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Tatyana McFadden and
Susannah Scaroni

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recovery
World-class wheelchair racer Tatyana McFadden won three gold medals at last fall’s Paralympic Games. But there’s another side to the skilled athlete, who is interning at Johns Hopkins Hospital as a child life specialist, training for a career in which she’ll support the emotional needs of sick children and their families.

Both her athletic zeal and her career goal are rooted in McFadden’s childhood experiences. “I developed my competitive edge in the Russian orphanage where I lived until I was six. Born with spina bifida, I was paralyzed below the waist, and I’ve been a fighter from the start. I had to be,” McFadden said.

When she arrived in the U.S. with her new family, she was “extremely scrawny, very sick, and anemic.” Several surgeries followed, along with a life-changing encounter.

ACPS Paralympian McFadden: Three times gold

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On the cover:
ACPS student Tatyana McFadden represented the USA at the London Paralympic Games in September 2012. Photo courtesy of Deborah McFadden.

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“I worked with a child life specialist in the hospital. Now I want to be the sort of person who encouraged me, helping kids get through their struggles and telling them nothing’s impossible. Yes, you are going through this experience, I will say, but life is not over.”

McFadden began competing in track events in high school and has raced in three Paralympics, winning silver and bronze medals when she was only 15. She is grateful for the athletic scholarship that brought her to the U of I, where many top wheelchair athletes are trained and celebrated.

Also important to her decision was ACES’ excellent track record in educating skilled and empathic child life specialists. (To learn about a Human and Community Development alum pursuing the same career, see academics.aces.illinois.edu/profile/kerry-murphy).

McFadden, who will be back on campus to complete her degree, continues to draw strength from her family. A special joy was sharing the Paralympics experience with her 16-year-old sister, Hannah, who made the finals in the 100-meter race.

Younger sister Ruthi, mom Deborah—with whom she’s had a special connection since their eyes met at the orphanage—and her superfan grandmother all screamed their support from the sidelines as Tatyana won one medal after another in London.

The stellar athlete plans to race in four years at the summer games in Rio de Janeiro. By then she should be hard at work as a child life specialist, inspiring children to excel in spite of uphill battles. McFadden knows something about winning against all odds.

Susannah Scaroni can still hear the roar of the Paralympics crowds, and the ACES dietetics major, who placed eighth in the marathon, said next time she is going after the gold.

“This marathon was nothing like others I had done. There were 60-plus turns, which is significant to a wheelchair racer because turning demands careful control of speed. Continual accelerating and decelerating really took a toll on my physical power,” she said.

So Scaroni tapped into the mental strength she had built during training, a tactic she knows she’ll apply in other challenging situations.

“When I came around the final roundabout, in front of Buckingham Palace, I was cheered on with a roar of U-S-A’s! My arms still burned, but now I felt a burst of energy and joy. I knew that I had given it all that was in me,” she said.

A native of Washington, Scaroni was injured at age five in a car accident that left her unable to use her legs, although she retained use of her abdominal and back muscles.

“In fourth grade, I began playing wheelchair basketball, and when the track season began, I joined that team, too, and continued through high school,” she said.

Growing up, Scaroni heard her teammates talk up the University of Illinois as the preferred college destination for wheelchair athletes, and as she investigated the dietetics program, she became even more determined to become an Illini.

“When I was in high school, I lost a lot of weight and was on bedrest for a year. That experience taught me the importance of good nutrition for competitive athletes,” she said.

Scaroni believes the U of I is the best place she can be as a wheelchair athlete and a future sports nutritionist. “The programs are phenomenal,” she said.
Real-world financial planning experience

Financial planning is one of the fastest-growing occupations in the United States, according to the U.S. Bureau of Labor Statistics. ACE 445 Intermediate Financial Planning, taught by Angela Lyons in the Department of Agricultural and Consumer Economics, offers students the opportunity to meet with more than 30 financial professionals and to work with a client to create a financial plan using the skills they learn over the course of the semester.

The financial planning project caught the attention of Zach Sabo, manager of financial services for Prudential in Champaign. Impressed by the students’ efforts, Prudential decided to offer an Apple iPad to the student with the most unique and innovative plan. Sabo reviewed the plans and provided input into deciding the prize winner.

“I was very impressed with the professionalism and attention to detail in each plan,” Sabo said. “I knew that this group of students had tremendous talent.”

Winner of the iPad was Kyle Grabenstetter, a senior in the financial planning program. The first runner-up was Dustin Paska; second runner-up was Brett Petrulis.

Reflecting on what this experience offers her students, Lyons said, “It’s not all about what you read in the textbook. We’ve learned that lesson the last few years from what has happened in the financial industry. Students entering the profession today need as much hands-on experience as possible. This course gives them an opportunity to put financial planning into action so they hit the ground running when they enter the real world.”

Students who graduate with a degree in financial planning are eligible to take the national Certified Financial Planner exam. The ACE program, in its sixth year, incorporates courses in finance, economics, personal investing, and policy.

Agri-marketing students develop campaign for “Zapple”

“Energy really does grow on trees,” claims the marketing campaign created by a team of 14 agri-marketing students. That’s the catchy slogan the team developed for the fictitious Zapple, an apple infused with caffeine equivalent to one cup of coffee. The campaign won sixth place in a national marketing competition hosted by the National Agri-Marketing Association (NAMA).

“Students in the agri-marketing class decide on a project and develop a plan to successfully bring the product or service to the marketplace,” said Theresa Miller, academic advisor in the Department of Agricultural and Consumer Economics.

The final presentation described some of the guerilla marketing strategies that would be implemented in metropolitan Chicago and New York City. Ideas included displaying a message on a blimp flying over the Chicago lakeshore; implementing a text-to-win promotion at the U.S. Tennis Open in New York, with spectators texting in to guess the number of Zapples in a giant canister outside of the stadium; and creating a “Bob for Zapples” game.

“The University of Illinois is in only its second year of competition after a hiatus of more than 15 years,” said Miller. “Teams were active in the late 1980s and early 1990s. This year students pushed to reinvigorate the NAMA club.”

“Beyond the professional networking opportunities, the NAMA club lets ACES and College of Business students apply what they’ve learned in the classroom while developing some of the ‘soft skills’ that are so important for career development,” said Nick Paulson, assistant professor in agricultural and consumer economics who provided instruction along with Miller. “Participating in the national marketing plan competition gives students experience with critical and creative thinking, market research, making a presentation under pressure, and fielding questions on the spot.”

The club received support from Roger Clark and Farm Credit Services of Illinois.
Tim DelValle, an intern at the College of ACES Dixon Springs Agricultural Center, conducted a study to determine the effect of pyrethroid insecticides on bull fertility. Although pyrethroids used in insecticides are generally harmless to humans, they have been shown in studies with mice and cell cultures to have negative effects on the male reproductive system at certain dosages and with certain methods of application.

Once a week, DelValle and members of the U of I College of Veterinary Medicine and Department of Animal Sciences evaluated semen quality in bulls treated with pyrethroids by ear-tag or pour-on applications at standard label dosages. Throughout the 62 days of the study, the researchers observed no detrimental effects of pyrethroid treatment on semen quality regarding sperm motility and morphology.

At the Orr Agricultural Center, intern Ashley Kloth conducted a counterpart study investigating the effect of pyrethroids on the conception rates of female cows.

Kloth evaluated the pregnancy rates for artificially inseminated cows with and without insecticide treatment. With two trials combined, it was determined that there were no significant differences in conception rates between the control and treatment groups, meaning no adverse effects were found.

The combined results from studying bulls at Dixon Springs and cows at Orr will be the first controlled research addressing the controversy surrounding the effect of pyrethroid insecticides on cattle reproduction.

The national Farm to School program seeks to provide nutritious meals to students while boosting local economies. Last summer intern Amanda Rosendale surveyed both school staff and farmers in the southern 16 counties of Illinois to investigate ways to improve the program. The preliminary results indicate that schools are more aware of Farm to School than are producers.

Rosendale identified common crops that schools buy and Illinois farmers grow, including tomatoes, apples, and peaches. The major concerns for schools are quantity requirements and the limited overlap between the growing season and the school year. Rosendale’s findings will help focus the next steps required to reduce the barriers for both schools and farmers and enhance Farm to School’s success.

Japanese stiltgrass (Microstegium vimineum) is an invasive plant species that covers areas of both Dixon Springs State Park and Shawnee National Forest. Interns Scott Cinel and Sean Hill investigated the plant’s ecological impact on songbird populations and prescribed forest burns. Cinel determined the reproductive success of songbirds in areas with and without stiltgrass invasion, where coverage of 20 percent or more is classified as an invaded zone. He identified 40 nests of eight different species throughout the summer. Most nests were located at similar heights from the ground in elm trees with coverage from vines. Success and survival rates were similar in invaded and non-invaded areas, indicating that stiltgrass’s influence on songbird populations is minimal; however, the 2012 drought may be an important factor, as the lack of rain severely limited stiltgrass growth.

To determine the influence of Japanese stiltgrass on prescribed forest burns, Hill studied 20 pairs of plots, comparing the fire potential of invaded areas with nearby non-invaded areas. He found the invaded zones to have more herbaceous coverage, whereas non-invaded zones had more shrubs and organic material on the forest floor. A formula that takes into account all the variables contributing to fire potential determined that invaded areas have more woody mass than non-invaded zones. The study confirmed that the presence of Japanese stiltgrass changes the composition of the forest floor. Being aware of this difference will allow the U.S. Forest Service to take precautions to ensure that prescribed burns are beneficial in both invaded and non-invaded zones.
**Fulbright recipient works in Nepal**

In the shadow of the Himalayas, Rosalie Ierardi is carrying out her Fulbright project in Pokhara, Nepal, while witnessing extremes of plenty and poverty very different from her hometown of Urbana, Illinois.

“I’ve been alternatively awed and appalled at the things I’ve seen here, ranging from beautiful temples and verdant rice paddies to grubby butcher shops and packs of feral dogs in the streets,” Ierardi said.

“So far, though, I’ve been most impressed by the Nepalis’ hunger for education: I see schoolchildren in crisp uniforms flocking to rundown buildings with unreliable power and few books, smiling and laughing, because even with such difficulties, the people here understand that education is the key to success.”

For her project, Ierardi is studying the effects of heat stress on buffalo. Working with the Animal Health Training and Consultancy Service, a nonprofit agency in Pokhara, Ierardi will try to better understand what farmers can do to mitigate seasonal impacts on buffalo milk production.

The goal of the Fulbright program for students, administered by the U.S. Department of State, is to promote cross-cultural interaction and mutual understanding through students’ engagement in their host communities. Each year 1,700 academic-year grants are awarded to U.S. graduating college seniors, recent alumni, and current master’s and doctoral students.

After completing an associate’s degree from Parkland College in Champaign, Ierardi earned a bachelor’s degree in animal sciences at U of I in 2012. She plans to pursue a career in production animal medicine with a doctorate in veterinary medicine.

“I’ll consider it a privilege to come home to the University of Illinois to pursue my studies in veterinary medicine—far more so than I could have appreciated before this experience,” Ierardi said.

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**Course examines issues affecting our food system**

When students eat a hamburger with all of its components, including grains, meat, and vegetable toppings, do they think about how all those elements were produced, processed, marketed, placed on store shelves, and transported to the place of preparation?

“How do all those processes affect someone’s nutrition? How do they affect our environment? And what happens to food, water, the oceans, and our climate as a result of people consuming that particular set of ingredients in a meal?” asked Robert Hughes, who teaches ACES 102, designed to help ACES and other university students think critically about solving the challenges that affect our food system.

“We talk about the big issues—everything from food waste to food scarcity, obesity in the U.S. and other Western countries, and food safety,” he added.

ACES 102 is taught by a group of faculty, one from each ACES department, with contributions from guest lecturers with specialized expertise.

“We want students to think as a team as they try to solve these major issues, not just as crop or animal scientists or nutritionists,” Hughes said. The goal, whatever their majors, is to make students more informed consumers and to engage them as scientists and interested citizens in shaping policy to make food safer, healthier, and less damaging to the world’s resources.

Amanda Jacobs, who took the class last spring, said that it taught her to analyze and criticize the food system in hopes of one day seeing it become an equitable, sustainable enterprise from farm to fork.

“The course gave me an appreciation of the many variables that contribute to nearly all difficult challenges. It helped me understand how few problems worth solving can be analyzed in a cut-and-dried manner,” Jacobs said.
One mark of the excellence that characterizes ACES faculty members is what other people say about them. At the 2012 North American Colleges and Teachers of Agriculture (NACTA) conference, 11 teaching awards were given to faculty from the College of ACES – more than any other single institution.

Wayne Banwart: Soil scientist, teacher, administrator

Wayne Banwart has devoted his career to educating students about agriculture, but he has done far more. For more than 35 years, Banwart has made untold accomplishments as a soil scientist, an exemplary teacher, and a dedicated advocate for quality education through a variety of roles in ACES and the North American Colleges and Teachers of Agriculture (NACTA).

Laurie Kramer, associate dean for academic programs and professor in the Department of Human and Community Development, gave examples of Banwart’s substantial contributions.

“As assistant dean, Dr. Banwart originated the introductory course that is required for all incoming students. Not only does the course introduce new students to the resources available to support success in learning, it exposes them to the varied career paths offered in agriculture and to the types of research and scholarship in each major discipline. Dr. Banwart taught students to think systemically. It changed their approach to learning, leading them to be better prepared for the fine-grained critical thinking required in higher-level courses.”

A leader in putting technology to work, Banwart incorporated online modules into the introductory course that, combined with personal discussion sections, created some of the nation’s first blended-learning experiences. His instructional model has since been adopted by all colleges at the U of I.

Kramer recalled that Banwart was instrumental when, in 1995, the college was restructured and 13 departments were reconfigured into seven. She said that he singlehandedly led the charge to create curriculum for each of the new or revised majors, working with multiple faculty groups to usher each curriculum through the multistage approval process.

Banwart retired from ACES Academic Programs in August 2007, but he continues to be involved as a professor emeritus in the Department of Natural Resources and Environmental Sciences.

Kalita receives Teaching Award of Excellence

Prasanta Kalita, a professor and leader of the soil and water resources engineering program, received the Teaching Award of Excellence.

Kalita, a U of I University Distinguished Teacher-Scholar, has won numerous departmental, college, and campus awards, including the USDA National Award for Excellence in College and University Teaching and the NACTA Central Regional Outstanding Teacher Award. He has been active in a multiyear project to develop and reform agricultural curricula in India as well as working to establish centers for teaching excellence at several Indian universities.

Kalita’s research in soil and water offers him many opportunities to enhance the educational experiences of his students. Kalita provides leadership for the Storm Water Pollution and Erosion Control Research and Training Center on the U of I’s South Farms. He assists students with research activities in erosion and sediment control and stormwater management, training them to develop solutions to real-world engineering and environmental challenges.

Kalita is also working with ABE Ph.D. student Joseph Monical on a project to enhance agricultural production in dry areas. The two have traveled to Lebanon to develop a water allocation model that will enable Lebanese communities to enhance their agricultural production using less water, with a system that is environmentally sustainable.
New ACES faculty

**Jody Endres** received a J.D. from the U of I College of Law and an M.A. in administrative management. She teaches courses in renewable energy policy, science and regulatory policy, and environmental law and policy. **Areas of interest:** Environmental, agricultural, and energy policy from legal, political, sociological and economic perspectives.

**Gail Ferguson** received a Ph.D. in clinical psychology from Ohio’s Bowling Green State University. She teaches courses in family conflict management and in immigration, acculturation, and globalization. **Areas of interest:** Caribbean youth identity and well-being; globalization and acculturation across countries.

**Paul Peterson** received a B.S., an M.S., and a Ph.D. from the University of Illinois. He teaches a course in commodity futures and options. **Areas of interest:** Futures and options; market regulation and clearing; commodity prices and risk management; marketing practices and pricing issues in the livestock, meat, and dairy industries.

**Pawan Takhar** received a Ph.D. from Purdue University and came to the U of I from Texas Tech University. He teaches courses in food processing. **Areas of interest:** Use of porous media physics to study food and bioprocessing applications; optimizing transport processes such as drying, sorption, and frying of foods; modeling of microbial destruction in foods; measuring the physical properties of food and biomaterials.

**Sam Wortman** received a B.A. in biology and environmental studies from the University of St. Thomas and an M.S. and a Ph.D. in agronomy from the University of Nebraska-Lincoln. He teaches an introductory horticulture course. **Areas of interest:** Plant physiology, environmental biology, weed science, grain crops, soil fertility, fruit and vegetable crops, crop management, and environmental systems.

More new faculty will be featured in the next issue of ACES@Illinois.

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**Kraft Foods chair named, support continues**

Kelly Tappenden, professor in food science and human nutrition, has been named the Kraft Foods Human Nutrition Endowed Professor. The endowed professorship is part of a $1-million permanent endowment from Kraft Foods to the Division of Nutritional Sciences.

“Dr. Tappenden is exceptionally qualified for this recognition because of her stellar contributions spanning each dimension of the U of I’s mission: research, teaching, and extension,” said Robert Hauser, dean of the College of ACES.

Tappenden studies the regulation of small intestinal function by various nutrients and gastrointestinal-specific peptides. A campus leader, Tappenden has served in many capacities, including her current role as University Distinguished Teacher-Scholar.

Rod Johnson, director of the Division of Nutritional Sciences, is enthusiastic about the benefits the Kraft endowment provides. “This endowment allows us to recruit and retain the highest-quality students and faculty, which will enable us to realize our vision of training the leaders in our discipline far into the future,” he said.

In addition to the endowed professorship, the Kraft Foods Human Nutrition Endowment provides two graduate fellowships in the division and undergraduate scholarships in the Department of Food Science and Human Nutrition.

Kraft Foods’ commitment to developing tomorrow’s scientists and professionals extends beyond the endowment the company has established. Kraft Foods is a multiyear sponsor of the college’s Research Apprentice Program. The Kraft Diversity Fund supports a four-person team of high school students exploring career options related to various areas of study in ACES. Development of a graduate fellowship for students from underrepresented groups to study food science or human nutrition is also underway.

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**Cann and Mackie: NASA grant**

Isaac Cann (left) and Rod Mackie stand inside an anaerobic chamber in front of the methogen cabinet that they will use to explore the general principles of life as part of an $8-million grant from NASA’s Astrobiology Institute.
ACES researchers now have access to a high-performance computing (HPC) system, the Illinois Campus Cluster.

Until recently, most researchers worked with individual clusters that were rapidly outgrown as the amounts of data generated increased. Today’s datasets tend to be huge, often several terabytes (one trillion bytes). Matt Hudson in the Department of Crop Sciences uses DNA sequencers that generate billions of base pairs per day.

Moreover, when the dataset is stored on a hard disk or disks, all the worker nodes have to be able to access it. The speed of getting the data on and off the hard disks becomes limiting.

The campus cluster addresses both problems. To increase computing capacity, resources are pooled. Individuals, groups, and campus units invest in the cluster. They are guaranteed access to the number and type of nodes in which they invested and can also access unused nodes. A new data storage system improves the access speed.

“It’s very, very fast,” said Hudson.

The cluster will grow as researchers invest in successive versions. Hudson is sure that the added capacity will be needed.

“Everyone says that genome sequencing is getting cheaper and easier,” he explained, “but plants like miscanthus and switchgrass are tough to sequence with the methods out there now.”

These plants have more than two sets of chromosomes, and the genomes are packed with repetitive transposons—short, mobile DNA sequences that can replicate and be inserted at random sites in the chromosome. “Trying to figure out which one goes where is difficult,” Hudson explained.

ACES has 36 compute nodes, 432 cores, 1.4 terabytes of random access memory, and 20 terabytes of additional storage.

“No many ag schools have access to—or are seeing the potential of—HPC,” said Hudson. “We have an opportunity to become a leader in this area.”
Environmental groups should pool efforts to reach the public

A lot of time, effort, and money are spent by agencies, municipalities, and various non-governmental organizations to educate the public about environmental concerns. Could groups with very different beliefs collaborate in doing so?

U of I geographer Bethany Cutts tracked messages to the public about water quality and usage from a variety of sources in Phoenix, Arizona. She found there was considerable overlap in the messaging, but little understanding or direction to collaborate and reach specific audiences, such as the community’s Spanish speakers.

“When I began interviewing agencies in a fact-finding mission, I kept hearing the same things. They referenced each other, shared ideas, collaborated, and co-funded projects,” Cutts said. The organizations’ biggest strength was their connectivity and ability to share information, but they hadn’t found a good way to manage and maximize the connections that already exist between specific groups within the public and the network of water educators.

Cutts found that people got more informed if they heard the same message from several sources. “Someone might see a billboard, then later get information in their water bill, and their child might be in an after-school program doing puppet shows about water conservation. Some neighborhoods might be barraged with a lot of messages, whereas others, even in the same city, might not.

“Everyone is trying to reach the entire public,” Cutts said.

Cutts suggested that even organizations with differing goals could do more information and even financial sharing. They can work together to build public knowledge and empowerment in environmental decision-making.

Teachers may need training to respond to children’s emotions

Early childhood teachers don’t get enough training in helping young children learn to handle frustration, anger, and excitement, a skill they need for kindergarten readiness, said Nancy McElwain, a professor of human development and family studies.

“When teachers aren’t trained to respond in supportive ways, they often fall back on responses that reflect how they were raised and whether they feel comfortable with their own emotions,” said doctoral candidate Rebecca Swartz.

For the study, 24 student teachers in the U of I Child Development Laboratory rated their responses to hypothetical emotional situations and reported their beliefs about the best ways to handle children’s emotions. They were then observed as they interacted with children and rated for their responses to the children’s positive and negative emotional displays.

Student teachers who reported using strategies to regulate their own emotions—for instance, thinking about a stressful situation in a different light—and who reported more accepting beliefs about children’s emotions showed more supportive responses when children had negative emotions.

Swartz wants teachers to learn emotional regulation strategies so they can model them for children and manage challenging moments involving emotions in the classroom.

For example, instead of saying “Don’t cry” or “That’s not important,” Swartz would like the teacher to label the child’s emotion and help him or her learn to cope with his frustration.

“If a child is crying because a classmate has taken a toy, a better response would be, ‘I know you’re sad. You really want to play with that.’ Then the teacher could use a problem-solving strategy: ‘Maybe you could take turns or play with another toy for now.’ ”

According to Swartz, “These everyday moments are golden opportunities for children to learn how to manage their emotions. Too often, teachers want to make negative emotions go away. Instead we need to use them as learning opportunities.”
Prairie cordgrass: Highly underrated

When D.K. Lee and Lane Rayburn talk about prairie cordgrass (Spartina pectinata), they have difficulty containing their enthusiasm. With colleagues at the Energy Biosciences Institute, they are among the few people doing research on this grass as a potential energy crop.

Lee said that prairie cordgrass has received comparatively little attention because, unlike other energy crops, it is not good for forage. However, he has found that it has other desirable traits.

For example, it grows well on land that is too wet for producing row crops and on marginal land where soil salinity is a frequent problem. It also has good cold tolerance. Although it is a warm-season grass, it starts growing in mid-March, allowing it to accumulate high biomass.

Rayburn said prairie cordgrass is perfect as an energy crop because it is a native species, so there are no invasiveness issues associated with it.

To find out where the grass grows and whether it was all the same, Lee traveled thousands of miles around the country collecting samples of more than 130 natural populations. He and his group then looked at the samples’ DNA and ploidy levels (the number of sets of chromosomes).

They found that most South Dakota cordgrass was octoploid (eight sets of chromosomes), while Illinois grass tended to be tetraploid (four sets). Then, to their surprise, they found a mixed-ploidy population of tetraploids and previously unknown hexaploids (six chromosome sets) on a piece of Conservation Reserve Program land in Illinois. The land had not been farmed for 20 years, so the polyploidy event occurred quite recently.

Lee said that, for biomass production, this newly discovered hexaploid is in the top five of his collection. Rayburn said that finding the hexaploid “was like catching a snapshot of evolution.”

Collaboration with Brazilian partners addresses postharvest loss

The Archer Daniels Midland (ADM) Institute for the Prevention of Postharvest Loss is funding research collaboration among the University of Illinois and three universities in Brazil to measure and document postharvest losses of soybeans and corn. Significant amounts of food are lost every year to postharvest waste, and the problem takes on global implications when studies show that this lost food could meet the minimum annual food requirements of millions of people.

The research project has three components. The first is an effort to determine the extent and cost of harvest losses for farmers in the major soybean- and corn-growing states in Brazil. The second is studying transportation and storage losses in order to develop guidelines for proper handling, transportation, and storage of soybeans and corn. The third component is testing and analyzing costs of implementing effective structures for on-farm storage, in particular silo bags.

Grace Danao, an assistant professor in the Department of Agricultural and Biological Engineering (ABE), is administering the ADM grant. ABE professors Richard Gates and Kent Rausch and professor emeritus Marvin Paulsen are also investigators with the project. The Brazilian partners include the Universidade Federal de Viçosa, the Universidade Federal de Goias, and the Universidade Federal de Mato Grosso-Sinop. This group is committing resources in the form of faculty time, graduate and undergraduate support, and materials and supplies.

The entire project is ongoing, and Danao said the team hopes to be able to demonstrate low-cost and efficient strategies that can be adopted by small and large producers in the next three to five years.
U of I scientists have found compounds that inhibit enzymes responsible for carbohydrate absorption and assimilation in Illinois blueberry and blackberry wines. That could mean a tasty way to help people with diabetes decrease their blood sugar.

“We’re thinking about a dealcoholized fermented fruit beverage that would inhibit the carb-fighting alpha-amylase and alpha-glucosidase enzymes and also make use of the wine’s other healthful bioactive components,” said Elvira de Mejia, a professor of food chemistry and food toxicology.

The study compared the anti-carb effects of bioactive compounds in blueberries and blackberries with acarbose, an anti-diabetes drug. The two carb-degrading enzymes performed at 91.8 and 103.2 percent compared to the diabetes drug, de Mejia said.

The study is the first to assess the effect of berry fermentation at different temperatures on these carb-inhibiting enzymes. At both room and cold (4 ºC) temperatures, berry wine retained the ability to degrade the enzymes, she said.

De Mejia also measured the antioxidant, polyphenol, and anthocyanin contents of blueberry and blackberry wines. Her proposed blend contains an abundance of these bioactive compounds, which add to its healthful properties.

She is particularly interested in the ability of anthocyanins to reduce inflammation, which contributes to the development of many chronic illnesses, including cancer, metabolic disease, and cardiovascular disease.

“Preliminary studies have indicated that anthocyanins may have a positive effect on cognition and overall brain health while protecting against some of the effects of aging, such as Alzheimer’s disease and memory loss. These berries have some very intriguing components,” de Mejia said.

The bioactive ingredients could also be added to any prepared beverage to give it color, flavor, and nutritional punch, making them useful to the food industry, she said.

Drink made from berry wine may provide tasty drug for diabetes

A study on hunger trends over a 10-year period found that 14.9 percent of seniors in the United States—one in seven—face the threat of hunger. This translates into 8.3 million seniors.

“In 2005, one in nine seniors faced the threat of hunger,” said Craig Gundersen, a professor in the Department of Agricultural and Consumer Economics and executive director of the National Soybean Research Laboratory. “So, unlike the population as a whole, food insecurity among those 60 and older actually increased between 2009 and 2010.”

According to the study, co-authored by Gundersen with Jim Ziliak of the University of Kentucky, from 2001 to 2010, the number of seniors experiencing the threat of hunger increased by 78 percent. From the onset of the recession in 2007 to 2010, the number of seniors experiencing the threat of hunger increased by 34 percent.

Gundersen said that the fact that seniors in our country are going without enough food due to economic constraints is a serious problem that has implications for senior health and will lead to additional nutritional and health challenges in the United States.

The increases in senior hunger were most pronounced among the near-poor, whites, widows, nonmetro residents, retirees, women, and households with no grandchildren present.

“What may be surprising is that out of those seniors who face the threat of hunger, the majority have incomes above the poverty line and are white,” Gundersen said.

Other key findings in the study are that those living in states in the South and Southwest, those who are racial or ethnic minorities, those with lower incomes, and those who are younger, ages 60 to 69, are most likely to be threatened by hunger.

This study is the first in a series of annual reports on the state of senior hunger in the United States.
Eating garbage: Bacteria for bioremediation

A 150-foot-high garbage dump in Colombia will have new life as a public park. Jerry Sims, an associate professor in the Department of Crop Sciences, and Andres Gomez, a graduate student from Medellín, Colombia, have demonstrated that soil bacteria can be used to neutralize contaminants.

The landfill, “El Morro,” served as Medellín’s dump from 1972 to 1984. It was also home to thousands of people who migrated from rural areas and made a living picking up trash. After relocating the residents, the government hoped to reclaim the area for a park, but the cost of digging up and treating the garbage was prohibitive, and it contained contaminants that are hard to treat.

“Hydrocarbon compounds, such as phenyls and chlorinated biphenyls, were an important source of contamination,” said Gomez.

Gomez worked with researchers from the National University of Colombia to develop bioremediation methods, which use biological agents to remove or neutralize contaminants. He looked for soil microorganisms that could eat carbon.

This task was not trivial. “There are maybe 10,000 species of bacteria and a similar number of fungi in a gram of soil,” Sims explained.

Moreover, because the material in the hill was loose and porous, with air spaces resulting from dirt being thrown over garbage layers, it was unclear if the indigenous bacterial community would be complex enough to perform effective bioremediation.

After sampling from different depths, Gomez found microbial communities with profiles typical of bioremediation bacteria. With support from an American Society for Microbiology grant, he came to Sims’ lab to do tests he could not do in Colombia. In collaboration with Tony Yannarell in the Department of Natural Resources and Environmental Sciences, Gomez confirmed that the bacterial communities, which changed at every depth, were carrying out bioremediation.

Based on these results, the Colombian government decided to create the park. Gomez, now working on his Ph.D. with Bryan White in the Department of Animal Sciences, hopes to go back to see it.

Forensic tools for catching poachers

Trade in ivory was largely outlawed in 1989, but poaching continues to be a serious threat to the African elephant. Alfred Roca’s research could be the basis for developing new law enforcement tools to catch poachers.

Roca, an assistant professor in the Department of Animal Sciences, has found a way to determine where ivory comes from. With funding from the Division of International Conservation of the U.S. Fish and Wildlife Service, he and his collaborators have obtained sequences of mitochondrial DNA (mtDNA) from elephants at 22 locations in 13 African countries.

Most DNA is found in the cell nucleus, but mtDNA is located in mitochondria, structures that convert chemical energy from food into a form the cells can use. It is a good marker for tracing ivory’s origins because it is transmitted only by female elephants, who do not migrate between herds.

Roca’s collaborator at Washington State University, Nicholas Georgiadis, used a rifle to shoot a biopsy dart at the side of the elephant and collect a small piece of skin.

“It’s like a biting insect,” said Roca. “The hardest part was finding the dart after it fell off.”

Georgiadis collected 653 samples, which Yasuko Ishida, a researcher in Roca’s lab, sequenced and analyzed. She found eight distinct subclades, or subdivisions, of mtDNA (previous research had detected only two to five), seven of which had limited geographical distribution.

The researchers identified 108 unique mtDNA sequences. Among the sequences, 72 percent were found in only one locality, and 84 percent were country-specific. Forty-four percent of the elephants carried a sequence detected only at their sampling locality.

Roca hopes that conservationists will use these methods to determine the provenance of confiscated ivory.

“Sequencing the mtDNA can give a good indication of where the ivory is being poached, helping the country to take steps to prevent it,” Roca said.
Aftermath of the 2012 drought

Last year Illinois along with most of the Corn Belt experienced the worst drought in 50 years. The lack of rain was exacerbated by near-record heat; the summer of 2012 was the third-hottest in U.S. weather history.

Impacts of the drought that were noted at the end of summer 2012 included these:

- More than half of the counties in the nation, and all but four counties in Illinois, were declared natural disaster areas.
- Farmers in the Midwest were forced to abandon cornfields covering an area larger than the state of Maryland.
- Drought and high temperatures during corn grain-fill stages, followed by rain brought by the remnants of hurricane Isaac, favored the development of aflatoxin in the grain.
- Faced with rising feed costs, livestock producers began culling herds.
- The U.S. Department of Agriculture slashed its forecasts for corn and soybeans and lowered production forecasts for eggs, milk, and pork.
- Food prices soared around the world.
- The U.S. government was under pressure to drop laws that mandate the amount of corn ethanol to be produced each year.

In early July, when the significance of the drought began to be evident, state extension specialists sent out news releases on what farmers could expect if the drought continued. They also hosted a number of field days to discuss drought-related issues.

The information provided through U of I Extension included the potential impact on yield, disease occurrence, field fires, food/feed quality of corn (both silage and grain), and water supplies for both domestic and livestock use. Articles were featured in various extension publications and distributed through the press.

U of I Extension launched the Illinois Drought Resources website (web.extension.illinois.edu/drought) to ensure that information related to the state’s dry weather is available, organized, and easily found. The site presents the most up-to-date information about the drought’s impact on crops, livestock, and home gardens as well as addressing financial considerations. It also serves as a portal to other useful state and national resources, including a website operated by the Illinois Department of Agriculture.

Robert Hoeft, interim associate dean of extension and outreach, served on a drought task force for the governor made up of representatives of federal and state agencies, who reported on their drought-response activities. He also served on the State of Illinois USDA Emergency Disaster Task Force, charged with determining when counties were qualified for disaster relief.
“Food desert” describes a geographical area with limited access to affordable and nutritious food. U of I Extension in southern Illinois has a program created specifically for families who find themselves stranded in such a desert.

Linda Crawl Jackson, an extension educator in the collar communities surrounding metropolitan East St. Louis, works closely with low-income families to address issues of access to foods needed to maintain a healthy diet.

“The Expanded Food and Nutrition Education Program [EFNEP] is a federally funded program that is designed to help low-income families choose, buy, and prepare healthy foods for their families,” said Jackson. “We’ve used some of our funding to provide a program we call Learning and Shopping On-the-Go.”

Members of the food-desert communities participate in training classes that teach them the basic daily food requirements for their family. They learn how to create shopping lists based around those needs and how to prepare foods on the list in a healthy manner.

“Because they live in an area that lacks basic services, such as a full-service market and public transportation, we’ve contracted with a local bus line that will shuttle participants in the program to a grocery store about eight miles away,” said Jackson. “This grocery store has been very willing to work with us.”

The store offers participants a “buy $50, get $10 off” (or buy $25, get $5 off) deal, coupons for sale items, and the opportunity to taste vegetables and fruits that participants may not have eaten before.

“It’s important to remember that the problem goes much deeper than just recognizing so-called food deserts,” Jackson concluded. “It’s more reasonable to address nutrition and health issues early rather than later. Health care is expensive.”

What do you do when oil and gas companies come calling for mineral rights to your farmland? In the best of economic times, landowners might be inclined to weigh the pros and cons of selling those rights. But these aren’t the best of times, and what some see as “free money” can be very tempting.

However, it’s not “free money,” said Adam Feig and Connie Beck, two county extension directors based in southeastern Illinois. They are working hard to keep ahead of their constituents’ need for information on selling mineral rights to companies more than eager to buy them.

Feig and Beck both emphasized that they are remaining unbiased on the often-controversial topic of drilling for oil. They do hope to provide information so that landowners can think through the process and make informed decisions based on their knowledge of the long-term effects.

Feig outlined some of the questions that landowners should consider during their evaluation: What is the condition of the infrastructure of the county or city where drilling will take place? Can the roads accommodate the extra traffic that will be generated? Are there rental properties available for the influx of people who will be hired? If not, are there zoning laws to manage the growth that will take place? What effect will drilling have on property values? Can the school systems absorb new students? Wells can require up to a million gallons of water—is there a local source available, or will water have to be trucked in? What effect will any trucking have on road conditions? What is drilling’s long-term effect on farmland? Will the company restore land to its original state after drilling?

Finally, said Beck, landowners need to consult a lawyer before they sign any agreements. “If you are given a lease for three to five years, think long and hard about it. The effects could last a lifetime.”
University of Illinois Extension makes learning online seriously fun, for children and adults alike. Jane Scherer, an extension specialist in web coordination and urban programming, said two of the most popular destinations are Schools Online and Hort Corner.

“Schools Online offers 47 sites that address basic science education as well as life skills,” said Scherer. “When school is in session, sites like The Great Plant Escape, designed to introduce students to plant science and how foods grow, get up to two million hits a month.”

In The Adventures of Herman, Squirmin’ Herman the Worm teaches kids about the anatomy of worms, what they eat, why they are important to healthy soil, and even how to construct a worm bin. There’s also a fun page with art projects, games, and original worm jokes (urbanext.illinois.edu/worms).

Out on a Limb (urbanext.illinois.edu/conflict) teaches youth how to better manage conflicts they face on a regular basis. How do you deal with life’s daily challenges without walking away or fighting?

“In three of the last four years, the American Library Association has placed three of the Schools Online websites on their list of top 20 websites in the country,” said Scherer.

Anyone interested in horticulture and gardening can visit Extension’s Hort Corner (urbanext.illinois.edu/hort), where there are numerous pages to instruct beginners and veterans alike. The Illinois Vegetable Garden Guide, for example, teaches how to grow, harvest, and exhibit vegetables. Stepping Stones to Perennial Garden Design details how to create and maintain a perennial garden that will delight with seasonal beauty year after year.

“Schools Online and Hort Corner are just two examples of the vast array of extension information available online,” said Scherer. “Most of our sites are skill-based, very specific, and often interactive. Our goal is to give people in-depth information, no matter what the subject.”

Team MetalCow wins Rookie Inspiration Award

Team MetalCow, a robotics team with a 4-H affiliation from Bloomington, Illinois, is gearing up for their second season of competition in a national robotics program that involves more than 54,000 students ages 14 to 18 and awards millions of dollars in college scholarships.

“Rebound Rumble” was the theme of last year’s challenge for the FIRST Robotics Competition (FRC). Teams were given six weeks to build a robot that could score baskets, retrieve the balls, and “play defense,” in an alliance with two other teams.

Team MetalCow, one of 10 4-H FRC teams in Illinois, attended the Midwest regional competition at the University of Illinois at Chicago in March. Carolyn Hansen, an extension educator in 4-H youth development for the Livingston/McLean/Woodford unit, was one of the team’s mentors.

“The first time we went out, we could not get the robot’s arm to let go of the ball,” said Hansen. “It came to a complete stop. But these kids didn’t lose their cool; they didn’t give up. They rewired and reengineered on the fly. Competing teams helped them out,” she continued, “and it was wonderful to see that interaction.”

For their outstanding performance under pressure, Team MetalCow earned the Rookie Inspiration Award.

Team MetalCow attended the Livingston, McLean, and Woodford county fairs to demonstrate their robot and had a demonstration booth at the Children’s Discovery Museum in Normal for 4-H National Youth Science Day.

“The lessons these youth learn are phenomenal,” said Hansen. “They bring what they learn in their classrooms into 4-H. They learn to think critically, but also to use their imaginations. It’s a natural fit.”

Robotics clubs affiliated with 4-H are forming across the state, and Hansen hopes to develop a club for Livingston/McLean/Woodford counties in the near future.
New Round Barn Society created

Over 500 charter members were welcomed in September into the Round Barn Society. Newly created by the ACES Alumni Association, the society recognizes former alumni board members who were elected to their volunteer positions as well as young alumni and Award of Merit winners who have by their professional accomplishments and service brought recognition and distinction to the college. Board members’ terms and award winners’ recognition may be static in time, but their contributions to the college are timeless.

“Why round? 

The three round barns situated on the north ridge of U of I’s South Farms are much more than quaint landmarks. The structures are symbols of ACES’ long history of agricultural education and a reminder of some of its earliest innovative research. Built as a demonstration dairy in 1908, the barns’ ingenious round shape allows for a center silo around which cows can stand and feed, like spokes on a wheel. The barrel construction uses less lumber and as a structure is stronger and better suited to resist harsh midwestern weather—powerful prairie winds glance off the rounded outer walls. In 1910, ACES animal researcher Wilber Fraser questioned the traditional shape of barns: “Because most barns are rectangular is no reason that this is the best and most economical form.” Fraser thought outside of the box, and the round barns were the result.

A man firmly planted in ACES

Dedicated alum Greg Oltman ’72 received the 2012 Constituent Leadership award from the University of Illinois Alumni Association. Back in 1973, as a landscape contractor with an ornamental horticulture degree in hand, Oltman created GRO Horticulture Enterprises, a company that specializes in tree planting and transplanting.

“Greg has been very engaged in the work of the college and has demonstrated a substantial breadth of service, giving his time, talent, and treasure over the years,” said Tina Veal, director of alumni relations for the College of ACES.

One of Oltman’s early gifts was 19 Austrian pines donated to the university golf course. He helped establish Salute to Ag Day, held every fall on a football Saturday, and has provided floral decorations for the event for years. Oltman put his transplanting skills to work to orchestrate the move of a rare and very large paperbark maple from near Bevier Hall to its new location just south of Mumford Hall, where it still flourishes. He was also a leader in the landscaping plan for the McFarland bell tower, a new landmark that rises above the ACES campus.

Oltman was a founding member and donor of the ACES Alumni Association Endowment. He often sets the standard, encouraging alumni engagement and giving. He has contributed to the Fund for Excellence in Horticulture programs,
Family, friends, and guests gathered on September 30 to celebrate the dedication of the Dr. Frank W. Kari Walkway and Ponds Restoration at the University of Illinois Arboretum in Urbana.

Guests including U of I president Robert Easter, College of ACES dean Robert Hauser, U of I Foundation president Sid Micek, faculty, students, donors, and community members strolled the walkway, which weaves around the Arboretum ponds and Japan House, to the dedication event. The ponds and their banks, newly graded and dotted with native perennials, served as a backdrop for the ceremony.

“Thanks to the Kari family, you could say the Arboretum is now our own little ‘field of dreams,’” Easter said. “This generous gift built new walkways and restored the ponds in this magnificent slice of nature, and just like in the Oscar-nominated movie, people are coming.”

The walkway has extended the Arboretum’s borders and enables people who use wheelchairs to experience the 26,000 native plants purchased with the restoration funds.

The Kari Family Trust

The Dr. Frank W. Kari Walkway and Ponds Restoration project was made possible by the generous Kari Family Trust in alum Frank Kari’s name. The trust was established by Kari’s father, the late Albert F. Kari, a U of I attendee, a horticulturalist, and a nurseryman.

“Dr. Frank W. Kari

Frank Kari received three degrees from the U of I: a bachelor of science degree in biology in 1974, a master’s degree in nutritional sciences in 1977, and a Ph.D. from the Division of Nutritional Sciences in 1981.

At the end of his career, he was a scientist at the National Institute of Environmental Health Sciences in North Carolina and an adjunct assistant professor in the Department of Nutrition at the University of North Carolina at Chapel Hill. Kari made important advances in studying the role of diet and nutrition in toxicology and cancer.

“I am so privileged that my life and Frank’s crossed here at the U of I in graduate school, where this university trained a wonderful scientist,” said Steven Clinton, M.D., Ph.D., a close friend of Kari and professor of internal medicine at Ohio State University. “We can forget when we talk about all of our other wonderful memories what an outstanding scientist he was. Frank was clear-thinking, asked great questions, could design and execute precise studies, and served as a superb mentor to students as well.”

Throughout their visit, Frank’s sisters and close friends reminisced about Frank’s zeal for life. He skied, played the mandolin, became a pilot, built stained glass windows, and brewed his own beer. However, he is remembered most as a people person.

“He was friends with musicians, artists, and many scientists. And, as I recall from our last walk around Chapel Hill, everywhere we went, everyone from the restaurant owners to the checkout girl at the grocery store knew Frank, and he brought a smile to their faces,” Clinton said. “He didn’t live as many years as most, but what years he had were well lived, very full, and very rich.”

Kari family trust enlivens Arboretum and more

Student Advancement Committee members Luke Rincker and Megan Palecek hold the ribbon for cutting at the dedication of the Dr. Frank W. Kari Walkway and Ponds Restoration. Those cutting the ribbon were (from left) ACES dean Robert Hauser; U of I president Robert Easter; and Kari family members Kathy Kari, Carolyn Kari, Frances Kari Schrader, George E. Boggs, Jr., and Scott Speers.
University of Illinois trustee Edward L. McMillan ‘69
Agriculture began his university career in agricultural economics with a farm management focus. After an internship with Ralston Purina between his junior and senior years, however, McMillan came back to campus intent on entering the world of business instead.

“Dean Warren Wessels helped me make the class changes and find a way to graduate after changing my major my senior year,” said McMillan. “I wouldn’t recommend it to everyone, but it set me off on my career with Ralston Purina, for which I am very thankful.”

McMillan was named vice president and director of marketing for the company’s U.S. animal feed business at the age of 32. “I was in the right place at the right time, with an excellent track record of experience and performance,” said McMillan. “That allowed me to be involved in major decision-making activities at the very top of a Fortune 100 company. I realized I could successfully compete and manage at that level of corporate leadership.”

Subsequently, McMillan was named president and CEO of Purina Mills at the age of 41. “The experience of running a $1.2-billion business that was the global leader in the manufacturing and distribution of animal feed was challenging, stimulating, and, at times, overwhelming.”

McMillan credits several U of I professors for helping build his confidence as he completed their courses, including Bob Spitze (policy), Tom Hieronymus (commodity marketing), Bud Harmon (swine production), and Evert Hatfield (nutrition). “Dean [Karl] Gardner was also a significant motivator and advisor,” said McMillan. “He provided the tough love and ‘kick in the pants’ I needed to take on risks and additional responsibilities, expanding my horizons beyond what I thought I could perform. That served me well in my career with Ralston Purina.”

McMillan has been involved in the university community for many years. He has served on the advisory boards of the Departments of Agricultural Economics and Animal Sciences, the College of ACES Alumni Association board, the U of I Foundation board, and the University of Illinois Alumni Association board. He was also named chairman of the board of managers for the University of Illinois Research Park. Today he serves on the U of I board of trustees.

“As a trustee, you are very accessible to the media,” said McMillan. “As a result, you become much more selective as to what you can, or want to, say publicly. A trustee must be considerate and judicious in any communications concerning the university. While I dealt with highly confidential information most of my life as a corporate executive, the public visibility and access associated with being a trustee has taken my experience to a new level of awareness and sensitivity.”

During McMillan’s three-plus years as a trustee, the board has dealt with numerous challenges, including an abrupt turnover of six of its nine members in 2009, controversies regarding admissions, and inaccuracies in reporting by the law school. The board has served alongside four different presidents and three different chancellors during McMillan’s tenure. “I certainly did not anticipate dealing with all those challenges when I accepted the governor’s nomination in 2009,” McMillan said, “but it’s been an honor and a privilege to be of service to the U of I.

“Like many in agriculture,” McMillan concluded, “I learned from Orion Samuelson that ‘you can never dream big enough!’ I never dreamed of becoming CEO of Purina Mills or a trustee of the U of I, but both happened. Similar things will happen to future U of I graduates, so they should start dreaming and preparing for them now!”
ACES alumni and friends experienced The Maschhoffs’ cutting-edge pig production platform that features the University of Illinois partnership in applied swine production and leadership development. About 80 participants toured the research center, with state-of-the-art feeding and measurement systems, that houses 8,000 pigs. The tour included remarks from Dean Bob Hauser and Doug Parrott, an extension specialist in beef and performance testing. This ACES in Places event was hosted by the College of ACES Alumni Association, District 7 Director Roger Sanders, and District 8 Director Ken Hayse.

U of I Extension farm broadcaster Todd Gleason led the first “Follow the Corn” bus tour from Urbana to New Orleans. The tour included CGB’s rail and river terminal in Mound City, Illinois, and the Zen Noh Grain export facility in Convent, Louisiana. For information on the next trip, contact Gleason (tgleason@illinois.edu; 217-333-9697).

A man firmly planted in ACES

Continued from page 17

the 4-H Annual Fund, and the Orion Scholarship in Agriculture Fund. Oltman was instrumental in organizing members of the green industry in 1998; he reached out to alumni, industry, and governmental leaders to create a proactive partnership between the industry and the College of ACES and the university.

Oltman also provided leadership in the guidance and direction of the horticulture program as it moved to a new department in the college. He worked with faculty on curriculum and career development and was a key player in the first green industry economic survey, assisting in creating, administering, and articulating the results across the state, particularly with governmental agencies.

Oltman’s long-time generosity has included service on countless ACES committees. This year he retires from 11 years on the ACES Alumni Association board of directors, including service as the vocational director for the Department of Natural Resources and Environmental Sciences from 2000 to 2006, and he is being ushered in as a charter member of the Round Barn Society.

Past ACES recipients of the U of I Constituent Leadership award

2003–2004—Starr Hull ’64
2000—Duane Strunk ’63
1998—Linda Soltwedel ’66
1998—Norbert Soltwedel ’65, ’67
1995—John G. Huftalin ’60
1993—Virginia Seidel ’38
1991—John “Jack” F. Rundquist ’46, ’47
1987—Helen Davies ’41
1985—Frederic B. Hoppin ’41
1984—Mildred Mies Hanley ’33
Gimme an “I”!

For Kurt Hansen, joining Block I was a “hands-down, no-questions-asked” decision after coming to the U of I from the football-loving Illinois town of Lake Zurich. KC D’Alessandro said she joined the group simply because she loves football. Today they run the show.

Together these two ACES students coordinate more than 3,000 of their peers in one of the country’s oldest student-run cheering sections.

Hansen, a junior in natural resources and environmental sciences, orchestrates each game’s card stunts as a Block I chair. His job requires much more than a microphone on game day.

It begins with using special software to create 12 stunts in the cheering section. The cards are then printed according to Hansen’s designs; when they’re delivered, he must sort them so that each of those 3,000 students receives the card colors needed for game day along with directions for when to hold up what card.

“I doubt the students know how much work goes into creating the card stunts,” Hansen said, “but that’s part of the magic. The students may take the card stunts at face value, but those of us behind the scenes know what it takes to make it all happen.”

D’Alessandro, the vice president of Block I, manages the Block I chairs and oversees the pep rallies, tailgates, and card stunts. She is a senior in human development and family studies with a minor in leadership studies.

“We can tell our members are excited about Block I by the way they smile when they are dancing and the way they get excited to be winning and start chanting,” D’Alessandro said. “It’s great to be able to say I helped make that happen.”

Under the leadership of Hansen and D’Alessandro, Block I is bigger than ever. Membership increased by more than 1,000 members this year—meaning almost one of every 10 U of I undergraduates is in the group.

“It’s only on game day that we realize the magnitude of what we are doing,” Hansen said. “It doesn’t really hit me until 3,000 students show up. When I was a freshman in the front row, I was just a part of Block I. Now, when I turn around, those 3,000 students can hear everything I say. It’s something else.”
A gala event on September 20 at the Rochelle, Illinois, lakeside home of Larry Hageman B.S. ’78 Agricultural Science launched the campaign to renovate teaching labs and classrooms in Turner Hall. More than 100 alumni, faculty, students, and friends of ACES attended, including well-loved professor emeritus of crop sciences A.W. “Tom” Burger.

Hageman is part of the Turner Hall Project steering committee, which is leading the fund-raising effort. The committee, made up of alumni volunteers from Crop Sciences and Natural Resources and Environmental Sciences, will work with faculty, students, and administrators to find ways to update the teaching spaces.

Chancellor Phyllis Wise’s Instructional Space Initiative (ISI), a 5-year, $60-million project to renovate and upgrade dozens of neglected and outdated teaching spaces across campus, has provided $3 million for the interior renovations. Campus has also allocated $2 million in state funds to secure the integrity of the building’s outer envelope and improve its energy efficiency. However, state funds alone cannot fulfill the vision and the need. The Turner Hall Project aims to raise private funds to match $5 million that has already been received.

“These remodels are not simply about upgrading aging classrooms and facilities, they are about ensuring our future,” Wise said.

“They will allow us to address important questions in teaching and learning,” she explained. “For example, how will education be delivered, and what will a classroom look like that blends a traditional lecture setting with online learning? We strive to provide the facilities that our world-class faculty need to maximize student engagement and success.”

The committee is currently focusing on the building’s interior. It has selected architects who will turn the teaching labs into bright, 21st-century learning spaces that will enhance student learning and inspire faculty innovation.

The new designs will emphasize flexible, modular construction and cutting-edge technology as well as spaces that are conducive to gatherings of students who participate in Science Olympiad, FFA, 4-H, and other activities. The goal is to stimulate intellectual curiosity and motivate students to consider careers in agriculture, natural resources, and environmental sciences.

Renovating Turner is critical to recruitment as well as to student learning. Competitive facilities are a crucial factor in attracting the most talented students. Improved learning spaces will help strengthen the reputation and improve the rankings of the soils, natural resources, and crop sciences programs.

Preparatory work has started on the exterior, with roof repairs and window replacement scheduled to begin in spring and summer of 2013.

Approximately $750,000 has been raised so far, including the generous lead gift of $500,000 from Turner Hall Project co-chair William F. Kirk, Jr. (B.S. ’64 Agricultural Science) and his wife, Lillian.

“Crop and soil sciences are core to many professions in agriculture, biotechnology, and environmental sciences, and these areas have great potential to improve our world. Having competitive facilities to retain and attract the best faculty is critical to attracting and developing our future leaders,” Kirk said.

“This project offers an opportunity to honor excellent faculty, like Dr. Burger, who taught us and developed us for our careers,” he added.

Dean Robert Hauser called the renovation of Turner, which will be 50 years old next year, a top priority. “We have not had a capital project in years—not since the ACES library,” he said.
INVEST IN ACES: LEAVE A LEGACY

GIVE THE GIFT OF EDUCATION

What will your legacy be? What will you leave behind that represents your values and priorities?

It’s no secret that the University of Illinois and the College of ACES have played important roles in the lives of many. It’s a great testament to the university that many friends and alumni choose to give back in the form of a legacy gift.

The U of I has made major strides toward fiscal health through these legacy gifts, which are destined to become even more critical in light of reduced public funding. Will you join us in this important endeavor?

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For more information on how you can give the gift of education through a legacy gift, contact the ACES Office of Advancement at 217-333-9355.

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A CES students participated in the Stockholm Summer Arctic Program in the Archipelago of Svalbard, Norway (around 78 degrees north latitude).