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## **Strengthening Faculties of Agriculture in Africa Through Collaborative Post-Graduate Degree Training by U.S. and African Universities: The HEPAD Experience**

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### **Abstract**

*From the 1960s through the 1980s, U.S. universities, foundations, and the U.S. Agency for International Development (USAID) provided major support for higher education institution building and post-graduate degree training. Commitment to these programs largely disappeared during the 1990s. Signs of renewed commitment have appeared within the last five years, but many donors are seeking more effective and less costly capacity building and training models before launching major new investments. This paper draws insights for improved post-graduate training models from a project implemented by a partnership of two U.S. and three East African universities, called "Higher Education Partnerships for African Development (HEPAD): Long-term Training for Regional Agricultural Development in East Africa: Kenya, Tanzania, and Uganda." The project was funded by the U.S. Agency for International Development from 2005-2008 as one of three pilot projects designed to provide guidance for an intended major program of USAID reinvestment in strengthening African universities, particularly Faculties of Agriculture. An important goal of the project was to identify ways of improving the cost-effectiveness of post-graduate training of African agricultural scientists, and the relevance of that training to national development goals. The paper summarizes issues, challenges, and lessons learned from this project. The contributions of the "sandwich program" training design and other program features to training effectiveness and cost savings are presented. Recommendations are made for improvements in long-term training design, faculty development, and project management.*

**Key words:** Agricultural Education and Training (AET), university partnerships, long-term degree training, capacity building, sandwich degree training

## Introduction

From the 1960s through the 1980s, U.S. universities, foundations, and the U.S. Agency for International Development (USAID) provided major support for higher education institution building and post-graduate degree training. Commitment to these programs largely disappeared during the 1990s. Signs of renewed commitment have appeared within the last five years, but many donors are seeking more effective and less costly capacity building and training models before launching major new investments. This paper draws insights for improved post-graduate training models from a project implemented by a partnership of two U.S. and three East African universities, called “Higher Education Partnerships for African Development (HEPAD): Long-term Training for Regional Agricultural Development in East Africa: Kenya, Tanzania, and Uganda.” The project was funded by the U.S. Agency for International Development from 2005-2008 as one of three pilot projects designed to provide guidance for an intended major program of USAID reinvestment in strengthening African universities, particularly Faculties of Agriculture (FOAs). The explicit intent of the HEPAD project was to establish collaborative relationships between faculties of agriculture in the United States and East Africa and to develop creative approaches to long-term training that would improve human capacity in regional FOAs and thereby contribute to the goal of ensuring regional food security.

### *Background*

University contributions to sustainable agricultural development in sub-Saharan Africa, especially by Faculties of Agriculture (FOAs), are well documented (World Bank, 2007; Bloom, 2005; Eicher, 2004). In an increasingly knowledge-based global economy, any country that does not produce well-educated people will find it increasingly difficult to take advantage of emerging technologies such as biotechnology and genomics and to integrate and use science as a development tool. Relying on technology transfer from the outside is short-term and has not proven to be effective. The Inter Academy Council (2004) stated that “sustainable science and technology capacity is vital to keeping the technology pipeline flowing.”

The U.S. Agency for International Development (USAID) and U.S. universities played an important role in building the agricultural science and technology capacity of many universities in sub-Saharan Africa (Eicher, 2003). USAID provided support for institutional partnerships between U.S. and African universities and for long-term degree training to increase the African human capital necessary for economic growth and development.

Unfortunately, over the past several decades the international donor community and African governments neglected tertiary education and its contribution to economic growth and poverty mitigation. Bloom (2005) attributed this neglect to a perception among donors that investments in primary and secondary education contributed more than tertiary education to economic growth and poverty reduction. Other factors leading to a general decline in donor support for higher education included shifting donor priorities (more emphasis on health improvement and poverty alleviation), and donor disillusionment with the non-sustainability and limited development impact of previous long-term degree training and institution building programs.

As an example, during the 1990s USAID withdrew most of its support for African university capacity building and for long-term graduate student training in the U.S. The number of graduate students supported by USAID from developing countries in all disciplines dropped from 9,128 in 1990 to around 1,200 by 2000 (BIFAD, 2003). The decline in support for

agricultural and rural development degree training in the U.S. over this period was even more dramatic, from 310 students in 1990 to 82 (largely supported by the Collaborative Research Support Programs - CRSPs) in 2000, resulting in markedly reduced visibility of American institutions within African higher education and policy circles.

Faced with stagnant or declining national investments for higher education and burgeoning undergraduate enrollments, African FOAs were left with overcrowded and deteriorating facilities and depleted faculty numbers and instructional and research capabilities. Public concerns mounted about the ability of universities in general and FOAs in particular to meet the changing needs of society and contribute to economic growth (World Bank, 2007).

In 2002, USAID began to re-evaluate its decision to withdraw from degree training and institutional capacity building in sub-Saharan Africa. In 2003, the Board for International Food and Agricultural Development (BIFAD) proposed that USAID should renew its investment in global long-term training and capacity building in agriculture and rural development. USAID recognized the need to reinvest in long-term graduate degree training yet wished to find ways to limit training costs, increase the relevance of training and research to home-country agricultural development priorities, and ensure the return of trainees to their home countries. In turn, African institutions sought new partnerships with American institutions that would reinforce local capacity and promote two-way exchanges of both staff and students.

In 2004, USAID provided limited funding to Higher Education for Development (HED) to develop three pilot long-term degree training and capacity-building partnerships between U.S. and African universities. One of the three, the HEPAD project, was awarded to The Ohio State University (OSU) and Michigan State University (MSU) in partnership with Egerton University (Kenya), Sokoine University of Agriculture (Tanzania), and Makerere University (Uganda), with activities in the region coordinated by the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM).

### **Purpose and Objectives**

The purpose of this paper is to summarize issues, challenges, and lessons learned from implementing the HEPAD project with three FOA in East Africa. An important goal of the project was to identify ways of improving the cost-effectiveness, broadly speaking, of M.S. and Ph.D. training of African agricultural scientists, and the relevance of that training to national development goals. The contributions of the “sandwich program” training design and other program features to training effectiveness and cost savings are presented. Recommendations are made for improvements in long-term training design, faculty development, and project management.

### **Project Goals and Philosophy**

The HEPAD goal was to develop innovative and cost-effective approaches to long-term training (including research) and short-term faculty development that would improve the human and institutional capacity of regional FOAs. Specific goals included: (1) provision of long-term graduate degree training opportunities in areas of critical need; (2) provision of short-term faculty development opportunities in areas of critical need; (3) strengthening of linkages between private sector agribusinesses and FOAs; and (4) designing and implementing an innovative, replicable model of FOA capacity building. The project was guided by a commitment to building effective partnerships through participatory project management to ensure that the needs and interests of the host institutions were fully incorporated into project design and implementation.

### Results

To achieve project objectives, three sets of activities were implemented during the project's 33 month time period (later extended by 6 months) including the provision of graduate degree training opportunities, in-country faculty development opportunities and support for MBA agribusiness internships and case-study development. These activities had a direct impact on improving the capacity of the three partner universities as summarized in Table 1.

The HEPAD project used the “sandwich training” model, combining one year of training in the U.S. with field research in the home country. Twelve one-year scholarships were provided for 3 M.Sc. and 9 Ph.D. trainees from the regional FOAs (of which two-thirds will receive their degrees from their home university). Two additional components of the sandwich degree program included providing each student with a seed grant of \$7500 for in-country field research and joint mentorship of each student by one U.S. and one East African university faculty member.

Table 1  
*Summary of Human Capacity-Building Outcomes*

Type of Capacity-Building	Number of Individuals		
	Males	Females	Total
M.S. trainees	3	0	3
Ph.D. trainees	7	2	9
Participants in faculty development activities *	167	66	233
M.S.-level agribusiness interns	14	10	24
Visits by faculty and Deans to HED/OSU/MSU	7	1	8
OSU/MSU faculty mentor visits to the region	12	0	12
Participants in seminars provided by OSU/MSU faculty at regional campuses.	203	92	295
<b>Totals</b>	<b>413</b>	<b>171</b>	<b>584</b>

*Note.* \*Subjects included field survey research methods and use of SPSS; issues and methods for studying the impact of HIV/AIDS on agriculture; policy-relevant applications of econometrics; and agribusiness activities including use of agribusiness case studies in the classroom.

Three major staff development workshops were conducted and twelve seminars provided by visiting U.S. faculty members to over 500 faculty and post-graduate student participants. The staff development workshop topics were “Survey Research Methods and Use of SPSS, Issues and Methods in Studying the Impacts of HIV/AIDS on Agriculture and Rural Households” and “Teaching Policy-Relevant Econometrics for Sub-Saharan Africa: Econometrics Applications for Use in Graduate-Level Teaching in African Universities.”

Twenty-four MBA Agribusiness students were placed in two-month internships with local agribusiness firms for hands-on training and exposure to the day to day running and decision making of an agricultural enterprise. One of these internship reports was selected at each university and developed into an agribusiness case study which was then used in the classroom with students and staff to demonstrate an active learning pedagogy. Agribusinesses that participated in this exercise were Shambani Milk Processing (Tanzania), Kerenge Tea

Estates (Kenya) and Ugandan Flower Exporters Association. A total of 116 students and staff participated in these case presentations. Finally, a full review of the Agribusiness MBA program at SUA was requested and conducted with focus groups of first- and second-year MABM students and MBA Agribusiness Faculty.

*Addressing USAID Concerns:*

All 12 HEPAD returned home following their one year of course work at OSU/MSU. The relevance of HEPAD activities to national agricultural development priorities was demonstrated in several ways. First, through the degree training program HEPAD activities strengthened and replenished human capital at each of the partnering universities laying a better foundation for future M.S. and Ph.D. programs. Second, because the trainees did their research in their home country, HEPAD fostered integration into national agricultural innovation systems by enhancing the linkages between regional universities and national and international research institutes. HEPAD students and their local mentors contacted or collaborated with nine different research institutes outside their universities. Additionally, eight students reported having direct interactions with farmers, grower groups, local and international NGOs, and private sector companies through their research efforts. Third, through the use of research seed grants the HEPAD project promoted academic entrepreneurship. Nine students accessed additional resources to support their research programs, which also strengthened their linkages with national and international agricultural research programs and scientists. Fourth, through faculty development activities, agribusiness internships, and demonstrating the development and use of case studies in the classroom, HEPAD activities promoted new pedagogies, analytical skills, agribusiness interactions, and linkages with the agricultural sector in each country.

USAID and other donors had expressed strong concerns about the costs of U.S. course-based post-graduate training. The project design addressed this concern by reducing the time that trainees spent in the U.S. and by having the U.S. universities cover part of the training cost. Instead of the typical 2-5 year stay in the U.S. for an M.S. or Ph.D. program, 9 of the 12 HEPAD trainees stayed only 9 months (one academic year) and 8 of them received their degrees from their home university, while the remaining 3 trainees (M.S. level students at OSU) spent 4 quarters, which allowed them to satisfy all OSU requirements and receive OSU degrees. The latter 3 trainees received fellowships and full tuition waivers. The other trainees were granted in-state status, which reduced their tuition cost by half. The 6 MSU trainees were enrolled as non-degree students, with in-state tuition and no additional fees.

Of the total training cost per participant (subtotal '1' in Table 2 below), tuition and fees made up 29%, living expenses 66%, and health insurance 5%. These costs are comparable to those of a student who is funded by a graduate research assistantship, which would typically cover tuition (at in-state rates), fees, health insurance, and a monthly stipend.

The sandwich program of one year in the U.S. did result in lower training costs. Including airfare, living expenses, tuition, books, and health insurance, the costs per student ranged from \$21,400 for MSU to \$25,900 for OSU (subtotal (1) in Table 2). The latter figure is higher in part because three students were registered for one full year (4 quarters) rather than for the academic year (3 quarters, or two semesters as at MSU). The Ph.D. students (and one M.S. student) who received their degrees from their home institutions incurred some additional registration or tuition costs for the time that they were actively enrolled following their return home. However, these costs were much lower than they would have been in the U.S.

There were additional savings relative to the costs of a program in which students pay full tuition and fees. At OSU, the 3 full tuition waivers provided by the Graduate School represented a savings of \$36,792. Another 3 trainees received in-state tuition, a savings of approximately \$18,400. At MSU, the budgeted costs per participant per academic year were approximately \$7,500 lower than they would have been with full tuition and fees, representing an overall savings of \$45,000 for the six trainees.

Table 2  
Budgeted and Actual HEPAD Training Costs at OSU and MSU

Item	Michigan State University a/		The Ohio State University	
	Budgeted	Actual	Budgeted	Actual
Pre-departure expenses b/	\$300	\$300	\$300	\$300
Air ticket	\$2,500	\$2,506	\$2,500	\$2,571
Tuition and fees	\$5,951	\$5,820	\$5,843	\$5,440
Living expenses c/	\$13,246	\$11,754	\$13,650	\$14,367
Books/supplies	d/	d/	\$1,400	\$2,002
Health insurance	\$923	\$1,009	\$1,201	\$1,240
<i>Cost per participant (1)</i>	<i>\$22,920</i>	<i>\$21,389</i>	<i>\$24,894</i>	<i>\$25,920</i>
Research seed grants e/	\$7,500	\$7,500	\$7,500	\$7,500
<i>Cost per participant (2)</i>	<i>\$30,420</i>	<i>\$28,889</i>	<i>\$32,394</i>	<i>\$33,420</i>
Total for 6 trainees (3)	\$182,520	\$173,334	\$194,364	\$200,520
Faculty mentor trips	\$17,600	\$14,780	\$12,900	\$14,500
Training coordinator f/	\$3,383	\$2,874	\$7,191	\$7,191
Project training cost (4)	\$203,503	\$190,988	\$214,455	\$222,211
<i>Project cost per trainee (5)</i>	<i>\$33,917</i>	<i>\$31,831</i>	<i>\$35,743</i>	<i>\$37,035</i>

Note. a/ For 2 semesters (9 months), mid-August 2005 to mid-May 2006.

b/ SEVIS fee and costs of medical exam.

c/ Housing, food, books, miscellaneous.

d/ Book reimbursement included in living expenses.

e/ Per participant; 6 participants each for MSU and OSU.

f/ OSU cost is for a staff member who handled TraiNet processing for both OSU and MSU.

Table 2 also shows additional training-related costs, including faculty mentor trips (4 for MSU, 6 for OSU), salary and fringes for an MSU training coordinator for 6 weeks at the beginning and end of the program, and the research seed grants provided to each student (included in the RUFORUM budget and allocated by them). The faculty mentor trips and research seed grants were features of the HEPAD project. Nonetheless, since the implementation of a training project would inevitably entail management and administrative costs, the costs of a short-term training coordinator and TraiNet Initiator are included. The last row of Table 2 shows the total cost per trainee including these additional costs.

#### *Innovative and Replicable Aspects of the Project*

First, the project used a multifaceted training approach that included sandwich training with most degrees awarded by regional FOAs, fellowship-supported U.S. degree training, and in-country thesis research. Second, project management was participatory and collaborative; the

Regional Management Committee (RMC) included key individuals from all partner institutions in project decision making. Third, the merit-based and priority-driven screening and selection of degree candidates and awarding of research seed grants allowed FOAs to fill critical gaps in their faculties of agriculture with high-quality, motivated professionals. Fourth, student mentoring was enhanced by involving both in-region and U.S. faculty mentors. Fifth, having U.S. faculty mentors travel to the region improved both the quality and completion time of thesis research and provided important incentives for U.S. faculty involvement. Sixth, beyond the required cost share contribution, the project was successful in leveraging an additional \$584,457, including \$252,667 in additional research support; and \$331,790 from the regional universities for salary, tuition and degree program registration. Seventh, exposure to new pedagogies in the U.S. resulted in enhanced classroom teaching and student learning at FOAs. Eighth, working collaboratively with a local coordinating agency (RUFORUM) improved project administration as well as strengthening local capacity. Finally, faculty development activities were extremely well received and benefited each FOA. With additional project funding, the number of these activities along with the number of participants could have been increased.

### **Challenges and lessons learned**

*Deans' express preference for Ph.D.* The HEPAD project was originally designed to provide M.S.-level training because of the short time period (33 months) specified in the Request For Application (RFA). However, the RFA also specified that the capacity building approach be "demand driven from the region." At the first meeting of the RMC, the Deans expressed a preference for Ph.D.-level training because their university policies required that persons hired into lecturer positions have Ph.D. degrees. This required an adaptive flexible response by project administrators to meet the needs of the East African Deans. It was therefore agreed that priority should be given to Ph.D. training, and 9 of the 12 faculty members selected for the program were enrolled for Ph.D. degrees.

*Preference for U.S. degree.* Generally, there is strong demand for higher education in the region and for coming to the U.S. for higher degree training as evidenced by the number of proposals received during the selection process. Several students and local mentors indicated that they would have preferred the students to have obtained U.S. degrees. However, Deans and faculty admitted that the sandwich model and the granting of degrees by their own universities enhances the chance of faculty retention.

*Selection process.* The process devised with the RMC for selecting students was quite effective. In departments where the Deans had identified critical training needs, staff members who did not have M.S. or Ph.D. degrees were invited to submit training and research proposals. Thirty-five proposals were eventually received and the applicants requested to take the GRE and TOEFL exams. OSU and MSU then looked for faculty members and departments who were interested in accepting the trainees and mentoring them. This process was designed, the proposals written, GRE and TOEFLs taken, students selected, visas obtained, and students placed in 8 months. All 12 students who attended courses at OSU/MSU were interested in and focused on graduate training. They settled into the program quickly, did well academically and returned home on time. Also, the selection process, which included assessing students' research proposals by the respective faculties and later the RMC, meant that research linked to national

priorities was the focus of the higher degree training. Students involved in this kind of training are more likely to return to the home country because the relevance of their training qualifies them for employment not only in universities but also at national research institutes and other agricultural development partners.

*Short time in U.S. for course work.* There are important differences between U.S. and East African University systems. The U.S. university system emphasizes course work at the graduate level which adds value to the degree training program by providing a strong theoretical and applied foundation. All the students appreciated the strong course work training in the U.S. and urged that this be adopted for all Masters and Ph.D. training in African universities. However, all students indicated that the time in the U.S. was very short. Course work was quite intense and the students would have liked an additional quarter/semester to take further courses and more fully develop their research proposals. Fortunately, with two exceptions, there was a good match between students' and U.S. advisors' research interests. An additional challenge posed by the short time in the U.S. was that students were unable to take certain courses that were only offered in alternate years. Nevertheless, all Deans concurred that the course work in the U.S. was a very valuable addition to their training and contributed to capacity building at their respective universities.

*Each university has different rules and policies.* Each university is unique and has its own set of rules and policies which could not entirely be foreseen in advance. Once these rules and policies were encountered and understood, the implementation of remaining project activities ran more smoothly. For instance, the disbursement of research seed grant funds was delayed until students had their research proposals accepted by their departments and graduate schools. It would have been useful to make some of these funds available to support research proposal development, allowing students and local advisors to make research site visits as part of the research design process.

*Communication between advisors and students and between host-country and U.S. mentors.* Mechanisms for improving the communication between the students and their host-country advisors and their OSU/MSU advisors need to be developed. Improving communication among mentors would also facilitate longer term-partnerships. Previous administration of long-term degree programs indicates that this is always a problematic area, which is best resolved by some early face-to-face contact between faculty member advisors. The respective roles of local and U.S. faculty mentors needed to be clarified at the outset, with respect to the procedures for advising and research supervision. Ways to improve communication between mentors, time and funding permitting, might include additional and early trips to the region for U.S. mentors, having more regional mentors travel to the USA, and greater use of video conferencing. Communication could also have been improved if there had been an opportunity for all HEPAD students and their mentors to meet as one group to discuss and share experiences.

*Faculty development activities.* The faculty development activities are still very much in demand at all three universities. Funding limitations required that most of these activities be conducted at each university rather than at a central location to which participants travel. Although this strategy allowed for more participants, it restricted the promotion of regional research integration and synergies. Several regional mentors and other local faculty mentioned



that they would have benefited from opportunities to come to the OSU/MSU campuses for short-term visits.

*Financial reporting.* Financial reporting is always a difficult and time consuming task at one's own university and HEPAD was working with three universities in East Africa. Working through a regional coordinating body like RUFORUM improved communication, expedited financial flows, and reduced the financial reporting burden.

*Previous linkages among university partners important.* Previous OSU/MSU links with East African universities were critical to rapid project implementation. These relationships were vital to securing rapport among partners and facilitated the transmission of lessons learned to a wider audience than initially targeted in the project. For example, involvement of RUFORUM, whose regional coordinator is an alumnus of OSU, provided an opportunity for immediate application of training materials developed by HEPAD activities to other regional universities beyond the three that participated.

*Project success has increased interest in partnerships between U.S. and African universities.* The partnership's success has led to increased interest, both from U.S. and African universities, in joint academic activities that are mutually beneficial. USAID has increased support for degree training and university partnerships particularly in Africa.

### **Recommendations**

#### *Recommended Long-Term Degree Training Design Features*

*The "sandwich" training model.* In general, it was felt that the sandwich model added value to the training through course work taken in the U.S. and lowered costs. It also helped students and mentors maintain the research focus on host-country development priorities. Including airfare, living expenses, tuition, books, and health insurance, the costs per student ranged from \$21,400 for MSU to \$25,900 for OSU. The latter figure is higher in part because four students were registered for one full year (4 quarters) rather than for the academic year (3 quarters, or two semesters as at MSU). In addition, a more flexible project implementation period would have permitted additional adaptations and adjustments such as lengthening the training period in the U.S. or allowing students to return to the U.S. following their research activities in the region to write up research results.

*U.S. versus local degrees.* The desire of the East African faculty members for training that would lead to U.S. degrees is understandable. However, the RFA for the HEPAD project called for a training model that would include one-year scholarships and would be cost-effective and innovative. Given these constraints, and the 33-month period of the project, it was not possible to provide training that would result in U.S. degrees, except for the three M.S. degrees at OSU where the requirements could be completed in one year. In addition, it was felt that having the majority of the degrees granted by the home institution would help strengthen their capacity and track record for offering quality graduate degrees (boosting their ability to attract further institution-building resources in the future), and would improve faculty retention. The latter point was acknowledged by the Deans.

*Student and advisor selection.* The two most important ingredients that contribute to successful degree training programs are to select students who have a high probability of succeeding and advisors who have a strong interest in seeing that the student succeeds as well as

interest in the student's area of research. Also, the merit-based process used to select sandwich degree candidates developed by HEPAD should be a part of any future faculty capacity-building project. Proof that this selection process worked was the excellent academic performance by the trainees at OSU/MSU. Lastly, ensuring that students are matched with effective advisors requires someone on-campus who knows faculty interests and who will invest the time to contact, discuss and select motivated advisors. Such a person or coordinating office can help facilitate this through the usual admissions process.

*Development of problem-oriented research proposals had clear benefits.* In most cases, students conducted their research in conjunction with producer groups and communities, thus promoting the visibility of universities. This facilitated leveraging of additional research and training funding, helped refine the sandwich degree model, and revitalized partnerships between U.S. and East African universities.

*Use of research seed grants promoted academic entrepreneurship.* HEPAD students and their advisors raised \$6,252 from their home universities' research funds and \$37,031 from grant-funded projects, international organizations or OSU/MSU departments.

#### *Recommendations for Faculty Development*

*More funding for faculty development.* Future university capacity-building projects need to include more faculty development activities. The HEPAD RFA included a myriad of suggestions for faculty development activities but funding and time limitations prevented implementing more than a few. Valuable activities, resources permitting, might include refresher courses on new pedagogic skills, short-duration stays in the U.S. as visiting scholars to work in laboratories with modern equipment, research and publication collaborations, targeted faculty sabbatical leaves, and travel support to attend professional conferences.

*Internship coordination.:* Internships are an effective mechanism for improving training relevance and linking universities with the private sector. However, internship administration can prove to be a significant burden for individual faculty members. U.S. universities have found it necessary to hire a dedicated internship coordinator who can develop, track, place, and help evaluate internships.

*Reciprocal faculty and student exchanges.* The East African FOAs would like to see reciprocal exchanges, with U.S. students and faculty coming to their universities. Such exchanges need to be built into future programs, and funding mechanisms identified to support them.

#### *Recommended Project Management Components*

Participatory project management through RUFORUM, which included the formation of the RMC with membership by the Deans from each of the universities, was critical to project success. This permitted the training to be genuinely demand-driven and responsive to the high-priority human capacity needs of each university.

Working through a regional organization familiar with universities was critical to project success. RUFORUM knew the region and our three partner universities well; it provided the U.S.

universities with a single point of contact for in-region project implementation—administratively much easier than negotiating and implementing separate subcontracts with each of the three universities—and, most importantly, it was responsive and fulfilled its project responsibilities in a timely matter. Our past experience in the region had indicated that contracting with national or international agricultural research institutes or centers to do university training would be cumbersome and ultimately ineffective.

The additional costs of administering participant placement including implementing the TraiNet visa issuance system need to be recognized as one of the training costs.

### References

- Bloom, D., Canning, D., & Chan, K. (2005). *Higher education and economic development in Africa*. Report Commissioned by the World Bank: Washington, D.C. Retrieved August 10, 2007 from <http://siteresources.worldbank.org/EDUCATION/Resources/278200-1099079877269/547664-1099079956815/>
- BIFAD Board for International Food and Agricultural Development. (2003). *Renewing USAID investment in global long-term training and capacity building in agriculture and rural development*. Washington, D.C.: BIFAD.
- Eicher, C. K. (2004). *Rebuilding Africa's scientific capacity in food and agriculture*. Staff Paper 2004-12, Michigan State University, Department of Agricultural, Food, and Resource Economics, East Lansing, Michigan
- Eicher, C. K. (2003). *Flashback: Fifty years of donor aid to African agriculture*. Paper presented at an International Policy Conference "Successes in African Agriculture: Building for the Future", sponsored by InWent, IFPRI, NEPAD and CTA, Pretoria, South Africa, December 1-3. Retrieved September 5, 2008 from <http://ifpri.org/events/conferences/2003/120103/papers/paper16.pdf>
- Inter-Academy Council. (2004). *Realizing the promise and potential of African agriculture*. <http://www.interacademycouncil.net/CMS/Reports/AfricanAgriculture.aspx>
- World Bank. (2007). *Cultivating knowledge and skills to grow African agriculture: A synthesis of an institutional, regional and international review*. Report no. 40997-AFR. Washington, D.C.: The World Bank