ASSESSING THE IMPACT OF THE BEAN/COWPEA COLLABORATIVE RESEARCH SUPPORT PROGRAM’S (B/C CRSP) GRADUATE DEGREE TRAINING

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Since the early 1980s, with funding from USAID, the B/C CRSP has supported nearly 200 students for MS and PhD degrees at U.S. universities in the plant sciences, food sciences and the social sciences—fields critical to the development of bean/cowpea research capacity in host countries in Latin America and the Caribbean (LAC), Sub-Saharan Africa, and the U.S. The CRSP has invested more than US$69 million to support global bean/cowpea research, of which about US$7 million has been spent on training to enhance the capacity of agricultural research institutions in developing countries.

DATA COLLECTION

A list of trainees and PIs was compiled by reviewing the Management Office’s (MO) databases and searching the Internet. Survey questionnaires were developed and sent in 2006 to former trainees and PIs/scientists who supervised the trainees during their GDT (graduate degree training). An Internet search was conducted to collect additional evidence of impacts. A modified Kirkpatrick's Framework (impact of training on KSA; knowledge, skills, attitudes) was used to assess training impacts. The study results are based on analysis of surveys returned by 76 former trainees (41% of the target population) and responses from 25 former/current US-PIs. Case studies were also carried out in 2006 to highlight regional impact of CRSP investment in LAC (Escuela Agrícola Panamericana - Zamorano (EPA)) and institutional impact in Tanzania (Sokoine University of Agriculture (SUA)). Face-to-face interviews were conducted with HC-PIs at each of these two universities.

KEY FINDINGS

1) Survey of Former CRSP Trainees. CRSP Trainee Alumni reported that that their GDT was necessary for their professional development (100%), was highly relevant to their current work (92%); and that their CRSP research was necessary for their professional development (97%) and highly relevant to their current responsibilities (83%). Trainees considered the ability to “design/conduct/analyze scientific research” (87%) as the most important KSA acquired from their GDT. Most trainees shared their KSAs through publications (66%), seminar/conferences (70%), and the research supervision of students (66%). Most respondents with PhD degrees are now working at a university (52%) vs. 25% of MS graduates. The private sector employs 31% of MS graduates. Most respondents in the plant sciences are still active in bean/cowpea research (60%), vs. 41% for the social sciences, and 17% for the food sciences. The acquisition of a graduate degree greatly increased trainee salaries. Few U.S. trainees have had outside consultancies, while more than 55% of trainees from ESA and WA have been contracted by outside projects to augment income. Most the trainees (71%) reported changes in their personal lives, including improved financial status, greater self-confidence, an opportunity to learn a second language, and gaining new friends outside their home country. A high percentage of trainees (78%) attributed changes in their professional lives to improved KSAs. Most trainees (57%) reported the release of varieties, awards received for research, papers published, and positions held as important bean/cowpea-related achievements. The overwhelming majority of HC respondents (86%) returned home or to another developing country after receiving their highest degree. Furthermore, 79% of returnees
returned to the institution where they were employed prior to their GDT. A typical trainee profile included an earned PhD degree (86%), a specialization in the plant sciences, (69%), and employment in a government organization (36%) or a university (31%). Most returnees (72%) continue to work in a bean/cowpea related field, compared to 50% for non-returnees.

2) Survey of Former & Current US Pis. PIs (56%) praised the CRSP’s commitment to long-term training, but cited (68%) the need for greater funding to support GDT, particularly at the PhD level. The main reasons PIs cited for providing full financial support to a trainee was because he/she was from a collaborating host country (31%) and that the trainee could not pursue GDT without full funding (27%). Alternatively, PIs indicated that trainees were partially supported if leveraged money was available from either a department (39%) or from an external source (25%). Problems PIs reported included delays in receiving funds (20%) from the CRSP—due to delayed funding from USAID—and the need for additional funds for GDT (16%). Most PIs (64%) reported significant jobs held by former trainees as an important bean/cowpea-related achievement. Several PIs cited trainees’ contributions to their research area and noted publications/awards that resulted from their bean/cowpea-related research.

3) SUA Case Study. Ten of the 11 CRSP-supported trainees from Tanzania returned home after completing their GDT. Of these, a majority still work at SUA and are CRSP research collaborators. The Bean/Cowpea CRSP has played a major role in helping SUA develop its research and teaching programs, particularly in crop science. The CRSP’s commitment to training has greatly enhanced SUA’s capacity to train bean scientists for Eastern Africa plus contributed to making SUA a key institution in the national bean program. While SUA scientists have released four bean varieties, including two in 2007, farmer adoption has been greatly limited by constraints to seed production and multiplication. The institutional visit confirmed the hypothesis that former trainees are contributing to developmental impacts by teaching and supervising students who play strategic roles in NARS and successfully secure external funding for bean research, complementing that received for CRSP projects.

4) EAP (Zamorano) Case Study. The CRSP has not supported GDT for EAP staff being a small private agricultural university. However, the CRSP has had a significant impact on creating a strong regional bean research program, which has contributed to increased bean productivity in Central America. The CRSP has been a primary long-term funding source for the region’s network of multi-locational varietal trials. In collaboration with national bean programs in Central America, EAP has developed many varieties that have been widely adopted throughout the region. The bean research program’s excellent reputation has served to both recruit outstanding students from the region and encourage EAP students to major in plant science. With CRSP resources, EAP has provided students the opportunity to conduct research and develop skills in the use of research equipment purchased with CRSP funds. Upon returning home, these graduates have assumed key positions in national research programs and continue to collaborate with EAP on regional bean research. Key informants reported that the bean research program has greatly enhanced the reputation of EAP and thereby contributed to its success in obtaining external funding from other sources. The site visit affirmed that by enhancing EAP’s capacity to train students and support varietal development, the CRSP has had a major impact on strengthening regional research capacity, increasing bean production, and increasing small farmers’ incomes.

LESSONS LEARNED.

The B/C CRSP has played an important role in building capacity for teaching and conducting research on beans and cowpeas, thereby benefiting both U.S and host country agriculture. The CRSP should continue its commitment to GDT and give high priority to supporting HC trainees. USAID and other donors need to: 1) increase financial support for GDT, particularly for HC nationals; 2) recognize that almost all HC trainees return to their home countries after completing GDT; 3) recognize that the returned trainees play an important role in building capacity at HC institutions; and 4) recognize that the CRSP’s GDT program has been highly successful in developing scientific capacity for conducting research in the US and host countries.