

# **TEXAS A&M AGRILIFE**

## **INTERNATIONAL RESEARCH AND DEVELOPMENT TASK FORCE REPORT**

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TEXAS A&M AGRILIFE RESEARCH-LUBBOCK

# Texas A&M AgriLife International Research and Development Task Force Report

## BACKGROUND

Texas is a major agricultural producer and exporter, and has a long history in international engagement, including the legacy of Dr. Norman Borlaug. There is a significant presence of international engagement in the Texas A&M University, College of Agricultural and Life Sciences (COALS), Texas A&M AgriLife Research and Texas A&M AgriLife Extension Service, but these activities could be better coordinated, encouraged and supported. Texas A&M AgriLife's funding portfolio in international research and extension could be strengthened. A task force was formed and charged with reviewing current Texas A&M AgriLife international activities and generating an options report regarding i) mechanisms to increase the international portfolio of COALS, Texas A&M AgriLife Research and Texas A&M AgriLife Extension Service, ii) assessment of future opportunities and faculty needs to engage in international research and development, and iii) the ideal administrative model and coordination of international activities. The *Task Force* consisted of 14 members, representing various units within the College and Texas A&M AgriLife. Members included Elsa Murano, Vikash Mishra, Heather Simmons, Daniel Leskovar, Juliana Rangel, Tim Davis, Russell Cross, Jeff Gwyn, Ky Pohler, Muthukumar Bagavathiannan, Kirk Winemiller, Jim Mazurkiewicz, Elizabeth Parker, and Megha Parajulee (Chair).

A survey was implemented by the *Task Force* to seek input from faculty across Texas A&M AgriLife. A detailed questionnaire was prepared to capture the Texas A&M AgriLife faculty engagement in international research, teaching, and developmental activities during the last six years and continuing. A total of 112 individuals responded to the survey, representing all 15 academic departments and Texas A&M AgriLife agencies.

## GOALS AND OBJECTIVES

The *Task Force* conducted several brainstorming sessions and identified three broad goals of the Texas A&M AgriLife international research and development program to increase the international portfolio and incentivize AgriLife units and faculty. Several specific objectives and approaches have been identified to achieve these goals as enumerated below:

- Goal 1. To expand the international scope of our research and outreach activities as described in AgriLife's Strategic Plan.
  - a. Engage our AgriLife faculty and staff in analyzing the potential for international opportunities in their field of study in specific regions and/or countries.
  - b. Encourage renowned international agriculture & life science researchers to connect with our faculty.
  - c. Create incentives for faculty and staff to engage in international activities (research, service, teaching, etc.), including reputational and professional enhancement, promotion, opportunity for sabbaticals, support for travel through VC's office, etc.

- d. Communicate the benefits (return-on-investment) of international activities conducted by our faculty and staff to Texas and the U.S. (i.e., economics, scientific advancement, pest prevention, mitigating illegal migration, peacebuilding, sustainable global environment, etc.).

Goal 2. To enhance our competitiveness for international funding opportunities.

- a. Enhance relationships, joint projects, and collaborations with organizations and institutions working globally as well as in target regions or countries by actively participating with them in meetings, workshops, and scoping visits.
- b. Proactively engage with funding entities (i.e., USAID, USDA, Foundations, international development banks, private industry, philanthropists, etc.) through periodic visits to their offices.
- c. Enhance awareness of the impact of our international research activities through popular articles, mainstream media, social media, websites, etc.
- d. Engage and identify opportunities for faculty (broad programs as well as targeted ones based on expertise); establish sustained programs with Foundations-TAMU partnerships aimed at promoting and rewarding faculty and student exchanges, e.g., with Fulbright, Cochran, Gates, or through bilateral agreements with key institutions on topics that are both applied translational as well as basic research (e.g., with some European programs).

Goal 3. To improve the efficiency of administration and coordination of our international activities.

- a. Provide specific staff within AgriLife Administration to facilitate efficient development of contracts and grants with international funding organizations (includes reducing bureaucracy).
- b. Develop a process whereby opportunities are tracked for the efficient and effective building of teams that increases coordination vs. internal competition.
- c. Establish a process for tracking and managing relationships with international partners and funding organizations.

### **CURRENT SITUATION - SURVEY OUTCOME**

Despite some shortcomings, the survey provided a significant amount of valuable information in developing a report to address the charge given to the *Task Force*. It clearly informed the current extent/scope of international engagement across Texas A&M AgriLife. Several key findings of the survey are provided below to illustrate the extent of international engagement and major gaps for potential opportunities for future engagement.

- The highest % of responders involved in international activities are within the Plant-Ag Sciences, with the majority being at the level of professor (50%) followed by those involved in teaching (25%).
- About 50% of the faculty respondents have either participated or been approached for participation in international activities led by the Borlaug Institute.

- Respondents showed interest in collaborating/engaging in any region of the world (Latin America and Caribbean 25%, Europe 17%, Middle East and North Africa 8%, Sub-Saharan Africa 14%, Southeast Asia 14%, Central Asia 10%, Australia and Oceania 12%). Faculty are engaged in 44 countries with emphasis on Brazil, China, Mexico, South Africa, Germany, and United Kingdom.
- About 50% of the faculty respondents are engaged in international activities that are not captured in agreements.
- Lack of funding (28%), lack of time (18%), lack of incentive or credit received (15%), and lack of exposure/knowledge to opportunities (15%) were the major roadblocks that have hindered/prevented participation in international activities.
- The major emphasis is in Plant Agriculture and Life Sciences, followed by Animal Sciences, Natural Resources and Conservation, and Entomology.
- About 67% of the units engage with international visiting scholars/students/collaborators, the majority being graduate students and faculty, followed by postdocs-research associates.
- The major countries contributing to these activities (including exchanges) are China, Brazil, India, Mexico, Pakistan, Colombia, Turkey, Nepal, Taiwan, Ghana, Egypt, Argentina, Spain and Japan.
- Since 2016, a very low percentage (14%) have participated in any Faculty Exchange Programs or Faculty Development Programs (FDLs) internationally.
- From those, participation included development grants for projects or assisting in grant writing; trainings in specific areas and countries; engagement in specialized thematic research; curricula development; participation in lectures and short-courses; trainings in specific areas with emphasis on developing or under-developed countries (typically sponsored by either USAID, International University, Foundations, Intergovernmental organizations, country of origin, private enterprises); assistance in symposia; consulting; and activities leading to economic development.
- In terms of units promoting international engagement, 55% of the units helped facilitate or engage in student-based study abroad courses/experiences/programs, internships, and/or fellowships. However, there was not a clear trend over time, with, e.g., most activities done in 2016, much less in the following two years and as expected minimum during 2019-2021 due to COVID19.
- Units have a low number of experts (16%) that could serve on US Government delegations to international standard setting bodies, international scientific committees/working groups, etc. Some activities began in 2016 and are expected to end in five to six years (2021-2022), while others are more recent. Reducing this gap by increasing the number of experts could help champion the promotion of international exchange activities in various organizations.
- Other international activities of faculty include providing seminars and being in advisory committees.

## **ASSESSMENT OF FUTURE OPPORTUNITIES AND STRATEGIES FOR ENHANCED FACULTY ENGAGEMENT IN INTERNATIONAL R&D ACTIVITIES**

Extensive arrays of Texas A&M AgriLife's international R&D activities are best grouped into three broad categories: A) Individual faculty (investigator) initiated, B) Institutional international development projects (e.g., The Borlaug Institute), and C) Academic exchanges (e.g., sabbatical, student and faculty exchanges, etc.). Assessment of future opportunities and strategies for enhanced faculty engagement in international activities are discussed separately under each category.

### **A. INVESTIGATOR-INITIATED INTERNATIONAL COLLABORATIONS**

Many AgriLife faculty members and students are involved in international research and academic exchanges. These international activities build collaborative research networks and elevate international recognition for individuals and institutions while advancing science and applications of science to advance agricultural production, economics, and sustainability as well as natural resource management and human health. These are tangible benefits. International research and educational activities also expose participants to diverse perspectives and different cultures that enrich the academic environment for all involved. International research collaborations involve a bidirectional flow of information and expertise that contributes to solving local, regional, and global challenges. Examples include mitigating impacts from climate change on natural and built systems; enhancing productivity and profitability of agricultural commodities; developing sustainable management of water and other natural resources; improved food security and nutrition; and advancing biodiversity and ecological research.

Before embarking on international academic and research activities, faculty members and students should understand associated benefits as well as unique challenges. The following sections summarize these benefits and challenges, which are then followed by a section describing examples of international collaborative opportunities.

#### **Benefits of Engaging in International Research and Education**

Professional Relationships. Research and education in all fields of study are increasingly collaborative and international collaborations allow professionals to expand their networks globally. International exchanges and research projects also provide opportunities to identify and recruit talented international graduate students. International collaboration with academic peers, students and researchers at institutes and agencies allow researchers, instructors, and students to gain broader perspectives about agricultural, natural resource and environmental challenges and scientific approaches applied in other regions of the world. To experience different regions, climates, ecosystems, cultures, languages and socio-economic-political circumstances can be deeply rewarding both personally and professionally.

International Reputation. Promotion in COALS/AgriLife requires that candidates show evidence of an international reputation in their area of expertise. This is particularly important for promotion to Professor. Promotion and tenure committees seek evidence that candidates for promotion have provided evidence of an international reputation in their area of expertise. Involvement in international research and educational exchanges demonstrates recognition and demand by international peers. Invitations to collaborate in international research or to offer workshops or courses in a foreign country is undeniable evidence of this demand. Additional evidence of this

demand is hosting and collaborating with international peers and students who request to come to Texas A&M on exchange visits.

Opportunity to Make Contributions. Compared to national research, international research and education often has greater and more immediate impact on people's lives and prospects for a sustainable future. This is especially the case for research conducted in developing countries where research and educational infrastructure and human resources are lacking. Many faculty members and students involved in international research or educational exchanges are motivated by the potential to make rapid, tangible impact. Moreover, some research questions in the life sciences and agriculture fields require comparative studies conducted across geographic regions, which requires international collaborations that yield datasets and analyses at spatial scales for robust inferences and broader perspectives.

Improved Teaching Capacity. TAMU students benefit from being taught by instructors who have a global perspective related to their area of expertise. Instructors with experience in international research can include examples that give students not only a better global perspective, but often a deeper understanding of the subject matter. International research experiences allow instructors to present personal accounts and photographs to make lectures more interesting and relevant for students.

Opportunities to Develop Study Abroad and Other High-Impact Learning Experiences. In recent years, TAMU, like most institutions of higher education, has promoted high impact learning experiences for students at all levels. Faculty members involved in international research are often in a good position to develop high-impact activities such as study abroad courses or internships for students. These activities can be highly rewarding for both faculty members and students as well as local collaborators. Many students describe these international experiences as "life changing."

### **Challenges to Engaging in International Activities**

Domestic and Institutional Administrative Hurdles. US universities are increasingly risk averse, and international research and educational activities may be perceived as having higher risks than local and national activities. University and agency administrations sometimes have limited international experience which limits perception of risks. In recent decades, the TAMU System has increased administrative requirements for approval of international research and educational activities. This is one of the major hurdles that hinders motivation for faculty members, research staff and students to propose international research initiatives. The administration of the university system should periodically review required trainings, documentation, administrative approval chains and other requirements for international activities with the goal of covering risk/compliance needs while minimizing the burden on researchers, educators and students. The proliferation of burdensome administrative requirements now poses a significant obstacle for those seeking to undertake international research and educational activities at TAMU. This also is the case for those seeking to invite international colleagues and students to our campus for professional exchanges.

International Politics and Bureaucratic Hurdles. Anyone planning travel to foreign countries understands there are passport and visa requirements. It also is imperative to review US State Department travel advisories for countries. However, for those engaged in research collaborations, there sometimes are legal issues, bureaucratic requirements and logistical challenges involved in setting up and conducting projects in a foreign country. In order to avoid delays and other problems

in program activities, international work requires knowledge of the foreign country's history, current politics, governmental agencies and regulations regarding permits. Assistance from in-country collaborators is essential for navigating institutional bureaucracy. If biological specimens or material need to be shipped or transported to the US for lab analysis, procurement of an export permit can be an arduous undertaking.

Language and Culture. Language is an obvious impediment for international research and educational exchanges. However, this barrier is not as significant as it was only a few decades ago. Most international academics, researchers and students now have a good command of the English language because it is necessary for international professional networking and publication of reports in peer-reviewed journals. Many TAMUS investigators and students are bilingual to some extent. Spanish is a popular second language for native English speakers which affords greater opportunities for international collaboration in Latin America. Cultural differences sometimes pose a greater barrier than language for international research and educational exchanges. US researchers can become frustrated with the slow pace of progress in setting up projects, organizing logistics and following through on plans when they are dependent on actions by in-country collaborators and institutions. Whereas cultural differences can be a source of frustration, they also can facilitate personal growth and lead to rewarding experiences if embraced with the right attitude.

Limited Funding Opportunities. International research, educational exchanges and professional outreach is highly dependent upon external funding, and depending on the location and project, can be more expensive than comparable domestic activities. Most funding sources for local, regional and domestic research projects in agriculture and life sciences, such as USDA and NIH, typically do not support international projects. A list of potential funding sources for international research and education exchanges appears below. An additional potential cost may be incurred if colleagues and/or their institutions require funding to support and/or justify their participation in the collaborative activity.

Economic and Health Conditions. In developing countries, health risks often pose an additional challenge for international activities, both within urban and rural settings. With proper pre-trip preparation, including vaccinations and appropriate precautions, health risks need not pose a barrier for international work. Economic conditions in developing countries often pose the greatest challenges for international research, especially when equipment and supplies are difficult to procure. Sometimes equipment and supplies that are unavailable in-country need to be carried or shipped which incurs additional costs in time and project budgets, and in some cases there are additional bureaucratic hurdles to obtain import permits.

### **Opportunities for Engaging in International Collaboration**

National Science Foundation. The US National Science Foundation funds international research, and some NSF programs target international projects and others favorably view projects with a broader global reach. NSF is a major source for international research funding.

USAID. The US Agency for International Development funds international research and its applications for assisting developing countries. USAID funding tends to target large projects with specific development goals and therefore are often beyond the capabilities of individual investigators.

US Fulbright Program. The prestigious Fulbright Program provides support for academic/educational and research exchange visits for US academics and graduate students. The program also provides funding for limited numbers of foreign graduate students from select countries to enroll in degree programs at US universities.

NGOs. Non-governmental (non-profit) organizations in fields such as conservation and poverty reduction often accept proposals for international research projects, workshops and training for foreign professionals and students at US institutions.

Private Sector and Consulting. In some cases, private entities in foreign countries provide research contracts or fees for consulting services by US researchers and their in-country collaborators. For such projects and services, an in-country collaborator is the lead PI and the US collaborator receives funding directly from their institution or from the private entity. This means that projects funded by foreign companies generally cannot be administered via the TAMUS with indirect costs.

Foreign Governments and Institutions. Some foreign governments and universities have fellowships to allow their graduate students to spend variable periods of time at US universities for training. For example, Brazil's CAPES and CNPq agencies have funded hundreds of doctoral students on exchange visits to US universities, including TAMU, over the past 15 years.

## **B. INSTITUTIONAL INTERNATIONAL DEVELOPMENT PROJECTS**

There are significant opportunities for AgriLife faculty members and students to become involved in international development projects. Such projects have the overall aim of improving the lives of citizens of underdeveloped and developing countries. Examples of targeted outcomes of development projects include improved productivity and profitability of agricultural commodities; adoption of sustainable practices; new products and markets; increased incomes; improved household nutrition; improved opportunities for women; better resilience to and mitigation of climate change; increased food security; and poverty reduction. The achievement of such lofty outcomes requires teams of technically competent professionals who understand and effectively work with local stakeholders to strengthen their capacity for moving their country forward.

Before embarking on such international development activities, it is important for faculty members and students to clearly understand both the benefits and challenges of such involvement. The following sections summarize these benefits and challenges which are then followed by a section describing more specific development activities in which faculty members and students can engage.

### **Benefits of Engaging in International Development Projects**

External Funding. Faculty members are under constant pressure to fund their own research and education programs. Significant funding opportunities exist for international development. Projects are often quite large (e.g., in millions of dollars) and complex. They provide an opportunity for faculty members to buy-out some of their time (proportionate to their involvement in the project), resulting in salary savings for their unit. Most unit heads are open to sharing those savings with the faculty members who generate them. This can provide faculty members with discretionary funding which is otherwise difficult to come by. Development projects also typically cover all travel costs and provide compensation for preparation time. Further, development projects can sometimes cover the costs of applied research.

New Collaborative Ties. Research and education are increasingly becoming team efforts. Therefore, it is helpful to have as many productive collaborative ties as possible. International development projects offer the opportunity to establish new collaborations with faculty members. Furthermore, such projects offer the opportunity to identify and potentially recruit talented international graduate students.

Opportunity to Develop an “International Reputation”. Promotion and/or tenure in AgriLife requires that candidates show some evidence of an international reputation in their area of expertise. This is particularly important for promotion to Professor. Promotion and tenure committees typically are looking for evidence that goes beyond a candidate presenting a paper at an international meeting. Involvement in international development projects can help provide such evidence and demonstrates an international demand and respect for a candidate’s technical expertise.

Opportunity to Make a Real Difference in the World. While academic endeavors such as publishing in scientific journals are certainly rewarding and important, faculty members may sometimes wonder whether these activities really make a difference to societies. Typically, involvement in international development work results in clear, landscape-level impacts that make a difference in people’s lives. Many faculty members involved in international development work are driven and motivated by such impacts.

Improved Teaching Capacity. Undoubtedly, our students at TAMU benefit from being taught by faculty members who have a global perspective related to their area of expertise. When teaching, faculty members who are involved in international development work can use examples of applications of their technical expertise to real-world problems. Students typically respond very positively to such examples which improves their global perspective.

Opportunities to Develop Study Abroad and Other High Impact Learning Experiences. TAMU has put increasing emphasis on providing the opportunity for students to be involved in High Impact Learning Experiences. Faculty member involvement in international development work can lead to the development of such activities which can be rewarding for both faculty members and students. Many students describe these learning experiences as “life changing.”

Perspective Broadening. From a more personal perspective of a faculty, involvement in international development work provides an opportunity for faculty members to broaden their horizon by experiencing different geographies, people, cultures, etc. This can be remarkably rewarding both personally and professionally.

### **Challenges to Engaging in International Development Projects**

Remaining Competitive in the Publication Race. International development work is not particularly publication-rich, at least initially. Development projects are typically slow to produce publishable results and may not lead to publications in top-tier science journals. A faculty member, particularly those who are at the early career level, should take this into account before becoming heavily involved in international development work.

Development Work is Strongly Grant-Dependent. Like most university research, development work is highly dependent upon external grants (i.e., there is little “seed” money available). It is therefore critically important that we remain competitive for obtaining development funding. For faculty members who have not been involved in such work previously, they need to partner with

those who have experience in the international development funding arena. Without that, there is a very limited chance for success.

Local Politics. When AgriLife faculty members engage in international development activities, questions can arise from Texas and/or US stakeholders about whether state-supported employees should be engaged in such activities. It is wise for faculty members and their unit heads to give some thought about how to answer such questions. With some proactive communication measures, such questioning can be kept to a minimum and avoid any misunderstandings with important stakeholders.

National Politics. The political reality is that international development priorities can change dramatically based upon who leads the U.S. Government. At the same time, international development work is long-term and takes many years to effectively implement. It is difficult to quickly pivot such projects to changing political priorities.

Risk Aversion. Universities are quite risk averse and seem to be becoming even more so. Because international development projects typically have higher risks than standard research and education activities, there can be significant challenges in navigating bureaucratic channels designed to protect the university's interests. While there are many dedicated and well-meaning individuals in the bureaucratic chain, they typically and understandably have little international experience which limits their perspective and understanding of development work. This can lead to delays in project implementation.

### **Specific Opportunities for Engaging in International Development Activities**

Project Management/Leadership. Faculty members who have broad long-term international expertise may be qualified to lead and manage development projects. Such roles include Chief of Party; Deputy Chief of Party; Innovation Lab Director; Project Director. These positions typically require at least 10-15 years of documented experience. Further, they typically require a full-time or near full-time level of effort and usually require temporary relocation to the country where the project is being implemented.

Short- (STTA) or Long- (LTTA) Technical Assistance. Faculty with strong technical expertise can be engaged in STTA or LTTA. The distinction between STTA and LTTA is not rigid, but generally STTA spend a few weeks on the project (often, but not always, including travel to the country where the project is being implemented) whereas LTTA spend months or years on the project and may even temporarily relocate to the country where the project is being implemented. STTA typically do not have any leadership roles on the project whereas LTTA may be responsible for leading a project component. As such, some STTA might work under the leadership of someone employed as an LTTA component lead.

Applied Research. Some development projects allow for applied or translational research. Such research projects must be clearly focused with potential for relatively quickly having landscape-level impacts in the country where a project is implemented. Often these applied research opportunities are associated with projects aimed at strengthening local capacity for research and education.

Capacity Strengthening. Development in some countries is limited by the capacity of universities and other-related organizations to carry out research and education. This provides an opportunity for Texas A&M AgriLife faculty members to work with in-country counterparts to strengthen local research and education programming.

Consulting. In some cases, faculty members or qualified students can be employed as independent consultants on international development projects. This can result in greater personal financial rewards but must be done in full accordance with university/agency outside employment policies.

Volunteer Work. There are several organizations (e.g., Farmer-to-Farmer) that connect volunteers who have technical expertise with opportunities to travel to developing countries where their expertise can be shared with relevant stakeholders. In such cases, faculty or students are not compensated for their time but their travel is typically fully covered. This can be a mechanism for gaining experience and contacts in a country of interest.

### **C. ACADEMIC EXCHANGES AND INTERNATIONAL COLLABORATION**

Approximately two-thirds of the Texas A&M AgriLife units engage in any international R&D activity is through visiting scholars, students and collaborators. Most of these exchanges are investigator-initiated and/or through international collaborators approaching our faculty. Many of the benefits of investigator-initiated and institutional international R&D activities are equally applicable in academic exchange programs.

Several US-based international exchange programs are currently utilized by Texas A&M AgriLife faculty and staff in cultivating international collaborations as well as promoting global activities across AgriLife units. For example, the Council for the International Exchange of Scholars (CIES) administers the Fulbright Scholar program that supports overseas research and teaching for U.S. faculty as well as brings visiting scholars and professors to U.S. colleges and universities. CIES also conducts other exchanges, including the Ford Foundation's ASIA Fellows Program and NATO's Advanced Research Fellowships and Institutional Grants Program.

#### **Promoting Exchange Activities for TAMU Faculty and Students**

1. Sabbatical can be a major faculty exchange program that can establish a long-term collaborative relationship with international researchers and universities/governments.
2. Long (6-12 month) and short visits (1-3 months) of a foreign laboratory or program can be achieved through investigator-initiated collaborative opportunities as well as through institutional R&D projects. Several international agencies seek expertise from U.S. universities for such short-term visits.
3. Teaching formal courses - Several of our Texas A&M AgriLife faculty conduct teaching of formal courses in various countries.
4. Teaching of specialized courses and consulting can also be achieved via faculty exchange programs.
5. Specialized tours for Ag students enrolled in courses (e.g., 6-12 months internship for Ph.D. students to engage in research with a recognized Ag Institution. Explore the potential for a dual-degree certification by both institutions.
6. Targeted exploratory visits for faculty to engage in research with other institutions.
  - a) Priority topics/programs need to be identified
  - b) Incentive to participate and funding to be allocated

## **Attracting External/non-TAMU Faculty**

1. Promote sabbaticals for high-quality scientists in key identified areas of mutual interest
  - Enhance current research
  - Teach specialized courses not available or complement existing ones
  - Development of innovative research that could lead to cooperative proposals
2. Provide incentives (air-tickets, living allowances, etc.)
3. Provide mechanisms to consider Adjunct Professor/Honorary Professor titles
  - Though participation in courses, lectures, or grad student committees

### **RECOMMENDED ACTION PLAN**

**[Includes suggested action steps in pursuit of objectives under each goal: (needs timeframe and responsible Unit/person for each action)]**

Goal 1. To expand the international scope of our research and outreach activities as described in AgriLife's Strategic Plan.

- Conduct a comprehensive review of international activities being carried out within each unit's field of study, to include research being carried out by our researchers vs. research being carried out by other institutions.
- Establish an international speaker series, or utilize the Borlaug Institute's Distinguished Lecture Series, as the platform to invite renowned international researchers to campus.
- Provide bonuses to researchers, and a cut from the indirect costs fee to units, for successful awarding of agreements to conduct international research.
- Include international research activities as a category in the annual evaluation of faculty, with the expectation of a certain minimum required for a favorable review, where appropriate.

Goal 2. To enhance our competitiveness for international funding opportunities.

- Create a calendar of visits by unit heads and specific researchers to specific government agencies and funders of international agriculture and life sciences, with AgriLife's federal relations office (or an alternative unit) serving as the organizational unit.
- Organize a calendar of engagements by unit leaders and faculty to participate in meetings and workshops where international activities are the predominant themes.
- Assign a specific official from Marketing & Communications to help improve communications on international activities by each unit, and for AgriLife at large, including articles, social media engagements and website presence.
- Include international impacts to the Vice Chancellor's remarks during the annual AgriLife Conference, other venues where the VC is the featured speaker and in regular communications such as newsletters.

Goal 3. To improve the efficiency of administration and coordination of our international activities.

- Create a position for international project coordination within AgriLife administrative services and develop an administrative structure of the international program that serves Texas A&M AgriLife agencies and COALS for increased synergy.
- Coordination of efforts to maximize success in obtaining funds from major funding sources. Coordination of international programs amongst other colleges, universities, and agencies within the TAMU System (i.e., possible, relevant, likely important to AgriLife).

### CONCLUSION

- COALS/AgriLife has extensive international research, education and outreach activities that span the entire globe. Most of these activities are initiated by individual faculty members/Pis. The college/agency could do a better job of publicizing international accomplishments.
- Benefits of international engagement are many, both for the individual and the institution. Many benefits are direct, but there also are significant indirect benefits.
- There can be significant challenges and hurdles associated with international engagement/activities that are disincentives for the Pis. Most of these are external to TAMUS, but some administrative requirements pose additional hurdles for Pis and students, both for those traveling abroad and those proposing to come to the US for exchanges.
- There are opportunities to compete for large international projects in agricultural and natural resource/environmental research, educational programs, and development assistance, but COALS/AgriLife has limited capacity to build/coordinate teams and facilitate proposal development. Some of these large international programs/projects require partnerships with other US institutions in addition to foreign institutions, which necessitates a great deal of coordination and administrative support.