

## IPM Innovation Lab Workshop on Diagnosis and Management of Plant Virus Diseases

Venue: Royal University of Agriculture  
Phnom Penh, Cambodia  
August 10-12, 2016

### OBJECTIVE

The Asian Vegetable IPM Innovation Lab (IPM IL) will conduct a three-day workshop on “Diagnosis and Management of Plant Virus Diseases” at the Plant Pathology lab of the Royal University of Agriculture (RUA) in Phnom Penh, Cambodia, during August 10-12, 2016. The main objective of this workshop is to provide an update on plant virus diseases and conduct an interactive workshop on methods for diagnosis and options for management of viral diseases towards building the scientific capacity of plant pathologists, extension personnel, and NGO personnel to tackle viral diseases in Cambodia.

### PROGRAM

Plant virologists from the IPM Innovation Lab will organize an interactive participatory workshop with field visits, lectures, and lab work; they will lead discussions on the current status of research, education, the seed production and distribution chain, and extension relevant to the management of virus diseases in Cambodia. Topics will cover fundamental and applied aspects related to viruses, their epidemiology, detection, and management. Discussions will also focus on capacity building needs in Cambodia and how the IPM innovation Lab can play a role in building the human and institutional capacity to address viral diseases impacting agricultural crops in the country.

### AGENDA

| <b>Day 1: Aug 10</b> | <b>Entomology and plant pathology labs</b>                                                                                                                                        |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9.00 – 9.30          | Registration                                                                                                                                                                      |
| 9.30 – 9.40          | Welcome all the participants and brief introduction about Vegetable IPM IL project by Dr. Seng Kim Hian, Project Coordinator                                                      |
| 9.40 – 10.00         | Introduction of the participants                                                                                                                                                  |
| 10:00-10:20          | Pre-test                                                                                                                                                                          |
| 10:20-10:35          | Coffee break                                                                                                                                                                      |
| 10:35-11:00          | An introduction to plant viruses and plant virus diseases –Dr. Amer Fayad, Associate Director, IPM Innovation Lab, Virginia Tech University                                       |
| 11:00-11:30          | Importance of viral diseases to food security and sustainable vegetable production by Dr. Naidu Rayapati, Associate Professor in Plant Pathology from Washington State University |
| 11:30-12:30          | Lunch break                                                                                                                                                                       |

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| 12:30-17:00          | Field visit for sample collection, symptom identification and use of immunostrips for virus detection                                                                                                                                                                                       |
| <b>Day 2: Aug 11</b> | <b>Entomology and plant pathology labs</b>                                                                                                                                                                                                                                                  |
| 9.00-12:00           | ELISA setup (including 15 minutes coffee break)                                                                                                                                                                                                                                             |
| 12:00-13:00          | Lunch break                                                                                                                                                                                                                                                                                 |
| 13:00-17:00          | Lectures by Drs. Amer Fayad and Naidu Rayapati <ul style="list-style-type: none"> <li>- Description of symptoms caused by virus and virus-like agents causing plant diseases</li> <li>- Dissemination of viruses (seed, mechanical, vectors)</li> </ul> (including 15 minutes coffee break) |
| <b>Day 3: Aug 12</b> | <b>Entomology and plant pathology labs</b>                                                                                                                                                                                                                                                  |
| 9.00-10:30           | ELISA results and discussion on practical aspects of viral diagnostics                                                                                                                                                                                                                      |
| 10.30-10:45          | Coffee break                                                                                                                                                                                                                                                                                |
| 10:45-12:00          | Lectures by Drs. Amer Fayad and Naidu Rayapati <ul style="list-style-type: none"> <li>- Field- and lab-based methods for the detection of viral diseases</li> <li>- Management approaches for mitigating impacts of viral diseases</li> </ul>                                               |
| 12:00-13:00          | Lunch break                                                                                                                                                                                                                                                                                 |
| 13:00-14:00          | General discussion on future needs for research and capacity building                                                                                                                                                                                                                       |
| 14:00-14:30          | Post-test                                                                                                                                                                                                                                                                                   |
| 14:30-14:45          | Evaluation                                                                                                                                                                                                                                                                                  |
| 14:45-16:00          | Valedictory function – Distribution of certificates and group photo (including 15 minutes coffee break)                                                                                                                                                                                     |