

# IPM CRSP Trip Report

## Countries Visited:

India, Nepal and Bangladesh

## Dates of Travel:

S.K. De Datta	January 26 <sup>th</sup> to February 10 <sup>th</sup> , 2012
Marty McVey	January 29 <sup>th</sup> to February 9 <sup>th</sup> , 2012
Sally Miller	January 28 <sup>th</sup> to February 11 <sup>th</sup> , 2012
R. Muniappan	January 25 <sup>th</sup> to February 9 <sup>th</sup> , 2012
George Norton	January 25 <sup>th</sup> to February 8 <sup>th</sup> , 2012
Doug Pfeiffer	January 25 <sup>th</sup> to February 5 <sup>th</sup> , 2012
Ed Rajotte	January 25 <sup>th</sup> to February 8 <sup>th</sup> , 2012

## Travelers Names and Affiliations Dates of Travel:

S.K. De Datta, George Norton, and Doug Pfeiffer - Virginia Tech, R. Muniappan- IPM CRSP ME, Sally Miller-Ohio State University, Ed Rajotte- Pennsylvania State University, and Marty McVey-BIFAD Board Member.

## Purpose of Trip:

To conduct the IPM CRSP South Asia project planning meeting and to visit IPM CRSP sites in India, Nepal and Bangladesh.

## Sites Visited:

Coimbatore Trichy, and New Delhi in India; Kathmandu and Pokhara in Nepal; and Dhaka, Gazipur and Bogra in Bangladesh.

## Description of Activities/Observations:

*India:* De Datta, Muniappan, Rajotte, Pfeiffer, and Norton

January 27<sup>th</sup>: 2.00 pm. The team met with Drs. Jonathan, Mohankumar, Karthikeyan, Udayasurian, Suresh and Selvaraj. Jonathan showed us a video of the parasitoid *Acrophagus papayae* ovipositing in the papaya mealybug. We had a discussion about the oncoming Virology Symposium, and proposals submitted for trilateral and bilateral programs including Tamil Nadu Agricultural University (TNAU) and Virginia Tech.

3.00 pm. Met with Dr. Murugesu Boopathi, Vice Chancellor and briefed him of the IPM CRSP activities. He was very appreciative of IPM CRSP efforts in controlling papaya mealybug and development of IPM packages for various vegetable crops in Tamil Nadu. Later we visited the Entomology Department and observed multiplication of papaya mealybug parasitoids. Then we traveled to the orchard where eggplants were grafted on the rootstock of *Solanum torvum*. By adopting this technique and ratooning they were able to keep the crop in the field for two to three years. We observed symptoms of virus infection of eggplants in the field and we suggested that they take samples and identify the virus(es).

January 28<sup>th</sup>: Norton and De Datta: Met with Dr. Selvaraj, Head of Trade and Intellectual Property Department of TNAU and spent the day reviewing socio-economic research on impact assessment and gender equity. In addition to Selvaraj, other participants from TNAU included N. Kiruthika (graduate student doing her Ph.D. dissertation- IPM CRSP impact assessment), Dr. K. Uma and Dr. M. Anjugam (associate professors of agricultural economics, TNAU, Coimbatore).

Dr. Selvaraj's presentation covered primary data collected on full and partial adopters of IPM CRSP technologies on onion, eggplant, okra, tomatoes and cauliflower.

Considerable discussion focused on papaya mealybug which had a huge impact on not only papaya but also mulberry and other fruit and vegetable crops in Tamil Nadu. With additional funds, Dr. Selvaraj will be able to work with George Norton to quantify the impacts of the mealy bug in horticultural crops. Also discussed were environmental impacts.

There was only limited work done by Gender Equity group. A plan is in place for Year II work (2010-2011) on gender difference in the level of IPM knowledge about how to control crop pests and access to assets.

Muniappan, Pfeiffer, and Rajotte traveled to Trichy with Mohankumar, Jonathan, Karthikeyan and Samiyappan to attend the farmers' meeting. The TNAU scientists prepared a book in Tamil including IPM packages for several vegetable crops and distributed it to the farmers during the meeting. They also displayed several posters on IPM packages in the session. The meeting was attended by over 700 farmers and was covered by All India Radio and local newspapers.

January 29<sup>th</sup>: In the morning, the team visited TNAU campus and reviewed past IPM CRSP activities and future plans at TNAU. We left Coimbatore at 3.30 pm and reached New Delhi at 8.00 pm.

January 30<sup>th</sup>: Honorable Marty McVey (BIFAD member) and Sally Miller joined the team. At 11.00 am, we visited USAID mission and met with William Hammink (Mission Director), Allan Mustard, Srivalli Krishnan, Mathew Jones, David Leishman, Alka Gupta and Nilu Sayal Chachra. Hon. McVey briefed the mission on BIFAD and we explained IPM CRSP activities in India. Mr. Hammink said that the mission's emphasis is on 1. Private-public sector partnership, 2. Development innovations, 3. Partnership innovations, 4. Food security, 5. Clean energy, and 6. Global health. We discussed about the U.S.A. – India – Africa trilateral program.

At 12.45 pm, we met with Dr. Rajendra Pachauri, Director General, The Energy and Resources Institute (TERI) and gave him an overview of the IPM CRSP. Dr. Nutan Kaushik presented a video on TERI activities and also gave a tour of her laboratories. Muniappan visited the Entomology Department of the Indian Agricultural Research Institute.

January 31<sup>st</sup>: In the morning, the team met with Dr. Swapan Datta, Deputy Director General (Crop Sciences) of Indian Council of Agricultural Research and explained to him various IPM CRSP activities in India. He was very appreciative of IPM CRSP efforts in biological control of the papaya mealybug in India.

In the afternoon, the team traveled to Kathmandu, Nepal.

February 1<sup>st</sup>: John Bowman, AOR, USAID joined the team.

Bowman, De Datta, McVey, Miller, Muniappan, Norton, Pfeiffer, and Rajotte participated in the IPM CRSP South Asia program review meeting which started at 8.30 am.

At 10.00 am, Bowman, De Datta, McVey, Muniappan, Norton and Luke Colavito visited USAID mission and met with David Atteberry (Mission Director), Luis Guzman (Feed the Future Team Leader), and Navin Hada. We explained IPM CRSP activities in Nepal. Mr. Atteberry mentioned that the mission is almost ready to release an RFP and he prefers projects that facilitate the mission focused programs. Hon. McVey met separately with the U.S. Ambassador to Nepal.

In the afternoon the team that visited USAID mission in the morning, joined the review meeting.

February 2<sup>nd</sup>: Bowman, De Datta, McVey, Muniappan, Norton, Dr. Colavito, Mrs. Colavito, Gyawali, Jonathan, Durairaj, Pugalendhi, Kaushik, and Mian traveled to Pokhara. In the morning, we visited fields that were using biofertilizers and biopesticides for production of cauliflower and other vegetables and met with vegetable marketing

planning committee. In the afternoon, we visited farmers who graft tomato scions on *Solanum sisymbriifolium* rootstock to overcome bacterial wilt disease and nematodes as well as to prolong their longevity.

February 3<sup>rd</sup>: We traveled to Kathmandu from Pokhara. In the afternoon, Bowman and Muniappan met with Luis Guzman and Navin Hada at the USAID mission. McVey, De Datta, Miller and Pfeiffer visited a farm that produced hybrid tomato seeds.

Also, IPM CRSP program planning meeting continued in the afternoon.

February 4<sup>th</sup>: De Datta, McVey, Miller, Muniappan, Norton and Rajotte traveled to Dhaka, Bangladesh from Kathmandu.

Pfeiffer left for U.S.A.

February 5<sup>th</sup>: Attended review meeting of the IPM CRSP activities in Bangladesh at Bangladesh Agricultural Research Institute (BARI) with introductions and a review of the successes of the IPM CRSP over the last 13 years.

Hon. McVey described BIFAD activities and their goals of improving impact and capacity building through USAID and Feed the Future Initiative. Several BARI scientists presented their research and extension activities in developing IPM packages for different vegetables and disseminating the information through field days, farmers field schools and mass media.

At 10.30 am Hon. McVey and S.K. De Datta met with Dr. G.P. Das who briefed them about ABSPII project in Bangladesh. Later Dr. Das and Dr. Islam showed them quarantine field facility where GM crops are grown.

February 6<sup>th</sup>: De Datta, McVey, Miller, Muniappan, Rajotte, Mian, Alam, Rahman, and Nahar traveled to Bogra. Norton remained at BARI and met with economists at the Socioeconomic Division to discuss impact assessment and dissertation research of VT Ph.D. student Ahsanuzzaman. The socioeconomic group will host the student for the next 7 months and together they will implement another survey to be used in impact assessment work.

At Bogra, in the morning, the team visited a pumpkin field wherein cuelure pheromone traps were set up for control of melon fly. In the afternoon, the team visited a village where women were producing *Trichoderma* compost and fields where *Trichoderma* compost was applied. Many farmers expressed their appreciation for introduction of *Trichoderma* compost production and use in the fields.

February 7<sup>th</sup>: In the morning, Hon. McVey, Muniappan, De Datta, and Yousuf Mian met with Ambassador Dan Mozena, Richard Greene, Mission Director and Ramona M. El hamzaoui, Director of Economic Growth Office and explained IPM CRSP activities in Bangladesh.

Norton and Rajotte left for U.S.A.

Feb. 7-9: An international training workshop was conducted on diagnosis and management of insect pests and diseases of horticultural crops under the IPM CRSP International Plant Diagnostic Network (IPDN) at BARI, Joydebpur, Gazipur. Ten participants from Bangladesh and two from Nepal attended the workshop. Three resource persons came from India (Drs. Samiyappan, Mohankumar and Karthikeyan, TNAU) and two from USA (Drs. Muniappan (VT) and Miller (OSU)). Dr. De Datta also attended. At the end of the workshop, there was a certificate awarding ceremony on Feb. 9, 2012. Dr. Rafiqul Islam Mondal, Director General of BARI was present as the chief guest and distributed the certificates among the trainees. Dr. Md. Shirazul Islam, Director (Res) and Dr. Md. Khaled Sultan, Director, HRC, BARI were also present. In total there were seven theoretical lectures and eight high tech laboratory oriented practical classes. The program provided theoretical background for identification of bacterial and viral diseases of vegetable crops, identification of *Pseudomonas* as biocontrol agents and use of modern molecular and serological diagnostic methods. Hands-on laboratory training was provided via three major case studies: 1) identification of papaya mealybug; 2) identification of *Ralstonia solanacearum*, causative agent of bacterial wilt and 3) identification of Tomato leaf curl viruses and whiteflies. Dr. De Datta suggested that a manual be developed on IPDN by the IPM CRSP.

McVey and Muniappan left for U.S.A. on February 8<sup>th</sup>.

De Datta left for U.S.A. on February 9<sup>th</sup>.

Miller left for U.S.A. on February 10<sup>th</sup>.

### Training Activities Conducted

Program type (workshop, seminar, field day, short course, etc.)	Date	Audience	Number of Participants		Training Provider  (US university, host country  institution, etc.)	Training Objective
			Men	Women		
Farmers Meeting, Trichi	January 28, 2012	Farmers	650	50	TNAU	IPM packages for vegetable crops

South Asia Planning Meeting	Feb. 1, 2012	Scientists			Kathmandu, Nepal	Review
Vegetable Marketing Committee Meeting	Feb. 2, 2012	Farmers			Pokhara, Nepal	Observation
Diagnostics Workshop	Feb. 7-9, 2012	Scientists	6	7	BARI	Diagnostics of vegetable Pests

### List of Contacts Made:

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