Inside:
Agronomy researchers take a systems approach to agriculture.
Dear Alumni:

First, I would like to introduce myself as the interim chair of the Department of Agronomy. For those of you who do not know me, I have a long history with the department. Like you, I am an alumni. I first came to Iowa State University to get my Ph.D. in plant breeding and genetics. From 1984 until 2002 I was a research geneticist/corn breeder with the USDA-ARS, located in the Agronomy building, and had a collaborative appointment with the department. I also serve as the director of the Raymond F. Baker Center for Plant Breeding and hold the Pioneer Distinguished Chair in Maize Breeding. My two-year term as chair began Feb. 1, 2006. I grew up on a farm in central Illinois and have been involved with agriculture my entire life.

I believe the most important asset a department has is its people. Our department has a long history of outstanding students, faculty, and staff and that tradition continues today. The alumni newsletter highlights some of the accomplishments and awards our students, faculty, and staff received during the past year. In 2005 we were fortunate to add three new faculty members. Roger Elmore joined us as a professor in extension. He is our state corn extension specialist and has variety of research interests related to corn production. Carlyon Lawrence joined our faculty as an assistant professor/collaborator. She is a research geneticist with the USDA-ARS, works in the field of bioinformatics, and is the scientist in charge of the maize genetics database. Her appointment continues our department’s long tradition of collaboration with the USDA-ARS. Gina McAndrews joined our department as a lecturer. She supports distance education opportunities in our introductory agronomy course.

Alumni are one of our most valuable assets as a department. Your accomplishments and achievements are, at least in part, a reflection of the education you received here at Iowa State. You are also important in maintaining and enhancing the strong support the department has enjoyed over the years. We are very appreciative of your loyalty and ongoing assistance.

I have met proud ISU Agronomy alumni every place I have traveled in the world. I hope to get a chance to meet you in person. If you are ever on campus please contact our main office if there is anything we can do for you or just stop in to say hello. I hope to see you out at Jack Trice Stadium for our annual Agronomy Tailgate on Oct. 7, 2006. We had a great response last year for the Iowa game and hope to this year for the Nebraska game as well. If you see me out in the state at one of our research farm field days, please introduce yourself to me. I am always happy to meet fellow alumni.

Sincerely,
Kendall Lamkey
Interim Chair
NEW RISK ASSESSMENT COURSE OFFERED BY IOWA STATE UNIVERSITY

Iowa State is among the first in the nation to offer a course in risk assessment for the biological sciences. The graduate course teaches students how to interpret the risk of adverse incidents in such situations as transgenic contamination, the occurrence of salmonella in food, and other agricultural or biological situations.

Jeff Wolt, Agronomy professor and course co-instructor, said the course allows students to understand how science is used in decision-making. “We introduce students to the concept of risk assessment, how to perform risk assessment, and how to deliver the information to policy-makers,” Wolt said. “A risk assessment can serve as the conduit for bringing science to the policy arena.” The course requires students to develop their own risk assessments in their areas of interest and review assessment case studies. Risk analysis is the integrated process of assessing, managing and communicating risk, and policy formulation.

The course was first offered in Fall 2005. Risk Assessment for Food, Agriculture, and Veterinary Medicine was offered by the Department of Agronomy and the Department of Veterinary Diagnostics and Production Animal Medicine. Risk assessment methodology is consistent across disciplines and has been used for years in other areas, such as engineering and economics. However, Iowa State is among the few to apply it to the biological sciences, particularly food and veterinary medicine.

Students discuss their risk assessment plans during class.

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On the cover
Agronomy Professor Rick Cruse is heading up a new ISU initiative focusing on agricultural systems. On the cover Cruse is shown in a field in China that illustrates the type of integrated agricultural system the initiative hopes to foster. Read more on page 10.

About The Iowa State Agronomist...
The Iowa State Agronomist is the annual Iowa State University Agronomy alumni newsletter. It showcases the teaching, research, and extension highlights from throughout the past year. Prepared by Melea Reicks Licht, communications specialist, and Ivonne Martinez-Sheperd, graduate assistant. Please send feedback to agron@iastate.edu. Visit the department on-line at www.agron.iastate.edu.
ISU CROPS TEAM PLACES SECOND AT NATIONAL COMPETITION

The Iowa State University crops team placed second overall April 15 at the North American Colleges and Teachers of Agriculture (NACTA) crops contest in Norfolk, Neb. The team of agronomy undergraduates placed first in the crop knowledge and lab portions of the contest, second in agriculture math, and third in plant and seed identification.

Paul Reicks of Lawler was second in the overall individual competition after placing second in agronomic knowledge and third in agriculture math. Jason Haegele of Davenport placed fourth overall, was first in lab and third in agronomic knowledge. Ryan Schnoes of Remsen placed ninth. Other team members were: Matthew Klein, Remsen; Jeff Chalstrom, Webb; Landon Ries, Ringstead; Wade Kent, Algona; and Jared Uhlman, Adair. Lance Gibson, associate professor of agronomy, coaches the team and it is supported by the Iowa Crop Improvement Association.

SOILS TEAM PLACES FOURTH AT REGIONALS

The 2005 Iowa State Agronomy Soils Judging Team placed fourth at the regional competition in September. Team members are Amber Anderson, senior in Agronomy and Plant Health and Protection from Cherokee; Nick Ihde, sophomore in Agricultural Business from Prairie du Chien, Wisc.; John Hammerly, sophomore in Agronomy from Newton; Jana Matthiesen, junior in Agricultural Studies from Bryant; Grant Nelson, sophomore in Agronomy from Greenfield; and Ann Rossi, senior in Agronomy from Red Hook, New York. Agronomy Professor Jon Sandor and graduate student Dan Nath coach the team.
AGRONOMY UNDERGRAD RECEIVED NATIONAL AWARDS

Jason Haegele, a senior majoring in Agronomy and Agricultural Engineering, was one of five college students nationwide to receive a National Alpha Zeta Scholarship. The scholarships were awarded to students based on scholastic achievement, leadership, character, community service, and financial need. Alpha Zeta is a professional organization of men and women whose educational and career objectives fall within the field of agriculture and natural resources. Haegele was also honored at the 2005 international annual meetings of the American Society of Agronomy (ASA), Crop Science Society of America (CSSA) and Soil Science Society of America (SSSA) Nov. 6-10 in Salt Lake City. He won the Hank Beachell Future Leader Scholarship.

GRAD STUDENT RECEIVED NATIONAL AWARD

The National Council of Commercial Plant Breeders selected Brandon Wardyn to receive the National Council of Commercial Plant Breeders Graduate Student Award for 2005. The $2,500 cash award was presented to Brandon at the American Seed Trade Association Corn & Sorghum and Soybean Conference held at Chicago in December. Brandon Wardyn, a graduate student in Plant Breeding and Genetics, works with Kendall Lamkey, Interim Agronomy Chair and Director of the Raymond F. Baker Center for Plant Breeding.

GRAD STUDENT RE-ELECTED PRESIDENT OF NATIONAL AG MINORITY ASSOCIATION

Aaron Jeffries, Agronomy graduate student, was re-elected national president for the graduate student chapter of Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS). The ISU chapter was also named the national Chapter of the Year at the MANRRS 20th annual Career Fair and Conference in Pittsburgh. Jeffries is from St. Louis, Mo. and is pursing a Ph.D. in Crop Production and Physiology under the direction of Jerry Hatfield.

GRAD STUDENT RECEIVED SARE GRANT

Valentin Picasso, an Agronomy graduate student and student in Sustainable Agriculture, received a grant from the USDA-CSREES Sustainable Agriculture Research and Education (SARE) program. Last year, 38 proposals were submitted and 15 were funded. Picasso’s major professor is Charles Brummer. He submitted “Illinois Bundleflower: A Perennial Multiple-purpose Third Crop for Iowa.”

GRAD STUDENT RECEIVED C.R. WEBER AWARD

Lucia Gutierrez, Agronomy Ph.D. student in Plant Breeding, received the 2005 C.R. Weber Award in recognition of excellence in graduate study in Plant Breeding. Lucia will be in Uruguay, where she will be doing field work for her research on genetic diversity in cultivated and wild barley species, a project involving international collaboration from plant breeders from over the world.

AGRONOMY GRAD STUDENTS HONORED BY ISU FOR EXCELLENCE IN RESEARCH, TEACHING

Three Agronomy graduate students were recognized by Iowa State University for their research or teaching excellence in the past year. James Correia Jr. received a Spring 2005 Teaching Excellence Award, Sue Duvick received a Fall 2005 Research Excellence Award, and Ramon Leon received a Summer 2005 Research Excellence Award. Each winner received a letter of commendation from ISU President Gregory Geoffrey, the award is noted on his or her university transcript, and they were recognized at graduation.
ISU OFFERED ENERGY AND GRAIN MANAGEMENT INFORMATION

To help farmers and other ag business professionals face energy challenges and make better decisions, Iowa State University (ISU) Extension formed a team of experts to address risk management, energy, and grain storage issues. The team consisted of ISU research and extension faculty and field specialists. The team is co-chaired by Paul Brown, assistant program director, ISU Extension Agriculture and Natural Resources, and John Lawrence, professor, Economics. “The Managing Risk and High Energy Costs Issues in Agriculture Team will deliver resources in two phases,” said Gerald Miller, program director, ISU Extension Agriculture and Natural Resources, and associate dean, ISU College of Agriculture. “First, new educational and decision aid materials are being created that will assist producers and agri-business professionals evaluate risk and energy management strategies. Excerpts of these materials formed the basis of radio segments to be broadcast during harvest. A Web site was created -- www.extension.iastate.edu/agenergy. This site is a starting point for producers looking for information that will help them manage the storage and fuel issues facing them right now.”

IOWA LEARNING FARM PROJECT ESTABLISHED

The Iowa Learning Farm project was established in 2005 by a group of organizations working to improve water and soil quality in Iowa by promoting better agricultural conservation systems with an emphasis on conservation tillage, cropping systems, and nutrient management. The project’s partners include the Conservation Districts of Iowa, Iowa Department of Agriculture and Land Stewardship, Iowa State University Extension, Iowa Department of Natural Resources, and the Natural Resources Conservation Service. During the first phase of the five-year project, conservation systems demonstrations and education projects were established on six to ten farms in each of the five geographic areas of the project across Iowa. In addition, an extensive education and outreach program includes field demonstrations, field days, field training, regional meetings, and a statewide conservation systems conference. The social and economic aspects of the soil conservation systems also will be examined in cooperation with Steve Padgitt, ISU Extension sociologist and Mike Duffy, ISU Extension agriculture economist. Phase two of the Iowa Learning Farm Project will focus on soil and water quality monitoring work. A Web site, www.extension.iastate.edu/ilf has been created to share information and research results from this project.
Agronomy Associate Professor Mary Wiedenhoeft is shown taking flipchart notes at the PFI discussion at Paul and Karen Mugge’s flax field day.

PRACTICAL FARMERS OF IOWA CELEBRATE 20 YEARS
The Practical Farmers of Iowa (PFI) Annual Conference and 20th Anniversary Celebration was held on Jan. 14 and 15 at the Airport Holiday Inn in Des Moines. There were dual keynote speakers featuring Stewart Smith, University of Maine agricultural economist; and Woody Tasch, CEO of the Investors’ Circle, a national network of investors and entrepreneurs seeking financial, social and environmental returns. The 20th anniversary program took place Jan. 14 followed by an all-Iowa buffet Jan. 15. PFI is a non-profit, educational organization that began in 1985 and now has over 700 members in Iowa and neighboring states. Its mission is to research, develop and promote profitable, ecologically sound, and community-enhancing approaches to agriculture.

IOWA CROP PERFORMANCE TESTS UPDATES
The Iowa Crop Performance Tests for corn and soybeans, the statewide program that evaluates the performance of crop varieties, made several important updates in 2005. The tests are conducted cooperatively by the Iowa Crop Improvement Association (ICIA) and Iowa State University’s Department of Agronomy. They provide farmers and Iowa seed producers with information on the performance of corn hybrids, soybean varieties, and other field crops.

Important program changes for 2005 included:
• Redrawing testing districts for both corn and soybeans, with the goal of achieving a better representation of the production areas of the state. Some testing locations will include both corn and soybeans tests.
• Better integration with ISU’s extension and research programs
• Improved presentation of individual location results
• Posting of test results on the Web as they become available
• Reformatted, more user-friendly printed reports
• Hiring of a new manager, Jim Rouse, to oversee the tests
See http://extension.agron.iastate.edu/varietytesting/ for details.

CORN NITROGEN RATE CALCULATOR IS ONLINE
Corn producers can calculate the potential economic return to nitrogen (N) application with different N and corn prices using a new regional Web-based tool located at the Iowa State University Extension Agronomy Web site. The Corn Nitrogen Rate Calculator, online at http://extension.agron.iastate.edu/soilfertility/nrate.aspx, follows a newly developed regional approach for determining corn N rate guidelines that is being implemented in several Corn Belt states. University soil fertility specialists from the Corn Belt states began discussions in 2004 regarding N rates for corn production, according to John Sawyer, ISU Extension soil fertility specialist. Results of those discussions included the development of a regional approach to N rate guidelines and a method for determining the most profitable fertilizer N rates for corn production in states across the Corn Belt. Using the online calculator, producers can calculate returns for one set of N fertilizer and corn grain prices or multiple prices for the state and rotation they are interested in. An advantage is that prices can be tailored to a producer’s specific N fertilizer purchase and corn grain marketing. With the current historically high N fertilizer prices, the Corn Nitrogen Rate Calculator tool can help crop advisers and producers adjust N rates to maintain maximum return from N application, Sawyer noted. While the high N prices result in increased input cost and reduce profit, this tool can provide guidance in determining rates that provide greatest return to applied N.
Research News

ISU RESEARCH SUGGESTES NEW CROP OPTION FOR IOWA PRODUCERS

An Iowa State University agronomist suggests Iowa crop producers consider adding triticale to their traditional rotation. “Triticale provides valuable soil conservation and nitrogen capture benefits in fall and spring,” said Lance Gibson, associate professor of Agronomy. “It captures from 50 to 150 pounds of nitrogen per acre that might otherwise be lost to the environment. It also provides protection from soil erosion during April, May, and June - a period when corn and soybean fields are the most vulnerable to erosion.” Gibson coordinated four years of research on triticale, by a multi-disciplinary team. The research included variety testing and development; planting and nitrogen fertility management; rotation options with corn, soybean, and forage legumes; swine feeding trials; and economic analysis. The research was funded by the ISU Agronomy Endowment and the Leopold Center for Sustainable Agriculture. Triticale is a cross between wheat and rye. In Iowa it is suitable as a feed crop, both as forage and grain. A new triticale variety developed specifically for Iowa by researchers at the University of Nebraska and Iowa State was released in 2004. He said seed for this new variety, NE426GT, was commercially available for planting in fall 2005.

IOWA STATE RESEARCHES FARMING THAT IMPROVES THE ENVIRONMENT

All those dried up stalks, husks, and cobs left in corn fields after every fall’s harvest could be a key to enhancing the environment, said Iowa State University researchers. They said partially burning some of the residue left in corn fields produces products that can be used to improve soil fertility, boost in-soil storage of greenhouse gases, and reduce the amount of natural gas used to produce anhydrous ammonia fertilizer.

Robert C. Brown, Iowa State’s Bergles Professor in Thermal Science, will lead a team of researchers studying the idea. The team includes Randy Killorn, an Agronomy professor, plus government researchers from the U.S. Department of Agriculture, the U.S. Department of Energy and industry researchers from Cargill Inc., Eprida and iPrismGlobal. The project will be supported by $1.85 million from the Biomass Research and Development Initiative, a joint project of the U.S. agriculture and energy departments.

The research team will focus on this process: Corn stover will be harvested from fields and partially burned to create charcoal and a bio-oil about as thick as motor oil. The bio-oil will be reacted with steam to produce hydrogen. That hydrogen will replace the natural gas typically burned to make anhydrous ammonia fertilizer. The fertilizer and charcoal will be incorporated into the soil.

Brown said there should be three significant results: Farmers producing their own renewable energy to manufacture fertilizer for their fields. Farming that improves soils because the added charcoal supports soil organisms. And the charcoal sequestering carbon in the soil, thus reducing the amount of greenhouse gases in the atmosphere.

Killorn, who will study soil fertility as part of the research project, said putting corn stover to work for the environment shows a lot of potential. “It looks pretty slick, taking these corn stalks and turning them into bio-oil and charcoal,” he said. “If everything works the way we think it will, this looks like a good deal.”
Iowa State University is one of four institutions on the team selected for a $29.5 million, three-year project to sequence the maize or corn genome, the most complex genome to be sequenced to date.

Iowa State scientists will play a major role in the project -- assembling the DNA sequence data. Patrick Schnable, professor of Agronomy and director of the Center for Plant Genomics, and Srinivas Aluru, professor of Computer and Electrical Engineering, will lead Iowa State’s effort. The sequence data will be generated at the Genome Sequencing Center at Washington University School of Medicine, St. Louis. Other institutions on the team are the University of Arizona, Tucson, and Cold Spring Harbor Laboratory, New York.

Sequencing a genome reveals an organism’s genetic blueprint and opens the door for researchers to discover the role each gene plays in the life of the organism. Completion of the corn genome will allow scientists to more efficiently develop corn varieties for specific conditions and uses. The corn variety selected for sequencing is B73. Developed at Iowa State, the cultivar remains the basis for many of the world’s commercial lines of corn, and is used widely in corn genetics research.

The project is funded by the National Science Foundation (NSF), the U.S. Department of Agriculture, and the Department of Energy. “Being part of this significant federal project is national recognition that Iowa State is a major force in maize genomics. The investments the state, the university and industry have made in the Plant Sciences Institute are being acknowledged at the national level,” Schnable said. “Using the very detailed map of all corn genes that will be produced by this project, we can begin to truly understand how the genome controls corn growth and development,” Schnable said.

This will allow scientists to more effectively develop corn with traits like enhanced nutrient composition for better food and feed, higher energy content for renewable fuel production, or improved characteristics for use in industrial raw materials. This will create new uses for corn and benefit both farmers and consumers.

“Without a doubt, the corn genome is the most difficult genome yet to be sequenced. It will be much harder than the human genome,” Schnable said. “The research community has been preparing for this project for years. It represents a real technological hurdle, but one we are now well prepared to tackle.”

NSF also has awarded Iowa State a separate $600,000 grant for equipment, with an additional $300,000 match from ISU’s Laurence H. Baker Center for Bioinformatics and Biological Statistics, to purchase a supercomputer to use in the corn genome sequencing project and other projects in plant genomics and systems biology. The new computer will likely rank among the world’s top 100 for speed and performance.
Under the Agronomy Department’s leadership a new research program in the College of Agriculture at Iowa State is working to discover the best strategies for designing economically productive and environmentally sound agricultural systems.

The Agricultural Systems Initiative is a coordinated research program studying how to integrate management components into comprehensive, mutually beneficial agricultural systems. The program brings together the efforts of university scientists, industry professionals, government officials, and farmers in order to maximize profitability and environmental quality of ag systems.

“Iowa crops will likely remain dominated by corn and soybeans,” said the Initiative’s Coordinator Agronomy Professor Rick Cruse. “However, opportunities to do better across all landscape positions must be considered and systems that will perform better must be developed.”

Two current research projects of the Initiative study watersheds to determine how their characteristics and design impact water quality. A third project researches the possibilities of growing alternative crops in Iowa.

In another project John Downing, professor of Ecology, Evolution, and Organismal Biology, seeks to identify the characteristics of watershed design that greatly impact surface water quality.

The other research project currently underway within the Initiative uses agroecology mapping to identify areas of Iowa that may be well-suited for growing alternative crops. Agronomy Professors Matt Liebman and Ray Arritt are working with Jeremy Singer and David James of the USDA-ARS-National Soil Tilth Laboratory on the project. Its goal is to identify important plant species and genotypes that could be used as crops or “ecological goods and services providers” in Iowa and other portions of the Midwest.

“Iowa crops will likely remain dominated by corn and soybeans... however, opportunities to do better across all landscape positions must be considered and systems that will perform better must be developed,” Cruse says.
Cruse said there are numerous opportunities for farmers to integrate ecological goods and services into their agricultural systems. There are also some barriers to implementing these opportunities that must be addressed.

“I recently talked with a local farmer that wanted to grow wildflower seed in buffer areas as a way to provide an ecological good,” Cruse said. “In addition to growing and selling the seed, the same area could be enrolled in a government green program and provide another financial return through lease hunting.”

As part of its effort to identify alternative plants for use in Iowa agricultural systems the project evaluates the influence of soil and climate factors on the productivity of plants and tests various temporal and spatial arrangements, such as varying field layouts and the timing of planting and harvest.

In addition to coordinating and funding research, the Initiative hosts symposiums and participates in national meetings with government agencies. It works closely with the University’s Office of Bio-renewable Programs and also coordinates with the National Council for Science and Environment, the Environmental Protection Agency, the Iowa Department of Agriculture and Land Stewardship, and the Iowa Department of Natural Resources.

“Our recent session at the National Conference for Science, and the Environment (NCSE) discussed best approaches for reducing dependence on foreign oil and providing a significant, sustainable component of our country’s energy portfolio,” said Cruse. “We were charged with developing research and funding recommendations addressing system components within the bioeconomy that will be distributed by NCSE to a wide audience, including the US congress.”

The idea of such an initiative began in 2001 with leadership from the Agronomy Department when the College of Agriculture administrators held discussions with other Iowa State University scientists and administrators about current research involving agricultural system integration. It took on its current structure in 2004 under the title Agricultural Systems Initiative - Management and Performance when Cruse began his term as coordinator. It is one of five initiatives within the College of Agriculture that coordinate the efforts of Iowa State scientists to address selected problems.

The Agronomy Department was presented with an anonymous endowment in September 1999. The endowment was not meant to replace existing funding, but to be used in innovative ways that would help the Department become the best — that is the major focus of the endowment plan, “The Path to the Future.”

The areas of the endowment plan are global agricultural science and policy, excellence in agronomic education and extension, integrated approaches to plant improvement and integrated studies of agroecosystems. In addition the endowment funds student scholarships, graduate fellowships, equipment purchases, faculty and staff development, infrastructure, and communications.

Initial research in the area of agricultural system integration was funded by the Path to the Future Agronomy Endowment. One such project reports the amount of soil erosion in each Iowa township. It provides useful data for researchers to use in further studies, such as those coordinated by the Agricultural Systems Initiative.
ISU AGRONOMY FACULTY RECOGNIZED BY AGRONOMIC SOCIETIES
The Agronomy department received numerous awards at the 2005 international annual meetings of the American Society of Agronomy (ASA), Crop Science Society of America (CSSA), and Soil Science Society of America (SSSA) Nov. 6-10 in Salt Lake City. Agronomy faculty honored by the societies included Alfred Blackmer, professor, who received the W.L. Nelson Award for Diagnosis of Yield-Limiting Factors; Antonio Mallarino, professor, who was named a fellow of ASA; Russ Mullen, professor, who received the Crop Science Teaching Award; and Mary Wiedenhoeft, associate professor, who was honored with the Agronomic Resident Education Award.

PROF NAMED FELLOW OF WEED SOCIETY
Mike Owen, an Iowa State University Agronomy professor, received the honor of Fellow of the Weed Science Society of America (WSSA). Owen is an ISU Extension weed specialist. He earned his bachelor’s and master’s degrees at Iowa State and his doctorate degree at the University of Illinois. His research and extension efforts focus on weed management systems that emphasize a combination of alternative and conventional strategies. His projects on weed biology, ecology, and herbicides are designed to provide useful information to agricultural clientele for use in managing weeds with cost efficiency and environmental sensitivity. Owen also is a Fellow of the North Central Weed Science Society. The WSSA selects fellows based on meritorious service to the society. Only 0.3 percent of the organization’s membership is elected a Fellow each year. Owen’s award was presented on Feb. 7 at the annual meeting of the WSSA in Honolulu, Hawaii.

AGRONOMY FACULTY LEAD DEVELOPMENT OF INTERNATIONAL PLANT GENOME JOURNAL
Kendall Lamkey, professor and interim chair of the Agronomy Department, and Randy Shoemaker, Agronomy professor, have lead the development of a new international journal *The Plant Genome*. The journal is a quarterly publication of applied plant-genomics research of the Crop Science Society of America. The first issue is scheduled for May 2006. The Plant Genome will publish original research showing clear potential for translating genomic technology into agronomic advancement, invited review articles, and commentaries. For details visit www.crops.org.

AGRONOMY PROF NAMED FELLOW OF IOWA ACADEMY OF SCIENCE
Lee Burch, Agronomy associate professor, was made a Fellow of the Iowa Academy of Science at the organization’s annual meeting April 29. The mission of the Iowa Academy of Science is to further scientific research, science education, public understanding of science and recognition of excellence in these endeavors.

AGRONOMY COLLABORATOR PALMER RECEIVED NATIONAL AWARD
Reid Palmer, USDA/ARS research geneticist and Agronomy collaborator, received the National Council of Commercial Plant Breeders Award for his outstanding basic contributions to the advancement of plant breeding and genetics in the public sector. He was presented with the award on Dec. 9 at the annual meetings of the Corn and Sorghum and Soybean Research Conference.

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Faculty Profile
Kan Wang

Kan Wang is an associate professor of plant molecular biology in the Agronomy department and director of the Center for Plant Transformation. A pioneer in biopharmaceuticals, she engineered corn to produce a therapeutic protein to protect humans and animals from diarrhea caused by bacterial infections. Wang grew up in Shanghai during the Cultural Revolution. After the Cultural Revolution ended and universities were re-opened she entered a program in biology/biochemistry earning her B.S. from Fudan University, Shanghai, P.R. China, in 1982. She was sent to the University of Ghent in Belgium to a plant genetics program where she completed her Ph. D. in 1987. She came to Iowa to take a research position in 1989 with ICI Seeds (now Syngenta) in Slater, Iowa where she continued to work in crop genetic engineering. After six years, she joined the faculty at Iowa State. With support from a U.S. Department of Agriculture grant, ISU administrators and talented graduate students, she has successfully pursued the development of a vaccine in corn. The corn harvested will be used in animal feeding studies and for analysis of efficient means to extract and purify the therapeutic protein. Married for 22 years, Wang and her husband have two children. Her hobbies include knitting and making photo scrapbooks.

ISU DESIGNATED STORM-READY BY NATIONAL WEATHER SERVICE
The National Weather Service in Des Moines and the Central Iowa StormReady Advisory Board presented officials at Iowa State University with a certificate and signs declaring the University StormReady on Mar. 29. Iowa State University was one of only nine universities nationwide and the first in Iowa to achieve the National Oceanic and Atmospheric Administration National Weather Service StormReady certification. StormReady is a nationwide program implemented by the National Weather Service. It recognizes those ‘communities’ that have taken steps to bring weather awareness and safety to the forefront through various preparedness activities. Iowa State University has become one of the nationwide leaders in promoting these activities.

ISU EXTENSION HONORED BY NATIONAL COMMUNICATION ORGANIZATION
Brent Pringnitz, Agribusiness Education coordinator, Rachel Klein, Agronomy Extension program specialist, and Jean McGuire, Extension communication specialist received a Bronze Award from the Association for Communication Excellence for the promotion of the 2003 Crop Advantage Series. It was presented at the association’s annual meeting in June.

SEVERE WEATHER ALTERS AGRON COURTYARD
The linden trees that formerly lined the Agronomy Courtyard fell victim to severe weather in 2005. As a result, the landscape of the courtyard has been dramatically altered. The sculpture, Janus Agri Altar, fortunately was not damaged. See photo below.

New Faculty and Staff

NEW STAFF
Jim Rouse, Ext. Program Manager II
Haiyan Li, Accountant I
Chad Arnold, Ag Specialist III
Terry Olson, Research Assoc I
Lisa Coffey, Research Assoc I
Helene Eckert, Research Assoc II
Cheng-Ting Yeh, Sys Sup Spec III
Anthony Mahama, Research Assoc II
Sarah Dirks, Crops Research Assoc I
Sarah Hargreaves, Research Assoc I
Ruilian Zhou, Research Assoc I

Lori Abendroth, Ext. Ag Specialist II
Janice Seibel, Soils Research Assoc I
Ronda Driskill, Ext. Program Spec II
Jeannie Lund, Research Assoc I

NEW FACULTY
Roger Elmore, Professor
Carolyn Lawrence, Assistant Professor (Collaborator)
Gina McAndrews, Lecturer
Faculty and Staff News

AGRON PROFS HONORED BY AG COLLEGE AT 2005 CONVOCATION

Three ISU Agronomy professors were honored by the College of Agriculture at the College's Spring 2005 Convocation on Jan. 12. Tom Loynachan, Agronomy professor, was presented with the Outstanding Achievement in Teaching Award. Pat Schnable, Agronomy professor and center director, was among the Acetyl-CoA team honored with the College of Agriculture Team Award. The 2005 Raymond and Mary Baker Agronomic Excellence Award was presented to Agronomy assistant professor and USDA-ARS collaborator Paul Scott.

SCHNABLE APPOINTED PLANT SCIENCES ASSOC. DIRECTOR

Patrick Schnable was appointed associate director of the Plant Sciences Institute. Schnable is professor in the departments of Agronomy and the department of Genetics, Development and Cell Biology. He also is director of the Center for Plant Genomics, one of nine centers in the institute.

AGRONOMY FACULTY, STUDENT HONORED BY PHI BETA DELTA

The Iowa State University chapter of Phi Beta Delta initiated Andrew Manu, Agronomy associate professor, and Krisztina Eleki, Agronomy graduate student, on March 1. Karen Ross and Craig Tordsen, former Agronomy staff members, were also inducted. Phi Beta Delta is an honor society for international scholars.

NEW AGRON ENDOWED PROFESSORSHIPS

The Agronomy Department will be filling two new endowed faculty positions funded by the ISU Agronomy Endowment. The professorships in Agronomy are the George Sprague Professorship and the Kenneth Frey Professorship. Both appointments are expected in the spring of 2006. Steve Fales, former chair of the department, said the Sprague Professorship will allow the department to build on its strengths in plant breeding and genetics by attracting an established scientist to apply genomic data and related technological resources to the development of sustainable cropping systems. Fales said that the Frey Professorship will help the department attract an established scholar to expand the breeding program by developing new traits in crops for the emerging bioeconomy.

In Memoriam

Dean Martens - 11/15/05. Before being transferred to Tucson where he most recently worked as a Soil Scientist with the USDA Agricultural Research Service Martens was employed at the National Soil Tilth Laboratory, in Ames as a Soil Scientist.

A. Duncan Scott - 11/12/05. Duncan was a professor in the Agronomy Department at Iowa State University from 1950 through 1990.
ISU AGRONOMY AWARDS PRESENTED MAY 13
Rita Brueland, clerk for the Baker Lab, John Lundvall, Extension program specialist, and Diane Luth, assistant scientist, were presented with Agronomy Excellence Awards at the department’s annual meeting and awards ceremony May 13.

AGRonomy FACULTy, STAFF HONORED FOR SERVICE AT ISU
Agronomy Professors Rick Cruse and Elwynn Taylor, and Agronomy Office Coordinator Robbie Kerkove were inducted into the Iowa State University 25-year Club on Feb. 17 for their service to Iowa State.

ISU’S A-MAIZE-ING AGRONOMISTS RAISE OVER $2000 FOR ALS WALK
The Iowa State University Agronomy team, the “A-maize-ing Agronomists,” raised over $2,000 in honor of Agronomy Assistant Professor Debra Muenchrath for the ALS Association at the Iowa Chapter’s walk, “The Walk to D’feet ALS,” on May 21 in Des Moines. Many in the department supported the effort, especially team captains Rita Brueland and Maria Hartt. The ISU A-maize-ing Agronomists ranked eighth highest in raising funds for the Iowa ALS Walk. The team raised a total of $2,616. Approximately 700 registered walkers representing 53 teams participated in the walk and raised over $85,000 in support of local patient services and nationally directed ALS research.
ALUMNI HONORED AT INTERNATIONAL MEETING

Several Department of Agronomy alumni were honored at the annual meeting of the American Society of Agronomy (ASA), Crop Science Society of America (CSSA) and Soil Science Society of America (SSSA) in November. Alumni who came away with honors included: Jerry Hatfield (PhD, agronomy, 1975), National Soil Tilth Lab director, who was elected president of the ASA; Vivan Jennings (BS, farm operation, 1959; MS, agronomy, 1966; PhD, agronomy, 1974), CEO of Asoya LLC, was presented ASA’s Monsanto Professional Certification Service Award; Darrell Nelson (PhD, agronomy, 1967), recently retired dean for Agricultural Research and Director of the agricultural experiment station at the University of Nebraska, was presented the Agronomic Service Award; Bill Wiebold (BS, agronomy, 1971; MS agronomy, 1975), plant sciences professor at the University of Missouri, was presented the Agronomic Extension Education Award; Norman Hopper (PhD, agronomy, 1970), plant and soil science professor at Texas Tech University, was presented the CSSA’s Seed Science Award; Raymond Allmaras (PhD, agronomy, 1960), professor emeritus in the soil, water and climate department at the University of Minnesota, was presented the Soil Science Professional Service Award.

AGRonomy AlsUMS REMINISCE AT 2005 ALUMNI DAYS

Six Agronomy alumni were among the 60 alumni and spouses who attended the College of Ag Alumni Days reception for graduates in May. Agronomy alumni Ken Larson, Roger Mitchell, Gene Vincent, Dean Swedlund, Ted Axland, and Donald Olson were in attendance. Retired Associate Dean Eric Hoiberg hosted the morning’s activities with the theme, “Then & Now: 50 Years of Change & Growth.” Department chairs shared highlights and discussed how their departments had evolved over the past 50 years. Alumni shared details of their lives from the last five decades. Photos from the event are on the Web at: http://www.agron.iastate.edu/news/photogalleries/AlumniDays05/.
FOURTH ANNUAL AGRONOMY TAILGATE SEPTEMBER 10
The Agronomy Department hosted its fourth annual agronomy tailgate on September 10 before the ISU vs. Iowa football game at Jack Trice Stadium. The tailgate was held in Cyclone Tent Row north the stadium. Door prizes were awarded and a catered meal was provided prior to the game. More than 130 Agronomy alumni, faculty, staff, students, and family members attended. Keep posted for the fifth annual tailgate to be held Oct. 7, 2006 prior to the Nebraska/ISU football game.

Agronomy alumni, faculty, staff, students and their families enjoy a catered meal at the 2005 Agronomy Tailgate. The 2006 tailgate is set for Oct. 7.

Class Notes

30s
John Airy, Peoria, Ariz., B.S. Agronomy 1938. Airy reports he is now 90 years old and doing well. He worked at Pioneer for 30 years then did professional consulting and farming. He shared many fond memories from his experience at ISU.

40s

40s

50s

60s
David Ouren, Reno, Nev., B.S. Agronomy 1965. Ouren retired after 30 years with a major oil company and two years with an Internet startup. He said he never worked in agronomy, but received very positive reactions when sharing his alma mater with golf course management.

Manuel Paulet Surco, Lima, Peru, M.S. Soil Management and Conservation 1966. Surco recently finished the evaluation of the River San Juan environmental project for the United Nations Environmental Program. In 2002, after 26 years of service, he retired from the Interamerican Institute for Cooperation on Agriculture having lived in the Dominican Republic, Brazil, and Costa Rica.
60s
Darrell Boege, Champaign, Ill., B.S. Agronomy 1968. He is working as a financial consultant with A.G. Edwards and Sons.

Lind Luis Ledesma, Argentina, M.S. Soils 1969. Luis retired in 2000. He is now 75 years old.


70s
John Widdowson, Nelson, N.Z., Ph.D. Soil Fertility 1970. Widdowson retired in 1993 after 40 years in soil fertility research with NZ DSIR. In retirement he manages aid projects in Fiji and runs a small farm fattening cattle and lambs in Wairarapa, NZ.


James Behrens, Humbolt, Iowa, B.S. Agronomy 1976, M.S. Agronomy 1999. Behrens is currently the assistant soybean breeder for Soygenetics LLC in Fort Dodge, Iowa.


80s
James Gumpert, West Lorne, ON, Canada, B.S. Agronomy 1981. He was promoted in the fall 2004 to President and Regional Sales Director at Pioneer Sales and Marketing, Pioneer Hi-Bred Limited.

Greg Wandrey, Ankeny, Iowa, B.S. Agronomy 1982, M.S. 1984. He is the director of product stewardship at Pioneer in Johnston, Iowa. Wandrey is married to Evelyn and have two children (Haley, 11, and Claire, 9).

Jim McDermott, Spencer, Iowa, B.S. Agronomy/Seed Science 1987. McDermott is currently a technology development manager with Monsanto. He has four children with a fifth coming soon to round out the McDermott basketball team.

90s

Stacey (Kunde) Noe, Huxley, Iowa, B.S. Agronomy 2000. Kunde married Dan Noe in the fall of 2000. She is currently the Executive Director of the Iowa State Dairy Association. She has a three year old daughter and gave birth to twin girls in December 2004.

Andrew Krogman, Doon, Iowa, B.S. Agronomy 2003. Krogman married Rhonda Young (AgBus/PSA 2004) and began a FSM position with NK brand seeds.

Hiew Wei-Heng, Malasya, B.S. Agronomy 1993. Wei-Heng is the Deputy General Manager-Marketing for SASCO in the Malaysia market. SASCO imports and distributes more than 700,000 mt fertilizer.

Anthony Sillman, Iowa Falls, Iowa, B.S. Agronomy 1995. Sillman and his wife reported they expected their first child in June. He is the Agronomy Department Manager for Farmers Cooperative Company in Dows.
GRAD STUDENTS RECEIVE DISTANCE EDUCATION SCHOLARSHIPS
Seven Iowa State University graduate students were awarded Virgil K. Webster Scholarships to pursue master's degrees using distance education. The award is presented annually to selected students interested in agronomy who demonstrate extension experience, desire to work as extension specialists or plan to pursue degrees using distance education. The following recipients of the 2005 Virgil K. Webster Scholarships are involved in the Masters of Science in Agronomy distance education program: Angela Begosh, Mediapolis; Diane De Jong, Carlsbad, Calif.; Douglas Doty, Sidney; Rhett Kerby, Lubbock, Texas; Carol Martin, Red Deer, Alberta, Canada; and Ken O'Brien, Carroll. Clarke McGrath from Lewis is a scholarship recipient in the Professional Agriculture distance education program.

GRAD STUDENTS RECEIVE SCHULER FELLOWSHIP
The Josef F. Schuler Graduate Fellowship in Agronomy was awarded to two ISU Agronomy plant breeding graduate students - Matthew Sorge and Marcus Marine. Both students are working with Agronomy Professor Mike Lee. The fellowship is open to all students in the department who are pursuing an M.S. or Ph.D. with an emphasis in crop breeding. Preference is given to students who are graduates of an Iowa high school or undergraduate institution and demonstrate financial need. Students must also have a GPA of 3.5 or greater based on a minimum of 15 credit hours.

ICIA AWARDS SCHOLARSHIPS TO UNDERGRADS
The Iowa Crop Improvement Association presented scholarships to four Agronomy undergraduates at the annual banquet. Scholarship recipients were freshman Matthew Dop, from Monroe; sophomore Landon Ries, from Armstrong; junior Kellie Tholen, from Tipton; and senior Todd Cogdill, from Dunlap. The Iowa Seed Association Scholarship also presented a scholarship to Jeff DeWall senior in Agronomy of Pocahontas.

2005 UNDERGRADUATE SCHOLARSHIPS TOTAL MORE THAN $83,000
In 2005 61 privately funded scholarships were awarded to Agronomy undergraduate students. In total more than $83,000 was awarded to students. Several donors attended the Agronomy Club banquet on Feb. 19 to present the scholarships. In addition, Agronomy Academic Fellowships funded by the Path to the Future Endowment (see page 11) were awarded to high achieving students.

MEMORY GARDEN DONATIONS
The Agronomy Department is collecting donations to establish a Memory Garden in the courtyard. Donations can be given to Robbie Kerkove, Agronomy Hall Room 1301, phone 515-294-5076. Checks should be made out to the ISU Foundation (note: Memory Garden). If enough funding is raised, a plaque entitled “In memory of deceased ISU Agronomy Department employees whose contributions to the department will not be forgotten” will also be created. Robbie Kerkove and Nancy Surprenant, RLA (Iowa State Landscape Architect) are coordinating the Memory Garden. If you have any questions, please contact Nancy (nsurpren@iastate.edu) or Robbie (rkerkove@iastate.edu). Donors will not be recognized publicly. Work on the garden is expected to begin in Spring 2006.
Peter Peterson, Agronomy professor, marks his 50th year with the department in 2006. He joined the department in 1956 as an assistant professor of genetics. During his half century of work with Iowa State University he has been actively involved in graduate teaching, advising, and conducting research in the genetics and cytogenetics of corn. He has been nationally and internationally recognized for his work with transposable elements.