

2007
Annual Report

**Office of International Programs
in Agriculture**

College of Food, Agricultural, and Environmental Sciences



February 2007

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 Council for Studying Productive Forces (National Academy of Science), Ukraine

2007 Annual Report

Office of International Programs in Agriculture

Mission

The Mission of the Office of International Programs is to incorporate an international dimension into the student learning, discovery and engagement dimensions of the college so that (a) our graduates understand, contribute to, and effectively compete in the global environment in which agriculture functions; (b) our research and engagement programs have access to the best ideas and technologies regardless of where they are generated or developed; (c) our outreach programs positively impact on the livelihoods of agriculturalists and other rural dwellers around the world; and (d) the above strengthen U.S. international competitiveness within a sustainable global agricultural and natural resource system.

Introduction

Activities undertaken by the International Programs in Agriculture (IPA) Office during 2007 continued to be consistent with its mission. The Office continued to provide important support services relating to the three major operational dimensions of the College of Food, Agricultural, and Environmental Sciences, namely, student learning, discovery, and outreach to students, faculty, staff and stakeholders. The Office has greatly benefited from support given to it during 2007 by the OSU Extension, the Ohio Agricultural Research and Development Center, and the College Office of Academic Affairs. It also benefited greatly from inputs provided by other collaborators on the OSU campus, in particular the Office of International Affairs and its affiliated Area Studies Centers, and the Center for International Business Education and Research. The office has also sought to strengthen programmatic ties with the College of Veterinary Medicine during 2007.

Globalization continues to have greater impact on rural Ohio and its economy. It is also increasingly recognized as a priority by Ohio State University leadership. In the January issue of *Currents*, President Gee writes that "Today, cross-cultural contact is a fact of life. Thanks to the internet, e-mail, the cell phone, and the PDA, international news and information, friends and colleagues, products and images are but a click away.....That is why cross-cultural understanding is the most important quality to be instilled in our 21st century students. An international experience is the best way to instill that vital understanding."¹ Similarly, Provost Joe Alutto has asserted that

¹ Gee, Gordon, "A New International Identity: Why every student should go abroad." *Currents*. January, 2008.

globalization should be one of two major priorities for the Ohio State University campus.

The ultimate mission of our Office is to assist agribusinesses, farmers, rural inhabitants and other stakeholders adjust to changes resulting from globalization and to take advantage of the opportunities afforded by it. We recognize that with globalization and with our commitment to becoming an eminent world university, we have important stakeholders in Ohio and throughout the U.S. The Office seeks to maximize the ability of all stakeholders to adequately address their rapidly changing economic, social, and political environment.

International Program Reviews

A major FAES international program review, which began during summer, 2006, was completed during 2007. It included the participation of a panel of three outside experts who joined the OSU Associate Provost for International Affairs during a series of interviews with OSU faculty, staff, students and stakeholders. Their report highlighted the importance of this dimension for the future of the college because it will increasingly need to address the continuous globalization of agriculture in the world. The visiting panel prepared a report consisting of a series of recommendations for the future. These recommendations, covering the full gamut of issues including those related to priorities and financing, are accessible on the IPA website².

This report was fully vetted with FAES faculty and stakeholders during 2007. Focus group meetings were conducted on the Wooster and Columbus campuses with the active participation of many. The IPA staff is grateful to participants for giving of their time to this effort. Based on the feedback received through these efforts, IPA prepared a report that consists of recommendations regarding the future organization, funding and program priorities for international programs in the college. A copy of the report is available on the IPA website

The OSU Provost has charged all of the college units on campus to prepare a strategic plan for the coming five year period. He has emphasized that globalization should be one of the major dimensions of these plans. Results from the recent program review in the college will be used as input into the preparation of this strategic plan for the college.

² <http://ipa.osu.edu/>

Active Projects during 2007

The Office of International Programs in Agriculture had the following sponsored active grants and contracts during the year.

Project Title	Total Funding
Faculty Exchange Program Training	\$232,207
Agricultural Exports & Rural Income (Egypt, MUCIA AERI)	\$293,514
Punjab Agricultural University and Food Processing: New Linkages with the Private Sector	\$299,632
EARTH University/OSU Collaborative Program on Environmental Research in Humid Tropics	\$771,000
Strengthening Capacity of East African Faculties of Agriculture to Improve Small Holder Productivity (HEPAD)	\$799,651
An Evaluation of New Market Development and Marketing Strategies on Sorghum and Millet Farmers' Income in Tanzania and Zambia (INTSORMIL CRSP)	\$130,375
University Partnership to Build Rural & Micro-Finance Capacity in Mexico	\$499,956
Regional Integrated Pest Management (IPM) Program in East Africa: Kenya, Tanzania, and Uganda (IPM CRSP)	\$553,735
On-farm water management for rain fed agriculture on benchmark watershed in five diverse eco-regions of India	\$59,405
Norman E. Borlaug International Fellowship - India	\$99,526
Market Development in Support of Sorghum and Millet Farmers' Income in Tanzania and Zambia (INTSORMIL CRSP)	\$108,000
African SPS Faculty Exchange Program	\$64,646
Building Human Capacity for Microfinance Institutions in Order to Increase Competitiveness and Reduce Rural Poverty in Mexico	\$249,978
Norman E. Borlaug International Fellowship - Macedonia, Kosovo, & Serbia	\$89,990
Norman E. Borlaug International Fellowship - Kazakhstan	\$14,997
TOTAL	\$4,266,612

INTERNATIONAL LEARNING

Study Abroad

The college continues to sponsor a number of academic term study abroad programs. During 2007 one hundred and twenty-four students with majors in agriculture used them to study overseas. This represents an increase of 26% over the previous year. Thirty-nine students took advantage of new short-term post-academic quarter study abroad programs developed by Paul Heimberger in Costa Rica, Maurice Eastridge in the Netherlands, and Brian Slater and Jerry Bigham in Iceland. Other short-term programs continue to be developed.



As the new coordinator for these programs, Kelly Koren has reenergized study abroad initiatives. She is located with the undergraduate support staff in the Dean's Office and combines her study abroad activities with other undergraduate recruitment activities. In this capacity, she reports directly to the Associate Dean for Academic Affairs. The position of CFAES Study Abroad Coordinator has been redefined to include a 30% appointment directly to the Office of International Affairs. This arrangement enables direct alignment of study abroad efforts with those of both the University and CFAES student affairs.

The OSU Office of International Education, which traditionally has had overall responsibility for managing study abroad programs across the entire campus, was discontinued during 2007. An Office of Study Abroad was created in its place and personnel associated with study abroad continued their assignments under this reorganization. The Office of Study Abroad reports directly to the OSU Office of International Affairs. It has been directly involved with the coordination of programs initiated by the College of Food, Agricultural, and Environmental Sciences, including short-term experiences. We remain very grateful to Director Grace Johnson and Program Coordinators Jeannie Simmons, Jenny Bickley, and Erin Galloway, for their excellent collaboration.



Resident directors for the 2007 study abroad programs were:

- Australia - Steven Loerch, Animal Science
- Brazil - Garee Earnest, OSU Leadership Center
- China - Karen Mancl, Agricultural, Environmental & Biological Engineering
- Costa Rica - Paul Heimberger, Academic Programs Office

- Czech Republic - David Hahn, Agricultural, Environmental, & Development Economics
- Dominican Republic - David Zartman, Animal Sciences
- England - Laura Burchfield, Horticulture & Crop Sciences
- Iceland - Brian Slater and Jerry Bigham, School of Environment & Natural Resources
- Netherlands - Maurice Eastridge, Animal Sciences
- South Africa - Andy Ward, Agricultural, Environmental & Biological Engineering
- Uganda - David Kraybill, Agricultural, Environmental, & Development Economics

CFAES study abroad students benefited from partial scholarships that were generated from endowments established by former faculty members and staff of the college as well as other sources.



The Ohio Internship Program

This past year was one of important accomplishments but also many changes, some of which were initiated by changes in Washington, D.C. related to the J-1 visa. Working with the Alliance Group in Washington, D.C. and congressional representatives, the Internship Program staff remained actively engaged in a meaningful dialogue with those who were managing these changes. This input was evident in the final documentation which emerged.

During the year, Gabriella Pearse-Danker resigned from her position due to personal reasons. Her acquired experience with 14 years of loyal service to OSU will be missed. Greg Lecki and John Beardmore have assumed many of her responsibilities in horticulture training.

Staff have continued to be actively involved in the recruitment of new international students for the program. During the year, six staff members traveled overseas to contact universities and programs that have provided participants in the past, as well as to contact new institutions and relevant U.S. diplomatic delegations in the respective nations.



Yining Zhang traveled to China where he interacted with many students interested in applying for the program. He was also honored for his dedication and success as a recruiter with an award from the China Association of Agricultural Science Societies of The Ministry of Agriculture. Two of the program's host employers, Kurt Blumel, Maryland and Don Bennick, Florida, were also honored for their service in training a large number of Chinese students.

Greg Lecki traveled to Poland where he met with prospective students and college administrators at their respective higher education institutions. Michael O'Keeffe undertook similar travel to England, Ireland and the United Arab Emirates (UAE).

John Beardmore traveled to eleven colleges in the UK for recruitment purposes. He also staffed a booth at the LAMMA Show (business show for farmers, contractors, agricultural engineers and manufacturers of farm machinery) in Newark, UK.



Michael Chrisman traveled to Germany to attend the IPM horticultural show and to visit Brazilian colleges to obtain agreements for student exchange.

Annual visits to various European nations are particularly important since the unification of college curricula and economies in the European Union are making internship experiences closer to home a more attractive alternative than those in the U.S. The Ohio Program staff are making every effort to maintain a steady flow of Eastern European student interns to the U.S.

An important function of the program is to oversee internships for students placed in Ohio and other states. Several staff members spent considerable time visiting interns throughout the U.S. during the year. They met with the students and their hosts to discuss individual programs. They used this information to assess the quality of the training environment provided by hosts in order to negotiate decisions about placement operations during the coming year.

Office staff also developed new and modified existing applications and descriptive materials for the program. Yining Zhang devoted time to the development of a new business trainee program application based on changes in regulations for U.S. internships mandated by agencies in Washington, D.C. Greg Lecki helped to fine tune the online application system for the internship program which he developed during 2006. The new system stores all information that is submitted online as part of a central database. This system has increased the efficiency of processing the numerous applications received for the program. During 2007, 393 applicants were placed on internships with hosts located throughout the U.S.



Mike O'Keeffe and John Beardmore planned and implemented the 11th International Turfgrass Conference for 45 internship participants at Sea Pines Resorts, South Carolina. Through the years, this conference continues to receive support from companies such as Scotts, Bayer, Syngenta, and the Golf Course Superintendents Association of America.

Todd Voss, President of The Ohio Turfgrass Foundation, Dr. Dave Shetlar and Dr. Karl Danneberger, OSU, Dr. Joseph Dipaola, head of marketing for Syngenta North America, and Dr. Chuck Darrah from CLC labs served as instructors for the conference. This is the 11th year of support from Industry and faculty for this short course opportunity.



Mike O'Keeffe won the 2007 Ohio Turfgrass Professional Excellence Award for his service to the Ohio turfgrass industry. To receive this award from Ohio stakeholders is a great achievement for Mike and the OSU Global Turf Training Program now in its 29th year.³

Migrant Labor International Extension Study

The OSU Extension continues to give increased attention to the growing Hispanic labor force working in green, dairy, and rural construction industries. Many OSU Extension educators lack important skills to facilitate direct assistance to this segment of the Ohio labor force or to help employers work more effectively with these laborers. In response to this perceived need, the IPA Office has supported an annual study tour to Mexico for Extension Educators and their clientele coordinated by the OSUE Ohio Latino Work Force Group and the Colegio de Post-Graduados en Ciencias Agrícolas (CPG), a traditional partner institution located in Montecillo, Mexico. Dr. Fernando Manzo in the CPG Department of Rural Development participates in



³ The Ohio Program has grown in prestige and accomplishments in 2007. Please visit these links- <http://top.osu.edu/art/au.pdf> and <http://top.osu.edu/art/ir.pdf> -to read about our programming from Australia, the UK, and Ireland.

program planning and serves as the on-site program coordinator. The OSU Center for Latin American Studies generously provided partial financial support for this endeavor to address transnational migration issues.



The September 2007 study tour included field trips to rural villages and farms where participants had opportunities to interview families of migrants and returned migrants about their motivations, experiences, and insights into how Hispanic labor relations and productivity could be improved in the U.S.

The study tour included the following OSU employees -- Marusela Anders, Ken Chamberlain, Francisco Espinoza, Eric Imerman, Randall James, Melanie Miller and Candace Pollock. It also included Emily Jalkanen and Sara Brick-Sturt from the agribusiness sector, and Robert Gitter, Ohio Wesleyan University. The Ohio Latino Work Force Group is developing a web site and continuing to provide additional educational opportunities to other OSU Extension Educators as it continues to expand its activities in support of working more effectively with this important segment of the Ohio rural work force.



OSU Executive Delegation Travel to Turkey

In June 2007 a delegation led by Karen Holbrook, OSU President, traveled to Turkey to visit several partner institutions. President Holbrook was accompanied by her spouse, James Holbrook, as well as Alam Payind, Director, OSU Middle East Studies Center, and David Hansen, Director, International Programs in Agriculture. The visit came at the request of Fikrettin Sahin, the 2007 awardee of the Distinguished International Alumni Award of the college. Dr. Sahin received his PhD in Plant Pathology from OSU. He completed his graduate education under the supervision of Dr. Sally Miller.

While in Turkey the delegation visited Yeditepe University in Istanbul where it was hosted by Dr. Prof. Ahmet Serpil, President of that institution, and a former mayor of Istanbul. They also visited Ataturk University in Erzurum which is the flagship university of Northeast Turkey. Hosted by President Prof. Dr. Yasar Sutbayez, they participated in the celebration of the 50th anniversary of that institution. Both Yeditepe University and Ataturk University have a number of PhD graduates from The Ohio State University on their faculty. In addition, a large number of faculty members from Ataturk University have spent sabbaticals at The Ohio State University over the past five years. Many of them have been placed in academic departments in the college.

Peace Corps

The IPA Office has hosted the Peace Corps representative on the OSU campus since the position was established in 1974. Peace Corps volunteers make a commitment of 27 months under a government paid program to provide technical assistance in one of over 65 different countries in a variety of fields including agriculture, natural resources, animal production, business development, community outreach, health and education. Over the years, it has provided opportunities for and enabled hundreds of students to gain field experience by participating in programs of this United States sponsored volunteer organization upon graduation from The Ohio State University.

In a notice from the Chicago Peace Corps Recruitment Center, IPA learned:

No school in the country has recruited more Peace Corps volunteers this year through campus-based recruiters than The Ohio State University (OSU). From fall 2006 through spring 2007, the OSU on-campus recruiter nominated, or recommended, 52 candidates to the Peace Corps, which is substantially ahead of the next closest university at 36 campus-based recruiter nominations. Ela Kakde, in the International Programs in Agriculture Office, is the driving force behind the high numbers and has recruited for Peace Corps on the OSU campus for two years while in graduate school.

Ela was a Peace Corps volunteer in Ecuador prior to assuming this position. She is pursuing an M.S. degree in City and Regional Planning. The office advertises Peace Corps opportunities and works closely with the Office of International Affairs and the Peace Corps Regional Office in Chicago to identify potential candidates and to interview and select them for programs overseas.



DISCOVERY THROUGH RESEARCH

During 2007, the IPA Office continued to support, and in some cases lead, programs which facilitate active participation by Ohio State University research scientists in the global agricultural research network. These programs represent important contributions to the overall research output of scientists in the college. Most of them provide financial support for the research and access to global networks in which to carry it out. Most of these programs are funded by U.S. Government agencies, especially USAID and USDA.

International Sorghum & Millet Collaborative Research Support Program

The CFAES collaboration with the INTSORMIL CRSP was renewed for another 4 years. Don Larson, AEDE and Mark Erbaugh, IPA, continue to lead on this effort titled *Market Development in Support of Sorghum and Millet Farmers in Tanzania and Zambia*. They collaborate with social scientists at the University of Zambia and Sokoine University of Agriculture in Tanzania to implement this market oriented approach. Graduate student, Jeremia Makindara, who did his Ph.D. course work at OSU, is also participating in the implementation. Mark represented OSU at an INTSORMIL planning meeting in Pretoria, South Africa in April, and Don did the same at a collective planning meeting held in Lincoln, Nebraska, in September. David Hansen is on the INTSORMIL Board of Directors.



Integrated Pest Management Collaborative Research Support Program

OSU/CFAES engagement with the Integrated Pest Management Collaborative Research Support Program (IPM CRSP) continues with two main programs. The *Regional IPM Program for East Africa* is coordinated by Mark Erbaugh, IPA, and partners with Makerere University and the National Agricultural Research Organization (NARO) in Uganda, the Kenya Agricultural Research Institute (KARI), Sokoine University of Agriculture (SUA) Tanzania, and co-PIs from Virginia Tech University, the University of Wisconsin, and the World Vegetable Research Development Center (AVRDC).



The focus of this effort is to design effective IPM systems for higher-value horticultural crops in East Africa. Co-PIs from CFAES contributing to this effort are Sally Miller, Plant Pathology, Joe Kovach, Entomology, and Doug Doohan, Dan Struve, Mark Bennett, and Matt Kleinhenz from Horticulture and Crop Science. Dan, who traveled to Kenya in April, is advising PhD candidate Robert Gesimba from

Kenya. Mark Bennett was the lead advisor and Matt Kleinhenz was on the committee of Mr. Hosea Mtui from Tanzania for his M.S. thesis. Mr. Mtui returned to OSU in August and completed his program in September. While in Tanzania, Doug Doohan advised collaborating scientists on weed management and field trial design. All of these co-PIs provided departmental seminars to faculty and students at partner institutions. Erbaugh led technical committee meetings in Uganda in March and September and prepared all annual work plans, budgets, and annual reports.



Another IPM CRSP affiliated program is the *Regional Diagnostic Laboratories Global Theme* which is coordinated by Sally Miller, Plant Pathology. This program is designed to build capacity at three regional hub-site locations in East and West Africa and Central America to do plant disease diagnostics. She participated in a third stakeholder meeting hosted by KARI in Nairobi, Kenya. Over 90 scientists from the region attended. Additionally, Dr. Miller, with other collaborating scientists, provided a two-week short-course on plant disease diagnostics in September at OARDC in Wooster, Ohio. It was attended by 27 scientists from ten countries.



Iceland Collaborative Research on Carbon Sequestration

At the initiation of CFAES, OSU hosted President Olafur Ragnar Grímsson of Iceland and his delegation for a three day visit in Spring 2007. President Grímsson was accompanied by leaders of Iceland's university community as well as government agencies dealing with natural resource conservation and management. They included, Ornlófur Thorsson, Chief of Staff; Árni Sigurjónsson, Director; Kristján Guy Burgess, Director, Global Center Iceland; Agúst Sigurdsson, Rector, Agricultural University of Iceland; Asa Aradóttir, Agricultural University of Iceland; Sveinn Runólfsson, Director, Soil Conservation Society of Iceland, and Andrés Arnalds, Deputy Director, Soil Conservation Society of Iceland. President Grímsson presented a lecture titled "*The Challenge of Climate Change, Iceland: A Laboratory for Global Solutions.*" Several agreements for student and faculty exchange and joint research were also signed during his visit.



In May Dr. Gudrun Gísladóttir, University of Iceland, arrived at OSU to undertake a sabbatical with Rattan Lal. While here, she analyzed data which she brought from Iceland, interacted with faculty of the School of Environment and Natural Resources (SENR), and presented a seminar on her research topic of interest.

In June Jerry Bigham and Brian Slater, School of Environment and Natural Resources, led a group of students on a study tour to Iceland as part of a course offered in their unit. They were hosted by the Agricultural University of Iceland. In September Rattan Lal participated in a forum in Iceland on "Soils, Society and Global Change." He was part of the organizing committee for this event and met with President Grímsson and other notables while in Iceland.

Plans are to continue collaborative research and student exchanges. A scholar from the University of Iceland is scheduled to come to OSU during 2008 Winter term.

India/U.S. Knowledge Initiative in Agriculture

India and the United States established an ambitious Knowledge Initiative in Agriculture Program for India during 2006. Bobby Moser, Vice President for Agricultural Administration, has served as a member of the board which oversees this initiative. In this capacity, he participated in several meetings in New Delhi and Washington, D.C. NASULGC was tapped to manage a competitive grants program focusing on two of the four areas of emphasis by the initiative, namely, (a) capacity building in higher agricultural education and research; (b) food processing and food quality; (c) natural resource conservation and management; and (d) biotechnology. The two areas identified for competition were capacity building and natural resource (water) management.

CFAES was awarded two of these grants, including one submitted by a team from Human and Community Resource Development led by Susie Whittington, and another submitted by Rattan Lal, SENR, in collaboration with David Hansen, in the area of water management. In addition, Larry Brown, FABE, also participated in another successful consortium proposal on water management and twinning degree programs headed by Iowa State University.

These projects have been ongoing during the year. Rattan Lal and David Hansen, in coordination with counterparts at Punjab Agricultural University, held a workshop on water management in September. U.S. participants came from Iowa State, Texas A&M, Colorado State, Purdue, West Texas A&M, Florida and USDA/ARS. Representatives from the Indian Council on Agricultural Research, ICRISAT, CRIDA, Punjab Agricultural University (PAU), and several other universities also participated in this workshop. Results of the workshop will be used together with other information to prepare a proposal on water management in India.

OSU was visited by Prof. V.K. Dilawari, PAU, during spring 2007 to discuss Teaching/Learning Academy project activities. Summer workshops and an extended visitation program by representatives from the three participating Indian universities are planned for spring 2008.



During June 2007 OSU hosted a three day visit by Indian members of the AKI Board of Directors, including Mangala Rai, Director General; S. Prakash Tiwari, Deputy Director General, Education; P.L. Gautam, Deputy Director General, ICAR, Higher Education; A.K. Upaduyay, Additional Secretary, ICAR; and V.K. Paul, Director of AMS, New Delhi. While on campus they visited with faculty participants in the AKI program, including Rattan Lal, SENR; Susie Whittington, James Connors, and Robert Birkenholz, HCRD; and Valente

Alvarez, Director of the OSU Food Industry Center.

They also visited the OARDC campus in Wooster where they met with Steve Slack, OARDC Director. On the OSU campus, they also met with Karen Holbrook, President; Dieter Wanner, Director, Office of International Affairs; Bobby Moser, Dean, College of Food, Agricultural and Environmental Sciences; and David Hansen, IPA Director.



Rural Micro-Credit Anti-Poverty in Mexico Program with CPG

Jerry Ladman and David Hansen were awarded a project in the area of micro-finance and micro-credit by the HED program. OSU's major partner in the project is the Colegio de Post-Graduados (CPG) in Montecillo, Mexico. The Mexican Co-PI is Fernando Manzo. The project has hired Zaida Maria San Juan Mejía as a project associate. Other participants in the project include CPG faculty Oliverio Hernandez and Ema Zapata, and OSU faculty Cathy Rakowski, Richard Meyer, and Claudio Gonzalez. This project is designed to provide important inputs to micro-finance programs in rural Mexico. It will include development of a modular program of training for those involved in the sector, research on issues related to credit delivery to rural users, development of curriculum on micro-finance for undergraduate economics majors, and graduate training. During the year Jerry Ladman made several trips to Mexico to work with counterparts on development of program activities. Fernando Manzo also visited the OSU campus in December at which time he worked with OSU counterparts on the planning of activities for early 2008.

A graduate student has been identified to initiate studies at OSU during 2008 with financial support from CONACYT (the Mexican National Council for Science and Technology). A workshop was designed to take place in January 2008 on micro-

finance issues. Participants will include Claudio Gonzalez, Jerry Ladman, Cathy Rakowski and Richard Meyer. Dean Bobby Moser will also be present at this event as will David Hansen, IPA Director. This event will also be complemented by a meeting of an Advisory Board for the project, consisting of high level representatives of major rural finance institutions in Mexico.

India Natural Resources Management Project



A follow up project dealing with the conservation and management of soil and water resources in India was initiated with the M.S. Swaminathan Research Foundation with Rattan Lal, School of Environment and Natural Resources, continuing as principal investigator for this project. Funded by the Sir Jamsetji Tata Trust Fund in India, it involves research at five sites in India – two close to Chennai, one in Orissa, one in Madya Pradesh, and one in Punjab. University research scientists from

local universities will continue to be engaged in conducting the actual field work at the Madya Pradesh and Punjab sites. This research will focus on changes in micro watershed balances in water and changes in soil and water quality as a consequence of specific interventions introduced through the project, such as the application of minimum and no tillage practices.

Rattan Lal and David Hansen attended a workshop in Chennai at the M.S. Swaminathan Research Foundation in July at which time details of the project were negotiated. The principal counterparts at the M.S. Swaminathan Research Foundation are Sudha Nair and Sudip Mitra.



EARTH University Collaborative Research Project, Costa Rica

CFAES continued its collaborative research project with EARTH University in Costa Rica. Funded by the U.S. Department of Energy, the project focuses on the conservation and management of natural resources and alternative energy sources in the tropics. On the OSU side, six active projects continued during the year which included participation by faculty and graduate students along with counterparts at EARTH University:

- Jay Martin, "Bio-Digesters as an Alternative Fuel Source for Home Cooking."
- William Mitsch, "Management of Wetlands in the Tropics."
- Roger Williams/Michael Ellis, "IPM Applications to Plantation Crops in the Tropics."
- Rattan Lal, "The Potential for Carbon Sequestration in Costa Rica."

- Kendra McSweeney, "Carbon Sequestration and Income Generation for Small Farmers in Costa Rica."
- David Hansen, "Adoption of Eco-technologies Disseminated by EARTH University in the Parismina Watershed."

The volume of activity was reduced but graduate student research continued at EARTH during the year. Blanca Bernal and Amanda Nahlik continued their research on natural wetlands. Stephanie Lansing conducted dissertation research on the use of bio-digesters to produce methane gas for cooking and electricity production. David Lansing continued his research on terrestrial carbon sequestration by residents of the Talamanca Indian reservation. Melanie Miller continued her research on the adoption of EARTH-recommended eco-friendly technologies in the Parismina watershed.

Articles continue to be completed for the proposed special edition of the journal, Ecological Engineering. Bert Kohlman, EARTH University entomologist, continues as the principal editor for this publication. The edition should be ready for publication in 2008.

Involvement of Central State University in the project was increased. Subramania Sritharan, Director of the International Water Management Center at Central State, visited EARTH University again in the company of FAES administrators. Bryan Smith, an undergraduate student at Central State, continued to participate in field work with OSU graduate students working on wetlands management at EARTH University.

Edgar Alvarado, EARTH University, spent three months on the OARDC campus working with Roger Williams and Michael Ellis. This sabbatical allowed him to work with them on the preparation of research publications from their field work and to discuss additional future research. Bert Kohlman, who is also responsible for research at EARTH University, spent a week on the OSU campus working with the IPA Office and other OSU participants on project-related activities. Ricardo Russo, Forestry/Soils, EARTH University, visited the OSU campus in December. Paula Chacon, a recent graduate of EARTH University joined Rattan Lal's research group in September and worked on analyses of soils data gathered at EARTH University. She was admitted into the Soil Science graduate program to begin in January 2008. The international internship program placed 14 EARTH students on internships with U.S. based companies during 2007.

Mexican Rural Financial Markets Program with CIDE

The rural and micro-finance project which was initiated in 2005 continued during the year. This project is central to the HED-managed TIES program with Mexico. Claudio Gonzalez, AEDE, is the principal investigator for this project and David Hansen is co-principal investigator on the OSU side. The principal co-investigator at CIDE is Gustavo del Angel. Four graduate students from Mexico received graduate training at OSU under this project during 2007. Malena Svarch, Ariadna Martínez-González and Marisol García de la Cruz continued their M.S. degree programs in September. A fourth student, Carolina Castillo, continued a Ph.D. program in rural finance under this project, having been awarded an OSU University Fellowship.

During summer 2007, the graduate students returned to Mexico to undertake internships with major rural finance funding agencies. They used this experience to gather data which they will use to complete their M.S. degrees at OSU. During 2007 CIDE and OSU also undertook several important workshops designed to develop appropriate policy tools to address shortcomings in the micro and rural credit markets. These workshops were attended by a large number of academics, NGO representatives, researchers and government policy makers. Results of the workshops have been amply divulged through mass media in Mexico and have been used to improve other applied activities dealing with micro and rural financial markets such as AFIRMA, a USAID-funded attempt to improve efficiencies of program operation among major NGO's working in this sector.

The project has developed a website that represents the nucleus for a virtual network on rural financial markets. This website⁴ continues to evolve and will become a major activity to promote innovations in rural credit markers in the future.

OSU received a visiting scholar from CIDE under the program during 2007. Prof. Alfredo Castillo spent nine months working with faculty associated with the rural finance program at OSU. During that time he attended courses offered by the program, worked on research publications, and prepared a proposal for additional research at his home university in Quintana Roo State, Mexico.

Claudio Gonzalez and David Hansen attended the annual HED Synergy Conference in Washington, D.C. during the summer. They were joined by Gustavo del Angel, CIDE, and jointly reported results of their program.

⁴ <http://www.cide.edu>

OUTREACH AND ENGAGEMENT

Over this past year, IPA staff have received over 60 international visitors from sixteen different countries.

Punjab Agricultural University Food Processing Project

This project was initiated with HED funding in 2004 and continued in 2007. Poul Hansen continued to reside on the PAU campus and to work directly with the Food Industry group on development of PAU's Food Industry Center. PAU committed 13 crore rupees (approximately \$3,200,000) for development of the Center. Plans were completed for a new Food Industry Center Building and equipment required for microbiology and food chemistry labs was purchased. These labs are important outreach components of the Center. Two individuals from related departments were transferred to the Center to handle activities of the labs.

Four members of the PAU Food Industry Center team undertook one month internships at the OSU Food Industry Center (FIC). Hosted by Valente Alvarez, Director of the Center, they included:

- Amarjeet Kaur, Cereals and Grains
- K.S. Minhas, Dairy and Meat Products
- Poonam Sachdev, Fruits and Vegetables
- Usha Bajwa, Dairy Products

While on the OSU campus, the scientists worked with FIC personnel in their respective laboratories, visited agribusinesses in Ohio, participated in short courses offered by the OSU FIC, and interacted with faculty and staff of the OSU Department of Food Science and Technology.

G.S. Chahal, PAU Co-PI for the project, and David Hansen, IPA, participated in the Annual Synergy Conference in Washington, D.C. which was hosted by the Higher Education in Development Office that is responsible for the grant. While at the Conference, they participated in panels during which they discussed the project objectives and accomplishments.

International Seed Biology Project

The Horticulture & Crop Science Seed Biology Program continued to promote collaborative research and outreach activities with several international partner institutions and scientists. Funded by several major grants and awards, they continued to focus on expanding relationships with key partner institutions including the University of Sao Paulo in Brazil, the Catholic University in Santiago, Chile, and to a lesser extent, the Chinese Agricultural University. Participants on the OSU campus

included Miller McDonald, Andy Evans and Mark Bennett, Horticulture & Crop Sciences, and David Tay, Ornamental Plant Germplasm Center. A joint M.S. degree program in Seed Technology was prepared by this leadership group and a course offered to students at the three locations by faculty from each of the locations through teleconference facilities. In addition, a course was programmed to be offered during the initial months of 2008. Tara VanToai, USDA Visiting Scientist, worked with the leadership team to expand the program to include the Hanoi Agricultural University in Viet Nam. Agreement was reached to hold a workshop at that site in 2008 and a proposal to support incorporation of Viet Nam into the network was initiated with participation by Vietnamese colleagues. A proposal for additional USDA funding was prepared as was a Memorandum of Agreement among the participating institutions.

Korean Rural Development Administration

A five day training program for 18 Extension Officers affiliated with the Korean Rural Development Administration was held June 24 – June 29, 2007. The purpose of this program was to expose members of the Korean Rural Development Administration to the methods and practices used by the Ohio State University Extension (OSUE) to implement community based development activities. This program was organized by Mark Erbaugh and Pat Rigby in the IPA Office in cooperation with Ken Martin, OSUE.

Dean Moser provided the welcome address to the group. Program modules were provided by Mark Erbaugh, Ken Martin, Brian McClain, Jeff King, Marilyn Rabe, Susan Colbert, Greg Davis, Alice Black, Jill Clark, Steve Baertsche, and Howard Siegestrest from OSUE, and Bob Furbee and Rob Luikart, Communications and Technology. Field trips were taken to the Extension Center and OARDC in Wooster and the South Centers where programs were provided by Jim Chatfield, Punam Ohri Vachaspati, John Congolese, Fred Michel and Joe Kovach in Wooster; and Tom Worley, Julie Fox, David Boulay, Jerry Driggs, Wayne Lewis, Brad Bergefurd, Shaun Wright and Geoff Wallat in Piketon.



Translation for the program was provided by two OSU graduate students, Mr. Gwangseog Hong and Mr. Changkook Kim.

Wuhan Water Resources Project

As part of a more comprehensive program between Wuhan University, Hubei Province, China and The Ohio State University, Larry Brown, FABE, is working with counterparts at the sister institution to develop environmentally friendly soil and water projects. In May, a delegation from Wuhan consisting of Mao Zhi, Xiugui Wang and Zheng Xu visited OSU and met with Larry to discuss this project entitled "Wetland Reservoir Sub-Irrigation Systems (WRSIS)." Leadership on it is given by USDA/ARS. A modified version of this project has been implemented by counterparts on two sites in China.

While on campus, the delegation also met with officials in Central Administration, including Dieter Wanner, Office of International Affairs, David Hansen, IPA Office, and other faculty members in FAES. Larry Brown and others have visited Wuhan University on several occasions as part of this project.

Pakistan Higher Education Commission Visiting Scholars Program

OSU received several visiting scholars from Pakistan under a program with the Higher Education Commission in Islamabad. Muhammad Abid worked in the lab of Dr. Rattan Lal, Soil Science, conducting analyses on soils. Farkhanda Manzoor worked with Susan Jones, Entomology. Latif Rizwan joined Dr. Lal's research team in fall 2007 to work on soil quality and water management issues. In addition, three scholars from Pakistan worked with Rafiq Islam, research scientist at the OARDC Research Center in Piketon: Irfan Aziz focused on global warming and carbon sequestration; Niaz Ahmed focused on micronutrient effects of boron and zinc on cotton; and Muhammed Mubashir Quireshi focused on nitrogen pollution of public water, soil and vegetables and the effect on public health.



University of Sao Paulo: Escola Superior de Agricultura "Luiz de Queiroz"

An active exchange program was maintained with ESALQ in Piracicaba, Brazil. This partnership dates back to the early 1960s. Antonio Roque Dechen, the new Dean at ESALQ, visited the OSU campus to reaffirm our mutual commitment to continue research and student exchange programs. He was accompanied by Raul Machado who has been an important contributor to this relationship over the past five years. Dean Dechen was hosted by Bobby Moser, Dean of CFAES, David Hansen, IPA Director, and Jerry Ladman. While on campus they visited the OARDC campus in Wooster and met with Steve Slack, Director, as well as several faculty with active research programs related to ESALQ. Discussions included the OSU Alpha Zeta study abroad program which annually sends a group of students to ESALQ during winter quarter, the collaborative program in international seed technology, and the joint graduate program in molecular and cellular biology. James Connors, who will lead

the Alpha Zeta program to ESALQ in winter 2008, met with the visitors. Julio Marco Filho, coordinator of the seed technology program at ESALQ, also visited the campus to help coordinate this program. Several members of the Plant Molecular Biology and Biotechnology program at OSU, including its coordinator, Bob Tabita, and Prof. Richard Sayre, visited the ESALQ campus as part of the exchange during 2007.

Collaborative Program with Hebrew University

Collaboration between the Faculty of Agricultural, Food and Environmental Quality, Hebrew University, and CFAES continued during 2007 as part of a broader program of bi-national trade and technology development between Ohio and Israel. This initiative includes participation by the Ohio Department of Agriculture, the OSU Extension, and the Ohio Agricultural Research and Development Center. It is funded in part through a grant from the U.S. Department of Agriculture and has been on-going for several years. Support is directly provided to the Negev Foundation in Cleveland, which is headed by Samuel Hoenig. Several OSU scientists have been engaged in collaborative research over the year, including Dr. Yael Vodovotz, Food Science and Technology, and Dr. Fernando Silveira, Veterinary Preventative Medicine.

USDA SPS Program with Veterinary Medicine

The OSU faculty of Veterinary Medicine hosted a Cochran delegation from Africa supported through the USDA/FAS. The program was designed to increase their knowledge of issues dealing with phytosanitary issues related to the export of meat products from their home nations. Participants in this program included:

- Bempon Obeng, Veterinary Officer, Ghana.
- Ahmed Zahran, Veterinarian, Central Administration of Vet Quarantine, Egypt.
- Albertina Shilongo, Ministry of Agriculture, Namibia.
- Wanderema Wesonga, Ministry of Agriculture, Uganda.

While at OSU they undertook an intensive two week program of class instruction dealing with sanitary and meat production and distribution issues and visited state offices, including the Ohio Department of Agriculture. Faculty members who participated in the training program include Fernando Silveira, Veterinary Preventative Medicine who coordinated the activities; William Saville, Armando Hoet, and Wondwossen Gebreyes, also in Veterinary Preventative Medicine; and Mo Saif, Director, and Jeff LeJeune, at OARDC's Food Animal Health Research Program (FAHRP).

Visiting Borlaug Scholars

IPA staff learned that a 2006 Borlaug scholar, Rose Prabin Kingsly Ambrose from India, returned to the U.S. in 2007 to pursue his PhD in Agricultural and Biological Engineering at Purdue University. During his OSU program which addressed high pressure sterilization processes, Dr. V.M. Balasubramaniam, Food Science &

Technology, served as his mentor. A joint article by Kingsly, Balasubramaniam, and N.K. Rastogi entitled "Effect of high pressure processing on texture and drying behavior of pineapple" has been accepted for publication in the *Journal of Food Process Engineering*.

CFAES hosted five Borlaug Scholars for five weeks during fall quarter 2007. This is part of a program being managed by USDA/FAS in honor of Dr. Norman Borlaug, Nobel Peace Prize Laureate. The scholars and their mentors were:

- Biljana Kusmanovska, Macedonia, worked with Sally Miller, Plant Pathology, OARDC, Wooster, on pathogens impacting tomato production.
- Nikola Tomic, Serbia, worked primarily with Lynn Knipe, Food and Animal Sciences, and also with Herb Ockerman, Animal Sciences, in the area of meat production. He was located on the Columbus campus.
- Izedin Goga, Kosovo, worked with Mo Saif and his research group at the Food, Animal Health Research Center, OARDC, Wooster, on molecular technologies for diagnosis of animal diseases.
- Elizabeta Miskoska Milevska, Macedonia, worked with David Francis, Hort & Crop Sciences, OARDC, Wooster, on the application of molecular marking techniques to identify and control pathologies affecting tomatoes.
- Ana Nikolic, Macedonia, worked with Rich Pratt, Hort & Crop Sciences, OARDC, and Peg Redinbaugh, USDA/ARS in Wooster, on molecular marking techniques for maize breeding.



As part of their program while at OSU, the Borlaug scholars attended the World Food Prize International Symposium in Des Moines, Iowa.

During 2007, three OSU faculty members who served as hosts for the 2006 Borlaug Scholars traveled to India to visit their counterparts and to work with them on collaborative research topics. These included Dr. Bala Balasubramaniam, Food Science and Technology, who visited Rose Prabin Kingsly Ambrose, in Punjab, India, and Sudhir Sastry and Gonul Kaletunc, FABE, who visited Anupama Singh, G.B. Pant Agricultural University. We anticipate that Fred Michel, who served as the host for

Gurvinder S. Kochar from Punjab Agricultural University in May of this year, will visit him during 2008.

Chinese Academy of Agricultural Sciences

OSU continued its collaboration with the Chinese Academy of Agricultural Sciences during the year. As part of this interaction, CFAES continued its study abroad program at CAAS. During summer 2007, Karen Mancl, FABE, served as the resident director for a class of 16 students in the program.



USDA SPS Faculty Exchange Program

The African Sanitary and Phytosanitary Faculty Exchange Program was designed to strengthen the capacity of African plant health authorities to implement effective programs and policies dealing with sanitary and phytosanitary issues and was supported by USDA/FAS/ICD. The project was managed by Mark Erbaugh and Pat Rigby, IPA, with special technical assistance coming from Mike Boehm, Department Chair, Plant Pathology. The three faculty from Africa who participated in this 4.5 month program were:



- Baone Kwerepe, Botswana College of Agriculture, Gaborone, Botswana
- Eric Cornelius, University of Ghana, Legon, Ghana
- Joseph Honger, University of Ghana, Legon, Ghana

The first week of the course was hosted by Entomology faculty including Dave Shetlar, Barb Bloetscher, and Celeste Welty. Jamie Cano, HCRD, also presented a program on curriculum development. The following three weeks were spent at OARDC in Wooster where the scholars interacted with Luis Canas, Dan Hermes, and Joe Kovach, Entomology; Anne Dorrance, Plant Pathology; and Parwinder Grewal, Nematology, before participating in an intensive two-week short course on plant disease diagnostics led by Sally Miller, Plant Pathology. Upon their return to the Columbus Campus, Mike Boehm provided a program that exposed them to all aspects of plant disease characterization and management.



Hunan Agricultural University Collaboration

Dr. Guo-liang Wang, Plant Pathology, is leading an initiative to develop close collaboration between CFAES and the Hunan Agricultural University (HAU). During the year, OSU hosted a delegation from HAU which was led by Quingming Zhou, President. He was accompanied by Linda Yue, Vice Dean of the International

College. While on the OSU campus they signed an agreement with Dean Bobby Moser of CFAES emphasizing the development of collaborative research and exchange activities with a particular emphasis on creation of a Plant Science Institute at the Hunan Agricultural University. These activities would involve researchers as well as graduate and undergraduate students.

Higher Education Partnerships for African Development (HEPAD)

The *Higher Education Partnerships for African Development (HEPAD): Long-term Training for Regional Agricultural Development in East Africa: Kenya, Tanzania, and Uganda Project* is funded by USAID through the Higher Education for Development (HED) organization. The Ohio State University, the lead institution, is partnered with Michigan State University. Mark Erbaugh, IPA, is the partnership Director. Activities in the region were coordinated by the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) which is coordinated by OSU alumni Professor Adipala Ekwamu. OSU technical advisors to the project include David Kraybill and Donald Larson, AEDE. The specific objectives of the project are to provide long-term graduate degree training opportunities for faculty from East Africa, to provide short-term faculty development opportunities, and to strengthen linkages between private sector agribusinesses and Faculties of Agriculture.

Six students from the three countries in East Africa completed their sandwich degree course work at OSU and five returned home to conduct their research in-country. Three of the students were granted Fellowships by the OSU Graduate School and three were provided with departmental assistantships to complete their programs and receive OSU degrees. The following faculty served as advisors to these students: Mark Bennett and Dan Struve from Horticulture and Crop Science; Larry Brown, FABE; Joe Ottobre, Animal Science; and Dave Kraybill and Don Larson, AEDE. OSU faculty Rich Pratt, Mark Bennett, Matt Kleinhenz, Dan Struve, Don Larson, Larry Brown and Dave Kraybill traveled to the region to advise graduate students on their research and to provide Departmental Seminars.

Mark Erbaugh, Don Larson, and Dave Kraybill worked with regional agribusiness faculty to develop agribusiness case studies and then demonstrated their usage in the classroom. Dave Kraybill also developed teaching materials and aides and provided a workshop at Makerere University for six MS-level and three PhD-level econometric lecturers from the three universities on *Policy-Relevant Econometrics for*



Sub-Saharan Africa: Econometrics Applications for Use in Graduate-Level Teaching in African Universities.

Dean I. Koskey from Egerton University in Kenya, Dean N. Mdoe from Sokoine University of Agriculture in Tanzania, and Dean M. Bekunda from Makerere University in Uganda came to the US to attend the annual HED meetings in Washington, D.C. and visit the OSU and MSU campuses.

In total, 510 individuals at the three campuses participated in seminars, workshops, internships, and non-degree training programs, and 12 persons completed course work training at OSU and MSU.

Visit by President of Bangladesh

The Hon. Iajuddin Ahmed, President of Bangladesh, together with a delegation of nine individuals including M. Humayun Kabir, Bangladesh Ambassador to the U.S., visited OSU for a period of four days in November 2007. This visit was a result of an invitation from Prof. Rattan Lal, SENR, who served as President of the Soil Science Society of America during the year.

The purpose of the visit was to explore collaborative ties between OSU and Bangladesh universities in areas related to the Carbon, Water and Climate Targeted Program in Excellence at OSU. While on campus, the President met with the OSU President, Gordon Gee and Provost Joe Alutto, as well as with Bobby Moser, Vice President for Agricultural Administration, and Bob McGrath, Vice President for Research. A number of collaborative activities were discussed including faculty exchanges related to research in this area, joint workshops on these topics, student exchanges, and exchanges of library materials.

The Bangladesh delegation visited the OARDC campus in Wooster where they met with Dr. Steve Slack, OARDC Director, as well as with a number of CFAES researchers working on related research problems. Presentations were made by Fred Michel, Harold Keener and Warren Dick on soil health and composting. The delegation was also able to attend a home football game against the University of Wisconsin while on campus.



Egyptian Institutional Linkages: Agricultural Exports & Rural Income (AERI)

The project, *Institutional Linkages Activity of the Egyptian Agricultural Exports and Rural Income*, was implemented by the Midwest Universities Consortium for International Activities (MUCIA) and led by the University of Illinois (Burt Swanson). OSU/CFAES is a partner institution and subcontractor along with Purdue University, the

University of Minnesota, and the University of Florida. This project was completed during 2007. It involved work with three partner Egyptian Universities (Cairo University, Assuit University, and Minia University) to build capacity of graduates, to create international public-private linkages, and to strengthen biotechnology research to help transform and link Egyptian agriculture to the global economy. At OSU, the subcontract was managed by Mark Erbaugh, IPA. CFAES faculty members who participated during the past year include David Hahn, AEDE, and Jamie Cano, HCRD.

Collaboration with Cavite State University - Philippines

Herb Ockerman, Animal Sciences, and David Hansen, IPA, visited Cavite State University in late spring to inaugurate a hall in the university library named after them in honor of a shipment of 40,000 books and journals which were donated by the central Ohio community. Subsequent to this shipment, another one was made consisting of 60,000 volumes. While in the Philippines, they were hosted by Ruperto Sangalang, President of Cavite State University, a graduate of CFAES. Opportunities for institutional collaboration were explored during this visit, including sandwich degree programs for staff of that university.

CEDAF Dominican Republic Project

CFAES continued to maintain ties with this partner institution in the Dominican Republic. Danis Feliz-Perez obtained his PhD in Food Science and returned to the Dominican Republic. A program designed to offer HACCP training at the ISA University in Santiago, involving participation by Danis Feliz-Perez and Dr. Valente Alvarez, Director of the OSU Food Industries Center, was discussed. During a visit to the Dominican Republic David Hansen met with CEDAF, USAID, USDA and ISA University officials to discuss further areas of collaboration. Initial discussions were held regarding a potential new PhD training program to be funded by the Dominican private sector and the Dominican government in coordination with the Latin American Scholarship Program for American Universities.

World Food Day Celebration

In October, CFAES provided access to students and faculty to view the World Food Day Celebration via video conference and to participate in the dialogue which ensued. The theme this year was, "The Right to Food: Make it Happen."

"The choice of The Right to Food as the theme for the 2007 World Food Day demonstrates increasing recognition of the important role of human rights in eradicating hunger and poverty . . . The right to food is a universal right and ensuring this right is a moral imperative. It means that every person must have access at all times to food, or to means for the procurement of food, that is sufficient in quality, quantity and variety to meet their needs, is free from harmful substances, and is acceptable to their culture" (World Food Day brochure).



New Agreements

Several new agreements were signed between CFAES and counterpart institutions around the world during 2007. They are designed to facilitate additional program development.

Among them are:

University of Arid Agriculture – Pakistan

The Agrarian Faculty, Peoples Friendship University – Russia

University of Botswana

University of Iceland

Agricultural University/Soil Conservation Service – Iceland

Hunan Agricultural University – China

East Normal University – Shanghai, China

Council for Studying Productive Forces, National Academy of Science - Ukraine