



Office of International Programs *Monthly Newsletter*

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MEAS hosts informational discussion to encourage faculty and graduate students to get involved



Image courtesy of Andrea Bohn: Future Farmers of Africa; little boy near Kisumu, Kenya proudly holding up freshly harvested corn.

Nearly 40 faculty, staff, and students attended an informational discussion on December 10, 2012, to learn about new developments and opportunities in the Modernizing Extension and Advisory Services (MEAS) project in the College of ACES. Faculty and staff were encouraged to contemplate specific ways that they and their graduate students could get involved in MEAS, a 5-year, \$9 million USAID-funded project led by the University of Illinois.

In its third year, MEAS works to define and disseminate good practice strategies and approaches to establishing efficient, effective, and financially sustainable rural extension and advisory service systems in Africa, Asia, the Middle East, Eastern Europe, and Central America.

The MEAS team (Paul McNamara, Burt Swanson, Andrea Bohn, Oliver Ferguson, and Joyous Tata) provided an update on MEAS' accomplishments thus far and planned future activities.

MEAS Director Dr. Paul McNamara said, "The goal of this discussion is not only to provide update on MEAS progress, but also to encourage other faculty, staff, and students who are passionate about these types of activities to get them involved."

To date, MEAS has conducted comprehensive extension assessments in 10 countries: Mali, Bangladesh, Nepal, Tajikistan, Egypt, Rwanda, Liberia, Malawi, Ghana, and India (Bihar). Similar efforts are also beginning in Iraq, led by the International Center for Agricultural Research in the Dry Areas (ICARDA).

MEAS Senior Advisor Dr. Burt Swanson talked specifically about the assessments he conducted in Tajikistan and Bangladesh during 2011-12. As a result of these assessments, USAID has issued requests for additional work in these countries. The most recent addition to the MEAS team, Research Associate Joyous Tata, talked about the Farmbook software, a notebook/table PC delivery tool for extension training programs that farmers can use for business planning, profitability analysis, crop monitoring, and overall farm management.

More information on MEAS is available on the project's website at <https://sites.google.com/a/meas-extension.org/public/>. Upcoming events for MEAS include a technical inception workshop in Erbil, Iraq in January, a second Global Learning Event on Extension in Washington, D.C. in June 2013, and an Extension Training Institute, also during summer 2013.

Loor's sabbatical at Italy's Catholic University of Piacenza advances dairy cow nutrition



Loor and Bertoni

As part of a longstanding international collaboration to further the health and nutrition of dairy cows, specifically around the time of calving, Dr. Juan Loor, an associate professor of animal sciences in the College of ACES, spent fall semester 2012 on sabbatical leave in Piacenza, Italy working with Dr. Giuseppe Bertoni, recently retired director of

the Faculty of Agriculture at the Catholic University of Piacenza.

From Loor's point of view, this collaboration has been extremely useful because of Piacenza's extensive knowledge of physiology of cows at calving. Combining Loor's work in nutrigenomics with Bertoni's work on physiology has resulted in a more holistic view of the cow during the transition period (-21 to 21 days pre- to post-calving).

"I have always favored collaborations and realized several years ago that Dr. Bertoni's group possessed unique capabilities and expertise in transition cow physiology. For example, over the past twenty years or longer, they have spent much time and effort developing and validating blood assays (protocols) to assess the immuno-physiological status of cows, which they use as a marker of the health and well-being. Likewise, we have been able to contribute to this field through extensive molecular analysis in what has become a constantly evolving collaboration."

Through gained understanding of the response of cows to specific nutrition and other environmental factors, the collaborative work will promote healthier practices for dairy cows during their late pregnancy as well as in the first weeks post-partum.

Loor has also mentored Trevisi in lab management, and the two have set-up plans to coordinate some of their future lab meetings via Skype, which will allow their current students and researchers to make connections. Other possible future initiatives include a summer collaborative graduate course. Piacenza is also extremely interested in more faculty and student exchange with ACES.

Scientific Mobility Program brings dozens of Brazilian students to UIUC and ACES

The College of ACES has a long history of collaboration and exchange with Brazilian universities, and the Scientific Mobility Program (SMP), formerly known as the Science without Borders program, is now bringing even more Brazilian students to ACES. With the goal of strengthening and expanding knowledge specifically in areas of science, technology, engineering, and mathematics, the Brazilian federal government initiated the SMP Program in 2011. As many as 101,000 Brazilian students and post-docs will take advantage of this program to study abroad at the world's best universities, including the University of Illinois at Urbana-Champaign. As part of this program, at least 25 Brazilian undergraduates have studied in ACES since spring 2012, and dozens more undergraduates, graduates, and postdocs are enrolled in other colleges at UIUC during the academic year 2012-2013.

Thiago Massao Inagaki, an undergraduate in the SMP program, explains how a new perspective expands his education in crop sciences, "The crops we study here at Illinois, corn, soybeans, and wheat, are the same we study in Brazil. However, in Brazil, we plant field crops all year long because the temperature allows the cultivation in all the seasons. So, here in Illinois, I am learning different techniques for crop management in another climate, for example, using tillage to control weeds and diseases because the Brazilian soil requires a no tillage system."

Inagaki notes another difference in the educational systems. "As an undergraduate in Brazil, I might take 10 classes simultaneously, which leaves little time for other activities but does allow me more diversity in my studies as opposed to here where I take five classes all centered around crop sciences but have more time for other activities."

The Brazilian government provides primary funding for SMP as well as selects students for the program based on a stringent application process. Undergraduate students are matched with universities based on their fields of study, but the host institutions make the final decision on whether to admit specific students. The undergraduate scholarship is good for up to one year of study, and then the students return to Brazil to complete their degrees. Graduate students can obtain scholarships for a year of study on a "sandwich scholarship," after which they return to Brazil to complete their Ph.D. The program also funds up to four years of tuition for Brazilian Ph.D. students to study at universities outside of Brazil. Ph.D. students must be accepted to a UIUC department in order to receive a scholarship.

Dr. Mary Arends-Kuenning, associate professor in the Department of Agriculture and Consumer Economics, serves as director of the Lemann Institute for Brazilian Studies at UIUC and a liaison between UIUC and the government of Brazil. She notes that Brazilian universities are very eager to work with UIUC. "The program is already leading to collaborations between faculty members at UIUC and Brazilian professors. It is exciting to see these linkages created and strengthened," adds Arends-Kuenning. She noted that plans are already underway to bring up to five funded doctoral students from one Brazilian university into agricultural and biological engineering and expects to see similar new opportunities for faculty exchanges.

The success of the Science without Borders Program in ACES would not have been possible without the dedication of ACES faculty and staff. Meredith Blumthal, director of the education abroad programs, works with other staff on campus to place the students and help them feel at home at UIUC. Dr. Richard Gates, professor in the Department of Agricultural and Biological Engineering, started exchange programs with Brazilian universities in 2009 as part of a Brazilian Education Ministry (CAPES)/ Fund for the Improvement of Post-Secondary Education (FIPSE) grant. This program provides opportunity for Illinois students to study in Brazil, and to date students from agricultural and biological engineering, technical systems management, and natural resources and environmental sciences have participated. Gates interviews students in Brazil and recruits them to come to UIUC. "Dr. Gates and I started working to bring the Scientific Mobility Program to campus in the fall of 2011, and it's great to finally see all of our efforts come to fruition for ACES and the campus," said Blumthal. The Lemann Institute for Brazilian Studies is providing information about the Science without Borders Program at UIUC to prospective Brazilian students and to UIUC faculty and staff. The Lemann Institute website is <http://www.clacs.illinois.edu/lemann/>.

Hartman hosts visiting scholar from Brazil's EMBRAPA to study soybean stem rot

As the world's two largest producers of soybeans, the United States and Brazil share some of the same production problems and challenges, including a disease known as Sclerotinia stem rot, also known as white mold, caused by the fungus *Sclerotinia sclerotiorum*. Severe epidemics of Sclerotinia stem rot cause significant yield losses, so both countries are eager to better understand and manage this disease. To this end, Dr. Claudia Godoy, a researcher from EMBRAPA in Brazil, is spending the 2012-2013 academic year in ACES as a visiting scholar. EMBRAPA is the "Empresa Brasileira de Pesquisa Agropecuária," or Brazilian Enterprise for Agricultural Research. She is hosted by Dr. Glen Hartman, professor in the Department of Crop Sciences and a research plant pathologist with the USDA Agricultural Research Service.

Godoy and Hartman are conducting several experiments to better understand the soybean-fungus interaction. They will evaluate the effects of temperature on growth and reproduction of *Sclerotinia sclerotiorum*, and determine if various temperatures alter infection and colonization of soybeans. This study utilizes fungal cultures from various locations in both the US and Brazil to make these comparisons. They hope to determine if ecotypes, sub-groups of the pathogen that have different capacities to perform in different environments, occur in one or both countries. Studies like this have implications on climate change and on the development of resistant soybean cultivars.