

## IPM Innovation Lab Trip Report

**Country Visited:** Bengaluru, India

**Dates of Travel:** September 26 - 29, 2018

**Travelers' Names and Affiliations:** Nguyen Van Hoa and Dang Thi Kim Uyen, The Southern Horticultural Research Institute (SOFRI), Vietnam.

**Purpose of Trip:** As scientists at the Southern Horticultural Research Institute in Vietnam and research team members of the “IPM for Exportable Fruit Crops in Vietnam” project, we have been invited to attend and report at the “First International Conference of Biological Control: Approaches and Applications” from 27 – 29<sup>th</sup> September, 2018 at Le Meridien hotel, Bengaluru, India.

**Sites Visited and stayed:** Le Meridien hotel, Bengaluru, India, September 27-29<sup>th</sup>, 2018.

### Description of Activities/Observations:

**September 26<sup>th</sup>:** We traveled from Ho Chi Minh City (Vietnam) to Singapore by Vietnam Airlines and arrived Bengaluru, India by Jet Airway at 21.25.

#### September 27<sup>th</sup>:

Morning: at Le Meridien hotel, Bengaluru, India.

- Registration and attended the inaugural session
- Welcome address by ICIAR, CABI, IPM/Virginia Tech and other Conference organizers
- Attended the opening lecture on “Why are so many manuscripts are rejected for publication? An editorial perspective” by Quirico Migheli, from Italy.

After that the conference divided into three different sessions at 3 different halls (Coronet, Senate and Orchid Hall).

We attended the session: **Biotechnological Approaches in Biocontrol with different presentations on:**

- Small insecticidal molecules against crop pests- by Raj Kamal Bhatnagar
- Role of transgenic *Bt*-crops in promoting biological control and integrated pest management- by Manjunath T M
- Yeast volatile organic compounds inhibit ochratoxin - A production by *Aspergillus carbonarius* (Bainier)- by Quirico Migheli
- Silencing of a *Meloidogyne incognita* mucin-like gene reduces *Pasteuria penetrans* endospore adhesion on the juvenile cuticle surface - Uma Rao (Nematology Division, IARI, Pusa, New Delhi, India)

Afternoon:

- Presentation on *Trichoderma virens* XYPPX repeat protein (XRP1) is involved in regulation of conidiation and mycoparasitism – by Ravindra Bansal

- Presentation: Prospecting for novel *Bacillus thuringiensis* holotype crystal toxin genes in India – by Singaravelu B

- Later, there were many presentations on different topics with useful discussions including general discussion up to 17.30 and continued with first day ICBC 2018 poster session as scheduled.

### **September 28<sup>th</sup>:**

#### Morning:

- We joined the Session 4: **Biological control Compatible Approaches**

- First presentation on: Recent collaborative research progress in pheromone-based trapping systems for agri-horticultural pests management in India- by Sithanatham S

- Antifungal activity against *Monosporascus cannonballus* and plant growth- promoting potential of bacteria isolated from rhizosphere of melon in Oman - by Dhuha Al Daghari.

- Nguyen Van Hoa, SOFRI, VN presented: Effect of *Bacillus* spp. and plant extracts from *Impatiens balsamina* L. on anthracnose disease caused by *Colletotrichum* spp. on mango in Vietnam.

- Then presentation on Fruit fly management in Nepal - a case from plant clinics- by Debraj Adhikari

#### Later in the morning session:

- Nguyen Van Hoa joined the Session 9: **Workshop of the IAPPS Working Group on *Tuta absoluta* - Biology, Ecology and Management** chair by Rangaswamy Muniappan.

- The keynote address by Abhijin Adiga, from Nepal: Multi-pathway models to understand the spread and impact of *Tuta absoluta*.

- General discussion

- Role of IPM Innovation Lab in Management of *Tuta absoluta*- by Muniappan R

- *Tuta absoluta* Workshop Group photo –All session participants

#### Afternoon:

- Many presentations on *Tuta absoluta*/tomato. This session was of interest to me as *Tuta absoluta* will be spreading to Southeast Asia within next year or two.

- Prof. Dr. Muniappan suggested a workshop should be conducted in Vietnam in early next year and to create awareness among the government officials.

- The second day ICBC poster session:

In this session the poster prepared by Mrs. Dang was posted: “The efficacy of *Streptomyces* spp., *Bacillus* spp and extracts of *Impatiens balsamina* on the mycelial growth of the fungi *Colletotrichum truncatum*, *C. gloeosporioides* causing anthracnose disease on dragon fruit,” Dang Thi Kim Uyen, Rangaswamy Muniappan, Tran Vu Phen and Nguyen Van Hoa.

+ Other IPM/Vietnam flyers were placed on table including dragon fruit, Mango, Longan by Dr. Muniappan.

In late afternoon/evening all participants joined for Cultural Events with many Indian traditional dances.

**September 29<sup>th</sup>:** Field visit for Third International Workshop of the IOBC Global Working Group on Biological Control and Management of *Parthenium* Weed; however, we could not accompany with other participants since we had to go to the airport for returning to Vietnam.

### **Summary and Recommendations:**

This was a good, useful trip for me; it helped us meet and discuss/exchange information/experiences with many scientists from different parts of the world. We could learn from participants who are working on different biological control aspects on different pests/diseases of crops, which we can learn to manage in Vietnam. In addition, we became aware of possible invasion of *Tuta absoluta* in Vietnam in the near future. We need to attend more international conferences and publish more papers from our IPM research on fruit trees; the website link needs to be translated into Vietnamese and we need to upload to SOFRI website for better understanding and informing the public. All presentations should be published in full length.

Through this report, I would like to express my sincere thanks to Dr. Muniappan and Dr. John Bowman, for funding. What we learned from this trip will be applied to our work, especially to our project. Beside that, I also would like to express my sincere thanks to Dr. Jalali for invitation and other organizers for the warm welcome and hostability. I hope in the future I will have other chances to return to India.