

International Programs in Agriculture



“ . . . to promote and facilitate international activities in the School of Agriculture...”

Mission Statement

Research and Development Cooperation

International research activities contribute to global science and to the welfare of people around the world, including citizens right here in Indiana. During the past year, with administrative support from International Programs in Agriculture, Purdue's School of Agriculture has been actively involved in several research activities whose purposes serve these goals.

Brazil. Building on the success of the Rockefeller Foundation supported workshop on soil management organized by IPIA/Department of Agronomy in May 1998, two additional research workshops were organized in Brazil during the 1999-2000 Academic Year. The first met in October 1999 to consider issues related to soil and crop management in the complex, highly weathered, acidic Cerrados soils of central Brazil and the broader application of production technology to other areas of the world. Of interest is the news that workshop participants have been awarded funding from the Rockefeller Foundation to transfer Cerrados-based production technology to sub-Saharan Africa. The second workshop met in May 2000 to start a process to build new research partnerships in an array of areas including GIS applications to agricultural land management, pest/disease management in grain crops, crop stress physiology, cereal chemistry, and soil erosion issues. Both workshops, which brought nearly a dozen Purdue professors to Brazil, met at the EMBRAPA (Brazilian national agricultural research organization) center in Sete Lagoas (National Maize and Sorghum Research Station) with whom Purdue has a relationship dating from the mid-1970's. More than a dozen of the researchers at this station have graduate degrees from Purdue/Agriculture.



Jordan. The School of Agriculture is part of a consortium of institutions that has been awarded a two-year USAID cooperative agreement to work with collaborators in the Jordan water sector. The project links Purdue (through IPIA) with Washington State University (the lead institution), the University of Jordan, Hashemite University, and the Jordan University of Science and Technology. The Purdue component of the project includes a series of seven training/technical

assistance modules on the following topics: domestic water supply and quality; wastewater treatment; water pollution reduction; GIS-based water resource management technologies; hydrological modeling; and irrigation technology using treated wastewater. The training will take place in the United States (Purdue and WSU) and in Jordan beginning in Fall 2000.

Honduras. Following the devastation of Hurricane Mitch in October 1998, the U.S. Congress provided emergency funds to assist with post-Mitch recovery activities. Substantial funds for this purpose are being managed by Purdue's Honduras partners, Zamorano College and Cornell University. A number of Purdue/Agriculture scientists are involved in recovery efforts focused on watershed management, soil erosion prevention, enterprise development, and related mitigation activities through these funds.

University partnerships for development cooperation. IPIA is nearing completion of two USAID-funded projects that link Purdue/School of Agriculture with higher education institutions in Honduras and Russia. Each project is designed to strengthen and highlight the capabilities of higher education in the solution of important development problems. The Honduras project partners us with Cornell University and Zamorano College to work on natural resource management, micro-enterprise development, community-based rural development, and curriculum improvement. The Russia project, which partners us with the University of Maryland and Novgorod State University, focuses on the development of a model graduate and undergraduate

environmental science and policy curriculum. Both projects will conclude with dissemination activities to highlight project accomplishments that can be replicated in their respective regions of the world.

International Collaborative Research. Faculty continue to be actively engaged with the USAID-funded Collaborative Research Support Program (CRSP). Our involvement has now expanded to include roles in six of the nine global programs, collaborating with counterparts in 15 countries around the world. Eighteen faculty and staff from seven departments across two schools (Schools of Agriculture and Consumer and Family Sciences) are significantly engaged in one or more CRSPs.

CRSP Highlights

- The Purdue-led International Sorghum and Millet (INTSORMIL)/Niger CRSP food scientists developed a pilot operation to produce sorghum and millet couscous for sale in the Nigerien urban markets. Currently, couscous from wheat is imported.

The local sorghum couscous has great potential to replace the imported product. Such an accomplishment saves valuable foreign exchange for Niger and contributes to the well-being of rural families in the nation. The Cereals Laboratory of the *Institut National de Recherches Agronomiques* (INRAN) is close to technological success with a manufacturing process. A marketing study in Niamey is in progress.



- The West Africa Regional Program of the Bean/Cowpea CRSP, one of three Purdue-led components, hosted its social scientist collaborators from Ghana, Mali, Niger, and Nigeria for a workshop at Purdue during Spring 2000 to discuss the development of cowpea markets, trade, and consumer preferences.

- The Nutrition and Utilization project group of the Bean/Cowpea CRSP is studying the effects of bean fermentation on the nutrition and sensory quality of bean-based weaning foods. These studies are conducted in several villages in Honduras.

- In conjunction with the FAO, the Bean/Cowpea/Cameroon CRSP program held a regional workshop in Harare, Zimbabwe, on post-harvest storage technologies for cowpeas and provided practical knowledge on culturing and identification of bruchids, an important cowpea insect pest in the region.

- Purdue continues to play a major leadership role in the InterCRSP Natural Resources Management (NRM) project. The goal is to extend multiple CRSP generated NRM technologies in Cameroon, Chad, Burkina Faso, and Mali.
- The Purdue component of the Peanut CRSP made considerable progress in studies on the health benefits of peanut consumption. New studies in Ghana and the U.S. show that hunger sensations and dietary responses to peanuts and other foods are nearly identical in both countries; however, indices that illuminate the cultural basis for measured responses showed widely varying characteristics.
- The Central America component of the IPM CRSP, under Purdue's leadership, was recognized by the Association for International Agriculture and Rural Development (AIARD), Washington, D.C. as one of the three outstanding examples of international development that benefit both the United States with safer food supplies and foreign host countries with enhanced non-traditional agriculture export (NTAE) opportunities. One of the premier accomplishments to date is the development and formalization of a preinspection program for snow pea exports in Guatemala, the lead country of the Central American regional site. This voluntary preinspection pilot program attracted seven major NTAE packers/exporters, accounting for approximately 30-40 percent of the country's total snow pea exports. Purdue researchers are also engaged in IPM CRSP activities focusing on vegetable production in Bangladesh.
- The Sustainable Agriculture and Natural Resources Management (SANREM) CRSP Principal Investigator continues to work with scientists in the Philippines to integrate a set of biophysical and economic findings from previous and ongoing research in the Lantapan watershed. The goal is to create a computer-based decision-support tool for natural resources management and planning.

Academic Programs

As globalization increases and the importance of national borders diminishes, students and employers are placing greater value on international experiences.

Study abroad and internship programs. Purdue agriculture students can now choose from 20 study abroad or internship programs in 15 countries, including a new program at the University of Wales (Aberystwyth). Corporate internships have been added to the existing exchange program with PURPAN in Toulouse, France. Student participants in all of our programs build their resumes, learn about the rest of the world, and acquire valuable cross-cultural skills.

Partial support for our programs comes from an endowment established by former Dean Robert Thompson and Karin Thompson. Major support for study abroad scholarships is provided by the Purdue Agricultural Alumni Association and



Elanco Animal Health. The Purdue Agricultural Alumni Trust Fund, which has for several years helped underwrite study abroad scholarships, doubled support for the next three years. Elanco Animal Health extended their generous support through 2002.

During the past year, approximately 70 students participated in a study abroad program or internship experience. Approximately 12 percent of Agriculture graduates in 1999-00 completed an overseas program prior to graduation. During this same period, 12 students completed requirements for the International Studies Minor in the School of Agriculture.

Purdue/Poland student exchange. Gifts from the Andrew W. Mellon Foundation and from Phillip and Martha Smith provided funds to support another exchange of agriculture students between Purdue and the Agricultural University of Krakow in the spring of 2000. Eight undergraduate agriculture students exchanged each direction. Purdue students studied Polish language and culture as well as the Polish agricultural system and environmental issues. Polish students took courses in the School of Agriculture and lived with host families in the Lafayette area during their stay at Purdue.

Russia program continues to expand. The U.S. Department of Agriculture awarded the School of Agriculture funds to permit ten agriculture students to complete courses in Russian agribusiness and marketing and study Business Russian at Novgorod State University in the summer of 2000. Prior to traveling to Russia, the students each completed three semesters of Russian language and one Russia-related course at Purdue.

Host family participation. A total of 29 Indiana families hosted international exchange students in agriculture from Japan, Poland, and Ireland this past year. Host families provided room and board, an environment for cultural exchange, and an opportunity for students to strengthen their English skills.

Extension and Outreach

The development and application of extension methodology in the international arena is increasingly a focus of IPIA, the Cooperative Extension Service, and partner countries around the world. In addition, IPIA has initiated work through the Extension Service to educate local citizenry about the important stake that Indiana has in the global economy.

Training workshop. IPIA, working closely with the Director of Indiana's Cooperative Extension Service, has planned an international extension workshop for September 2000. The workshop will seek to develop a definition and rationale for strengthening internationalization of Purdue Extension. In addition, participants will hear about international Extension models that have emerged in Michigan and Ohio. The workshop will conclude by identifying the necessary steps for further international engagement by Indiana Extension Educators.

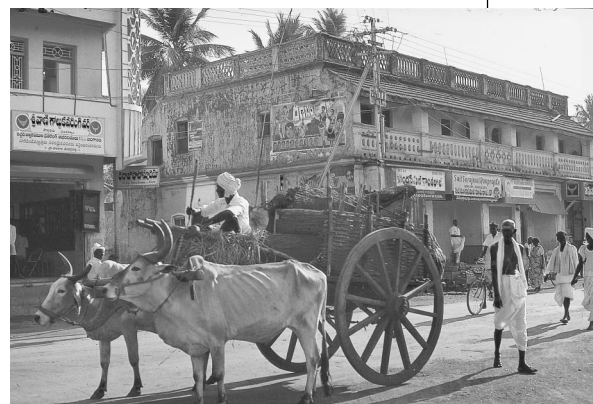
Poland. IPIA and Purdue Extension co-supported a workshop in May 2000 in Poland to contribute to leadership development. Two Purdue Extension Educators, joined by a faculty member from the University of Cincinnati, provided training on the Myers-Briggs Personality Inventory, to introduce the idea of personality differences as a factor in leadership skill development for Polish community leaders.

News from IPIA

Global Consortium of Higher Education and Research for Agriculture

(GCHERA). The Global Consortium, launched at an inaugural meeting in Amsterdam in July 1999, has expanded to include more than 260 agricultural institutions worldwide. The mission of GCHERA is to foster global cooperation for the improvement of higher education and research for agriculture as a prerequisite to solving the food security and environmental problems confronting the world. Iowa State University provided leadership in formation of GCHERA through former President Martin Jischke. But, with the appointment of Dr. Jischke as the new president of Purdue University in August 2000, administrative and support activities for GCHERA will move to IPIA, including substantial responsibility for organizing the next meeting of the consortium in the summer of 2001.

D. Woods Thomas Memorial Scholarship in International Studies. The School of Agriculture (through IPIA) awarded the "D. Woods Thomas Memorial Scholarship in International Studies" in 2000 to Mr. Jason Swain, Department of Animal Sciences, to support his Ph.D. research in South Africa on elephant reproductive physiology. The award, made possible by an endowment in honor of Dr. Thomas (former Director of IPIA), supports graduate student scholarly activity in a developing country.



China programs expand. IPIA-led programs in China, supported by a gift from Professor *emeritus* John Tse, continue to expand. The gift permitted the School of Agriculture/IPIA to formalize a unique alliance with the China office of Winrock International, a private organization devoted to global development and poverty alleviation. The Winrock alliance provides Purdue Agriculture with a permanent, credible presence at Winrock's Beijing office. Resources leveraged from USDA/Foreign Agricultural Service combined with the gift supports a second Chinese supermarket managers' inventory control training program in 2000/2001. The swine technology training program, supported by the U.S. Grains Council, is in its second year. A



relationship with the Chinese Academy of Agricultural Sciences (CAAS) is emerging that may lead to a new study abroad opportunity for School of Agriculture students. We continue discussions on collaborative activities in forest conservation, GIS applications to management of environmental problems in China, precision agriculture demonstrations, and a novel MBA in Agribusiness using a collaborative multi-institution education approach.

Curriculum development. In cooperation with international program leaders at Indiana University and the National FFA organization, Purdue/IPIA and the School of Education are contributing to the development of a high school international curriculum. Development of the curriculum is supported by a two-year grant from USAID. The curriculum, a unique Web-based tool, will focus on global-local linkages that affect the lives of students and their families. Designed as a series of modules, set in Moldova, Honduras, and Ethiopia, the curriculum will permit students to work at their own pace on the lessons. A national workshop for high school vocational agriculture teachers will meet in late winter 2001 in Indiana to introduce the curriculum and to train teachers in its use. A preliminary version of the curriculum is to be pilot tested

during the National FFA Convention in Louisville in October 2000.

Changes in IPIA personnel. Dick Gelzleicher, International Extension Coordinator and Poland Program leader at IPIA since 1992, retired on June 30, 2000. During his tenure, Gelzleicher provided visionary and energetic leadership for the Mellon-funded Poland Project (nearly \$1 million) that introduced methods to link Polish higher education in agriculture to extension education, community leadership, and local entrepreneurs in rural areas throughout Poland. A highlight of the Poland Program was the organization of the Malopolska Extension Region through Krakow Agricultural University with a Polish university-funded position to provide extension leadership in southern Poland. Gelzleicher also organized and delivered multiple programs on the U.S. model of extension for visiting delegations from numerous countries around the world.

Two new staff members joined IPIA this year. Janet Schwanke is our new Secretary/Receptionist. Prudie Miller joined the staff as International Students and Visitors Coordinator. We extend a warm welcome to both.

IPIA international seminar series. Agrobiotechnology and trade liberalization were the themes for the nine IPIA/IP sponsored international seminars this year. Off-campus speakers included executives of the Monsanto Company (St. Louis and Washington, D.C.), a political scientist (Wellesley and Harvard) who is assessing the probable impact of agrobiotechnology on developing countries, and the Director General of the International Rice Research Institute (Philippines).

IPIA guest apartment in campus International Center. The center housed nineteen guests from 13 different countries this year. The apartment is a low-cost service provided by IPIA to help departments host their international visitors.

School of Agriculture visitors. IPIA hosted 44 visitors from 18 countries during 1999-2000.



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8/00

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