Impact: Bioeconomy
FOREWORD

SOME PEOPLE ARE NATURAL STORYTELLERS.

John Pesek, Charles F. Curtiss Distinguished Emeritus Professor in Agriculture and Life Sciences in agronomy, is one who always has a good story to tell. His stories are always interesting, meaningful and to the point.

Given Dr. Pesek has served Iowa State University for one third of its 150 years, he has a number of stories to tell. He’s been working to tell the story of the agronomy department for years now, writing chapter after chapter as he finds time between meetings, lectures and trips abroad. He may joke about his work never seeing print, but his persistent effort shows how important his task is — recording and sharing the stories of the people who made Iowa State University what it is today and how their efforts have influenced the world.

We’d like to take a lesson from Dr. Pesek and tell some of our own stories before they become history. As the newly renamed College of Agriculture and Life Sciences, we have many stories to share with you.

Stories we hope will inform and inspire you. Stories about how the college is constantly striving to make new discoveries, encourage and educate students and serve Iowans. Stories of the people who make this college one of the premier institutions of agriculture and life sciences in the world.

We’ll begin with stories of historic leaders like Dr. Pesek and student leaders who are achieving national honors even as they learn and develop into experts in their industries. Our sections on the college’s work in the bioeconomy illustrates the strength and depth of our faculty who are working to uncover sustainable means to meet the world’s energy needs. Our alumni stories demonstrate the impact of the college through its successful graduates. As you will see, our alumni are making meaningful imprints on the world, both small and large.

You’ll read stories of success, of engagement and of service. As alumni and friends of the College of Agriculture and Life Sciences these are your stories. We hope to share them as Dr. Pesek would, in an entertaining and relevant manner that allows the real story, the real person to shine through. We hope you find these stories as compelling as we do.

Kind regards,

Melea Reicks Licht

On the Cover: Everyone’s first question is that hemp? No, it’s kenaf — a relative of cotton used for biomass and industrial fiber. Roger Hintz (left), agronomy assistant scientist, and Ken Moore, agronomy professor, compare two varieties of kenaf among the eight they grow to study yield and fiber qualities. Learn more about how Moore’s research is helping to discover future biomass crops for Iowa on page 12.

WELCOME TO THE INAUGURAL ISSUE OF STORIES in Agriculture and Life Sciences, a magazine to keep you informed about the students, faculty, staff and alumni in the College of Agriculture and Life Sciences at Iowa State University.

As I travel around Iowa, meeting with farmers and community leaders, business owners, alumni and parents of current ISU students, I am always touched by the genuine interest shown in the college. In responding to the numerous questions, I frequently hear, “Really! I didn’t know the college was working on that.”

I tell them that we seek to continue building on a legacy that began in 1858. For 150 years, the college has played a significant role in the state’s growth and development — educating generations of intelligent, thoughtful producers and citizens; building the genetic potential of crops and animals; developing healthier, safer foods; conserving and safeguarding our soil and environment; and envisioning how to stay a step ahead of a rapidly changing world.

STORIES seeks to tell the college’s story — about our deep commitment to agriculture that we demonstrate through research, teaching and extension programs; about the increasing number of students we educate across 15 departments. We want to keep you aware of the college’s response to the opportunities and challenges facing agriculture — and life — in Iowa and the world.

I recently talked to a young undergraduate in agronomy about her classes. Thinking back to my undergraduate days, I asked, “So what do you find the most challenging part of your courses this semester?” She surprised me with her response: “GIS mapping.” In that answer, I recognized once again how much the terrain has changed for our students in agriculture and life sciences.

Agriculture and life sciences increasingly play a more prominent role in the world. The growing need for food, feed and energy and the increasing burden on arable land makes the need for research and technological innovations all the more significant. It is exciting to see that future taking shape in the research laboratories, field plots and classrooms in our college.

I hope by reading these stories you’ll gain insight into the breadth and depth of our dedicated faculty and staff and the incredible potential of our students. I invite your comments.

Let me close by telling you a story.

This fall semester I’ve been helping Associate Dean David Acker teach a leadership class for freshmen recipients of our Scholarships for Excellence in Agriculture and Life Sciences. We meet around a table in a conference room in Curtis Hall with the portraits of the previous deans of the college looking down upon us.

Recently, the students discussed leaders who’d made a strong impression on them. Their answers were remarkable. They included world figures like Gandhi, Eleanor Roosevelt and Nelson Mandela; Liberian President Ellen Johnson Sirleaf, who recently was awarded the U.S. Presidential Medal of Freedom; and American soldiers, high school teachers and local pastors.

“... I WAS LOOKING INTO THE FACES OF TOMORROW’S LEADERS.”

It struck me then, scanning this diverse set of young people — majoring in animal science, biology, agricultural biochemistry, agronomy, genetics, animal ecology, horticulture, microbiology and pre-veterinary medicine — that I was looking into the faces of tomorrow’s leaders. I could imagine their faces set down in portraits someday, maybe not as college deans, but people who made a difference in the world.

What I saw impressed me. It made me feel good about the future. I hope that what you read in STORIES strikes you the same way.

Wendy Wintersteen, Dean

STORIES

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Dean Wintersteen, Associate Dean Acker and members of a freshman leadership class.
L

ooking back on a career spanning 50 years at an institution existing for 150, John Pesek has seen significant change on campus, in Iowa and the world – some of which he instigated. Despite receiving countless awards for his service to agronomy, agriculture and human relations, Pesek has reservations about his reputation as one of the major influences on the university and the global scope of agriculture.

By one of his colleagues, he was a thank you note to the editor. “We cannot consider ourselves sustainable until we know we and our civilization are still here as far into the future as the time elapsed since the emergence of agriculture (and civilization), at least 10,000 years, hence.”

Pesek is world renowned for his role in the 1989 National Academy of Sciences Congress on Sustainable Agriculture, as well as the John Pesek Colloquium on Sustainable Agriculture hosted annually at ISU, has made Pesek’s name synonymous with sustainable agriculture.

“Sustainable agriculture is really a concept. In terms of practices, it is a moving target and depends upon a myriad of factors including time, place, technology and need,” Pesek says. “We cannot consider ourselves sustainable until we know we and our civilization are still here as far into the future as the time elapsed since the emergence of agriculture (and civilization), at least 10,000 years, hence.”

Pesek credits his successes to “highly competent people around me most of my career including a first class department, and college.”

He retired in 1992, but taught a course he developed for international agriculture students until 2001. Pesek continues to participate in departmental activities and keeps regular office hours.

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THE PESEK TOP TEN
A career like John Pesek’s is tough to sum up, but he provided the top ten highlights of his career (in no particular order).

- Served as president for American Society of Agronomy (1939) and the Soil Science Society of America (1966)
- Fostered the Council for Agricultural Science and Technology
- Helped organize the First International Crop Science Congress
- Penned ISU’s first nondiscrimination statement, 1970s
- Participated in the Pontifical Academy of Sciences, 1972
- Enhanced the USDA-ARS North Central Regional Plant Introduction Station
- Supported the development of the Seed Science Center, established, 1978
- Created economically based fertilizer recommendations with Earl Heady, professor of economics and Charles F. Curtiss Distinguished Professor in Agriculture and Life Sciences
- Encouraged the construction of the National Soil Tilth Laboratory, 1989
- Directed a major addition to Agronomy Hall and developed the Agronomy and Agricultural Engineering Research Farm

He began his service at Iowa State in 1950 as an assistant professor in soils, thanks to the unprompted recommendation of Louis Thompson, a former instructor at Texas A&M who became a colleague and friend at Iowa State. Pesek earned his Ph.D. from North Carolina State and his bachelor’s in agricultural education and master’s in agronomy at Texas A&M.

After moving through the ranks to professor, he was surprised by an offer in 1964 to serve as head of the agronomy department, but gratefully accepted the helm of what he considered a highly respected department.

“I spent 26 years as head dedicated to advancing first the faculty members and staff of the department, then its physical and financial resources,” Pesek says. “Our goal was to make student success possible in the curriculum and in post-college life.”

During his term as head from 1964 to 1990, Pesek also served as interim dean of agriculture from 1987 to 1988.

He has worked extensively internationally, emphasizing the environment, production agriculture and education. Pesek credits his successes to “highly competent people around me most of my career including a first class department and college.”

He retired in 1992, but taught a course he developed for international agriculture students until 2001. Pesek continues to participate in departmental activities and keeps regular office hours.

IN HIS OWN WORDS:
Audio of John Pesek and Doug Cooper discussing some of the achievements made in agronomy over the years is available on-line at: www.ag.iastate.edu/stories

John Pesek wrote a remembrance of Howard Robert “Bob” Fohn, who died in April as part of the College’s sesquicentennial celebration. The essay is available on-line at: www.ag.iastate.edu/stories

Fond Farewells
Lorna Michael Butler, Henry A. Wallace Endowed Chair for Sustainable Agriculture and professor of sociology and anthropology retired from the university on Feb. 1. Butler joined Iowa State in 2000.

Harold Crawford (50 ag education, MS ’55, PhD ’68), agricultural education and studies, retired June 22. Crawford joined Iowa State as an instructor in agricultural education and studies in 1965, eventually serving as professor and department head. He also served the college as associate dean for academic programs and director of off-campus and international programs. Recently, Crawford co-directed a $3.8 million partnership to strengthen natural resources education in communities served by Native American colleges through a U.S. Department of Agriculture’s Initiative for the Future Agriculture and Food Systems grant.

Hearty Nefkos
New faculty in the college in 2007 included:
- Ta Hyun Kim, assistant professor, agricultural and biosystems engineering
- Julie Blanchong, assistant professor, natural resource ecology and management
- Jesse Randall, assistant professor, natural resource ecology and management
- Larry Halverson, assistant professor, plant pathology
- J. Gordon Arckucke, assistant professor, sociology
- Carmen Bain, assistant professor, sociology
- Dorrian Garrick, Lush Endowed Chair, Animal Science
- William Beavis, Sprague Endowed Chair, agronomy
- Thomas Lübbersedt, Fry Endowed Chair, agronomy
HOGBERG USHERS ISU’S DAIRY FARM INTO MODERN TIMES

By Ed Adcock

The new dairy farm sends other messages, he says. It is evidence of the university’s commitment to Iowa’s dairy industry and elevates Iowa State’s image among universities doing dairy research and education.

The facility, located across the road from the Ag 450 Farm, represents a huge advance in dairy teaching, research and extension at Iowa State.

The 27-acre complex will milk 450 cows and house more than 3,000 total animals. Funding for the nearly $15 million facility came from proceeds from the sale of ISU’s other dairy operation in Ankeny to the City of Ankeny in 2005.

“Students need to be trained in a more modern setting. You can’t train them on Model Ts and expect them to drive big trucks,” Hogberg says.

Hundreds of students will benefit from the facility. All 742 of the department’s undergraduates take courses that include dairy animals. Graduate students will use the farm for research and training. Veterinarian medicine students will gain experience with herd health programs on the cattle. ISU faculty and scientists from the U.S. Department of Agriculture’s National Animal Disease Center in Ames will conduct research at the farm. On the extension side, the farm will be a training ground for dairy professionals.

Its research and outreach programs will help sustain the current growth in the state’s dairy industry.

Hogberg says the Iowa Dairy Coalition, which Iowa State helped organize, “fulfilled our promise. That’s the kind of integrity we need to build trust.”

“The overall vision is to create a field tool for agronomists and plant breeders,” Beavis says. “A handheld device would have the capability to take a sample, such as a leaf punch, and have the communications capability to access databases remotely.”

According to Beavis, this tool is known as an “electronic field decision support system.” It would analyze molecular biomarkers (which include molecules like DNA, RNA and proteins) in a leaf sample then reference the genomic databases. It would then statistically predict the value of the biomarker selected in the plant and its offspring. This would be a valuable tool, allowing breeders and agronomists to rapidly make decisions in asymptomatic environments.

Beavis sees numerous parallels between plant genetics and human genomics. He recognizes the potential for successful application of such a tool in human health care as well. After integrating and standardizing genomic databases, finding associations between biomarkers and crop performance and providing information for breeding and management practices, emerging communications technologies will remotely connect the field sample to the databases. This sounds like an intense process. But Beavis believes field labs could be ready in five to 10 years and public databases could sufficiently provide recommendations in 10 to 15 years.

The Sprague endowed chair is funded by a private endowment to the ISU agronomy department. Sprague is considered one of the fathers of modern maize breeding and is credited with bringing the corn breeding program at Iowa State to prominence. He was a member of the Iowa State agronomy faculty from 1939 to 1958.

GEORGE F. SPRAGUE CHAIR

Beavis references information on a personal digital assistant in the field. The new device he’s developing would look similar, but provide links to genomic databases.
**ANIMAL GENETICIST FILLS LUSH ENDOWED CHAIR**

By Susan Thompson

A native of New Zealand is the first person to hold the Jay Lush Endowed Chair in Animal Breeding and Genetics at Iowa State.

Dorian Garrick arrived in the Department of Animal Science in August, after five years as professor of animal breeding and genetics at Colorado State University.

Lush, a Charles F. Curtiss Distinguished Professor in Agriculture and Life Sciences at Iowa State.

Rae, also a New Zealand native, earned a doctorate at Cornell University in New Zealand in graduate school. Other former students, friends and family of Lush also contributed to the endowment.

Garrick earned a bachelor’s degree at Massey University in New Zealand in 1982 and a doctorate at Cornell University in 1988. He returned to Massey the same year and began work as a teacher and researcher.

In 1994, Garrick was named the A.L. Rae Chair at Massey University, a title he continues to hold. Rae, also a New Zealand native, earned a doctorate at Iowa State in 1950, where he was a graduate student under Lush.

Garrick’s past research exposed him to the genetic improvement of a range of animal species and a variety of traits. “Animal breeding is using knowledge of genetics to improve populations,” he says. “There is a tremendous amount of work being done in animal genomics, and knowledge being generated, that needs to be transferred into animal breeding.”

At Iowa State, Garrick sees the greatest opportunity in beef cattle. He is a director of the National Beef Cattle Evaluation Consortium, which is responsible for the development of selection tools.

“The critical mass of universities working on beef cattle has declined,” Garrick says. “That’s sad, given the value of the beef industry. I feel an obligation to Iowa State to pick up the reins and assist with beef cattle improvements.”

In particular, Garrick says he hopes to establish a closer relationship with the American Angus Association.

“Iowa State has a long history of research and collaboration with Angus breeders,” he says. “We have a herd of 450 registered Angus cows and I look forward to making use of these animals in my research.”

Garrick has found Ames to be “very much a college town,” he says. “I’m impressed with the academic environment. There isn’t a day without an interesting seminar somewhere on campus or interesting visitors from elsewhere in the world.”

He’s also impressed with Iowa State, a state he visited briefly in the 1980s on a pheasant hunting trip. “There is a recognition of the importance and relevance of agriculture to the state, by people both within and outside the agriculture industry,” he says.

The Department of Animal Science will hold a symposium when the Lush Endowed Chair was established.

**CONVERSATION WITH ALLYSON CHWEE**

Chwee will keep you on your toes. Chwee talks about game theory, quantitative math and macro- or microeconomics with ease. It’s the expertise that’s indicative of the students who make up Iowa State University’s national award-winning Agricultural Business Club.

Chwee is a senior in agricultural business, economics and international agriculture from Elgin, Ill. She took the LSAT in October and hopes it will open the door to law school.

“I want to work in agriculture and I’ve always wanted to go to law school,” Chwee says.

Ron Deiter, professor of economics and the club’s advisor, says Chwee is an amazing student and representative of the club’s members. When she was a sophomore, he says, she already had a lengthy resume.

“We have a high percentage of students involved in the club and they aren’t just members — they are leaders,” Deiter says.

Chwee is among the best. For the past two years she chaired the FFA barbecue committee, organizing and distributing food to 3,000 high school students who visit campus for the State FFA Leadership Conference. She’s co-chaired the Ag Career Day committee for two years, tutors students in math and works to recruit new members to the club.

To recruit we have fun activities like this summer I worked on biodiesel and government relations in Omaha,” Chwee says. “I learned a lot, especially about the energy legislation currently in Congress and the proposed renewable fuel standard.”

For Chwee, the learning communities and honors classes made a difference in her college career.

“It was beneficial because you take all your classes with other ag business freshmen and you end up with a great group of friends,” Chwee says.

In the honors program Chwee had the opportunity to participate in leadership seminars, develop lesson plans and help teach a class. She’s currently working on her honors project and presentation for this year.

“For my project, I’m going to analyze how farmers choose the crops they plant,” Chwee says. “This year, obviously, corn prices were high so many acres were switched to corn, but how high do corn prices have to be relative to soybean prices to make the switch?”

For now, Chwee is leaving her career choices open. If law school is an option, she plans to represent ag businesses. After two summer internships working for Ag Processing Inc. (AGP) she’s ready for the corporate world.

“This summer I worked on biodiesel and government relations in Omaha,” Chwee says. “I learned a lot, especially about the energy legislation currently in Congress and the proposed renewable fuel standard.”

Chwee enjoyed the Business Club meeting when the Lush Endowed Chair was established.

Dorian Garrick has more than Jay Lush’s name as part of his new title at Iowa State – he also has Lush’s desk. The ornate desk, which was originally a piano, was rescued by Richard Willson.

Allyson Chwee is a leading member of ISU’s award-winning Ag Business Club.
Becky Weeks (’07 genetics) took genetics when she was a junior in high school and was hooked. So hooked, in fact, that she repeated the class her senior year, just for fun. Then she came to Iowa State to learn more. “I wasn’t sure if I wanted to go into plant or human genetics, but I wanted something that kept me in the Midwest. I knew if I went into a health-related field, I’d probably have to go to a coast to get a job,” says Weeks, who is a graduate student in genetics researching ear and tassel development in corn.

Weeks began researching corn as a junior in genetics when her lab supervisor gave her the chance to do hands-on research. She continued the research in the college’s Science With Practice program, a course that links faculty mentors with students and provides research experience, credits and a paycheck.

“Science with Practice was great because it allowed me to become more autonomous,” Weeks says. “I learned how to look at my results and decide the next step.” It didn’t take long for Weeks to decide to continue her research as a graduate student.

“I graduated on May 5 and started graduate school on May 7. I wanted to get started right away,” Weeks says. “This isn’t work to me – it’s what I want to do.”

Agricultural markets also intrigued the Kansas City native. She thought farmers sold their grain as soon as it was harvested.

“When I moved to Iowa, I started listening to AM radio and heard about December and July corn. I was confused. I wanted to know how the markets work,” Weeks says.

To find out, Weeks signed up for the college’s Agriculture Weekend Experience (AWE) program last summer. The AWE program, which also was developed by the ISU Agricultural Endowment, gives students who have never been on a farm the chance to stay with an Iowa farm family and learn first-hand about farm life.

“I don’t have any experience on a farm. Everything I do in the research field is done by hand and I’ve always wondered how it works on a large scale,” Weeks says. “I want to work for a seed company someday and my goal is to design products that make it easier for the farmer. How will I know what they need if I don’t know what they do?”

The AWE program, which is in its third year, was a great experience for Weeks. She was amazed by what she learned about farm management and economics in discussions with Don and Marylou Ahrens. The Ahrens, who live near Osage, hosted the AWE students in July.

“The key for succeeding in this field is to make things easier and more profitable for the farmer,” Weeks says. “I felt it was important to learn how the farm works to gain a perspective and expand my vision for future corn improvements.”

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When David Manu became ill in high school, with a disease that limited the kinds of food he could eat, he didn’t realize he would later study food science looking for ways to help others.

“I was diagnosed with an ulcerative colitis as a sophomore and I couldn’t eat high-fiber foods,” Manu says. “Now I’m in food science and I can go into medicine or I can design foods that help others have a normal life.”

Manu, a junior in food science and an ISU George Washington Carver Scholarship recipient, started learning how to conduct research this summer in the Microbial Food Safety Laboratory in the food science and human nutrition department. Aubrey Mendonca, associate professor in the department, is a mentor to Manu and oversees the research and students in the lab.

The research focuses on listeria, a foodborne pathogen that causes listeriosis. The disease affects pregnant women, newborns and adults with weakened immune systems. Listeria sickness costs about 2,500 and kills 500 people per year nationally.

“I’m testing the types of ways to fight the bacteria,” Manu says. “It’s a new project and hasn’t been a lot of research on it. I enjoy it because there are surprises every day and you never know what results you’ll get.”

The research is focused on processed turkey and will provide recommendations for food processors to limit listeria contamination. Listeria bacteria can develop in turkey, deli meats, soft-ripened cheese, milk, undercooked chicken, uncooked hot dogs and shellfish.

“We use both chemical treatments and pressure to kill listeria,” Manu says. “The high pressure compresses the cells and makes them burst, but the pressure only makes changes on a microbial level – it doesn’t change the food. We are testing these two methods to find the best combination to kill the bacteria.”

“David seems to like research a lot. Every month he is not in class he comes to work in the laboratory,” Mendonca says. “The whole idea has been to get him interested in graduate work. It can be hard for undergraduates because they have so many other classes and activities.”

For now Manu says he plans to pursue a master’s degree in food microbiology at Iowa State University and a doctorate degree somewhere in a warmer climate.

Manu was born in Ames. When he was two-months old, he and his family moved to Niamey, Niger, Africa, where they lived for seven years before coming back to the United States. As a young boy, Manu remembers interacting with animals in an African wildlife preserve. “I remember we were able to go up to the giraffes and pet them, take pictures and just hang out with them,” Manu says.

Manu no longer has problems with colitis thanks to an experimental operation he chose to undergo rather than taking steroids for the rest of his life. Manu hopes he can design foods that help others who have similar diseases. To do that he’d like to own a company or do research for a major food company.
A s a freshman, Joe Bowser knew he wanted to intern at Wimbledon. This summer his idea became reality. He became the first Iowa State student to intern for the legendary tennis club in London.

It wasn’t easy getting to the All England Lawn Tennis and Croquet Club. It took two years for Bowser to work out the legal details so he could work in England.

Bowser, a senior in horticulture from Fort Dodge, Iowa, says he owes it all to Dave Minner, ISU horticulture professor.

“JoeBowser found out that the daily goal at Wimbledon is perfection – especially when it came to working on the grass tennis courts. The grounds crew has to ensure the courts are flawless for the championship tournaments. “I enjoyed working on the grounds crew,” Bowser says. “I knew the work that I did directly affected the quality of play during the tournament.”

Bowser helped maintain 41 grass tennis courts, clay courts, croquet greens and ornamental lawns. During the tournament, he watched from Centre Court ready to cover the courts in case of rain.

One of the highlights for Bowser was working during the tournament and getting his picture taken with Roger Federer, the eventual champion (and fifth consecutive winner).

“It was great. He was very nice and he even autographed my photo,” Bowser says. Although Bowser didn’t win any prize money, he won his supervisor’s praise when he was invited to return to Wimbledon in 2008.

“They asked Joe if he could come back and they asked me if we could send more students like Joe,” Minner says. “As always, the quality of students we get at Iowa State is evident in their work ethic.”

Bowser isn’t sure if he’ll go abroad after graduation, but he’s leaving his mark on the tennis courts. His internship at Wimbledon is perfection – especially for his love of tennis and turfgrass into a dream internship at Wimbledon.
A WIN-WIN SITUATION: NEW CROPS, NEW FUEL OPPORTUNITIES

By Susan Thompson

It’s estimated biomass fuels currently provide just 4 percent of the energy used in the United States. Researchers at Iowa State University hope to change that. Plants not routinely found on Iowa farms — switchgrass, big bluestem, sweet sorghum, triticale, kenaf — fill several research plots on an Iowa State farm west of Ames.

“Our primary goal is to provide realistic alternatives for Iowa producers to diversify their cropping systems,” says Ken Moore, agronomy professor. But he’s quick to point out this isn’t just about developing alternative crops, it is also about developing valuable new uses for harvested materials.

Emerging markets for liquid fuels and other industrial products made from crop biomass offer new opportunities. “This requires development of an industrial market for these alternative biomass crops. In the end, the research should benefit not just producers, but also consumers and the alternative fuels industry,” Moore says.

Lance Gibson, associate professor of agronomy, says the Iowa State researchers studying biomass crops have five guiding principles. “We’re working to develop cropping systems that produce the most energy per acre per year, are energy efficient, meet food needs while producing more fuel than current systems, protect the natural resource base and add diversity to the landscape and the economy,” he says. Several projects are underway to explore new crops and cropping systems that can help produce food and fuel while benefiting the environment.

Others involved in the research with Moore and Gibson are Matt Liebman, agronomy professor and Henry A. Wallace Chair for Sustainable Agriculture; and Robert Anex, associate professor of agricultural and biosystems engineering and associate director of Iowa State’s Bioeconomy Institute.

Robert Anex examines a plot of hybrid sorghum-sudangrass. The plant is a high-yielding biomass crop that’s being studied as a possible biomass source for the production of cellulosic ethanol.

Crop Options
This is the fourth year for a pair of projects evaluating kenaf varieties and production practices for Iowa. The crop is usually grown for industrial fiber, but also is a potential biomass crop. Several varieties of kenaf have been planted with the goal of identifying ones that yield optimal fiber quality and quantity. The fibers are evaluated for use in ethanol production and biocomposite materials. This research also involves studying the best management practices for growing kenaf in Iowa and an economic evaluation of the industrial use of kenaf and its by-products.

It’s the third year for a project involving five sweet sorghum varieties and management practices. Once harvested, each variety is evaluated to determine how well it is suited for ethanol production.

This is the second year for a study of native warm-season perennial grasses that show promise for biomass production — switchgrass, Indiangrass, big bluestem and eastern gamagrass. Various management practices are being evaluated and samples collected to compare biomass production, carbon storage and nutrient use efficiency.

Miscanthis is another possibility. But so far, tests in Iowa have proven this crop to be difficult to establish, since young plants are sensitive to cold and dry soil. Another downside is that it can take three to five years to establish this perennial, meaning a producer would have nothing to harvest for at least two years.

Alternative Crop Systems
Liebman, Anex, Moore and graduate student Andrew Heggenstaller are especially interested in evaluating how nutrients can be recovered from biorefineries as grass biomass is processed, and how these nutrients can be recycled to the fields where the perennial grasses grew. This nutrient recycling may eliminate or at least reduce the need for additional fertilizer inputs in biomass cropping systems.

A concern sometimes raised about the use of annual crops for biomass is that removing large amounts of crop residue from fields might lead to greater soil erosion, reduced soil fertility and increased need for commercial fertilizers.

“To address these challenges, we are investigating alternative cropping systems and associated management practices that might be used to generate large amounts of biomass feedstocks while better protecting environmental quality,” says Liebman.

“Our theory is that producing two crops in one year will generate more biomass at lower environmental cost,” he says. With that in mind, a long-term crop rotation study that looks at the possibility of a double-crop sequence of winter and summer biomass crops is in its second year.

Triticale, a cross between wheat and rye, is planted in October and harvested for biomass the following June. This protects soil and water quality during winter and spring, when Iowa crop fields typically are barren.

Once the triticale is harvested, warm-season crops such as corn, soybeans, sudangrass and crotalaria, a legume that can fix large quantities of atmospheric nitrogen, are planted.

Decision-making Tools
Not only are the researchers focused on new crops and new cropping systems, they’re also considering what decision-making assistance producers will need in this new era of agriculture.

To help farmers begin to understand how collecting biomass from their fields may affect soil fertility, erosion, energy needs, labor and the bottom line, Anex and others added bioeconomy elements to I-FARM, a Web tool that helps farmers simulate and plan various changes to their operations. The free tool focuses on the Midwest and Northeast with weather and soils data for 28 states accessible from its database. For a link to I-FARM visit www.ag.iastate.edu/stories.

Growing enthusiasm for biofuels has raised many questions about impacts on farmers’ income and the environment. “The need to produce both food and fuel from farmland places new demands on the agricultural system,” Anex says. “Yet biofuel demand also creates opportunities to develop new crops and cropping systems that provide new value to farmers while reducing environmental impacts.”

As long as questions remain, Iowa State University researchers will continue their search for answers. ☎

Agromony faculty including Distingusihed Professor Robert Horton (left) and Agronomy Department Chair Kendall Lambkey (second from left) discuss bioenergy crop trials with ISU President Gregory Geoffrrey (far right).
NEW CENTURY FARM TO SHOWCASE
BIOMASS PRODUCTION AND PROCESSING

By Susan Thompson

T he first-in-the-nation integrated research and demonstration farm devoted to biomass production and processing is being created by Iowa State University. Construction of the ISU New Century Farm will get underway soon.

“This facility will give us the opportunity to integrate directly into agricultural fields the connections with harvesting, transportation, storage and processing,” says Wendy Wintersteen, dean of the College of Agriculture and Life Sciences. “The New Century Farm will not only provide a venue for cutting-edge research, it also will allow us to educate the next generation of scientists in this critical growth area.”

The site is the existing Agronomy and Agricultural Bio-systems Engineering Research Farm along Highway 30 west of Ames. It was selected for its rural setting, yet high visibility. The main biomass processing facility should be completed by fall 2008. Field, harvesting and storage research infrastructure will follow.

The facility is on a fast track. In March, the Board of Regents, State of Iowa, approved the planning phase of the project. In August, the board granted construction approval. “The New Century Farm is an important addition to Iowa State’s biorenewables facilities that link new discoveries, integration of science and real-world situations and preparation for commercialization,” says Joe Colletti, associate dean in the College of Agriculture and Life Sciences. “The New Century Farm will strengthen ISU’s portfolio that includes biorenewables facilities in ISU’s Bioeconomy Institute, the College of Agriculture and Life Sciences and the Iowa Energy Center.”

Research at the 23,000-square-foot facility will address some of the most critical questions facing biorenewables. The New Century Farm will include harvesting, storing, transporting, handling and biomass processing facilities. Biomass crops destined for use as bioenergy and bioproducts will be grown onsite and at other area Iowa State research farms.

“The biomass processing facility will allow researchers to study systems to turn a variety of biomass materials into bio-oil or synthetic gas by using thermochemical technologies or into ethanol and industrial chemicals by fermentation,” says Larry Johnson, director of the Center for Crop Utilization Research. “This facility will allow Iowa State researchers and industry partners to test and demonstrate processing system technologies before going commercial.”

Planners say the New Century Farm will incorporate four key components. These are:

• Research that brings together scientific expertise to address biomass cropping systems, biofuel and bioproduct processing, logistics of biomass supply and positive environmental effects such as recycling nutrients back to the land.
• Teaching that serves as a laboratory and resource for educating future scientists, producers and extension experts.
• Extension that demonstrates economic, social and environmental viability of biorenewable energy and bioproducts production to producers, policymakers and the public.
• Outreach with companies that will work with Iowa State in collaborative research and development.

The project costs are estimated at $19 million with funds coming from state, federal and private sources. In September, DuPont pledged a $1 million commitment to ISU for development of the New Century Farm.

IN BIORENEWABLES POLICY, HART’S CONSIDERED AN INCREDIBLELY VALUABLE ECONOMIST

By Sandra Clarke

Don’t let his casual attire fool you. He may wear shorts and tennis shoes most days of the year, but Chad Hart’s telephone number is on the speed dial of a number of congressional staffers, commodity group leaders and local and national reporters. When it comes to agricultural policy, he’s all business.

Hart came to Iowa State University to get a doctorate in economics and statistics after completing a bachelor’s in economics at Southwest Missouri State. The Center for Agricultural and Rural Development (CARD) hired him as a graduate research assistant for data crunching on many projects and capitalized on his ability to write econometric computer programs. Once Hart had his doctorate, CARD director Bruce Babcock offered him a staff position.

“Chad has made countless contributions to CARD and the university,” says Babcock. “He has earned a reputation as one of many a dozen agricultural economists in the United States who really understand U.S. agricultural policy.”

Hart’s significant contributions were recognized this year by professional and scientific staff excellence awards from the College of Agriculture and Life Sciences and the Iowa Board of Regents.

For the past seven years, Hart has studied the efficiency of agricultural policy and crop insurance. He has briefed congressional staff, the U.S. Department of Agriculture and the Congressional Budget Office. And he has created several innovative Web-based tools for producers to aid in their decisions about risk management.

The first tool was a Loan Deficiency Payment calculator. A new tool still under development provides basis maps updated daily, so Midwest farmers can track prices of corn and soybeans at various delivery points. See www.ag-iastate.edu/stories for a link.

In 2006, amid swirling questions about booming ethanol production, Hart stepped up to lead a new Biorenewables Policy Division. “I needed an excellent economist who knows Iowa and U.S. agriculture,” says Babcock, “and who is careful, honest and can present well about the topic. Chad meets all of those criteria.”

Hart says, “the Biorenewables Policy Division has already produced two pivotal studies on the effects of emerging biofuels on traditional commodities and on food and feed prices. The research has produced some of the earliest and most influential projections so far in measuring the impact biorenewables will have.”

In a dress shirt, slacks and tie, something that usually provokes a few doubters and comments from his workmates. They know, though, that as soon as the presentation is over, Hart will settle comfortably in front of his computer in his Cardinals baseball cap, tie back on his hook, ready when needed.

Chad Hart is making major league contributions on biorenewable risk management and economics on agriculture.”

As a result of these initial efforts, Hart’s dance card is quite full: he responds to countless calls from the press and to many presentations requests.

Which means he somehow always comes into the office
ANIMAL AGRICULTURE IN A BIOFUEL WORLD

By John Lawrence

The rapidly emerging renewable energy industry has generated a lot of excitement in rural America. Ethanol plants, biodiesel refineries and wind farms are sprouting across the heartland as fast as investment bankers and pipefitters will allow.

These renewable energy facilities are welcome additions to many Iowa communities, some of which haven’t had a new employer since Prohibition. Corn and soybean prices have increased dramatically and are forecast to remain well above historic averages. Land prices increased 20 percent in the last year, setting new record high prices and land rents have also risen, with increases of 25 to 40 percent commonly reported.

All in all, we are poised to make the Midwest to biofuels what the Midwest is to oil. Think shakers in seed caps.

While the new wealth and employment from biorenewables is exciting, it is important to keep it in perspective and in balance with what else Iowa does extremely well — animal agriculture. In 2006, 55 percent of Iowa’s agricultural cash receipts came from animals and their products.

These examples illustrate how animal agriculture and biofuels not only coexist, but complement each other.

Rural communities should take notice. While modern animal agriculture takes a significant capital investment and is automated, it’s still labor intensive. It takes more jobs to feed animals than it does to make ethanol. Feeding hogs or cattle uses four times more labor per bushel of corn “processed” as does an ethanol plant. More labor-intensive enterprises like farrows-to-finish hogs use 10 times more labor per bushel than does ethanol and, at the extreme, milking cows uses over 100 times more labor per bushel of corn consumed.

In addition to jobs on the farms, there are even more Iowa livestock and poultry farmers also are grain producers. They support expanding biofuel production. At the same time, they have questions about the future.

**These examples illustrate how animal agriculture and biofuels not only coexist, but complement each other.**

While much of the research will evaluate energy crops, harvesting and processing methods and environmental implications of a biofuel landscape, systems that include animal agriculture with energy production and nutrient recycling from manure will provide a clearer picture of an integrated bioeconomy.

**Our thinking, actions and investments must move beyond what we have done in the past to what is possible in the future. The opportunities exist. The challenge is finding the balance that produces fuel, feed and food to the benefit of Iowa, the nation and the world.**

[John Lawrence (’34 animal science, MS ’36 economics) is a professor of economics, an extension livestock economist and director of The Iowa Beef Center at ISU.]
BILL NORTHEY SHARES THE STORY OF AGRICULTURE

By Melea Reicks Licht

F or Iowa Secretary of Agriculture Bill Northey, the most challenging part of his job is switching hats. Literally and figuratively.

Between a recent tour of a limestone mine near Ames and a presentation to the Iowa Food Producers’ Association, he traded his hard hat and reflective vest for a sport coat and leather portfolio.

“The challenge is really diving into one issue so completely then switching to a completely different one,” says Northey.

After sharing insights from his recent trip to Cuba with the producers’ association, he met with a group at a community college then hopped into the cab of his combine on his northwest Iowa farm near Spirit Lake to get out the last of his bean crop.

A fourth generation farmer, Northey began his term as secretary in January 2007. He started farming with his grandfather after graduating from Iowa State University with a bachelor’s degree in agricultural business in 1981. He earned a master’s in business administration from Southwest Minnesota State University in 2004. He has served as a leader for farm groups including a number of county organizations, he says Northey.

The remainder of counties after harvest. He began his term as secretary in January 2007. He started farming with his grandfather after graduating from Iowa State University with a bachelor’s degree in agricultural business in 1981. He earned a master’s in business administration from Southwest Minnesota State University in 2004. He has served as a leader for farm groups including a number of county organizations, he says Northey.

“I am asking the agencies to help with the real problems and in community college agriculture sometimes get played against each other, but I don’t buy it,” he says. “Most farmers I meet are great environmentalists, even if they don’t appreciate the term. ‘Conservationists’ is probably a better term.”

Leopold believes the two sides agree on 95 percent of issues, but the remaining five percent get the majority of attention, such as issues of local control and air quality surrounding livestock confinement. “There are really two sets of problems in this area — the real problems and the perceived problems,” Leopold says. “I’m asking the agencies to help with the real problem and I’ll deal with the perceived problem.”

Leopold believes his agency has made great strides in improving water quality in Iowa and it will continue to focus on those efforts. He expects future challenges for the agency will surface as demand for ethanol increases the number of acres converted from the Conservation Reserve Program to corn production.

Leopold has hope to lure young people back to nature through destination state parks with features like water parks and outdoor experiences including boating, swimming, and hiking. One such example is the Honey Creek Resort State Park at Lake Rathbun in south-central Iowa scheduled to open in summer 2008.

Leopold also is encouraged by the overall public attitude regarding the value of natural resources in quality of life. “Today people move where they want to live then find jobs. They look for culture, education and recreation,” Leopold says. “Iowa is one of the best places on the planet in terms of soil, water and air quality, so natural resources are a huge part of economic development.”

The two industries will come to complement one another. “There will be bumps in the road, but we can work through those issues through feeding dried distillers grain and building new livestock facilities in the right way and in the right places,” Northey says.

Northey’s agenda for Iowa agriculture includes promoting renewable energy, conservation and stewardship and the industry of agriculture. “One of the most important things we need to do is to tell our story to those unfamiliar with agriculture,” Northey says. In addition to promoting agriculture in the state, he says those involved in agriculture need to allow themselves to be optimistic for the future.

“The negative tone that was set in agriculture in the 1980s is finally beginning to lift and we’re starting to see some attitude change,” Leopold says. “There will be bumps in the road, but we can work through those issues through feeding dried distillers grain and building new livestock facilities in the right way and in the right places,” Northey says.

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SECRETARY NORTHHEY (LEFT) IS SHOWN APPROXIMATELY 220 FEET UNDERGROUND TOURING MRS. MINNESOTA MINES NEAR AMES. PLANT MANAGER DOUG ROBHEY EXPLAINS HOW SWITCHING TO SOY B99 BIODIESEL TWO YEARS AGO HAS IMPROVED AIR QUALITY IN THE MINES.
SOME FAMILIES BLEED CARDINAL AND GOLD.

Dave and Pam Bolin attend Iowa State to study dairy production. Two of their three sons have degrees in dairy science from ISU. Their farm, Beaver Creek Farms, has been in the Bolin family since 1890. Currently their operation has about 70 milking cows and 60 heifers.

“WE ARE IN THIS BUSINESS BECAUSE WE LIKE ANIMALS...”

Their oldest son Matthew is using his degree in agriculture courses from ISU.

Dave, their middle son, also has a bachelor’s from Iowa State in his work as an independent dairy contractor in Ames, where he is an independent carpentry contractor and he is the operations director for an inflatable game entertainment company.

Pam and Dave look forward to seeing their farm through plans to release the third edition next year under the title Web, Paper and Mixed-Mode Surveys.

“THE SHOP”

Don Dillman received his graduate training in what was affectionately called “The Shop,” a term that referred to the cadre of graduate students supervised by George Beal and Joe Bohlen from approximately 1955 to 1980 in the Department of Sociology. Shop members included Gerald Klonglan and Richard Warren who carried on The Shop with their own graduate students after they became faculty along with Charles Mullgard, Everett Rogers, Ron Powers, Daryl Hobbs, Larry Kasperbauer, Quentin Jenkins and Rex Warland are just a few of the sociology notables educated in The Shop.
College Tailgate Draws a Crowd
About 300 alumni, retired and current faculty and friends attended the college tailgate before the Iowa State and University of Nebraska game.

Head of Cattlemen’s Group
Alumnus Craig Beer was one of 20 chosen to serve as a fellow with the congressional agribusiness internship program for 2007-08. The internship included a meal grilled by the Iowa Agricultural Business and Dean Tom Danielson.

Awards Presented to Alumni
The ISU Alumni Association presented its 2007 honors and awards at Homecoming in October. Several college alumni were among those honored:

- **Eric J. Hentges** (PhD ’84 animal nutrition), Alexandria, Va., Alumnus Merit Award
- **John Ringel** (’79 agricultural business), Highlands Ranch, Colo., James A. Hopson Alumni Volunteer Award
- **Lyle Campbell** (’68 agricultural business) and **Nancy Campbell**, Paradise Valley, Ariz., Impact Award
- **Janet Birer**, Ames, Iowa, National Service Award

- **Terry EuClaire Meyer** (PhD ’87 molecular, cellular and developmental biology; PhD ’87 biochemistry and biophysics), Urbandale, Iowa, Floyd Andre Award
- **Duane C. Acker** (BS animal science, MS ’53 animal nutrition), Atlantic, Iowa, George Washington Carver Distinguished Service Award
- **Harlan D. Ritchie** (BS animal and dairy science) Okemos, Mich., Harry N. Wallace Award

Celebrated Emeritus Prof Enjoy a Fine Hand
By Melba Bocke Licht

In addition to his bridge partners, Thompson taught many other students who became prominent alumni, including John Pesek, a former student of his who attended Texas A&M. Thompson recommended Pesek for the Iowa State agronomy faculty.

Thompson received numerous awards for excellence in teaching, research and distinguished service. He says his attentive teaching style helped students learn. “I could tell by watching the students, by seeing the understanding in their eyes,” Thompson says. “If they weren’t listening, they weren’t interested. And they weren’t learning.”

Undergraduate education was so important to Thompson that he established ISU’s Louis Thompson Distinguished Undergraduate Teaching Award for faculty excellence in undergraduate teaching and advising. There also are agronomy and study abroad scholarships that bear Thompson’s name.

When Thompson retired in 1983 he began a second career as a research climatologist. He made an exceptional prediction of the drought in 1988 based on his research on the relationship between drought in the Corn Belt and El Nino. The prediction led to scores of invited presentations that kept Thompson busy until just days before his eighty-first birthday when he decided to begin a more traditional retirement.

Today, at 91, Thompson is an active philanthropist, stays current on the latest climatology news and enjoys visiting with his friends and colleagues. Especially over a good game of bridge.
SOMETHING

**Passionate for Pride and Purpose**

By Melea Reicks Licht

It’s important to ask, ‘How can I help?’ It’s not always about money. It’s about time and money.”

Tierney found his way to the leadership of the campaign through his passion for Iowa State University and agriculture. He credits his company for allowing him the opportunity to get involved in previous ISU campaigns through the Iowa State Alumni Association. For over 20 years Tierney has worked in the ag industry. As a lobbyist for Monsanto to Tierney informs state and local government officials in the upper Midwest on modern agriculture. He says his 1985 bachelor’s degree in public service and administration in agriculture was a perfect fit for his position in government affairs.

Tierney says he jumped at the chance to chair the college’s campaign committee based on his positive experiences in two other ISU campaigns and through his service on the board of the Committee for Agricultural Development, a nonprofit organization affiliated with Iowa State that has supported university agricultural research since 1944. “I’m honored to be a part of such a great team of alumni and Iowa State University Foundation employees,” Tierney says. “Everybody on the committee contributes something different. That’s what’s really exciting about this group.”

The College of Agriculture and Life Sciences seeks $155 million in private funding through Campaign Iowa State. According to Dean Woody Wintersteen, the funding will be used to fulfill the college’s mission and extend and redefine it for the 21st century.

“When it comes to rallying support for the college, Dave Tierney is a straight shooter,”

“Everyone can find their own way to be a part of the college,” Tierney says.

**STORIES**

Fall 2007
K EVIN VINCATTLE thinks highly of research done by Iowa State University. And it’s not just because he’s an alumnus. The research helps improve the operations of egg producers he represents.

Vinchattle is in his 10th year as executive director of the Iowa Egg Council and chief executive officer of the Iowa Poultry Association. He earned a bachelor’s degree in biology in 1978 with an environmental studies emphasis.

Vinchattle says Iowa State’s research findings benefit all egg producers, especially those in Iowa. Having the research done on Midwest facilities is invaluable to producers.

“It allows us to better understand the environment in which we work,” he says.

During the last 12 years Iowa State has been increasingly performing research into issues of concern to egg and poultry producers. One of the leaders on campus in partnering with producers has been Hongwei Xin, professor of agricultural and biosystems engineering.

The Iowa Poultry Association presented Xin its Poultry Industry Person of the Year Award last September for his work on poultry welfare, housing and air quality.

Xin says the goal of his research is to produce science-based information that can be used by producers in their decision-making. Much of the work is done in commercial poultry facilities, which gives it a real-world basis and demonstrates that it can be applied by producers.

“The Iowa Egg Council funding has enhanced our research capability to address industry needs,” Xin says.

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There is a list to study in Iowa, the nation’s leading egg producer, with about 54 million laying hens, and leading egg processing state. The Iowa Egg Council spends as much as $300,000 to $400,000 a year on research, most of which goes to Iowa State.

The Iowa Soybean Association (ISA) and other commodity groups have been key partners in Xin’s research, most of which goes to Iowa State.

“Iowa Egg Council funding has enhanced our research capability to address industry needs,” Xin says.

“For example, studies have looked at air quality and emissions associated with two typical types of hen housing and manure-handling systems used by producers. Certain additives applied to the manure reduced ammonia emissions.

“Manure is a great fertilizer. Research is done on the nutrient content and application, storage and emission issues. It’s a valuable organic fertilizer,” Vinchattle says.

Researchers have also compared the common industry diet with different formulations that feature reduced crude protein or inclusion of fiber in hen diet to decrease ammonia emissions from the hen manure. Increasing fiber with feed costs.

Xin says an area that will become increasingly important for poultry research is animal welfare issues. Future research at Iowa State will look at how different housing systems affect air quality and bird welfare, for example cage versus floor-raised chickens.

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S OYBEANS ARE ASSAULTED on all sides by diseases known widely among soybean growers by their acronyms. SDS. SCN. ASR.

Leonor Leandro, assistant professor of plant pathology, is one of ISU’s scientists conducting research on multiple disease enemies of soybean with substantial funding from growers’ checkoff dollars provided by the Iowa Soybean Association (ISA).

In fact, Leandro was hired as part of a $500,000 financial commitment from the Iowa Soybean Association to support new research in fungal pathogens.

Most of my research on fungal diseases is currently funded by ISA,” Leandro says. “My research focuses on soybean rust and sudden death syndrome. With rust, the goal is to search for partial resistance to the disease by comparing the infection process on different plant hosts. This is so important because rust is a potentially devastating disease.

Leandro and her colleagues are involved in several studies on sudden death syndrome ranging from the genetic level, to epidemiological studies, to a clip management study on row spacing and planting density.

Sudden death syndrome is challenging because there are several environmental and soil factors that appear to affect its severity, including an interaction with the soybean cyst nematode,” Leandro says. “We need to better understand these interactions in order to improve disease management.

The research of Leandro and many others currently on campus is the latest chapter in a continuing story of partnership between ISU and the Iowa Soybean Association.

Since 1972, the association has contributed $33,111,343 to ISU research to address production challenges that have limited soybean yield and producer profitability. In 2007 alone, the ISA provided more than $2 million for research.

Because of this partnership, average soybean yield has increased 34 percent since the early 1990s due in part to improved production practices and disease and insect management recommendations developed and delivered by Iowa State researchers and extension.

“The goal of my research is to increase knowledge on the biology and epidemiology of these diseases, which is essential for effective disease management,” said Leandro. “We are particularly interested in supporting the development of resistant varieties. That’s why the work is important to Iowa soybean growers because it can result in improved soybean productivity.”

Leandro sees the partnership between ISU and the state’s soybean growers as very productive and beneficial.

“It really energizes and strengthens the interface between soybean growers, commodity groups and Iowa State researchers, and therefore supports our land-grant mission,” said Leandro.

“It’s also helps stimulate collaborations within ISU and with other institutions and keeps researchers focused on the needs of soybean growers.”
Iowa State University
College of Agriculture and Life Sciences

Recruitment Success
Enrollment is up in the college with nearly 2,700 undergraduates and 700 graduate students. That’s an increase of 788 undergrads and 31 graduates over one year ago. This was the second straight year for double-digit freshman-and-transfer increases in the college. Two-thirds of the college’s students received financial aid.

Fall 2007 Enrollment Data

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<th>Undergraduate</th>
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<tr>
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<tr>
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Extension Service to Iowans in 2007
A total of 159,136 Iowans participated in Agricultural and Natural Resources Extension’s noncredit workshops, conferences, field meetings and home study programs to increase their understanding and skills related to agricultural enterprise management, natural resource protection and economic development. Another 169,271 Iowans called Agricultural and Natural Resources Extension hotlines or received individual consultations.

Future Plans of College of Agriculture and Life Sciences Recent Graduates
Graduating seniors attending the college’s May convocation wrote their plans and comments on cards to be read as they were recognized. These are a few samples:

- returning home to the family farm
- working as an account manager trainee position with Pioneer Hi-Bred, Mankato, Minn.
- will work for forest service in Oregon
- will attend Creighton Law School focusing on corporate/business law
- working in marketing department at Kinze Manufacturing
- will be a zookeeper at Blank Park Zoo, Des Moines
- working as a milling sales rep for ConAgra, Omaha
- agronomist with Lim Coop Oil Co., Newton
- planning to attend medical school in the fall
- will be an ag loan officer with Northwest Security Bank, Fredericksburg
- joining U.S. Army Medical Service Corps
- going to graduate school in microbial genetics
- will be an intern at Dankai National Park and Preserve, Alaska
- will be an equine trainer for Junior Blind of America in California
- plans on working for Buenge Corp., in Arkansas (and maybe running for governor)
- agronomist with Lim Coop Oil Co., Newton
- plans on working for ConAgra, Omaha
- agronomist with Lim Coop Oil Co., Newton
- plans on working for Buenge Corp., in Arkansas (and maybe running for governor)

Graduation Rates
The College of Agriculture and Life Sciences has the highest graduation rate on campus at 74%. Iowa State’s composite graduation rate is 65.8%.

Fundraising
In 2006-2007, the college had its second best fundraising year ever – for the third year in a row. (It’s hard to beat 1999, when an $80 million gift was announced.) Nearly 4,000 donors expressed their generosity with nearly $23 million, an increase of 17 percent over a year ago.

2007 fundraising highlights for the college include:

- the Almanac program support
- $458,490 from phone, direct mail and online giving
- record fundraising accomplishment for a fiscal year and a 23 percent increase

Snapshot of Our Alumni, 2007

- 19,202 Alumni Living in Iowa
- 26,371 Alumni in Midwest (SD, WI, NE, KS, MN, MO, IL)
- 36,572 Alumni in U.S.
- 1,243 Alumni with International Addresses
- 37,815 Total Alumni
- 83.5% Male, 16.5% Female

Agriculture and Life Sciences Ambassadors are shown with college administration and recruitment staff.

College of Agriculture and Life Sciences Ambassadors are shown with college administration and recruitment staff.

S N A P S H O T  O F  O U R  A L U M N I , 2 0 0 7

- Agronomist with Linn Coop Oil Co., Des Moines
- Agronomist with Pioneer Hi-Bond, Inc., Cedar Rapids
- Agronomist with Linn Coop Oil Co., Newhall

B A S E  P R O G R A M  R A N K S  N E A R  T O P  I N  N A T I O N

The Agricultural Engineering program at Iowa State is ranked second in the country in the U.S. News & World Report’s 2008 “America’s Best Colleges” annual rankings. The Department of Agricultural and Biosystems Engineering jumped four spots from the last ranking and is the only Iowa State department ranked in the top 10. The ranking is based on the opinions of deans and senior engineering faculty nationwide. Iowa State University is ranked among the top one-fourth of all public universities nationwide.

Ramesh Kannan, ABE Chair

More Than 98 Percent Placement
For 2005-2006 graduates of the College of Agriculture and Life Sciences, 98.2 percent (694 of 605) were placed within six months of graduation. In 19 out of 24 majors, 100 percent placement was recorded. Sixty-eight percent are beginning their careers in the state of Iowa.

The student ambassadors have volunteered over 850 hours during the fall semester, planning campus visit experiences for prospective students, hosting prospective students and visiting Iowa high schools.

- More than 200 agriculture and life sciences students like Case Circle, above, studied in 25 countries in 2007. Twenty-five percent of spring semester graduating seniors studied abroad. The college will provide 50 passports to first-time travelers during the 2007 academic year and presented more than $41,000 in study abroad scholarships to 104 students during the 2006 academic year.

STORIES

--- Excerpt from a postcard sent to the College of Agriculture and Life Sciences Study-Abroad Office in April. Case Circle, a junior in agriculture studies, is a world traveler thanks to support from the office. He has participated in programs in Australia and Argentina and is busy selecting his next study-abroad program.

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STORIES

Fall 2007

30

SCHOLARSHIPS
The college offers more than $1 million in scholarships every year.
$1,000,000

INTELLECTUAL PROPERTY
College’s percentage of ISU patent disclosures:
College’s percentage of ISU active licenses:

(68)

(46)

COLLEGE OF AGRICULTURE AND LIFE SCIENCES FACULTY AND STAFF BY THE NUMBERS

382

professional and scientific staff

285

tenured or tenure-track faculty in 15 departments

19

endowed chairs and professorships

50

More than

RESEARCH – EXPERIMENT STATION
The Iowa Agriculture and Home Economics Experiment Station, the research program directed by the Dean of the College of Agriculture and Life Sciences, receives both state and federal funding.

State Funds
$34,493,006

Federal Formula Funds (Hatch, budgeted for state fiscal year)
$4,028,617

Federal Formula Funds (Multistate research, estimated)
$2,062,975

Total, state and Federal Funds
$40,584,598

Budget
The College of Agriculture and Life Sciences will receive more than $68 million from the state of Iowa and the federal government this year to carry out its teaching, research and extension mission.

EXTENSION
The Agriculture and Natural Resources (ANR) Extension Program in the college receives combined resources from a state budget line item and federal formula funds from U.S. Department of Agriculture’s Cooperative State Research, Education and Extension Service.

Funds-Extension Campus Faculty $5,616,888

Funds-ANR Field Specialists $3,438,017

ANR Administration $265,539

Total, ANR Extension Funds $9,320,444

GENERAL UNIVERSITY
The college will receive $19,111,881 from an Iowa State University line item in the state budget that funds nearly all campus personnel, facilities and programs. The college primarily uses these funds to support teaching programs.

ALLOCATION OF STATE AND FEDERAL FUNDS
State and federal appropriations to the college’s departments, centers and programs for research, teaching and extension are committed to personnel and to supplies and services. Supplies and services make up 10.3% of the total budget. The majority is in personnel shown below.

SPONSORED FUNDING
The College of Agriculture and Life Sciences receives sponsored funding from several sources to help support its research, teaching and extension programs. Sponsored funding includes support received directly from federal, state and local government units, businesses and corporations, foundations and associations. The College of Agriculture and Life Sciences, the Experiment Station and Agriculture and Natural Resources Extension generated more than $55.76 million in grants, contracts and cooperative agreements during FY07. That number is 20.5% of the university’s FY07 total sponsored funding, which besides research, includes funding for public service/extension, education, financial aid, buildings, equipment, etc. This funding is building academic excellence in the College of Agriculture and Life Sciences as well as creating new economic opportunities for Iowans through research and development.

42.4% FACULTY

17.2% PROFESSIONAL & SCIENTIFIC STAFF

5.6% MERIT STAFF

4.1% GRADUATE ASSISTANTSHIPS

19.8% SCHOLARSHIPS

0.6% EARLY RETIREMENTS/CURRENT EXPENSE WAGES

Personnel 89.7%

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5.6% MERIT STAFF

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Personnel 89.7%

The College of Agriculture and Life Sciences’ annual Agriculture Career Day was filled to capacity with recruiting employers on Oct. 23, 2007. The career fair is the largest in the nation attracting 151 companies who recruited students for jobs and internships. The Ag Career Services Office coordinated 630 interviews for visiting companies in the three days following the event.
SOY ON PARADE
The college purchased a piece of soybean artwork that was part of the Iowa Soybean Association's Soy on Parade promotion. The giant soybean, about four feet in diameter, is titled “History of Soy” and features ISU's George Washington Carver and Henry Ford and their contributions to new uses for soybeans. It was on display over the summer in the College of Agriculture and Life Sciences deans’ suite in Curtis Hall. The deans became so fond of the piece they decided to make a bid for it when the soybeans were auctioned off in September. After a fevered bidding process, Larry Johnson, shown at right, director of the Center for Crops Utilization Research, was able to secure the bean for the college.

AG NOVICES “AWE” ED BY AG
More students enrolled in the College of Agriculture and Life Sciences have little or no farm experience. Three such students gained first hand farm experience through the Agricultural Weekend Experience (AWE) program in July. The program gives students in the college the opportunity to experience agriculture through a stay with an Iowa farm family and agricultural business tours, farm visits and activities. AWE is co-sponsored by the College and the ISU Agricultural Endowment. See photos and learn more on-line at www.ag.iastate.edu/stories.

FOOTNOTES

SECRET S OF PLANT GENOMES REVEALED!
Jonathan Wendel, chair of the ecology, evolution and organismal biology department, is featured in a 23-minute, MTV-style movie about plant genomics for high school and grade school students. The “Secrets of Plant Genomes Revealed!” features three scientists who are experts studying the genomics of cotton, corn and potatoes. Wendel’s segment on cotton starts out in a corn field and jumps to the largest cotton field in Iowa — Wendel’s research plants in the greenhouse on top of Bessey Hall on ISU campus. The National Science Foundation commissioned Minnesota Public Television to produce the video, which is available on-line, www.ag.iastate.edu/stories.

AWE participants are shown touring Golden Grains Energy Ethanol Plant in Mason City.

MYSTERY DONOR’S GENEROSITY UNCOVERED
Across more than four decades, Vincent Brangan, a farmer in Pocahontas County, and ISU distinguished professor of economics Neil Harl traveled thousands of miles of roadways together to attend seminars. In the eulogy he delivered at Brangan’s funeral last summer, Harl revealed a secret: For about 40 years, Brangan had been an anonymous philanthropist, donating nearly $180,000 to support ISU agriculture scholarships. Why? In 1938, during the Depression, he was fortunate to receive a Sears-Coopacher scholarship that allowed him to attend Iowa State. In 1966, with Harl’s assistance, Brangan decided to begin giving something back to help young people learn about agriculture at ISU. Brangan gave Harl permission to reveal his identity when he died, in hopes it would encourage others to give. Brangan died June 24 at the age of 90. Harl said, “I’m supremely confident that, as St. Peter welcomed Vince, St. Peter likely said, ‘Well done, thy good and faithful servant, well done. And by the way, the next seminar starts in 10 minutes.’”

HERO AMONG US
College alumnus and Army Capt. Timothy Gittins ’FW ag education’ was honored as one of the Time 100, the news magazine’s list of the most influential people in the world in the magazine’s 100 People Who Shape Our World edition. In the May 14 issue, Gittins was called “an apt symbol of the tenor that the U.S.’s pair of lengthening wars have demanded of the roughly 1 million men and women who have fought them.” Gittins also received the Doug Las MacArthur Leadership Award in a Pentagon ceremony in May. He commands the 11th Airborne Division’s Company C, 1st Squadron, 61st Cavalry Regiment, and will be an instructor beginning in the Captains Career Course. See his profile on-line at www.ag.iastate.edu/stories.

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ISU Sesquicentennial Lecture Standing on Shoulders: The Next 150 years
Lowell B. Catlett, Regent’s Professor and Dean, College of Agriculture and Home Economics, New Mexico State University
February 21, 2008
Sun Room, ISU Memorial Union
7 p.m.

ISU Alumni Association
55,000 in 2010
Your ISU Alumni Association is reaching new heights! The new ISU Alumni Center is scheduled to open in April 2008, and the Alumni Association has set a goal of reaching 55,000 members by the end of 2010. Join today at www.isualum.org or call toll-free 1-877-ISU-ALUM.

MEMBER BENEFITS INCLUDE:
• Exclusive access to the NEW Alumni Center on game days beginning fall 2008
• CySpace online alumni community (www.cyspace.isualum.org)
• Quarterly VISIONS magazine
• ISU wall calendar
• Discounts on many products, services, and events
• Go to www.isualum.org/benefits for a complete list of benefits

ISU Alumni Newsletter
SPRING 2008
IMPACT: WATER QUALITY
Look for more STORIES in your mailbox this spring from the College of Agriculture and Life Sciences.

Impact: Water Quality, learn how ISU researchers are using riparian buffers to enhance stream quality, meet award-winning teachers and catch up with globe-trotting students.

Discover how ISU Extension partners with local leaders to protect watersheds and how college alumni are impacting the state, nation and world.

STORIES IN AGRICULTURE AND LIFE SCIENCES

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We want to hear from you!

Please e-mail us at stories@iastate.edu to share feedback and your current e-mail or mail address. Or, complete and return the attached card (left). By sharing your e-mail address you will be signed up to receive our monthly e-mail update, College of Agriculture and Life Sciences Alumni Online.