IOWA STATE UNIVERSITY

College of Agriculture and Life Sciences

Class of 1961
Alumni Days Celebration

May 13, 2011

held in the Curtiss Hall Auditorium

PROGRAM:

Eric Hoiberg
Retired Associate Dean
College of Agriculture and Life Sciences

Wendy Wintersteen
Endowed Dean
College of Agriculture and Life Sciences

Tom Polito
Director, Student Services

Andy Zehr
Marketing and Recruitment Director

Michael Gaul
Director, Agriculture Career Services

Recruiting Experiences of CALS Students

Alumni Memories

Guided Tours of Curtiss Hall Renovation
(Optional)

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College of Agriculture and Life Sciences

Departmental Updates

Department of Agricultural and Biosystems Engineering

Ramesh Kanwar, Chair

Agricultural and Biosystems Engineering (ABE) undergraduate and graduate student enrollment numbers have continued to increase since 2004 and 2011 spring enrollment for undergraduate students is more than 480 and 100 for graduate students. Both, the undergraduate and graduate programs in agricultural engineering were ranked 4th and 6th, respectively in the nation in the 2011 rankings by the US News and World Report. Also, ABE has probably the largest undergraduate and graduate student enrollment in the country. In addition, the number of students participating in study abroad programs and graduate students conducting research in overseas labs is increasing. The following are some interesting facts about the undergraduates in ABE at Iowa State University:

- ABE admitted the first class of its new BS degree program in Biosystems Engineering in fall 2010 with more than 60% female and minority students.

- ABE has established its formal partnership with Dalian Polytechnic University of China to initiate its first ever joint 2+2 BS degree program in Agricultural or Biosystems Engineering with a specialization in Food and Bioprocess Engineering

- ABE's undergraduate student retentions rates improved to > 92%.

- The diversity (female and minorities) in undergraduate programs has increased from 3.8% in 2001 to more than 12% in fall 2010.

- Industry internships are taken by 100% of our technology students and 87% of ABE engineering undergraduate students every year.

- There is almost 100% job placement and more than 70% of technology and engineering students find jobs in Iowa and contribute to Iowa's economy.

- ABE faculty brought more than $15 million in external grants in 2010

ABE faculty continues to expand research and outreach expertise to prepare itself to meet the global challenges of the 21st century. ABE added several new faculty members in the last seven to eight years to take this department into the future. The newly hired faculty members have been added in key strategic areas of biomaterials and biofuels, biosensors and bionanotechnology applications in biosystems engineering, robotics and embedded technologies in machine systems, pathogens and pharmaceuticals in water, nonpoint source pollution control and air quality protection, and impacts of biofuels industry on environmental quality. ABE faculty and staff continue to receive national and international honors and serve on several national and international science/policy advisory boards. Last year, two ABE faculty left to accept administrative jobs at other universities. Dr. Robert Burns became Assistant Dean at the University of Tennessee and Dr. Alok Bhandari became Department Head at Kansas State University.

The Department of Agricultural and Biosystems Engineering is excited about the new building project and recently hosted a visit by our Honorable Iowa Governor to Davidson Hall. The building is part of a planned multi-structure biorenewable laboratory complex. The building project has raised more than $12.5

million from private sources. Despite the downturn in the economy, we are very hopeful that construction will begin at a site near Howe Hall on campus in less than a year. The quality research and teaching labs and state-of-art classrooms are crucial because they enable faculty to improve learning, perform research and work closely on projects with graduate students, colleagues and engineers from private industry to solve our global society's problems of the 21st century.

Department of Agricultural Education and Studies

WADE MILLER, INTERIM CHAIR

The Department of Agricultural Education & Studies has two majors: Agricultural Studies (formerly known as Farm Operations) and Agriculture and Life Sciences Education, which has two options: Teacher Certification and Communications.

Enrollment in Agricultural Education & Studies includes about 425 undergraduates and approximately 50 graduate students at various levels of completion. Career placement is very high for both majors. Agricultural Studies graduates readily find careers in agriculturally-related businesses across the U.S. Interest in teacher education has grown as the need for agricultural science teachers has increased. Communications graduates are finding employment in a variety of firms and news outlets.

The Ag 450 Farm had another successful year. Students in the AGEDS 450 class manage the farm as a business. They grow approximately 1,400 acres of corn and soybeans. Yields were at or above Story county averages. They manage a custom swine operation. They also manage a test plot. The mission of the farm business is to be a practical resource for ISU; demonstrating quality and sustainable production agriculture in the Midwest. AGEDS 450 is the capstone course for students majoring in Agricultural Studies.

The department recently completed the new Agricultural Mechanics facility to offer courses in basic agricultural mechanics for teacher education candidates. Skills and knowledge as well as how to teach these skills and knowledge bases will be provided in the areas of small engines, welding, electricity, construction, etc. New courses in agricultural mechanics are being developed to be able to best use the available facilities at the Ag 450 Farm.

The department is pursuing an Endowed Professorship in Agricultural Leadership Education, for a new position in the Department of Agricultural Education and Studies.

The department is celebrating the 100th Anniversary of the Agricultural Education Program at ISU. (1911-2011). We will have a reception during VEISHEA in 127 Curtiss Hall at 3:00 p.m.

The Departmental Clubs, AgEd Club, Farm Op Club, and the Agricultural Communicators of Tomorrow (ACT) Club, along with Collegiate FFA had their third combined awards banquet this spring. Outstanding students were recognized with scholarships and other awards at the banquet. Brian Waddingham ('94) was this year's featured speaker. He is the Executive Director for the Coalition to Support Iowa's Farmers.

Department of Agronomy

KENDALL LAMKEY, CHAIR

The Department of Agronomy is training the next generation of agronomists to protect the land, nourish the seeds, and unleash the potential of plants to provide for our global society.

At a time when the challenges of our global society are creating an ever increasing need for agronomists with a science-based education, the department is making history. The 2010-2011 academic year had the highest undergraduate enrollment in

agronomy ever. We are providing the world with more agronomists today than at any previous time in Iowa State University's history.

These students benefit from the hands-on experience provided through the research of our world class faculty. Their research includes:

- Creating sustainable systems through projects such as the Comparison of Biofuels Systems (COBS) which collects data for a side-by-side evaluation of start to finish cropping systems

- Developing tools for Iowa farmers that predict crop growth stage variations across cropping districts

- Unleashing the potential of crops by developing highly productive perennials to augment corn and soybean production systems, dramatically reduce erosion and increase the productivity of the land

The Department of Agronomy is securing a future for tomorrow as the leader in the science of crops, soil and climate, making our alumni proud to say, "I'm an Agronomist!"

Department of Animal Science

Maynard Hogberg, Chair

Record undergraduate enrollments persist in the Department of Animal Science. The 2010 fall enrollment was 864 and the outlook for this fall is for continued growth. This past year there was an exceptional group of leaders within those ranks who received university as well as national recognition. Lee Christensen, Justine Hosch and Garret Skaar received the Undergraduate Scholastic Achievement Award from the American Meat Science Association. Justine also received the Leadership Excellence

Award from the college and Lee was the college convocation speaker last spring. Tyler Bauman received the Wallace Barron All-University Senior Award and Kaleena Westaby was honored nationally with the Genevieve Christen Outstanding Student Award from the American Dairy Science Association. The active Block and Bridle Club is busy making plans for bringing the 2012 National Block and Bridle Club meeting to campus.

The new agriculture pavilion is becoming more of a reality as the goal to raise $7 million dollars is nearing fruition. Reflecting the importance of the new pavilion to our students, members of the Block and Bridle Club recently helped to procure a $200,000 commitment from the Iowa Pork Producers for a classroom in the new pavilion.

Department of Biochemistry, Biophysics and Molecular Biology

GURU RAO, CHAIR

The grand challenges of the 21st century are health, food, water and energy. The world population which stands at around 6 billion is growing at an annual rate of 80 million per year and, at this rate, will exceed 10 billion people by the 2030's. Rapid urban expansion has resulted in a progressive decline of arable land available for agriculture and put severe strains on meeting the nutritive demands of a burgeoning world population. Solutions to these problems will have to come from technical and scientific innovations in a plurality of disciplines, including the biological sciences. In this context, the Department of Biochemistry, Biophysics & Molecular Biology (BBMB) is a critical component of Iowa State University's pre-eminent status in the life sciences, both nationally and internationally. In research, the success of our department contributes significantly to the national reputation of Iowa State University. BBMB has a significant presence in the major federal funding agencies, particularly in the NIH and NSF, the two agencies that are most often used as benchmarks in evaluating the strength of a biological sciences department. The

successful research activity of BBMB also positively impacts the indirect cost overhead provided to ISU through the efforts of its faculty.

In keeping with the traditions of a land grant university in a predominantly agricultural state, BBMB faculty are committed to fundamental research designed to simultaneously increase our understanding of natural phenomena and accrue practical benefits to society at large in fields such as agriculture (improved crops), biotechnology (renewable energy) and medical science (new drugs). We have been doing it for the last 50 years. During these years we have graduated well over 1200 students with an undergraduate or a graduate degree. Hundreds of others have passed through the portals as post-doctoral fellows, visiting scientists and staff members. Many of them hold positions of responsibility as doctors, scientists, teachers etc. in both the public and private sector all over the world. We marked the golden anniversary of the department of BBMB in July 2010. In a 2-day event that reunited over 200 past and present BBMB faculty, staff and students, we celebrated the many accomplishments of the department over the past five decades.

Department of Ecology, Evolution, & Organismal Biology

Jonathan Wendel, Chair

Founded in 2003, the Department of Ecology, Evolution, and Organismal Biology (EEOB) brought together under one roof faculty and students with similar interests to work together on important questions in ecology and evolution, using a wide range of approaches and technologies, including fieldwork, laboratory experiments, and computational analyses.

EEOB has many active research programs and opportunities for students interested in conservation biology, ecological and evolutionary genomics, population, community, and ecosystem ecology, quantitative genetics, as well as traditional organismal

disciplines such as taxonomy. The 27 faculty, 13 post-doctoral research associates and staff, and ~50 graduate students are housed in Bessey Hall, where the hallways are lined with research displays highlighting, for example, the evolution of the eye in mollusks, sex determination in turtles, the genetic make-up of sponges, the restoration of grasslands, and the great diversity of tropical bamboo species.

Faculty in EEOB are linked through students and research programs to many other departments within the life sciences as well as to supporting disciplines in the physical and computational sciences. The diverse knowledge of the EEOB faculty provides unique opportunities for undergraduate students majoring in Biology, Genetics, and Environmental Science, to whom we offer a rich and cutting-edge curriculum.

Department of Economics

GianCarlo Moschini, Chair

A heartfelt hello to all of our alumni and friends. I was recruited to chair the department in January 2009 to take over from Arne Hallam who had the opportunity to move into an associate dean position in the Liberal Arts and Sciences (LAS) college. These have been two challenging years. Because of the economic hardships brought about by the great recession of 2008-09, Iowa State University has had to endure two years of deep cuts in state appropriations. The pain has been felt at various university levels, leading to a downsizing of many programs and activities. Our department had to contribute its fair share in this process, although by some standards we fared reasonably well because we were able to fill a few critical positions that had been in the making for some time. We now have about 40 faculty lines from the LAS and College of Agriculture and Life Sciences (CALS) colleges combined (not counting our colleagues Hallam and Lawrence who are serving in college administrative positions), a dozen fewer than the high mark of two decades ago.

Despite its shrinking size, the department can still count on some excellent faculty and superb staff. It is actively engaged on a number of fronts and remains well positioned to make key contributions to the University's mission.

We continue to educate a large number of undergraduate students every year on basic principles of economic thinking, a critical skill in today's world. Econ 101 (Principles of Microeconomics) and Econ 102 (Principles of Macroeconomics) are among the most highly enrolled classes on campus. Agricultural Business continues to be our largest undergraduate major (about 300 students). The economics major is also growing (about 100 students), thanks in part to the increasing popularity of double majors. And we have a new undergraduate major, Business Economics, which we developed jointly with the College of Business. To strengthen our commitment to undergraduate education, we have developed a number of new courses over the last few years, including Econ 207 (Applied Economic Optimization), Econ 234X (Small Business Management), Econ 313X (Economics of Sports), Econ 334 (Entrepreneurship in Agriculture), Econ 339X (Agricultural Marketing), Econ 364X (Rural Property Appraisal), Econ 387X (Economics of China and India), and Econ 418X (Introduction to Game Theory). We are also increasing our efforts in distance education and are currently serving nearly 400 students in this innovative way.

Graduate education is centered on our PhD program, which attracts students from all over the world, although we continue to invest in our MS program as well. Our doctoral students are holding their own in a very competitive job market, thanks to the rigorous training and excellent dissertation supervision provided by our dedicated faculty. A major recognition of our efforts in this area was provided by the long-awaited NRC ranking of US doctoral programs released last September. Economics at ISU was ranked very well, as discussed elsewhere in this newsletter; indeed, our doctoral program was one of the very highest ranked programs on the ISU campus.

Research continues to be a centerpiece of our academic activities. In addition to traditional disciplinary efforts (in agricultural and resource economics, theory, macro, international, and labor), the department is making a foray into the newer area of behavioral and experimental economics, and is taking leading roles in timely issues related to biofuels and the bioeconomy, water and environmental issues, and food quality and nutrition. The Center for Agricultural and Rural Development (CARD), which Bruce Babcock has led for more than 10 years, continues to make important contributions in applied policy analysis and maintains its traditional high profile in its outreach activities.

Our extension activities have dealt with declining state funding, which has resulted in the loss of several positions in this area and is providing strong incentives for us to prioritize our efforts. We are also challenged to cope with the changing demand for extension in the rapidly evolving new world of the information age. Our current activities continue to emphasize grain and livestock marketing, farm management and risk management, as well as a selected number of other programs that bring value to the citizens of Iowa.

As we move forward in these uncertain but interesting times, we are mindful of the expectations that a department like ours faces. We owe it to our current students to provide them with the same solid education that has been a key to success for generations of past students. And we owe it to ourselves to live up to the standards of the great scholars that have defined our department's history. One positive outcome of the recent great recession is to remind the university community and the public at large of the critical role that economics plays in everyday life. As we renew our efforts in the pursuit of a diverse and challenging portfolio of scholarly activities, we are thankful for the continued support of our alumni family and friends.

Department of Entomology

Steve Jungst, Interim Chair

When last year's budget cuts made it through the ISU colleges, the Department of Entomology received a >25% cut, which jeopardized our existence as an independent unit of study. Two critical outcomes of the budget cuts were the loss of the undergraduate major in Insect Science and the loss of all of the Graduate Research Assistantships provided by the College of Agriculture and Life Sciences. Structurally we had to make a change, combining the academic Chair of Entomology position with that of Natural Resource Ecology and Management (NREM), and move to a business center model for administrative oversight. However, we were able to retain the identity of entomology. Our research, extension, and education will remain intact for the foreseeable future.

For the short-term, Central Administration has provided bridging funds to cover the budget reductions including the loss of Graduate Research Assistantships as we transition to having all graduate students supported by funding from their major professor. For the long-term, Dean Wintersteen has appointed a search committee to seek applications for the new Chair with a candidate identified to begin the Chair duties by July 1, 2011.

Our alumni have continued to be recognized:

- John Lyell Clarke (Ph.D. 1988), entomology alum and president of Clarke Mosquito in Roselle, IL, received the U.S. EPA Presidential Green Chemistry Challenge Award for NatularTM, their new reduced risk, natural mosquito larvicide. NatularTM uses spinosad for management of mosquito larvae with a novel plaster matrix that releases optimal levels of product. This is the 15th year that the Environmental Protection Agency (EPA) has recognized pioneering chemical technologies developed by leading researchers and industrial innovators who are making significant contributions to pollution prevention in the U.S.

- George G. Kennedy, who was an undergraduate at ISU in 1966-1967 on a scholarship to the gymnastics team (rings and trampoline), was elected as an honorary member of ESA. Kennedy is currently William Neal Reynolds Distinguished Professor of Agriculture and head of the Department of Entomology at North Carolina State University. He holds B.S. and Ph.D. degrees in entomology from Oregon State University and Cornell University, respectively. He served as assistant professor of entomology at University of California, Riverside, from 1974 to 1976 before joining the faculty at N.C. State as assistant professor in 1976.

- Kevin L. Steffey (Ph.D. 1979), a technology transfer specialist at Dow AgroSciences, won the ESA North Central Branch's C. V. Riley Award in recognition of outstanding contributions to the science of entomology. Steffey was an extension specialist at the University of Illinois for over 25 years.

Even though we have suffered a severe budget cut, we have very dedicated faculty who are providing quality instruction and are conducting cutting edge research and extension programming.

Department of Food Science and Human Nutrition

RUTH MACDONALD, CHAIR

Due to the great generosity of our alumni, two faculty were named to endowed professorships this year. Dr. Michael Spurlock was awarded the Virginia Gladney Professorship in the spring and Dr. Christina Campbell was awarded the Sandra S. and Row W. Uelner Professorship in the fall. Both awards support the expansion of the recipients' research programs.

In 2010, FSHN faculty made some exciting advances research. Dr. Wendy White's study with HarvestPlus has found that corn

bred to contain increased levels of beta-carotene is a good source of vitamin A. These results are an important step in making biofortified corn available to people in developing countries that need vitamin A in their diet. Assistant professor Buddhi Lamsal, PhD, helped a team find a greener method to clean up oil spills. The project used engineered microorganisms to convert biobased media into bio-dispersants using fermentation. Making our food safer, Dr. Byron Brehm-Stecher created a process that can detect and genetically identify salmonella from contaminated food outbreaks in hours rather than days. Brehm-Stecher hopes this process will bridge the gap between traditional methods and the complex next-generation tools to enhance food safety efforts.

Undergraduate enrollment in FSHN reached an all-time high of 464 in 2010. This includes students majoring in dietetics, food science, nutritional science, and culinary science. We had our first graduates from the culinary science major in December. The diet and exercise BS/MS degree program continues to see increased enrollment and a new option in the Nutritional Science major, Nutrition and Wellness, will begin this year.

Our graduate student enrollment continues to be high with 60 students mentored by FSHN faculty across disciplines and interdepartmental programs.

The IFT product development team was selected to compete in the final round at the IFT Annual Meeting last summer with their nutritious, melting seasoning. A unique combination of flavors with added vitamins in a gel that consumers place on top of cooked meat. Another team placed 4th in the AACC competition with their naturally-flavored, environmentally-friendly zein-based probiotic chewing gum. Continuing a climb to the top, the Dairy Products Evaluation team placed 2nd in team all-product (the grand total of all 6 products), 1st in yogurt, 2nd in cheddar cheese, and 3rd in cottage cheese at the national contest. In addition, Gerui Li placed 2nd individually in all-product competition. And Joshua Carter, 2009 team member, received the 2010 Joe Larson Merit Award.

Department of Genetics, Development and Cell Biology

MARTIN SPALDING, CHAIR

The Department of Genetics, Development and Cell Biology (GDCB) is a relatively new department, inaugurated July 1, 2003, as part of the reorganization of the biological sciences at ISU. As such, GDCB, together with the Department of Ecology, Evolution and Organismal Biology (EEOB), supplanted the former Department of Botany and Department of Zoology and Genetics, which were transformed into GDCB and EEOB in the reorganization. GDCB focuses primarily on biological function at the cellular and subcellular level, using molecular, genetic, computational and biochemical approaches to understanding biological function. GDCB overlaps with and complements the Department of Biochemistry, Biophysics & Molecular Biology (BBMB) at the molecular scale and the EEOB Department at the organismal scale. These three departments are the fundamental biological science departments at ISU, and all are jointly administered by both the College of Agriculture and Life Sciences (CALS) and the College of Liberal Arts and Sciences (LAS).

These three departments are representative of the expanded vision of the CALS to embrace fundamental biological sciences. GDCB has 29 tenured and tenure-track faculty (12 with CALS appointments), 6 closely associated non-tenure-track teaching or research faculty, and several emeritus professors. We also have 15 departmentally-funded support staff in departmental offices or facilities, 36 grant-supported post docs and research support staff, and 55 graduate students in five interdisciplinary graduate majors, of which more than 80% are supported by extramural grant funding. GDCB also is committed to innovative and effective undergraduate education. GDCB jointly administers the undergraduate Biology major (jointly with EEOB) and the undergraduate Genetics major (jointly with BBMB and EEOB), both of which are offered in both CALS and LAS. These two undergraduate programs together total over 600 majors in the two colleges

combined and are growing, with Biology becoming one of the larger majors in the CALS.

Department of Horticulture

Jeff Iles, Chair

Welcome back to campus! And just like you, we're proud of our Cyclone roots and of our association with the best College of Agriculture and Life Sciences in the nation. The Department of Horticulture is an integral member of CALS and I think you'll agree, the achievements of our faculty, staff, and students are as interesting as they are impressive.

Service Learning: The EARTH (Education and Resiliency through Horticulture) Program is a service-learning program developed and implemented by the ISU Department of Horticulture in collaboration with Gifft Hill School, St. John, U.S. Virgin Islands. Each semester, two students from Iowa State (mostly horticulture undergraduates) will live and work on St. John as part of a study-abroad /service learning program. Graduate students and faculty from the Department of Horticulture also will visit and consult on a regular basis. Both ISU and GHS students will share in a unique cultural and education exchange.

New Students: The Department of Horticulture continues to aggressively recruit the best and brightest students to campus, and to help us spread the word about horticulture, a new DVD was recently developed that showcases career and employment opportunities in horticulture. To view the DVD, please visit our website at http://www.hort.iastate.edu/news/.

Undergraduate Club Competitions: Undergraduate students representing the Department of Horticulture Turf Club continue to dominate in national competitions. Last February, a team from the ISU Turf Club won first place honors at the 17th Annual Turf Bowl competition in Orlando, Florida. Teams from ISU have finished first in this competition in nine of the last ten

years! The Golf Course Superintendents Association Collegiate Turf Bowl competition is a three and one-half hour test covering knowledge of soils, turf grass species, diseases, weeds, insects, mathematics, human resources, and financial management relating to golf course operations. For their efforts, the team from Iowa State was awarded a traveling trophy and a $4,000 cash prize. ISU alum and current Ph.D. graduate student Marcus Jones was instrumental in training, mentoring, and coaching this outstanding team.

Outreach: The Second Annual All-Horticulture Field Day was held July 29, 2010. This event highlighted research projects and demonstrations at ISU's Horticulture Research Station (Gilbert, IA). Vegetable production, apple, grape, and small fruit production, wine tasting, turfgrass management, urban tree selection, landscape design and installation, organic horticulture, and farm pond management were featured stops during the "tour" portion of the field day. The Third Annual All-Horticulture Field Day will be held July 19, 2011. We hope to see you there.

Comings and Goings: Drs. Cindy Haynes and Ann Marie VanDerZanden are accompanying a group of undergraduate students to Ireland from May 8 to 21, 2011 for an exciting study abroad experience. Their tour will include the cities of Belfast, Galway, Killarney, Cork, and Dublin. The Department of Horticulture has been actively involved in study abroad since 1997. The trip to Ireland comes at the completion of a semester-long course in which students learned about the culture, history, politics, and horticulture of this beautiful country.

And FINALLY, new horticulture greenhouses are coming! The newly constructed greenhouse range (12,200 sq. ft.) is slated for completion in early May, 2011 and will feature in-floor heating, a thermal blanket system for heat retention, sun shading, fan and pad and/or fog cooling, and a state-of-the-art computer control system. Dedication is scheduled for September 3, 2011.

Department of Natural Resource Ecology and Management

Steve Jungst, Interim Chair

The Department of Natural Resource Ecology and Management (NREM) enrollment is among the highest in the region with almost 387 undergraduate students (83 forestry majors and 304 animal ecology majors) and 52 graduate students. The graduate students have started a new web publication titled Field Notes that can be found at: http://www.nrem.iastate.edu/documents/Field-Notes-2010.pdf.

The url for the department website is: http://www.nrem.iastate.edu.

Department of Plant Pathology

Thomas Baum, Chair

The Plant Pathology department is the professional home to almost 100 faculty, staff, and students. About twenty faculty members are charged with extension, research, and/or teaching missions and are running their respective programs in this department. One of our strengths is the great collegial and collaborative spirit that has resulted in numerous joint efforts within the department, with other departments at Iowa State University, and with units throughout the country and the world.

The Department of Plant Pathology at Iowa State University has a simple mission: We benefit society by protecting and enhancing plant health. However, as simple as this mission may sound, the implications of what it means to our tasks in research, teaching, and extension are immense.

Research scopes range from applied problems to mission-oriented basic programs, and research subjects span the wide range of bacteria, viruses, fungi, nematodes and their plant hosts. Our extension services meet the needs of diverse groups, from Amish

farmers to horticultural endeavors, and from new industries like viticulture to the most modern farming operations in the world. We are ready to provide the knowledge to ensure plant health wherever it is threatened. Research and extension alone do not make us a successful department: we also are fulfilling vital teaching roles by educating the next generation of leaders.

Our department is the home for top notch graduate education – not only in plant pathology, but also in a wide field ranging from sustainable agriculture to toxicology to genetics and molecular biology-related majors. Our graduates are sought-after professionals that find employment in industry, research institutions, or university settings. Also, the Department of Plant Pathology, in collaboration with the Department of Animal Science, is the administrative home for the undergraduate microbiology major, and many courses in this major are being taught by plant pathology faculty.

Department of Sociology

Paul Lasley, Chair

Greetings from the Department of Sociology. As I write this summary of departmental activities, recent events in Japan demonstrate the power of uncontrollable natural events in the earthquake and subsequent tsunami. This tragedy also serves to remind us that controlling technology can also be problematic. As the world watches the news reels of the loss of life and property and the challenges of safely shutting down the nuclear power plants damaged in the quake, the world community is responding to requests for assistance. Japan is a major market for Iowa farm products and we are seeing the impacts of the aftermath of the quake in our economy. Many Iowans recall the helping hand we received during the floods in 1993, 1998 and last year.

While much as changed since 1961, including the ending of the Vietnam War, the Civil Rights Movement, the Campus unrest of

the 1970s, and the farm crisis of the 1980s, Americans continue to reach out to those in crisis. Sociologists have often noted that it is in periods of turmoil, either through wars, natural disasters, or other major events that crises brings people together. Already we are seeing the world community respond to Japan's crisis, and this aid is disparately needed. The challenge will be to assist Japan over the many months and perhaps years in their rebuilding efforts. Our faculty have written about the important role of social capital, which can be viewed as the glue that holds communities together. It is under conditions of extraordinary devastation when entire neighborhoods or communities are swept away that extraordinary assistance is needed. Hurricane Katrina and the rebuilding of New Orleans is a case in point of how cooperation between local, state and national government can make huge strides in the rebuilding efforts. We have seen this closer to home when Cedar Rapids was severely flooded a couple of years ago. Sociologists have much to offer in understanding how to achieve cooperation during times of stress.

Likewise, our faculty have studied and commented on the bourgeoning world population and the need for new sources of energy. Certainly bio-based energy especially ethanol has helped boost farm prices in the state. However, in countries like Japan where they do not have adequate stocks of grain or forage to convert into ethanol, they have relied more heavily on nuclear generation of electricity. But as with all forms of technology, sociologists have reminded us that there is always an element of risk. While it is easy to criticize nuclear power plants given the recent events in Japan, ISU sociologists are heavily involved in exploring ways to maintain or increase crop production while reducing soil erosion and protecting our groundwater. All forms of energy production involve tradeoffs between costs and benefits, and sociologists are assisting in efforts to encourage adoption of new technology to help mitigate or reduce environmental impacts.

The latest example of this line of research is the recently awarded $20 million federal grant to Iowa State University to explore

the impacts of climate change and corn production across the Midwest. Two of our sociologists, Lois Wright Morton and J. Arbuckle are providing leadership to this initiative so that corn producers will be better able to respond to climatic changes. While climate change is slow and unpredictable, it is important that we have scientific studies on the shelf and ready to roll out when the time arrives.

The last few budget years has been challenging and the Department has experienced its share of budget reductions, but I continue to remind our faculty and staff that we are no different than Iowa families who have had to make adjustments because of job or income loss. The Department has a long proud tradition of assisting Iowans as well as citizens of the nation and world, and we look forward to continuing this tradition far into the future.

The important contributions of sociologists in understanding the political, economic and social upheaval of unplanned events such as natural disasters or technological failures will continue to be a large part of our efforts.

Department of Statistics

Ken Koehler, Chair

The Department of Statistics is one of the top ranked programs in the country. It grew out of the Statistical Laboratory which was founded in 1933 to provide support in statistical methodology and computation to researchers at the Iowa State College. The seeds were planted eight years earlier when Henry A. Wallace established collaborations with George Snedecor and other prominent researchers that sparked interest in application of statistical methodologies to agricultural research and the use of computing machinery to carry out calculations.

Snedecor was appointed statistician within the Agricultural Experiment Station and he pioneered the development of sound

statistical practices in experimentation, especially in biology and agriculture. He instituted cooperative agreements between the Statistical Laboratory and the USDA, Bureau of Census, and U.S. Weather Bureau that supported research in survey sampling, particularly in improving livestock and crop estimation procedures. Under one of those agreements, Snedecor directed the development of the National Master Sample of Agriculture.

This pioneering work continues to have a profound influence on the way agricultural data is collected and distributed around the world. The survey research group in the Statistical Laboratory has evolved into the Center for Survey Statistics and Methodology (CSSM). CSSM currently directs the National Resource Inventory, an ongoing USDA project that annually updates Congress on land use in the U. S. and its territories. In addition to agricultural and natural resource surveys, CSSM provides valuable expertise in conducting surveys to a wide range of ISU researchers as well as state and federal agencies and professional organizations.

The history of statistics at ISU has been rich with innovations that have helped to advance plant and animal genetics and agricultural production. We continue to build on this heritage to provide leadership in developing efficient methods for study design and data analysis for such widely diverse fields as genomics and molecular biology, animal and plant breeding, disease control, entomology, soil and water quality, climate change, biofuels production, wind energy, food science, nutrition and rural health. Rapidly evolving technologies and ever increasing abilities to rapidly collect massive amounts of information have created a ceaseless demand for new statistical methodologies. We have a talented and energetic faculty and enthusiastic students who are working hard to meet the next generation of challenges.

NOTES

IOWA STATE UNIVERSITY
College of Agriculture and Life Sciences
138 Curtiss Hall • Ames, Iowa 50011-1050