

International Programs in Agriculture



IPIA

Annual Highlights
2005-2006

Message from the Director – *International Essentials*

In Purdue's College of Agriculture, participating in international activities is one of the essentials. All Purdue Agriculture full professors have an international dimension to their work, and it is required for promotion. Insights from overseas experience, international examples, and homework exercises using data from other countries provide experiences for every student. In addition, Purdue Extension programs are permeated by the understanding that we live in a global economy. This is in contrast to some other universities who treat international activities as an "add-on," nice but not crucial.

The *Annual Highlights 2005-2006* summarizes the efforts of International Programs in Agriculture (IPIA) over the last year. Highlights from previous years are available on our Web site (www.agriculture.purdue.edu/ipia). If you have any questions about international activities in agriculture, please contact us or the academic department that initiated the activity.

Jess Lowenberg-DeBoer, Interim Director

News from IPIA

Change is one of the few constants at IPIA. It seems that someone is always going somewhere, usually for a few weeks or months, but occasionally the change is permanent. Long-term changes this year include the following:

New Staff. Lee Stanish is a new International Youth & Extension specialist. He joined the IPIA staff from previous positions with Farm Credit Services in Fort Wayne and his family business in Uniontown, PA. Stanish is a 2003 Purdue Ag Economics graduate; and during his student years, he participated in study abroad programs in Poland and Russia.

Goodbyes. David J. Sammons, Associate Dean and Director of IPIA during the period 1993 to 2004, left Purdue in summer 2006 to take a new assignment as Director of International Agricultural Programs in the Institute of Food and Agricultural Sciences at the University of Florida. During his tenure as Director of IPIA, Sammons provided leadership for expanding agricultural study abroad programs dramatically, increasing Purdue's roles in the USAID-funded Collaborative Research Support Program (CRSP) and other global research activities, and building a unique International Extension Program.



Kelli Selby, International Extension Program Coordinator, left Purdue in May for Plymouth, Wisconsin. Selby had worked in IPIA since 2003, building the International Extension Program from the ground up. The Latino Learning Centers and the Costa Rica Agribusiness Program show her handiwork. She found short-term overseas opportunities for Extension educators with ACDI/VOCA (formerly known as the International Cooperative Development Association, and the Volunteer Development Corps), Winrock International, and Citizen Network for Foreign Affairs.

Continuing. Jess Lowenberg-DeBoer continues as interim Associate Dean and Director of IPIA. He will soon complete two years as interim. An international search is in progress to identify the new permanent Associate Dean and Director. University based international programs are changing rapidly.

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Woods Thomas Award. Named in honor of former IPIA Director, D. Woods Thomas, this annual award goes to a graduate student who is pursuing scholarly activities in a developing country. This year, funding was sufficient to grant two awards.

Jonah Duckles, pursuing a Ph.D. in Forestry and Natural Resources (FNR), and **Jessica Perdew**, a Master's student in Agricultural Economics (AGEC) were co-recipients. Duckles' research focus is land management and hydrology research in Moldova. This award will assist with his travel expenses to collect data, study land use, and work with scientists at the National Academy of Moldova. Perdew is doing research on farmer adoption behavior and constraints in cocoa farming in Southeast Asia (Indonesia and Vietnam). The award will supplement a small grant from Mars Inc. for travel to the region to ground truth previously collected data from Indonesia, and to expand research to include Vietnamese cocoa development.

Egypt. During year three of the four year project titled *Institutional Linkage Cooperative Agreement for Egypt Agricultural Exports*

and *Rural Incomes (AERI)* Purdue faculty were involved in capacity building and course development workshops. Four teaching faculty from Purdue's Departments of Horticulture and Landscape Architecture (HLA) and Agricultural Economics (AGEC) taught workshops on *Tree Fruit Production*, *Farm Management*, *Introduction to Agribusiness* and *Small Business Management*. Each workshop had 25-30 participants, made up of faculty and teaching assistants from Faculties of Agriculture at Cairo, Fayoum, Minia, Assiut, and South Valley Universities. The week-long workshops included teaching methodology and technique as well as course content and example materials.

Purdue faculty also provided several two-day workshops on their topic for Extension workers, farm leaders, and service providers in the Minia and Qena governorate. These workshops were a part of the Public-Private Linkages working to better equip personnel to work with the agriculture industry. Each workshop had between 35-45 attendees.

CRSP Highlights

Collaborative Research Support Programs (CRSPs) are funded by the United States Agency for International Development (USAID) to link agricultural research, outreach, and education in the United States and developing countries. CRSPs are structured to provide benefits to developing countries as well as to the United States.

BEAN/COWPEA CRSP

Marketing Beans and Cowpeas in Africa. Joan Fulton and Jess Lowenberg-DeBoer, Department of Agricultural Economics, and collaborators in Senegal, Nigeria, and Niger continued data collection on price and quality characteristics of cowpeas and usage of cowpeas in West Africa. Results confirmed that consumers prefer cowpeas that are larger in size, have higher sugar content, and require a shorter cooking time. Related studies in Tanzania, Malawi, and Mozambique revealed that larger size grain is also preferred by consumers of common beans.

Women in Development: Joan Fulton and collaborators from Niger and Senegal studied urban women entrepreneurs selling street food made from cowpeas. They discovered that women in the main cities in Niger regularly sold a labor-intensive deep fried fritter made from cowpea batter (called *Kosai* or *Akara*) while women entrepreneurs in Senegal had substituted *Akara* with less labor-intensive products. The differences appear to relate to the opportunity cost of time for women in the different locales. Surveys show that this entrepreneurial activity is important for economic development because women spend the money they earn from street vending for food and clothing for their families, school expenditures, and savings.

Cowpea Biotechnology in West Africa: Barry Pittendrigh and Larry Murdock, Department of Entomology (ENTM), continue research with their West African CRSP collaborators in Burkina Faso, Niger, and Nigeria on *Maruca vitrata*. *Maruca* dramatically

reduces the yield of cowpeas, an important source of protein for some of the poorest farmers and consumers in West Africa. Transgenic cowpeas expressing the insecticidal *Bt* gene are currently being developed in Australia by researchers at the Commonwealth Scientific and Industrial Research Organizations (CSIRO). Pittendrigh, Murdock, and their colleagues are developing ways to prevent *Maruca* populations from becoming resistant to these transgenic cowpeas.

In July 2005, Murdock, Pittendrigh, and Monsanto entomologist, Joe Huesing, met with Bean/Cowpea CRSP Principal Investigators (PIs) in Burkina Faso to plan research focused on managing resistance to *Bt* cowpea in West Africa. They subsequently participated in a meeting convened by the African Agriculture Technology Foundation (AATF) and Network for the Genetic Improvement of Cowpea for Africa (NGICA - <http://www.entm.purdue.edu/ngica/>) to review work on the genetic transformation of cowpea with the *Bt*-insect resistance gene and develop a strategy for future research.

PEANUT CRSP

Peanuts and Human Health: The Purdue component of the Peanut CRSP works with the Food Research Institute in Ghana and the Federal University of Vicosa in Brazil on nutritional and health aspects of peanut consumption.

INTEGRATED PEST MANAGEMENT (IPM) CRSP

Purdue Agriculture faculty completed activities under the first

phase of this CRSP in 2005 and continued their research efforts under the new phase of this CRSP in Central America and West Africa in 2006. The Purdue-based programs focus on vegetable crops in the new IPM CRSP project, which has been reorganized under regional and theme topics.

Central America: Stephen Weller, Department of Horticulture and Landscape Architecture, and collaborators in Guatemala and Honduras continued their IPM CRSP work of developing non-traditional agriculture export (NTAE) production strategies and production protocols that manage pests while reducing the use of chemicals. They developed a pre-inspection manual for snow and sweet peas for production directors and technicians of numerous agro-export companies. They presented training modules on fertilization, monitoring, and control of pests, proper timing of pesticide use, conservation of soil, and management of records to 15 groups involving over 1000 participants. A significant achievement of these sessions was that a number of the groups received certification from the European Community.

Weller is also involved in the new IPM CRSP project: *IPM for Fragile Ecosystems: Perennials in Latin America and the Caribbean*. The overall project has activities in Honduras, Ecuador, and Puerto Rico. Purdue scientists are focused primarily on working with the Honduran Agricultural Research Foundation (FHIA) and Zamorano College. In the first year of this project, collaborative research was initiated to develop baseline information on pest problems in several important crops including mites in Chinese eggplant and strawberries; purple nutsedge in cowpea; production of pest free transplants of solanaceae, curcubitaceae, and brassicaceae crops; thrips in onion; and use of solarization techniques for soil borne pests.

West Africa: Ricky Foster, Department of Entomology, continued his eighth year of participation in the IPM CRSP project in Mali and expanded activities to West Africa. He is a collaborator in the new IPM CRSP West African Regional Consortium of IPM Excellence. The primary focus of his work the past year has been the management of the whitefly vectored virus complex that has devastated the tomato industry in West Africa. Cooperators in each country are conducting variety trials, using tomato germplasm from the University of California, Heinz, various American and European seed producers, and AVRDC: The World Vegetable Center. In addition to IPM CRSP funds, West Africa research is also supported by USAID Agricultural Biotechnology Support Program II (ABSPII).

AQUACULTURE CRSP

Purdue University participates in the Aquaculture CRSP under the leadership of Kwamena Quagraine, Department of Agricultural Economics. Under his leadership, the program in Tanzania is training some 25 fish farmers from the participating villages of the Morogoro Region during summer/early fall 2006. The training is important for developing model fish farmers who will participate in future research activities and extend the knowledge to other fish farmers in the region. The five-day training workshop will be conducted in collaboration with the Mkindo Farmers Training Center. The major topics they covered are pond construction, pond management, fish health, fish nutrition, economics of production, and marketing. Training instructors come from Sokoine University of Agriculture, Kingorwila National Fish Center, and Moi University in Kenya.

INTSORMIL

Purdue's International Millet and Sorghum (INTSORMIL) CRSP has breeding, food science and marketing research activities. Gebisa Ejeta, Department of Agronomy, is responsible for the breeding and genetics. John Sanders, (AGEC), focuses on marketing issues for both millet and sorghum in West Africa. Bruce Hamaker, Department of Food Science (FS), continued his work with collaborators in the West African Sahelian region on processing of sorghum and millet quality, competitive products for urban markets, and on improving sorghum grain nutritional quality. He conducted large-scale market studies in Niamey, Niger, on couscous and associated products produced at the government food technology laboratory cereal processing unit set up over five years ago. Newly developed pre-gelatinized flours were also consumer tested, showing high potential for marketability. A regional effort is underway to stimulate growth of local cereal processing enterprises. Nutritional studies showed the basis for the slow starch-digestion property of sorghum foods that are desirable for diabetics and pre-diabetics. A collaborative study with Purdue food scientist Mario Ferruzzi and breeder Gebisa Ejeta showed carotenoid (provitamin A) levels and potential for improvement in sorghum grain.

SANREM CRSP

Gerald Shively, Department of Agricultural Economics, currently serves as the chair of the Sustainable Agriculture and Natural Resource Management (SANREM) CRSP Technical Committee and coordinates SANREM systems-oriented research on policy and governance. He is Principal Investigator on several research projects on smallholder tree crops, among them coffee and cacao. He has research projects in Latin America, East Asia, and the Indian subcontinent.



Study Abroad

The mission of agriculture study abroad is to help prepare agriculture students for the global nature of agriculture by increasing opportunities for undergraduate participation in study abroad, overseas internships, and international studies. Student participants in these programs not only build their resumes but also acquire valuable cross cultural skills.

OVERVIEW OF WHAT'S NEW

In 2005-06 the College of Agriculture counted over 23 percent of its graduates among those who participated in an international academic experience. A total of 148 agriculture students participated in a study abroad course or program during the academic year 2005-06. This figure included 10 students who participated in spring break academic club programs. In the summer of 2006, Purdue Agriculture sent over 120 students to study abroad. Of the summer short-term course offerings at Purdue in 2006, 12 were offered through Purdue Agriculture.

Purdue Agriculture continues to expand its study abroad offerings. In the summer 2006, five undergraduates spent eight weeks in South Africa conducting research with Rebecca Krisher, Professor of Animal Sciences, on the Development of Assisted Reproductive Technologies for Antelope Conservation. A service learning project in Ecuador was led by Pamala Morris, Assistant Dean and Professor in Youth Development and Agricultural Education, Kim Wilson, HLA, and Klein Ileleji, Agricultural and Biological Engineering. The Ecuador project involved 13 students. Eleven Food Science graduate students studied in China for two weeks with major funding from PepsiCo.

Ten students participated in a course in Costa Rica earning graduate level credit in agricultural education.

New exchange agreements were signed with Hohenheim University, Stuttgart, Germany, and the China Agricultural University (CAU), Beijing, China. In addition to the student exchange agreement, a transfer student agreement was also completed with CAU, which facilitates transfer of students to Purdue to complete their degrees.

Thanks to the generosity of donors, four new grants and scholarships were announced for agriculture students who study abroad. The endowments include the College of Agriculture Study Abroad Scholarship, The Christina York Stanley Scholarship for Agriculture Study Abroad, and the Horizons Agriculture Study Abroad Scholarships, and the Curt and Julie Hasselbring Study Abroad Scholarship in Agriculture which will be funded on an annual basis.

An International Science and Education grant from the USDA has allowed Purdue faculty and advisors to visit partner institutions. This enabled academic leaders to promote longer-term study abroad to students more vigorously. This grant will also support development of better tools for evaluation of short-term international programs.

International Extension

The Purdue international Extension vision includes three points: 1) building professional competence among Extension personnel to engage more effectively with the rapidly changing demographic mix in Indiana through targeted trainings; 2) providing Extension support to efforts of the International Trade Division of the Indiana Department of Commerce and Indiana Department of Agriculture to assure Indiana agribusiness concerns would capture a fair share of the international marketplace, and; 3) seeking opportunities for Purdue Extension professionals to have significant professional experiences in an international context.

Costa Rica. Jerry Peters, Department of Youth Development and Agricultural Education, and Jerry Nelson, Extension Specialist, led a summer 2006 program to the Tropical Agricultural Research and Higher Education Center (CATIE). Participants from Indiana included Purdue faculty, educators, students, Indiana agribusinessmen, and USDA officials. The program is made possible via a USDA CSREES grant to promote cultural competence, global competitiveness, and market assessment.

Mexico and Latin America. Purdue Extension had great success in its collaborative effort to operate four Latino Community Learning Centers in Indiana. With an ever changing demographic mix, Extension has answered local needs in Latino education. As part of this continuing effort, Clinton County Extension educator Susan Tharp is working on the development of a Mexican immersion experience for community leaders and educators.

Poland Youth Exchange. In response to the 30 Polish visitors hosted by northeast Indiana 4-H in 2005, Indiana 4-H organized a reciprocal trip in early summer 2006. The exchange was coordinated by several northeast Indiana Extension educators. A mix of adult leaders, Extension educators, and nine 4-H youth participated in the two-week program.

Master Gardeners Visit England - Mike Dana and Rosie Lerner, both HLA, took 18 Master Gardeners to England in summer 2006 as part of a continuing education program.

Extension Educator International Assignments. During the past year, five Extension educators have participated in international Extension assignments. The programs were supported by Winrock, ACIDI/VOCA and Citizens Network for Foreign Affairs (CNFA). The assignments included the countries of El Salvador, Russia (2), Uganda, and Belarus.

News from Departments in the College of Agriculture

Purdue Agriculture integrates international efforts into the daily activities of faculty, staff, and students. IPIA often supports and facilitates those international activities, especially when they are interdisciplinary and would be difficult for any one department to manage. Even so, numerous core international activities occur in departments. The following summarizes some of the outstanding departmentally-based international activities currently underway. Please contact departments directly for details about their efforts.

Agricultural and Biological Engineering

Brazil & Argentina - Students from ABE and FS returned in early June from a three week study abroad program in Brazil and Argentina. They were visiting food and food ingredient companies and ethanol and sugar manufacturing facilities that use sugar cane as the raw material, and soybean crushing facilities. They also visited farms and universities in both countries. Professors Mark Morgan and Osvaldo Campanella developed this study abroad course, which is offered every two years.

Qatar - Rabi Mohtar was among six international scientists invited to organize and lead the 1st Conference for Expatriate Arab Scientists held in Doha, Qatar, April 24-26. The main objective of the conference was to bring together worldwide Arab scientists to participate in a forum on the future of science in the Arab world. Additional goals were to develop comprehensive plans of action taking into account the needs for the Arab scientists and the available resources in the region, and to set up a mechanism for immediate incubation of tangible projects that meet the development needs in the Arab region.

France - Vincent Duffy gave a presentation titled, "Motion Capture for Job Risk Classifications Incorporating Dynamic Aspects of Work," and served as co-chair for the session on Verification and Validation at the Society of Automotive Engineers Conference on Digital Human Modeling for Design and Engineering in Lyon, France, July 4-6, 2006.

China - Chang Lu visited Peking University, College of Chemistry in Beijing, China, in January, 2006 and gave a seminar titled "Microfluidics-based Processing and Analysis of Single Cells."

Mexico - Osvaldo Campanella was the keynote speaker of the Eduardo Mendez Lecture in the Food and Chemical Engineering Conference, organized by the University of Las Americas, Puebla, Mexico, in November, 2006. His presentation was titled "Mathematical Models: A Useful Tool for Food Processing Studies." His attendance to this meeting was funded by the Eduardo R. Mendez Memorial Fund and the Pan American Health and Education Foundation.

Tunisia - As part of his on-going USDA-Foreign Agricultural Service (FAS) funded project, Rabi Mohtar co-organized and co-conducted a workshop on dryland hydrology that included over 30 regional participants from government and academia in Tunisia. One Tunisian scientist came to Purdue for hydrologic modeling training.

Agricultural Economics

Afghanistan - Kevin McNamara continued his work with the Afghan Ministry of Higher Education on agricultural/veterinary science education under the USDA/USAID Capacity Building Project. Activities completed under the project in the first year included renovation of the agriculture and veterinary science buildings at Kabul University; establishment of linkages with two Indian universities; development of an English language program for students, a teaching symposium, several curriculum workshops, a faculty exchange program, and other developmental activities.

The Netherlands and Belgium - John Connor's expertise with antitrust regulations, price-fixing, cartels, and regulation of public utilities (energy and telecommunications) took him to The Netherlands and Belgium during the past year, where he led workshops for regulators, provided expert input to governments on antitrust guidelines, and made technical presentations on relevant themes of importance in this thematic arena.

Denmark - Philip Abbott spent a sabbatical leave at the University of Copenhagen, Denmark, working with the Development Economics Research Group in the Department of Economics this year. His research focused on trade policy reform and its impact on development. During that period, Abbott also worked on assignments in Cameroon, Morocco, Mozambique, and Vietnam. Specific activities focused on the cocoa supply chain and the impact of privatization on African cocoa sectors (Cameroon); spatial and temporal wheat price variability to inform ongoing policy debate (Morocco); cashew export taxes, export subsidies, and their impact both on in-country processing and farm income (Mozambique); and the impacts of past bilateral trade agreements with the European Union, Association of South East Asian Nations (ASEAN), and the United States and their implications for World Trade Organization (WTO) Accession (Vietnam).

Morocco - Wally Tyner and Phil Abbott were active in policy reform issues in Morocco this year. Abbott worked on analysis of the regional and temporal impacts on wheat prices under different assumptions about tariff reduction and reform of domestic flour subsidies. Tyner worked on a wide range of border protection and domestic marketing policy reform issues, including land reform, food safety in the meat processing industry, poultry marketing issues, market information systems, and grades and standards.

Vietnam - Jerry Shively's research focused on several aspects of natural resource management in low-income settings in the

Agricultural Economics continued

developing world. His research included work in Vietnam, where he collaborated with colleagues from Nong Lam University, the Philippines, and Indonesia.

Center for Global Trade Analysis - Thomas Hertel and Terrie Walmsley are the Executive Director and Director, respectively, of the Center for Global Trade Analysis (GTAP), the university-based home for GTAP. GTAP is a global network of researchers and policy makers whose goal is to conduct quantitative analysis of international policy issues and to improve the quality of global economy-wide trade analysis through education and the development of analytical data bases, economic models, and innovative methodologies. These efforts are supported by funds from 24 international and national organizations. This year the center produced version 6.2 of the GTAP Data Base covering 96 regions and 57 commodities. In collaboration with Migration Center at Sussex University, United Kingdom, Walmsley also produced a labor migration database that contains the data on foreign born migrants by origin and destination for 226 countries. As part of the center's goal to increase awareness of GTAP in developing countries, the center and the UN Economic Commission for Africa co-hosted a conference in Addis Abba, Ethiopia. The center also held a course at the Indira Gandhi Institute in Mumbai, India and provided training to the Ministry of Finance and the Central Bank in Paraguay.

West Africa - Will Masters continued his work on the development and dissemination of improved agricultural techniques in Africa. In 2006, he received a new grant from the International Food Policy Research Institute (IFPRI) to help develop new incentives for faster deployment of innovations, through "prize" payments proportional to the economic value of adopted techniques. This project is detailed at www.agecon.purdue.edu/prizes.

Jordan - Joan Fulton was part of a team that conducted a review of the National Center for Agricultural Research and Technology Transfer and the Ministry of Agriculture's Extension service in Jordan during the summer and fall of 2005. This review was conducted as a partnership between USAID and USDA/ARS with collaboration from three Land Grant Universities (Purdue University, University of Maryland, and University of California, Davis).

Center for Food and Agricultural Business (CFAB) - CFAB continued its international training activities with activities in China, Latin America, and the Caribbean. CFAB delivered a training program in Beijing, China, in conjunction with the Tippie Business School at the University of Iowa through a partnership with the Franklin Institute of Management, Inc. focused on a food and agricultural business MBA. The center also contributed to a training program for Executive Chefs in China, supporting a long-standing working relationship between CFAB and the Department of Hospitality and Tourism Management (HTM) at Purdue. The purpose of this project was to provide the Chinese chefs with professional educational experiences that improve their ability to

incorporate U.S./Western approaches to management and that would also improve their acceptance and utilization of U.S. food products in the hotel kitchens of China. In addition, a technical program for 15 Chinese Sinograin managers was organized in West Lafayette. Sinograin is the Chinese government grain marketing organization. That program involved in-class lecture presentations on fundamental topic areas of management, case study, interactive interviews with experienced U.S. managers of grain firms, and field experiences at the Post-Harvest Education and Research Center, local grain firms, research laboratories, test plots at the Purdue Agronomy Research Center, and a visit to the Chicago Board of Trade.

Agronomy

Argentina - Carlos Cangiano, a forage researcher from the Argentinean national research organization, INTA, spent summer 2005 in the department visiting with Jeff Volenec. A joint research program was developed focusing on the impact of environment on alfalfa dormancy, and how it interacts with harvest frequency. Yield, persistence, and forage quality will be determined and root physiology will be monitored in order to interpret plant responses to environmental conditions.

Australia and New Zealand - Robert Nielsen participated in national maize conferences in New Zealand and Australia during the past year. In New Zealand, he led two in-field educational sessions on maize crop canopy development and maize root development. During the Australian conference, he presented three talks; one was a keynote address on maize Extension in the United States. Sylvie Brouder gave the keynote address, New Directions in Potassium Research, at the Second Workshop on Potassium in Australian Agriculture. Her presentation summarized experiences in potassium research, focusing on soil testing, spatio-temporal variability in plant-available potassium, plant response, and potassium-related aspects of crop quality. Scott Jackson made a presentation at the 3rd International Conference on Legume Genetics and Genomics in 2006, in Brisbane.

Costa Rica - Scott Jackson co-taught a genetics course for CATIE in Costa Rica in 2005 with Jeff Stuart, ENTM.

Ghana - Gilbert Rochon presented at the World Summit on HIV/AIDS in Accra, Ghana, in 2005.

India - Devdutta Niyogi is part of the Indo-U.S. Forum on Science and Technology and participated in invited meetings at Boulder, Colorado, on regional climate modeling. Currently, efforts are underway to develop a memorandum of agreement with the Indian Institute of Technology, Delhi, on regional climate and weather forecasting studies for monsoon and agricultural applications. Niyogi also received an Asian Initiative Project grant from Purdue and has developed a project with the Indian Institute of Tropical Meteorology for water resources and climate. For more details regarding these projects, visit www.landsurface.org.

Kenya - Gilbert Rochon gave a paper at a conference of the African Association for Remote Sensing of Environment in Nairobi.

Philippines - Scott Jackson attended and presented a seminar at the International Rice Genetics meeting in Manila in 2005.

South Africa - Gilbert Rochon met with officials at the University of Stellenbosch to negotiate an arrangement for the Purdue Terrestrial Observatory to serve as a ground station for their soon to be launched hyperspectral satellite, in collaboration with the University of Leuven, Belgium.

Sudan - Gilbert Rochon made a presentation on the application of remote sensing for post-armed conflict reconstruction in Khartoum at the invitation of the Remote Sensing Authority of Sudan.

Thailand - Gilbert Rochon was appointed Adjunct Professor, School of Science, Natural Resources and Environmental Management at Mae Fah Luang University, Chiang Rai, Thailand.

As a Fulbright Senior Specialist in Environmental Science, Rochon completed a two week assignment in Thailand, which included lectures at Chulalongkorn University and Kasetsart University in Bangkok, and at Mae Fah Luang University in Chiang Rai. He also met with administrators and faculty from the University of Chiang Mai and the Asian Institute of Technology.

Turkey - Gilbert Rochon made presentations in Istanbul, Turkey, for the NATO Committee on Challenges to Modern Society at a meeting focused on clean products and processes. He also presented at the Turkish Aeronautical and Space Technology Institute (ASTIN).

United Kingdom - Devdutta Niyogi is part of a collaborative project with Kings College, London, dealing with satellite data for land use mapping. Cale Bigelow, Dan Weisenberger, and Aaron Patton attended the 10th International Turfgrass Society Research Conference in Wales, in 2005. Bigelow presented two papers on turf research and had opportunities to evaluate international turfgrasses.

West Africa - Devdutta Niyogi has collaborative projects underway in Western Africa, particularly Senegal, as a part of an international activity entitled "African Monsoon Modeling and Analysis Project" (AMMA).

Laboratory for Applications of Remote Sensing (LARS) - Melba Crawford, Director of LARS, participated in the plenary and presented two technical papers at the IEEE Geoscience and Remote Sensing Society (IGARSS) meeting in Seoul, Korea, in 2005. As VP for Conferences for the IEEE GRSS Society, she recently traveled to South Africa to support the local organizing team with site selection and government fund raising efforts for the 2009 IGARSS conference. She also met faculty in KU Leuven, Belgium, regarding the joint Purdue-KU Leuven Earth Observation Master's program and the Belgian-South African satellite remote sensing program.

Purdue Climate Change Research Center (PCCRC) - Kevin Gurney attended the UN negotiating session in Montreal, Canada, in 2005 as an official observer. At this conference, the global community gathered to further improve and expand the Kyoto Protocol on global climate change that entered into force in February of 2005 without U.S. agreement.

Animal Sciences

Canada - Todd Applegate presented a talk entitled "Overview of Phosphorus Pollution from Animal Agriculture" at the Western Nutrition Conference, Calgary, Alberta, Canada, in September, 2005.

China - Heng-wei Cheng, Dave Gerrard, and Alan Grant traveled with Allen Hubbell (International Students and Scholars Office) to Zhejiang University and Huazhong University in China in February, 2006, to establish a summer intern program at Purdue for Chinese students; 13 students were interviewed and invited to Purdue for a seven-week research internship in summer, 2006. A faculty member from Zhejiang University will be joining the Animal Science faculty as a visiting scholar. Todd Applegate hosted three scientists from the Feed Research Institute of the Chinese Academy of Agricultural Sciences for one week in December, 2005.

Japan - Terry Stewart and Allan Schinckel met with Japanese swine geneticists from the National Swine Breeding Center of Japan and from Global Swine Farms, the largest breeding stock company in Japan and one of the largest in the Eastern Asia. They discussed the development and refinement of STAGES - the Swine Testing And Genetic Evaluation System evaluated at Purdue and the continued refinement of the program including additional reproductive and pork quality traits.

Moldova - Mark Russell coordinated and hosted seven agricultural and veterinary students from the State Agrarian University of Moldova for three months during the summer of 2005.

Netherlands - William Muir collaborated with Europe's largest poultry layer breeding company (Hendrix Poultry Breeding) on implementation of group selection in their breeding programs to improve productivity and animal well-being. He collaborated with this firm on application of genome wide selection programs for broilers. Muir served on a review panel for the "Robust Chicken Project," a jointly funded project between the European Union, Nutreco, and Wageningen University.

New Zealand - Shawn Donkin took a sabbatical leave at the Liggins Research Institute, The University of Auckland, Faculty of Medical and Health Sciences. Donkin was invited to apply his interests in nutrition and liver function toward developing a greater understanding of the process of fetal programming and relationship to diabetes, insulin resistance, and obesity. Donkin also participated in activities at Dexcel Inc., the primary dairy research and Extension institution in New Zealand, through field day activities, farm visits, producer Extension programs, and research planning.

Animal Sciences continued

Poland - Colleen Brady, Youth Development and Agricultural Education, and John Forrest, Ed Pajor, Mark Russell, Department of Animal Sciences, led the 2006 Animal Sciences Maymester program "Exploring International Animal Agriculture of Central Europe." Twenty-five students participated in this course, which took participants to Warsaw and Krakow, Poland; Nitra, Slovakia; and Brno and Prague, Czech Republic.

Romania - Mark Russell traveled with a multi-university team to lecture at veterinary universities in Iasi, Cluj-Napoca, and Timisoara, Romania, in fall, 2005.

Scotland - William Muir participated in a Sustainable Animal Breeding (SABRE) workshop focused on numerical genomics and approaches to incorporate genotyping information in the analysis of phenotypes.

South Africa - Rebecca Krisher developed a new hands-on study abroad course in South Africa that focused on development of assisted reproductive technologies for antelope conservation. She accompanied five Purdue students to the Wildlife Biological Resource Center, Endangered Wildlife Trust, in Pretoria, South Africa, in early summer 2006. Using an alternative model to the traditional study abroad program, the experience involved students in a significant research project and also introduced them to a new culture and location.

Vietnam - Brian Richert continued his leadership of training schools for the swine and feed industries at four sites in Vietnam during 2005. Each two-day school, supported with funding from the Emerging Markets Program of USDA, averaged in excess of 100 students per site. The overall training objective was to teach principles and critical disciplines essential for high-performance swine production. The swine industry is growing at about 8 percent per year as production shifts from back yard to more commercial production in technically advanced units that make use of feed ingredients and production technology produced in the United States and exported to Vietnam.

Biochemistry

France - Jim Forney was an invited speaker at the International Paramecium Genomics meeting at Dourdan in 2006. Sponsorship for the meeting was provided by a European research group called "Paramecium Genomics" created by French scientists to promote Paramecium genome sequencing, annotation, and functional analysis. Scientists from Europe, Japan, and the United States presented their research.

Italy - Jim Forney was invited to speak at the International Ciliate Molecular Biology Meeting in Luca in 2005. More than 120 scientists from around the world presented research on the analysis of the cell biology and biochemistry of ciliated protozoa.

United Kingdom - Henry Weiner was an invited speaker at the international meeting on Strategies for Engineering Negligible Senescence (SENS). This meeting, held in Cambridge in 2005, was focused on understanding and repairing age related damage to the human body. The program included over 50 speakers from more than 10 countries.

Spain and Mexico - In 2005 and 2006, David Krogmann published manuscripts investigating the cyanobacteria photosystem with collaborators in Spain (Universidad de Sevilla y CSIC) and Mexico (Institute Politecnico Nacional). His collaborations with Carlos Gomez-Lojero in Mexico were established 28 years ago.

Botany and Plant Pathology

Argentina - Don Huber was an invited speaker at the 13th Latin American Phytopathology Congress in Cordoba and at the Sugar Cane Research Conference in Tucuman. While in Tucuman, he completed an in-depth evaluation of research programs and made recommendations to control "sugarcane decline" and other debilitating diseases of this crop.

Australia - Ray Martyn attended the 3rd International Cucurbitaceae Conference in Townsville in 2005, sponsored by the International Society of Horticultural Sciences. Martyn presented a keynote lecture entitled "Late-season vine declines of melons: Pathological, cultural, or both," chaired two scientific sessions, and he was a member of the conference scientific program board.

Brazil - The National Science Foundation has funded a collaboration between Brazil scientists in Marcos Buckeridge, (University of São Paulo) and Eugênio Ulian, (Sugarcane Technology Center, Centro de Tecnologia Canavieira), and U.S. scientists Nick Carpita and Wilfred Vermerris (Purdue University), with the additional expertise and technical support of Mark Davis (National Renewable Energy Lab), Golden, Colorado. The team will mine maize and sugarcane genetic resources to uncover determinants of carbohydrate production, lignin production, and carbohydrate-lignin interactions that potentially impact saccharification potential for biofuel production. The knowledge base will consequently lead to improvements in nutrient availability in forage grasses for ruminant animals. In addition, Greg Shaner and Shawn Conley spent two weeks in Brazil observing soybean rust while traveling from Sao Paulo to Minaus, visiting farms along the way. Through direct observation and from discussions with farmers and plant pathologists, they were able to increase their skills in field and lab diagnosis of the disease, and its management with fungicides. In a related activity, Tadashi Yorinori, a soybean pathologist from Brazil (who accompanied this group in Brazil), came to Indiana in 2006 and gave presentations to farmers at four of Purdue's research farms. In 2005, Don Huber participated in international symposia and/or cooperative research in several countries. Don was an invited speaker at an international symposium in Brazil, at which he spoke on the role of nutrition in disease, and also reviewed

cooperative research with T. Yamada (Brazil), Volker Romheld (Germany), D. Huber (United States) on control of citrus variegated chlorosis and soybean rust.

Chile - Mary Alice Webb was an invited speaker at the 9th International Symposium on Biomineralization held in Pucon in 2005.

China - Jin-Rong Xu attended a panel meeting at the National Science Foundation-China (NSF-C) in Beijing in 2005. Xu received funding from NSF-C for a three-year project on functional characterization of G-protein coupled receptors in the rice blast fungus. A formal collaboration was established between Xu and Zonghua Wang at Fujiang Agriculture and Forestry University during this visit. Xu was also invited to chair a symposium for the Third Chinese Rice Blast Conference and was one of the keynote speakers at this conference. In addition, Xu visited Youliang Peng's lab at China Agricultural University and Fucheng Lin's lab at Zhejiang University.

England and Germany - Don Huber was an invited speaker at the International Sulfur Workshop at Braunschweig, Germany, and also presented a seminar at Rothamstead in England that reviewed the causes for reemergence of the debilitating disease of cereals known as take-all. In York, Huber was a speaker and research reviewer of nutrition-disease interactions.

France - In 2005, Jin-Rong Xu visited the research group led by Marc-Henri Lebrun at Bayer Crop Science in Lyon. Xu gave a seminar entitled "Infection-related morphogenesis in *Magnaporthe oryzae*."

Russia - Don Huber also traveled to Russia, where he evaluated non-proliferation activities with biological agents in Russia and designed facilities to facilitate treaty compliance and promote cooperation on reducing the incidence of weapons of mass destruction.

South Africa - Charles Woloshuk was a speaker and participant at the Cape to Cairo Safari Conference (September 16-18, 2005) at North-West University in Potchefstroom. The conference was held as an initiative for developing a research program to study the indigenous plants that traditionally have been consumed by rural Africans. The goal is to avoid loss of local knowledge about the utility of these plants. Conference participants came from throughout Africa. Woloshuk was one of four non-African scientists who were invited to participate. A strategic plan for the group was developed, which they have named IDIFA (Initiative for the Development of Indigenous Food-plants of Africa).

Trinidad and Tobago - Steve Hallett and Kevin Gibson led a Maymester course in 2005 that took a group of undergraduate students to Trinidad and Tobago for two weeks to study tropical agriculture and ecosystems. The location lends itself well to such studies because it has a very high diversity of habitats in a very small area. Furthermore, the peoples of Trinidad and Tobago, with diverse roots in Africa, India, China, Europe, and South America

combine to provide Trinidad with a rich and uniquely diverse blend of cultures and traditions.

Morocco - A group of faculty including Joseph Anderson, Department of Agronomy, Stephen Goodwin, Loretta Loesch-Fries, Gail Ruhl, and Karen Rane, Department of Botany, under the leadership of Program Coordinator Dr. Ronald Coolbaugh, hosted three Moroccan plant disease diagnosticians for a five-week training program in early 2005 under the Norman Borlaug International Science and Technology Fellows program. Funding was provided through the USDA Foreign Agricultural Service with funds from the State Department's Middle East Partnership Initiative (MEPI). In late 2005, the department hosted a second group of Borlaug Fellows, also from Morocco. A similar five-week training workshop was organized but this time for a group of veterinarians from the Moroccan Ministry of Agriculture. The focus of the training was animal disease diagnostics and epidemiology. Faculty from Purdue's Animal Disease Diagnostic Laboratory (Leon Thacker, Director) cooperated with Coolbaugh in the organization and mentorship of this training activity.

Philippines and India - Guri Johal attended a joint event that brought together two different symposia in one meeting—the 5th International Rice Genetics Symposium and the 3rd International Rice Functional Genomics Symposium held in Manila, Philippines, in 2005. Johal chaired the session on "Heterosis and Rice Breeding" and he attended a meeting in India (Udaipur, Rajasthan) in late 2005 where he delivered a keynote lecture in the session "Disease Management: Novel Approaches." The title of his talk is "Thinking the unthinkable: Building plants resistant to all diseases."

Entomology

Canada - Chris Oseto is involved with the University Honors Program Study Tour to Laval University (Quebec City) each year. The Laval University-Purdue University program provides an opportunity for 38 of the entering University Honors Program freshman to study U.S.-Canada relations for one week and to visit historical sites and government facilities in Quebec.

China - Gary Bennett has been involved in a number of activities in China as follows: 1) During 2005, he hosted Zhifeng Wu from the Institute for the Control of Agrochemicals, Ministry of Agriculture. While here, she conducted laboratory and field experiments, learned about pesticide regulations in the United States; attended the North Central Branch (Entomological Society of America) meeting; and visited the Indiana State Chemist's Office, Dow AgroScience, and Monsanto; 2) During 2005 Bennett's colleague Changlu Wang from Purdue's Urban Center visited Guangdong Plant Protection Research Institute and visited several fire ant infested areas and collected and identified ant specimens for the purpose of formulating a fire ant management plan.

Entomology continued

Costa Rica - Cliff Sadof and Tamara Benjamin (FNR) have been working at CATIE to help Costa Rican producers of ornamental plants increase trade with the United States while reducing the risk of exporting exotic pests to North America. Motivated by the recent passage of the Central American Free Trade Agreement (CAFTA), they have been working with the plant trade regulatory agencies in the United States (USDA APHIS) and in Costa Rica (MAG). They have also received three years of support from the Costa Rican Corporation for National Production (CNP) for developing a Clean Stock Program for exporters and small farmers. Purdue and CATIE are taking the lead on the research effort that will provide tools that growers can use to reduce pest abundance. With six graduate students in this program, they are developing tools that will be directly applicable to nursery producers in the United States. Sadof is also continuing his activity with a sister project in which he and his colleagues from The Ohio State University (Luis Cañas) and Texas A&M (Carlos Bogran) are working with red ginger flower growers on similar issues impacting trade of ornamentals. In March, they organized a workshop in Guapiles that was attended by 50 growers, a project that was critical to convincing Costa Rican Agencies to provide funding for the larger Clean Stock Program.

Europe - C. Richard Edwards continued to work with colleagues in 20 European countries on the development of sampling protocols and management schemes for the western corn rootworm (WCR), *Diabrotica virgifera virgifera* LeConte. He spent the summer of 2005 in Northern Italy working with Italian colleagues on studies to compare different trap types in an effort to improve the farmer's ability to determine when economic populations of WCR are present. He returned to Italy in 2006 to continue this work. Also, he and Italian colleagues started a new project in 2006 in cooperation with Pioneer Hi-Bred Italy on determining the response of WCR to different planting dates of corn. He also serves as co-convenor of the IOBC International Working Group on Ostrinia and Other Maize Pests (IWGO), which met in Vienna in 2006. Alan York visited St. Istvan University, Godollo, Hungary, to contribute to improving student internship opportunities. At their request he also presented a seminar on Purdue's Bug Bowl to help the local faculty and staff begin plans for their own insect festival. York also spent time in Madrid, Spain, and Barcelona, Spain, (Universitat Politècnica de Catalunya), investigating logistics for a possible Maymester 2008 Study Abroad course on Mediterranean agriculture. In Toulouse, France, at Ecole Supérieure d'Agriculture de Purpan, he worked out details for a 2007 Maymester (France/Italy) Study Abroad as well as the plans for a multi-year Farmer/University Exchange program.

Honduras - Three Zamorano interns have been selected to work in Robert O'Neil's lab. This brings the number of Zamorano students who have interned or matriculated in graduate study at Purdue to over 50.

Japan and China - Robert O'Neil leads collaboration with the University of Utsunomiya and a consortium of Japanese institutions on the potential non-target impacts of soybean aphid natural enemies as well as the natural enemies' basic ecology and potential for use in U.S. soybean production. This work is supported with funding from the Japanese government, and dovetails with a similar project in China with collaboration of the Chinese Academy of Science.

Food Science

China - The Department of Food Science completed several major efforts during the past year, including faculty presentations for academia and government and a study abroad program for graduate students. LiFu Chen presented a seminar at Nanjing University of Technology entitled "Biomass conversion to ethanol and utilization of carbon dioxide generated by ethanol fermentation" and a second talk entitled, "Utilization of corn and corn-stalk" to corn industry personnel in Changchun City. A two-week study abroad program in China for 12 graduate students and two faculty from Purdue Food Science was made possible with assistance from Southern Yangtze University and the PepsiCo Corporation. The group visited multinational food companies with offices in Shanghai and Suzhou, to learn about the realities of doing business in China. They also visited China-based food companies, and local open food markets and stores. In addition, the group visited and made presentations at the food science departments of Southern Yangtze University in Wuxi and China Agricultural University in Beijing. While there, they visited with government groups that regulate the food industry and food imports in China.

India - Arun Bhunia visited two institutes in India in late 2005: Indian Institute of Technology (IIT) in Gawahati, and Indian Institute of Chemical Biology (IICB) in Calcutta. He also presented seminars on "Nano-micro-technology in pathogen detection" during his visits as well as participated in discussions on current trends and issues in pathogen detection in food safety and food biosecurity in the international arena.

Italy - Purdue Food Science led a Spring Break study abroad program to Italy for a second year in 2006, and is organizing a 2007 Maymester program to Italy. Mario Ferruzzi and Robin Tribbet, in Food Science and Horticulture and Landscape Agriculture respectively, led the Spring 2006 study abroad program. The group visited the University of Bologna Agricultural Research Station, the Paterna vineyard and winery in Tuscany, and an organic olive farming operation. Students prepared detailed reports and gave short presentations on agricultural and cultural topics visited through their travels.

Spain - Christian Butzke was a keynote speaker at the Conference on Off-Flavors in Wine and Other Beverages organized by the Applied Biotechnology Innovation Center of the Universitat Rovira i Virgili in Tarragona in 2005. Butzke presented the lecture "Musty

Taint in Wine: TCA as a Special Case.” In 2006, he was invited back to Catalonia to give a presentation at the 1st International Symposium on Wine and Global Warming hosted by the Wine Academy of Spain in Barcelona. He continued his travels to the famous Rioja wine growing region to make an invited presentation at the 5th International Wine Forum in Logroño.

Forestry and Natural Resources

Australia - Rado Gazo presented findings on increased wood-working tool life through the application of refrigerated air and cryogenic treatment when machining medium density fiberboard, at the XXII IUFRO World Congress in Brisbane, Australia.

China - Guofan Shao supervised graduate students at the Chinese Academy of Sciences and is coauthoring several articles with them in a special issue of *Science in China*, the leading academic journal in China, *Digital Forestry*. His newly edited book, titled “*Computer Applications in Sustainable Forest Management*,” represents another outcome of international collaborations supported by Chinese funding agencies. Shao also created a new study abroad course on natural resources in China.

Costa Rica - Rosa Goodman, an undergraduate student, spent two months on an internship at CATIE assisting faculty members there on a cocoa agroforestry trial system and with research in a tropical hardwood nursery. Anna Marsh, an undergraduate student focusing on wildlife biology, interned for three months with a CATIE graduate student working to collect data on how agroforestry systems affect bird diversity. Bill Hoover and Tamara Benjamin helped write a proposal that was funded by USDA-ISE to focus on building cultural competence and increasing global competitiveness for Indiana as well as Costa Rican agribusinesses. Kathleen Coates, a Ph.D. student, completed a 6-week field course offered by the Organization for Tropical Studies (OTS). Purdue is one of 63 universities and research institutions from the United States, Latin America and Australia that form OTS, a non-profit consortium. Andrew DeWoody and Rob Swihart participated in the OTS Assembly of Delegates and explored plans for coordinating future activities in Costa Rica among CATIE, OTS, and Purdue.

East Africa - Bryan Pijanowski is involved in two National Science Foundation (NSF) supported projects to develop simulation models of land use and climate change. Pijanowski travels to East Africa about one to two times a year and interacts with scientists on the project at the International Livestock Research Institute (ILRI) in Nairobi, Kenya, and at the major universities in Kenya, Uganda, and Tanzania. He has also developed partnerships with the Kenya Wildlife Society. The University of East Anglia in the United Kingdom is another partner on the project, providing unique, long-term datasets.

Europe - John Dunning taught in the annual study abroad course offered by Purdue, North Carolina State, and (Sweden). Students

traveled to Sweden, Denmark, Germany, Austria, and the Czech Republic to study natural resource management across European soil types and climates. Tim McCleary, an undergraduate student, spent the summer of 2005 in England at the East Malling Research Center, with funding from a NSF grant to Charles Michler and Rick Meilan. He conducted research related to black walnut genetic diversity in Europe and will be the first author on a forthcoming paper.

Russia - Andrei Kirilenko worked with colleagues at Moscow State University in a project on climate change impacts on agriculture in Russia.

South Africa - Rick Meilan co-chaired a symposium on embryogenesis, regeneration, tissue culture, and transformation at the IUFRO Tree Biotechnology Meeting in Pretoria, South Africa.

Sri Lanka - Roshni Nugehalli, an advisee of Linda Prokopy, traveled to Sri Lanka in the summer of 2005 to conduct Masters thesis research on a community tropical forest biodiversity conservation project. The project was implemented by the United Nations Development Program (UNDP) in villages surrounding a recently declared United Nations Economic & Social Council (UNESCO) Man and Biosphere Reserve (MAB) in southwestern Sri Lanka.

Horticulture and Landscape Architecture

India - Rashchandra Raghothama, Avtar Handa, Kathryn Orvis, David Salt, and Peter Goldsbrough continued their efforts under a USAID-ALO funded project entitled “Partnering with higher education in India for improving nutritional quality of food by biotechnology approaches.” The principal Indian partner is the Agricultural University of Bangalore. In early 2006, a biotech education presentation was given by Peter Goldsbrough at the International Conference on Biotechnology Approaches for Alleviating Malnutrition and Human Health, which convened in Bangalore. The paper’s co-authors included Natalie Carroll and Kathryn Orvis of YDAE. Ed Ashworth joined a number of other senior Purdue faculty and administrators for this conference, which highlighted the work led by the department.

Departmental Retreat - The department’s annual retreat on May 11, 2006, focused on International Opportunities in Research, Education and Engagement. The event was organized by Steve Weller and featured participants included: Thomas Lumpkin, Director General of AVRDC: The World Vegetable Center, Tainan, Taiwan; Emmy Simmons of Partnership to Cut Hunger and Poverty in Africa, Washington DC; Dean Randy Woodson; Dean Riall Nolan; and Lowell Hardin of Purdue University along with department speakers.

Global Horticulture Assessment - Steve Weller played a leadership role in a USAID funded project entitled “Global Horticulture Assessment.” The year long project was part of an

Horticulture and Landscape Architecture continued

international effort to assess research priorities needed to exploit the potential role of horticulture in promoting better nutrition and economic development in the developing world.

Plant Nutrition Research - A project funded by the McKnight Foundation on “New approaches for improving phosphorus acquisition and aluminum tolerance of plants in marginal soils” is led by Drs. K. Raghothama, C. Johnston, and D. Schulze of Agronomy, with collaborators in Brazil, China, and Africa.

Youth Development and Agricultural Education

Spain - Mark Balschweid presented a paper “Designing Vocational Education for a Changing World: Teaching Academic Standards within a Vocational Context” at the 12th International Conference on Learning held in Grenada in 2005.

Jamaica - Mark Balschweid received a Fulbright Fellowship to teach and conduct research at Jamaica’s College of Agriculture, Science and Education (CASE) for the 2005-06 academic year. In addition, he and B. Allen Talbert led 11 students on an international study abroad undergraduate teacher preparation course in agricultural education in Jamaica. The Maymester course was headquartered at CASE in Port Antonio, Jamaica.

Afghanistan - Jerry Peters conducted a six day teaching symposium for the Faculties of Agriculture and Veterinary Sciences at Kabul University, Kabul, Afghanistan.

Kyrgyzstan - Jerry Peters and colleagues from Notre Dame University and Indiana University visited the USPORT-Kyrgyzstan project in Osh and Bishkek and met with U.S. Embassy and Mercy Corps representatives to discuss expansion of the program.

Australia - B. Allen Talbert presented a paper at the 2005 International Conference on Diversity in Communities, Organizations, and Nations: Symposium on Women, Diversity, and Human

Rights entitled “Enhancing opportunities for diverse secondary students: Case study of an urban agricultural magnet school.”

China - Clint Rusk is currently serving as a departmental host for Dou Penghui, a visiting professor from Northwest A&F University in Yangling, China. Dou Penghui came to Purdue in spring, 2006, for a one year stay to study the 4-H program in Indiana.

4-H International Exchange Program 2005 - Forty-eight Japanese youths ranging in age from 12 to 18 spent four weeks in Indiana as part of the LABO and Meiji Gakuin Summer Exchange Program, a long-standing Department of Youth Development and Agricultural Education exchange program. The purpose of this 4-H based International Exchange Program is to provide a “glimpse” into the everyday life of American families while developing lasting friendships and warm memories. The students enjoyed all the activities associated with an Indiana summer: swimming, camping, county fairs, picnicking, visiting farms, and traveling.

Sweden - Natalie Carroll attended the 11th International Symposium on Society and Resource Management (ISSRM) at Mid-Sweden University and presented the poster, “Public Education about Fate & Transport of Nano Sized Materials.”

Canada - Mark Tucker and Natalie Federer attended the 2006 annual conference of the Association for Communication Excellence (ACE) in Quebec, Canada. Tucker was also first author of a paper presented at the conference titled “Taming the Standard Deviation.” Also at this conference, Tucker received the ACE Service Award, which recognizes major contributions to the organization through volunteer efforts and leadership.

Poland, Slovakia & Czech Republic - Colleen Brady, Edmond Pajor, and Mark Russell, Department of Animal Sciences, led 25 students in a Maymester course entitled “Exploring Animal Agriculture” in Poland, Slovakia, and the Czech Republic. Students visited a variety of animal agriculture operations as well as learned about the culture and history of Central Europe.

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