PROCEDURE FOR COLLABORATIVE RESEARCH PROGRAMME ON INTEGRATED PEST MANAGEMENT

Between

The Bangladesh Agricultural Research Council (BARC) of the Ministry of Agriculture, Government of the People’s Republic of Bangladesh with principal office at New Airport Rd., Farmgate, Dhaka-1215, Bangladesh (hereinafter called BARC) and

The Office of International Research, Education, and Development (OIRED) Virginia Polytechnic Institute and State University 1060 Lidon-Reaves Hall, Blacksburg, VA, USA (hereinafter called Virginia Tech)

Bangladesh Agricultural Research Council (BARC) is the apex body of the National Agricultural Research System (NARS) and is charged with the responsibility of promoting, assisting and coordinating agricultural research, and its applications in practice; acting as clearing house of information not only with respect to research, but also with respect to agricultural and veterinary matters in general. BARC has a mandate to collaborate with international organizations and institutions in matters with respect to agricultural research.

The Integrated Pest Management Collaborative Research Support Program (IPM CRSP) is a US-AID Global Bureau funded project. Virginia Tech (a land grant university in the United States) is the grantee and Management Entity (ME) of the project. IPM CRSP had sites in the Philippines, Guatemala, Jamaica, Mali and Uganda. In Phase II IPM CRSP Management Entity has proposed and the Board of US-AID has approved Bangladesh as a prime Asian site starting from September 30, 1998. Virginia Tech is involved in agricultural research programs throughout the world, many of them with an emphasis on integrated pest management. The IPM activity has as a major objective to improve farmer income and enhance vegetable exports. The OIRED offers state-of-the-art research and communication technology, permitting rapid and effective responses to project demands around the world. The OIRED at Virginia Tech is the Management Entity (ME) for the IPM CRSP, a group of U.S. and international research institutions and national programs that are charged with the execution of a joint program of collaborative research support.
on IPM according to USAID Grant number LAG-G-00-93-00053-00. The ME is responsible and accountable to USAID for the program and financial management representing Virginia Tech (the grantee).

The objective of this Procedure for collaborative research is to define the areas of collaboration between the IPM CRSP, managed by the ORED at Virginia Tech and the Bangladesh Agricultural Research Council (BARC) of the Ministry of Agriculture, Government of the People’s Republic of Bangladesh.

Agricultural pests (insects, diseases, weeds, and nematodes, among others) cause heavy production and storage losses in Bangladesh. As a result, many farmers apply heavy doses of pesticides in attempts to control these pests, particularly on high value crops such as vegetables. Indiscriminate use of pesticides sometimes causes health and environmental problems due to residues on crops, contamination of surface and groundwater, and applicator poisoning. Many of these high-value crops are becoming increasingly important in rice-based farming systems and contribute significantly to food security, income, and export earnings. Therefore there is a need to reduce pest losses and to minimize toxic residues on crops, particularly vegetables. This will open up the export opportunities of vegetables and fruit crops in foreign markets.

In consideration of the above premises and their mutual covenants, hereinafter set forth, the parties have agreed to pursue areas of mutual interest to be undertaken under the general procedures and terms and conditions as herein contained.

**Objectives of the IPM Program**

The objectives of the IPM CRSP in Bangladesh are to enhance and promote IPM to:

1. Sustain or increase production of food crops in rice-based systems (including upland crops, vegetables, and enterprises such as fish and duck production).
2. Increase farmer and social economic benefits.
3. Protect biodiversity and human health.
4. Reduce pesticide residues on crops, fish and ducks in rice-based systems, and
5. Complement existing IPM research and technology transfer programs. By this procedure, the IPM CRSP and BARC (on behalf of participating institutes) agree to work together through the collaboration of Virginia Tech and its partner U.S. institutions with collaborating Bangladesh institutions. The IPM CRSP and the Bangladesh Agricultural Research Council (BARC) will work cooperatively with appropriate national research systems and universities. Agriculture Extension, relevant non-governmental organizations, and the private sector, particularly with Bangladesh Agricultural Research Institute (BARI), Bangladesh Rice Research Institute (BRRI), Bangabandhu Sheikh Mujibur Rahman Agricultural University (BSMRAU), and Department of Agriculture Extension (DAE-Plant Protection Wing) to ensure that mutually agreed upon research and training objectives associated with the IPM CRSP are achieved.

Type of Collaboration

Collaboration in this project will include:
1. Joint IPM research activities.
2. In-service training for participating institutions.
4. Project planning and review meetings.
5. Interchange of scientific information and methodologies that has value to IPM research, education and training.
6. Activities to provide information in support of technology transfer.
7. Other activities related to IPM research, education and training which all parties agree to undertake collaboratively.

Contributions by Collaborating Institutions

The Virginia Tech Contribution on behalf of IPM CRSP

The contribution of IPM CRSP (represented by Virginia Tech) will include the following:
1. The IPM CRSP will provide funds for the IPM collaborative program. Funds are from USAID Global Bureau grant to Virginia Tech (LAG-G-00-93-00053-00).

2. Virginia Tech will establish a coordination office to support IPM CRSP activities in Bangladesh and liaise with the ME at ORRED, Virginia Tech.

3. Representatives of the ME at Virginia Tech and co-principal investigators from collaborating U.S. and other relevant national and international research institutes/centers will periodically visit Bangladesh to participate in the IPM collaborative research program.

4. Provide funds for supplies, equipment and travel for personnel contributing to the IPM CRSP.

5. Provide funds for travel to the United States or third country for appropriate visits, meetings, and workshops for appropriate Bangladeshi personnel.

6. The organization of periodic workshops for the benefit of host country IPM CRSP collaborators to facilitate the exchange of information between researchers, educators, and technology transfer agents.

7. Support for graduate student education where graduate students are from collaborating institutions and, support for collaborating institution scientists' short-term training to work in Bangladesh, U.S. or other countries on agreed upon research objectives of the IPM CRSP.

**Contribution of NARS**

The contribution of BARC will include, subject to personnel and budgetary considerations, and as may be mutually agreed on, the following:

1. Office, laboratory, field facilities and relevant personnel to implement jointly developed research projects.

2. Facilitating and promoting research and technology transfer activities to be conducted in Bangladesh by Bangladesh and U.S. and international IPM CRSP collaborators. These activities may include research and training, technology transfer, educational workshops and periodic meetings in Bangladesh that are mutually agreed upon and described in Annual Workplans.
3. Involving the national extension system, NGOs and the private sector to facilitate the rapid diffusion of technologies developed on the IPM CRSP.

4. Recognizing and analyzing the continuously integrated nature of technical and policy constraints to IPM adoption, and recommending policy changes on an on-going basis to engender maximum access in the most rapid and economical fashion to all members of the agricultural sector, especially the small and poor farmer.

Work Plan Development

1. Detailed Annual Work Plans and Budgets will be developed by scientists from collaborating institutions and submitted to the Committee for the Asian Site in Bangladesh for further input and modification. The Work Plan will then be submitted to the IPM CRSP Technical Committee and following their input, will be submitted to the ME at OIRED, Virginia Tech and the IPM CRSP Board of Directors for approval.

Research Management

1. A steering committee will be constituted headed by the Executive Chairman, BAKC and scientists/development personnel drawing from relevant organizations to oversee the collaborative program activities of IPM and workplan of the program. Detailed workplan and budget will be approved by the steering committee.

2. The IPM CRSP is funded by USAID and the collaborating U.S. institutions, and administered by the ME at OIRED at Virginia Tech, which is responsible to USAID for fiscal matters and research progress. Each participating institution is responsible to the ME for project expenditures and research progress.

3. The IPM CRSP is under the direction of the ME with the guidance of the Board of Directors, Technical Committee and the External Evaluation Panel. The ME through the IPM CRSP Program Director, Assistant Program Director, and the Principal Investigator will provide assistance in the management of activities under the procedures outlined.
Input into operational policies will be through the Site and Technical Committees and the Board of Directors and in compliance with the provisions of the Grant.

4. Virginia Tech in consultation with BARC will appoint a Coordinator for IPM CRSP Bangladesh site. All expenses for the IPM CRSP will be administered by the Coordinator. The ME (Virginia Tech) will be responsible for conducting an external audit, if required by USAID. The principal collaborating institution in Bangladesh will also be responsible for submitting a research progress report to the ME on an annual basis.

Use of Research Results

Scientific and technological information derived from collaborative activities under this procedure shall not be unilaterally disclosed without mutual agreement of the participating agencies.

Duration of the Collaborative Program

1. This procedure for collaborative research program is extended for a further period of six years (initially for one year and successively for five years) starting from September 29, 2009 and terminates on September 29, 2014.

2. If either party to this collaborative program decides to terminate its relationship with the other, it must provide at least three (3) months advance written notice to the other party.

3. The collaborative program covered by this document shall continue unless terminated by immediate notification of termination of the IPM CRSP funding grant by USAID, Washington.

4. BARC of the Ministry of Agriculture, Government of Bangladesh or the ME may request consideration of adjustments to this procedure for collaborative activities.
5. The IPM CRSP is a continuing project with funds appropriated annually contingent on the availability of USAID funding and on performance.

Approvals

Having read this procedure for collaborative program, the persons below have signed their names and shown their agency affiliation indicating their concurrence with the collaborative research relationships outlined herein.

Dr. M. Nural Alam
Executive Chairman
Bangladesh Agricultural Research Council (BARC)
Dhaka, Bangladesh

(Date)

Dr. Charles W. Steger
President, Virginia Polytechnic Institute and State University (Virginia Tech)

(Date)

Dr. S.K. De Datta
Associate Provost for International Affairs; Director, Office of International Research, Education, and Development; Principal Investigator, IPM CRSP; Virginia Polytechnic Institute and State University (Virginia Tech)

(Date)

Mr. David W. Richardson
Director, Office of Sponsored Programs, Virginia Polytechnic Institute and State University (Virginia Tech)

(Date)