“Dr. McKeith has been very successful at training students well for the industry and helping get them started,” Dilger says. “Alumni are loyal to this program because they had such great experiences here—being on judging teams, working at the meat counter, etc. Alumni are always willing to come back.”
Sometimes the message is just a list of what products are available that day; other times it includes a recipe or favorite preparation for a cut of meat. Often it is seasoned with a funny story that was just too good not to share.

Whatever the content, “Meat Mail”—the digital voice of the Meat Sciences Lab meat salesroom—goes out regularly to over 5,000 subscribers.

“At some point email became prevalent for communication, and it was a free way to advertise. That’s how Meat Mail got started,” says Chuck Stites, animal sciences researcher, manager of the Meat Sciences Lab, and “the Meat Mail guy.”

“I’ve heard about people who live in California who subscribe to Meat Mail. They just enjoy getting the [often humorous] messages. We get a lot of positive feedback about the emails, but also about the products we produce. Customers tell us they appreciate the opportunity we are giving students,” Stites says.

But it’s more than just clever writing that has brought attention to the meat science program. Steak, bacon, brats, freshly made sausage, pork, and many other specialties—just watch your Meat Mail to find out.

Stites and a staff of students run the retail salesroom three half-days a week. “We are a federally inspected meat processing plant. We do all of the processing, cutting into retail portions, and selling,” he says.

Stites says the success of the salesroom benefits the research program in providing an outlet for meat products generated from particular projects. “We can move through a lot of product when we have to, and having the retail outlet and the opportunity to sell to university dining services allows our program to stay viable, without being a drain on college funding,” he says.

Though the lab can’t provide all the meat needed to feed students in the residence halls, it has provided selections for campus special events. And Illini football fans can now get a taste of ACES through concessions in the Colonnades Club for premium seat holders. The State Fare stand serves bacon, beef, and pork sourced from the lab. State Fare also sells a salad made with ACES bacon and produce grown on ACES’ Sustainable Student Farm.

“It’s a trend for our customers to want to know more about where their food is coming from, so it seemed like a natural fit,” says food production manager Aaron Kielbasa. “We were already rebranding some of our concession stands, so we decided to take this one step further, dedicating one whole stand to locally sourced meats and promoting ACES as well.”

The relationship with University Catering at the stadium started in 2012 with DaBurger, a sandwich created by the Illinois Pork Producers Association featuring pork sourced from the Meat Sciences Lab. DaBurger stacked pulled pork on a ground pork burger and topped that with bacon. The positive reception was no surprise, and Kielbasa says it was a natural progression to keep serving the lab’s meat at Memorial Stadium.

The products are earning a name for themselves in the community, too, and Stites says he and his staff enjoy the interactions with customers in the salesroom.

The salesroom business has grown substantially in recent years, Stites says, and there is often more product than room in the sales cases. “We have considered expanding, but that takes money. We do keep a list going of what we would like to have and what we need.”

The salesroom is open Tuesdays and Thursdays from 1 to 5:30 p.m. and Fridays from 8 a.m. to 1 p.m. Stites and his crew serve easily over 100 customers each day they are open. “We sell a lot, and we sell out a lot,” he says.

To subscribe to Meat Mail or for information about products sold in the meat salesroom, go to meatandeggsales.illinois.edu. Visit them on Facebook at facebook.com/UofIMeatSales.
Highlighting some of the success of our ACES family in their pursuits to make an impact on society and find solutions to some of the world’s greatest challenges.

The ACES Student Advancement Committee (SAC) broke campus records with their “Pay It Forward” campaign last spring. More than $15,000 was contributed by some 1,100 donors—nearly 90% of them students—an all-time high for the number of student donors in any fiscal year. The College of ACES likewise reached a new goal for most donors in a fiscal year. In sororities and fraternities, clubs and classrooms, SAC members made presentations and solicited support in honor of the organization’s 25th anniversary and to show their passion for ACES.

Jason Berner, a graduate in natural resources and environmental sciences, participated in World Water Day 2014 with the Peace Corps Response Project. He traveled to Zacatlan, Mexico, to provide training on how to design, construct, and maintain rainwater harvesting cistern systems for on-campus buildings. Berner is a team member of EPA’s national low impact development and green infrastructure storm water management program.

Chicago Knights Robotics, a 4-H special interest club based in the city’s South Side, participated by special invitation in this year’s White House Science Fair. Hosted by President Obama, the fair featured innovative science projects, designs, and experiments from students across the United States. A 4-H grant helped teens from the club lead a citywide robotics competition for junior high students, and volunteer leader Jackie Moore will present her club’s innovative approach to STEM education at a national 4-H conference.

Agriculture Future of America selected Shelby Cooper, a junior in agricultural education, as one of 17 Campus Ambassadors for 2014–15. AFA creates partnerships to support outstanding college men and women preparing for careers in the agriculture and food industry.

Kimberly (Kim) Crossman, a PhD student in human and community development, received the 2013 Jessie Bernard Outstanding Research Proposal from a Feminist Perspective Award as well as the 2013 Cindy Winter Scholarship Award for outstanding leadership/service in the discipline of family sciences, both from the National Council on Family Relations. Her mentor is Jennifer Hardesty.

Ryan Dilger, an animal sciences researcher in nutrition, was awarded a substantial gift for a new biomedical swine research unit that will increase capability for research regarding learning and memory in young pigs, with the goal of understanding how nutrition affects brain development in human infants. Mead Johnson Nutrition, maker of Enfamil infant formula, awarded $945,000 to fund the facility. The new unit, set to be in place by January, will enhance researchers’ ability to make new discoveries in cognitive development by using behavior to measure brain function.

Joey Donovan, graduate student in food science and human nutrition, is co-chairing the Institute of Food Technologists Fun Run, which last year helped raise more than $100,000 for student scholarships.

John Erdman was selected to give the 2014 Fred W. Tanner Lecture from the Chicago Section of the Institute of Food Technologists. This is the first time in the more than 50 years of this lecture that a U of I faculty member has received this national recognition. Erdman was also chosen for the Gilbert A Leveille Award and Lectureship from the National Institute of Food Technologists.

Farmdocdaily received the 2014 Distinguished Extension/Outreach Program Group Award from the Agricultural and Applied Economics Association. The team’s website—farmdocdaily.illinois.edu—provides crop and livestock producers in the U.S. Corn Belt with round-the-clock access to integrated information and expertise to better manage their farm businesses.

Dianelys Gonzalez Pena received the 2014 Midwest Young Scholar Award from the American Society for Agriculture and Food Industry.

IN THE SPOTLIGHT

The new head of the Department of Animal Sciences is Steve Loerch, a Pennsylvania native who received his bachelor’s degree from Pennsylvania State University and his master’s and doctoral degrees from the University of Illinois. Loerch came to Illinois from The Ohio State University, where he had a distinguished 30-year career in teaching and research. Investigating basic biological processes and applying them to industry production scenarios have been strong points of his award-winning research. He has distinguished himself in his instructional programs with extremely high and consistent reviews over a variety of courses for many years; in the development of capstone learning activities for undergraduates in animal sciences; and through a strong contingent of graduate students who have continued with great success in academia and commercial companies in agriculture.
Seven new faculty have joined the College of ACES this year:

Rabin Bhattacharjee, assistant professor in Agricultural and Biological Engineering
Maria Chu, assistant professor in Agricultural and Biological Engineering
Benjamin Crost, assistant professor in Agricultural and Consumer Economics
Paul Davidson, assistant professor in Agricultural and Biological Engineering
Morgan Hayes, clinical assistant professor in Agricultural and Biological Engineering
Karen Kramer, assistant professor in Human and Community Development
Alexander Lipka, assistant professor in Crop Sciences
Jessica Madison, clinical assistant professor in Food Science and Human Nutrition
Zeynep Madak-erdogan, assistant professor in Food Science and Human Nutrition
Kevin McSweeney, clinical professor in Natural Resources and Environmental Sciences
Hope Michelson, assistant professor in Agricultural and Consumer Economics
Erica Myers, assistant professor in Agricultural and Consumer Economics
John Newton, clinical assistant professor in Agricultural and Consumer Economics
Cameron Pittelkow, assistant professor in Crop Sciences
Christine Richmond, assistant professor in Agricultural and Consumer Economics
Chance Riggins, research assistant professor in Crop Sciences
Andrew Steelman, assistant professor in Animal Sciences

of Animal Science. A PhD student working with Sandra Rodríguez-Zas in the Department of Animal Sciences, Gonzalez is studying how reproductive technologies impact swine production systems from financial and genetic improvement perspectives.

Loren Goodrich received the 2014 Outstanding Senior in Agronomy, Crop, Soil and Environmental Sciences Award from the National Student Recognition Program for her academic record and leadership. Her commitments included being Field and Furrow Club president, serving in Sigma Alpha sorority for women in agriculture, and being an ambassador for the Department of Crop Sciences. Goodrich traveled to Malawi with Global Missions after graduation last May and has returned to campus as a graduate student in crop sciences.

Craig Gundersen was named the Soybean Industry Endowed Professor in Agricultural Strategy in the Department of Agricultural and Consumer Economics in April.

The Illini Agricultural Communicators of Tomorrow (ACT) chapter was named 2013 National ACT Chapter of the Year at the Ag Media Summit in Buffalo, New York.

The Agricultural and Applied Economics Association named Scott Irwin an AAEA Fellow, the organization’s most prestigious honor, in 2013. AAEA Fellows are selected for their continuing contributions to the advancement of agricultural or applied economics.

Jazmine Jefferson, a freshman in food science and human nutrition, has been named a Gates Millennium Scholar. One of only 1,000 talented students nationwide to be selected for this good-through-graduation scholarship at the school of their choice, she chose ACES.

Kale Monk, a PhD student in human and community development, received the 2013 Best Student/New Professional Research Proposal Award from the National Council on Family Relations, Research and Theory Section. His mentor is Brian Ogolsky.

Professor Kenneth Olson of the Department of Natural Resources and Environmental Sciences received the Journal of Soil and Water Conservation Editor’s Choice Award in 2013.

Marcela Raffaelli received the 2013 Jan Trost Award, which recognizes outstanding contributions in international family studies. The award honors an individual for lifetime achievement in research, teaching, and service to international families.

In addition to competing in the Boston Marathon, food science and human nutrition graduate Susannah Scaroni received the 2014 Outstanding Dietetic Student Award for Illinois.

Paul Schumacher, a graduate student in agricultural and biological engineering, received the 2013 K.K. Barnes Student Paper Award (Second Place) in Undergraduate Oral Competition from the American Society of Agricultural and Biological Engineers.

ViJay Singh received the 2013 Excellence in Teaching Award from AACC International, a nonprofit organization dedicated to advancing the knowledge and understanding of cereal grain science through research, leadership, education, superior technical service, and advocacy.


Taylor Wolfer, a senior in animal sciences, received a 2014 American Meat Science Association Undergraduate Scholastic Achievement Award. She just completed a second internship at Hillshire Brand Foods.

Liangcheng Yang received the 2013 Boyd Scott Graduate Research Award (First Place) in Graduate Oral Competition from the American Society of Agricultural and Biological Engineers.
For a bird that spends most of its waking hours during the day, the yellow-breasted chat spends a lot of time visiting other territory at night. ACES ornithologist Michael Ward was studying chats’ daytime movements when he noticed that males were active almost every night, while the females’ nighttime activity was pronounced during the window of time when they were fertile.

“Although we were focused on the chats’ daytime movement, we were collecting data 24/7,” Ward says. “We started seeing all of this nocturnal movement and wondered what the birds were doing.

“At first I was using data from the night readings to calibrate the system,” Ward says. He explains that females get up at night to roll their eggs so the inner membrane doesn't stick to the shell. That little bit of night movement was a way to test the triangulation software, because the researchers know the locations of all nests, providing a baseline for comparison.

Ward continues: “I started plotting the data and thought, this can't be right. This bird is on the nest for an hour or two and then it's all over the place. It can't be that these signals are bouncing around that much. It has to be that the birds are actually moving off of the nest.”

Ward says that the chats’ night vision isn't any better than ours, so they probably weren't out foraging for insects. There was no obvious reason for the nightly escapades. Then someone noticed that females were only moving during their fertile period.
These movements are much more common than you would expect," Ward says. "You might expect some females getting up randomly during the night, but the pattern of these nocturnal forays suggests that they may be trying to increase their reproductive success by searching out partners other than their own social mate."

In the field portion of the study, 32 birds were captured in mist nets; after age and sex were logged, each was fitted with a lightweight backpack radio transmitter that emits a signal that is picked up by four towers, each with six antennas. The signal strength provides directionality and allows the researchers to compute the bird's location using a simple triangulation. Location is recorded every three minutes, yielding approximately 12,000 points per bird. The birds' nests were located and checked every 2 or 3 days until eggs hatched or the nest was eaten by a predator. Female chats typically have one brood of four eggs each year, laying one egg a day beginning about 3 to 5 days after they become fertile—not a broad window.

There is little research on this kind of bird behavior, Ward says, and this is one of the first studies suggesting that diurnal birds move around at night for reproduction.

"We know females generally sleep on or near their nests, but males usually have two or three sites they go to every night, usually pretty far from the nest," Ward says. "The females nest in dense shrubbery, so it would be difficult at night for the male to see the female leaving her nest."

Ward likens the behavior to "a soap opera." Other studies have shown that males will harass the female or choose not to help her feed the young if they suspect infidelity.

"Males are active at night and looking to copulate, but when their female is fertile, they don't leave their territory," he says. "They try to keep her around—which doesn't seem to be working very well—and keep other males from coming in. It goes both ways. Females sneak around to other territories, and so do males."

How does the female looking for a nighttime rendezvous know the male she's visiting is actually awake and receptive? In the case of yellow-breasted chats, a type of warbler, Ward says, the male sings a sort of low song so the female can find him and hook up.

Ward also describes what he calls "nightclubs." He found forest areas on the edge of the habitat that were not appropriate for nesting but were frequented during the night by both sexes. "If males and females are interested in copulating, and there is a known location, it would make sense to go there," he says.

What with foraging and nest building by day and cruising by night, when do these birds actually sleep? Much as with humans after a late-night party, Ward says, the day after a bird has a pretty active night, it is less active than usual.

Ward says that this behavior may explain why the chat and other species that are generally territorial prefer to nest near others of the same species.

"Given the birds' movements into others' territories, efforts should be made to conserve large chunks of habitat that can accommodate many territories," he says.

"We started seeing all of this nocturnal movement and wondered what the birds were doing."
Winning a Fulbright Award was not on Colby Silvert’s bucket list when he came to the University of Illinois. But going to the Dominican Republic as a freshman steered him in a new direction, resulting in his being awarded one of the country’s most coveted student study abroad awards.

The Fulbright U.S. Student Program is the largest U.S. exchange program offering opportunities for students and young professionals to undertake international graduate study, advanced research, university teaching, and primary and secondary school teaching experiences worldwide.

“Colby took advantage of all the international opportunities the U of I and ACES had to offer, including studying abroad four times,” says Meredith Blumthal, ACES director of education abroad. “As a direct result of his participation in our summer research and Portuguese language program at the Federal University of Vicosa, he received a 2014–15 Fulbright U.S. Student Award to Brazil.”

Over the past four years, Silvert has adapted his goals to fit his developing interest in international agriculture.

“Through my summer job at a small farm in my hometown and my conversations with farmers in the Midwest, California, Latin America, and New Zealand, I know small farmers everywhere are struggling,” Silvert says. “I want to focus my career path on working with small farmers internationally and helping them market their products while building better businesses.”

Specifically, he wants to become a leader in agriculture with both field experience and knowledge of international agricultural policies and markets. Silvert is particularly interested in coffee as a specialty crop. While living in Brazil as a Fulbright scholar, he will investigate the limitations that discourage coffee farmers of the Zona da Mata region from improving their product quality and selling to markets with greater returns and opportunities for economic advancement.

“When I arrive in Brazil next March, I will begin collecting secondary data, but the most important component of my project will be visiting family coffee farms. Zona da Mata is the focus region of my Fulbright Award takes ACES grad to Brazil to study coffee farmers

By Ellen Reeder
project because of the perceived inability of its family coffee farmers to access the Fair Trade-, Rainforest Alliance-, and Organic-certified markets," he says.

Silvert aims to bridge the gap of understanding, he says. He has experienced life on coffee farms in the Dominican Republic, Colombia, and Central America, but it is clear that Brazil is different. Unlike in Central America, many of the country’s small coffee farmers do not adopt certifications that would seemingly improve sustainability and labor conditions and return greater profits.

Silvert says he can’t imagine where he would be today without that first study abroad experience.

“The whole trip was thought-provoking, but the day we spent at Batey Libertad, a sugarcane farming community of Haitian immigrants, caused me to reconsider my professional and personal plans,” he says.

When he had heard the group was going to visit one of the country’s poorest communities, he wasn’t sure what to expect. After all, he was interested in landscape design at the time. Honestly, he says, he thought the experience would be depressing.

Quite the opposite—Silvert says it was one of the most inspirational days of his life.

As soon as their bus arrived, his study abroad group was greeted by a bunch of excited children. One little boy grabbed Silvert’s hand and held tight to him for the next two hours, speaking a mix of Haitian Creole and Spanish. Silvert tried valiantly to understand and respond.

“I’ll never forget the genuine excitement on the faces of the children and the hardworking farmers who were the backbone of the community,” he says.

After that first inspiring experience, Silvert continued to expand his interactions with farmers in other parts of the globe, and he is eager for the next chapter in Brazil.

“Colby is an outstanding student and so deserving of this amazing opportunity,” says Jason Emmert, ACES assistant dean of academic programs. “Applying for a Fulbright grant requires a great project idea and tremendous hard work and preparation over several months. He was not selected merely on the basis of his academic abilities. I commend Colby for his dedication and perseverance. To be selected for this award is truly an honor.”
I see beauty in the unity that has strengthened our community through the recovery.
Hope remains after town is shaken

By Regan Emkes
Photo by Leslie Ehler

My dad wasn’t joking when he told me I wouldn’t believe what I saw outside. I walked cautiously out of the house, only to find our garage lying in pieces. Our neighbors’ houses were pretty much gone. A lawnmower was lodged into the side of my car.

Before the tornado, driving down Main Street in my hometown signaled that I was just seconds away from the home I knew and loved. But Main Street will never be quite the same for Gifford residents like me after the catastrophe that devastated our town just before Thanksgiving in 2013.

The weather that day certainly sent up red flags. It was extremely warm, sun shining, winds blowing—much like a day in late spring. Shortly after noon, disaster struck. In 15 seconds on November 17, my world changed forever. And that life-altering day was followed by one of the longest, coldest winters in years, and hopelessness and anxiety grew as the temperatures fell. All you noticed looking around town was piles of rubble covered in snow and ice.

But spring finally came. Volunteers flocked to town. Rubble disappeared, and homes started going up left and right.

I see beauty in the unity that has strengthened our community through the recovery. Neighbors I didn’t know before I now talk to daily. There is a new sense of camaraderie in our town, because we learned we’re all in this together. Monthly community meetings keep residents informed and remind them that they are not alone.

I have never sobbed harder than when I walked out of the house that day. The wailing sirens, the indescribable sounds of the storm, the despair on my neighbors’ faces—all are permanent memories. But an instant change in attitude was another result. I started focusing on just how lucky I was to have my family and a roof over my head, no longer complaining about the things I didn’t have. I started volunteering more. I spend more time with my family. I work harder in school and in my extracurricular activities. I keep busy with things that make me happy.

For years, I thought of home as the place you grow up and family as the people you see on holidays. But this experience has taught me that I have another family, here in the College of ACES. The outpouring of support from my ACES friends and teachers helped reassure my family and me that things would one day get back to normal. Surrounding me in one of the worst times in my life, my ACES family reminded me that I always have a home.

The greatest lessons are learned in trying times, and the key to moving forward is counting your blessings, not your problems. Life does not always deal the fairest cards, but the way you play your hand determines your true character and strength.

Regan Emkes, a lifelong resident of Gifford, is a senior majoring in agricultural communications.

Creative director Leslie Ehler, also a Gifford resident, captured this scene the day after the tornado struck.
Building an emotional foundation that endures

By Phyllis Picklesimer
Photo by Haley Ahlers
Child development professionals call it secure attachment—a young child’s deep sense of knowing her parents are there for her. That bond gives a secure base from which to explore the environment, protection in times of uncertainty, and a source of joy in everyday interactions, according to University of Illinois attachment experts Nancy McElwain and Kelly Bost.

As a result of that security, children come to believe that they are competent in managing challenging situations, are worthy of care and attention, and can trust others in close relationships. And that sense of well-being can endure throughout a child’s lifetime.

So how do kids develop a secure attachment? “It depends on how a parent responds when the child is distressed or upset and needs emotional support,” says Bost, professor of human development and family studies.

Parents have a key role in helping kids learn how to regulate and express their emotions. Secure attachment gives young kids an emotional foundation as they learn how to handle powerful feelings like sadness, frustration, social fearfulness, and anger, says McElwain, professor of human development and family studies.

“When parents punish their children for being sad, angry, or scared, kids learn to hide their emotions instead of showing them. These children become increasingly anxious when they experience these feelings because they know they’ll face negative consequences,” she adds.

Here are some everyday examples of how parents can replace negative responses with more effective ones when challenges arise:

Say a young child returns from a birthday party crying because her friend neglected her, choosing to play with another child instead.

• Rather than dismiss her sadness (“Just forget about it, honey. Don’t be sad”), support your child as she experiences this difficult emotion: “I’m sorry you’re upset. Let me give you a hug.”

• Instead of minimizing the emotional reaction (“Don’t be a baby. You’re making a big deal out of nothing”), help your child identify and understand her feelings: “I know that you feel sad and hurt that Betsy played with Estela more than she played with you. Tell me how you feel about that.”

• Rather than punish her (“Go to your room until you can control yourself”), help her problem-solve: “Let’s think of something you can say or do if this happens again.”

In recent research, the two experts have discovered some really good reasons for nurturing attachment in young children.

Bost has discovered that a parent’s attachment style, which is thought to stem from the mom’s or dad’s own attachment-related experiences, may influence parenting behaviors that have been implicated in childhood obesity.

In a recent study, insecure parents were significantly more likely to respond to their child’s distress by becoming distressed themselves or dismissing their child’s emotion.

A child who doesn’t learn how to properly handle sadness or frustration is more likely to engage in comfort eating, using food for self-soothing, she says.

McElwain’s research has taken her in a different direction. “Because a child’s early attachments are close and emotionally intense, those first relationships may be important in guiding the way children think about and function in other close relationships in later life,” she says.

She has learned that children who are securely attached develop stronger early friendships, “probably because they enter relationships with positive expectations. If they’ve had a secure, emotionally open parent–child relationship, they’re more responsive to their peers, and that promotes more positive interactions with friends during the early school years.”

In another benefit, McElwain says, a securely attached child who encounters a peer who doesn’t interact well can adapt to the situation and be assertive, by either making suggestions or giving directions.

Parents have a key role in helping kids learn how to regulate and express their emotions.

McElwain’s research has shown that little boys, especially those who are prone to feeling anger, fear, or frustration intensely, may need extra support when their emotions threaten to overwhelm them.

“In our culture, boys are discouraged from expressing their emotions. If you add parental punishment to these cultural expectations, the outcome may be especially detrimental for boys who often experience negative emotions intensely,” she says.

Bost says that parents shouldn’t confuse a difficult temperament with an insecure attachment.

“You may have a fussy infant, but if you respond to him sensitively and consistently, he will develop a strong bond with his parents and will likely go on to develop close relationships with others.”
S tuart Levenick’s career with Caterpillar has led him full circle—from Washington, Illinois, around the globe and back to Peoria, just 12 miles from his hometown.

Levenick began his years at Illinois in 1971, a student in the College of Engineering and a walk-on offensive guard for the Fighting Illini. Although he remained on the football team until he graduated in 1976, he didn’t stay in engineering.

“If you think your career is planned by the time you come to college, I can tell you that mine certainly wasn’t,” Levenick said to a group of ACES students during a visit to campus this year. “I got through two years of calculus, differential equations, and physics, then decided, I don’t think I really want to be an engineer.” He switched to pre-med.

“I took some of those classes that serve as a filter for who’s going to go on to be a doctor and who isn’t. I got decent grades, but I thought, I don’t know if I want to be a life scientist indoors. Maybe I want to be a life scientist outdoors.”

Levenick’s “I wonder what I should do with my life” exploration continued. When he landed in an ACES ecology class, things finally clicked. “I never intended to be a field forester; I just liked the industry. It was a nice mix of science and business. While I studied forestry, I took electives in business law, investment banking, and insurance. I even took a 5-credit-hour cooking course that somebody talked me into. It was harder than organic chemistry,” he joked.

After graduating, Levenick was drafted by the Baltimore Colts, but a knee injury at training camp ended his football career. He took a sales and marketing job with Caterpillar. “My dad was an engineer at Cat, so I had grown up in the shadow of ‘the Big Yellow,’ but I never thought I’d work there. In fact, it’s probably the last place I expected to work.”
Today
Levenick is one of five group presidents for a company with 118,000 employees and annual sales and revenues over $55 billion. Caterpillar is the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines, and diesel-electric locomotives.

Levenick's first Cat assignment was in Eugene, Oregon, followed by six years in Toronto, then back to Peoria. He switched to product source planning, making regular trips to Iraq, Turkey, and South Africa. But when Cat moved him to Jacksonville, Florida, he told his wife that their dream of living overseas may never become reality.

"The following Monday I got a call from my boss saying to sell my house," Levenick says. Cat sent him to MIT as a Sloan Fellow for a master's degree in management. Little did Levenick know that company executives were grooming him for bigger things, including a career trajectory that would take him to Singapore, Moscow, and Tokyo, where he became vice president. "I've been back in Peoria for about 10 years, which is the longest job I've ever had with Cat," Levenick says.

Looking back, Levenick now sees his route in a different light. "The five of us who run Caterpillar meet regularly to plan and manage the careers of our top 500 employees. I didn't know it at the time, but someone was looking at my strengths and weaknesses and evaluating what experiences I needed in order to be successful."

Levenick calls his years at Illinois formative. "I'm a perfect example of the depth and breadth of education and opportunities that students have at the University of Illinois. You can go as deep as you want. The expertise is phenomenal, and the breadth is unmatched. I didn't realize at the time how valuable my experience there would be."

Although Levenick got a lot of leadership development as football co-captain, he says that kind of experience can be gained in any arena—sports, the arts, community service. "It's the sign of a well-rounded education and a way for students to test outside the classroom what they learn inside."

Levenick spoke about the ambiguities he often faces in his role and the lessons learned that help him make difficult decisions. "The answer might not be obvious. And decisions may often come as much from your heart as your head. Leaders have to find a way to get the information necessary to make decisions about things that matter, in the absence of certainty, and in an ethical fashion."

"There generally isn't a decision that comes to me that has an obvious answer. You have to leverage teamwork in an inclusive manner, use inquiry and debate to get the right facts on the table. And then a leadership style that includes accountability will drive results. It's all about clarity, vision, and execution."

By Debra Levey Larson
Another fall semester on campus has begun, and the ACES Alumni Association remains focused on providing meaningful events and opportunities for you to interact with the college.

We were proud to honor the College of ACES Outstanding Young Alumni Award winners, the Family Spirit Award winner, and the Illinois 4-H Foundation Award winners in September at the ACES College Connection, co-hosted with Illinois 4-H Foundation. New members of the Round Barn Society were also pinned at the society’s reception. Salute to Ag Day was held the next day, with many alums in attendance. Many of you have attended ACES in Places alumni events throughout the year, and—with thanks to Tina Veal, director of alumni relations—the ACES Alumni Association assisted with anniversary celebrations for Farmhouse Fraternity (100 years), 4-H House (80 years), and Nabor House (75 years).

You can read details of our most exciting news on the next page: the birth of ACES Family Academies, where children between 8 and 12 will share the ACES experience with a family member, including an overnight stay in the dorms! We expect this new event to extend the family spirit we all enjoy in ACES. If you have any interest in helping with ACES Family Academies, please contact Tina Veal at vealt@illinois.edu. As we know, many hands make light work.

The support of each of you is important to the College of ACES and the University of Illinois.

I encourage you to visit our website (acesalumni.illinois.edu) to keep abreast of future activities. You can also follow the College of ACES on Facebook, Twitter, and LinkedIn. Please stay connected to your alma mater.

I have greatly enjoyed the privilege of serving as board president the past two years, witnessing firsthand your generosity, support, and loyalty. ACES’s success and reputation are due in large part to you—there cannot be a finer institution or alumni group. Go Illini!
ON THE HORIZON

2014
October 15 :: 2015 ACES Award of Merit nominations due
October 24-25 :: University of Illinois Homecoming
October 25 :: Ag Comm Huddle
October 25 :: Student Advancement Committee 25th-anniversary reunion
December 5 :: ACES Alumni Board meeting

2015
March 3 :: Big Ten Ag Alumni Event, Washington, DC
March 13-14 :: ExplorACES
April 13 :: ACES Award of Merit luncheon; ACES awards banquet
May 16-17 :: Commencement
July 9–10 :: ACES Family Academies
September 1–3 :: Farm Progress Show, Decatur, IL

For more event announcements, including regional alumni events, visit acesalumni.illinois.edu. All events are on campus unless specified.

ACES College Connection Recognizes Outstanding Alumni and Friends

In September, more than 150 alumni and friends attended ACES College Connection to honor the achievements of a number of individuals recognized by the College of ACES Alumni Association and the Illinois 4-H Foundation. Our congratulations to this year’s alumni award winners:

ACES Outstanding Young Alumni Award
BRAD MEYERS, B.S. ’04, M.S. ’07
Food Science and Human Nutrition
MICHAEL ROBINSON, B.S. ’03
Agricultural and Consumer Economics
JENNIFER WALLING, B.S. ’03, M.S. ’06
Natural Resources and Environmental Sciences

ACES Family Spirit Award
THE MATTHEW STOLL FAMILY

ACES E-Alumni Newsletter
Stay connected to the College of ACES! Be sure your email is up to date with us to have the latest news delivered to your inbox every other month. Email us at acesalumni@illinois.edu, or complete the Class Notes survey on the ACES Alumni Association website at acesalumni.illinois.edu.

ACES Alumni Class Notes
Check out Class Notes online at tinyurl.com/acesclassnotes! Be sure to share any special times in your life with the ACES Alumni Association to keep your fellow alumni updated. Newly married or a new parent? A different job or a promotion? Publication of a book? We hope to hear from you!

ACES FAMILY ACADEMIES

Coming Next Summer

ACES alumni will have an exciting new opportunity next July 9 and 10 to bring children, grandchildren, nieces, or nephews ages 8 to 12 to their alma mater. Families will enjoy a 1½-day educational experience while spending time together on campus.

Participants will sleep in a residence hall, eat in campus dining facilities, and participate in classes on the ACES campus. You can relive and share your college days as well as create new memories with your aspiring Illini.

ACES Family Academies, being organized by the College of ACES Alumni Association, will be a self-supporting program dependent on registration fees. If you have any interest in helping, contact Tina Veal.

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PARTING SHOT

Nothing says fall on campus like busy parking lots filled with tailgate parties—orange-and-blue flags, painted faces, laughing children, cold beverages, and steaks sizzling on the grill.