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Report on

### **INTERNATIONAL MASTER CLASS**

### IN PLANT BIOSECURITY

The Legend Hotel Kuala Lumper Malaysia

2 – 13 June 2008

International Master Class in Plant Biosecurity Issues and Responses

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ATTACHMENT 1 – Complete Master Class Program

### ATTACHMENT 2 – Comprehensive feedback

### ATTACHMENT 3 – Participant list

#### REPORT ON INTERNATIONAL MASTER CLASS IN PLANT BIOSECURITY KUALA LUMPUR, MALAYSIA 2 – 13 JUNE 2008

### Introduction

The ATSE Crawford Fund has a substantial record of supporting Master Classes in subjects related to agriculture, involving participants of proven expertise in specific topics together with peers and presenters from a number of countries. Several Master Classes have been held in Australia but a number has been mounted in other locations when this has offered advantages in terms of achieving the purpose of the Master Class.

With this point in mind, The Crawford Fund agreed to support an International Master Class in Plant Biosecurity in Malaysia, participants to come from a number of ASEAN countries and some other Asian countries of trading significance in the region. CABI (South-East Asia), the Cooperative Research Centre for National Plant Biosecurity (Australia) and the Department of Agriculture and Agro-based Industry (Malaysia) were enthusiastic collaborators with the Fund in this endeavour.

The aim of the Master Class was to reach participants who are 'influencers', that is, persons with a scientific and technical background in the disciplines associated with biosecurity and who have the ability to interface with policy makers and regulators in their home countries and, potentially, abroad.

In the event, 17 participants from 10 countries took part in an intensive program of presentations, practical work, discussion groups and field visit from 2 June to 13 June 2008. Sadly, the major earthquake in China shortly before the Master Class prevented participation by that country. Invitees from both Indonesia and Pakistan (despite advance notice) were unable to finalise travel arrangements and did not participate.

The desired outcomes of the Master Class were threefold, namely, to:

- raise awareness of the plant biosecurity continuum (pre-border at border and post-border) in ASEAN countries and some of their neighbours with a focus on the global context of biosecurity;
- increase the level of knowledge of risk analysis processes among Australia's neighbours and trading partners, and
- further develop collaborative links between the Master Class partners and between the partners, the participants and their home countries.

Feedback (p 6) indicates that these outcomes were achieved. Several suggestions for specific follow-up activities will be considered and CABI has already indicated its willingness to partner the CRC for National Plant Biosecurity in some of these. There is also a demand for further training which The Crawford Fund may wish to consider.

### Administrative organisation

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### Presenters involved

Presenters were drawn, principally, from staff of CABI and members of the CRCNPB, together with the Master Class Director, Dr Ferrar as detailed in the Program, (Attachment 1).

#### Other international experts involved

A presentation was made by Audrey Young (MFIT Project).

### Funding

The Master Class was presented for approval to the Board of the CRCNPB (as the largest financial contributor) as Project No. CRC60072. Operating costs were estimated at \$125 000 with a complement of 15 to 25 participants. Components of the budget were expected to be CRCNPB \$50 000; The Crawford Fund \$35 000; ACIAR \$20 000 and the Government of Malaysia \$20 000.

CABI provided copies of its Crop Protection Compendium for each participant, together with other significant 'in kind' contributions. The Government of Malaysia covered the costs of the meeting room; transport and the Conference Dinner, and made very substantial 'in kind' contributions during the set up and wind down phases, as well as throughout the Master Class.

#### Master Class program

Full detail of all lectures, practical classes and teachers are shown in the Program in Attachment 1.

#### **Publications**

No formal, scientific publications are expected to emanate, directly, from the Master Class. However, a number of participants indicated an intention to prepare documentation for purposes of dissemination and the CRCNPB will make a media release.

#### **Presentation of Master Class certificates**

Certificates, signed by senior representatives of the four collaborating organisations, were presented to each participant by Mr Sulaiman bin Md.Zain, Assistant Director General, Department of Agriculture and Agrobased Industry. The presentations formed part of the formal Closing Ceremony of the Master Class on Day 12.

### Summary of feedback from participants

Feedback was sought from participants by circulating a questionnaire. Fifteen responses were received, two participants being unable to complete the questionnaire due to conflicting commitments during the time available.

The feedback provided below is a summary of the responses, which is provided in Attachment 2.

## 1. What do you think is the most important thing you have learned from the Master Class?

**Comment:** the most important points were perceived to be: understanding the concept of plant biosecurity (PB); the need to take an holistic approach to PB; the need for coordination/networking between disciplines and scientists; risk analysis; the development and availability of tools and of simple, reliable tests.

## 2. What were the <u>two</u> most important aspects of the Master Class activities for you? [n = 15]

•	Lectures	10
•	Practical sessions	6
•	Discussion groups	9
•	Field visits	0
•	Meeting with other scientists with similar interests	5

'The exercise on surveillance was very enlightening and useful - not all of us see the same thing in the field'.

**Comment:** the efforts of all presenters was greatly appreciated. Field visits were informative and enjoyable (see comment, above), however, they did not rate in the top two 'aspects'. A planned visit to a 'point of entry' may have had a favourable effect on the ranking had it been possible.

## 3. Did you find anything missing from the Master Class? If so what would you have liked to have been included?

**Comment:** in general, there was a high level of satisfaction with the content of the Master Class. A view emerged during the Master Class that the scientific aspects of plant biosecurity need to be melded with policy and regulatory considerations. This view is reflected in some of the comments.

## 4. How has your view of biosecurity principles and practices changed as a result of the Master Class?

**Comment:** The observation 'Biosecurity is more than quarantine, plant protection and free trade' exemplifies a general development of the biosecurity concept during the Master Class. This was accompanied by an embracing of the 'biosecurity continuum', that is, biosecurity needs to be addressed pre-border, at border and, in a worst case scenario, postborder. An introduction to the approaches, techniques and tools which enable the continuum to be addressed was appreciated.

## 5. Has the range of your professional contacts changed as a result of this Master Class? If so please describe what has happened.

**Comment:** With one exception the participants felt that their professional contacts had broadened during the Master Class experience. Diagnostics and urban surveillance were two topics which captured attention and are noted, specifically in feedback, here.

## 6. What should be done now to reinforce the activities of this Master Class?

**Comment:** widespread for support for post-Master Class activities is evident as is the development of means of sharing information. Capacity building, including promoting awareness in a broader professional and community context, was emphasised in the Master Class and is reflected here.

## 7. Were the accommodation, meals and general arrangements appropriate? If not, could you provide details?

**Comment:** personnel of the Department of Agriculture and Agro-based Industry, Malaysia, formed a secretariat. Members of which liaised with The Crawford Fund, CABI and the Cooperative Research Centre for National Plant Biosecurity (CRCNPB) before the event and were 'on the ground' in numbers during the Master Class. CABI made particular contributions to program development, presentations and to arranging travel for participants. With support from the Crawford Fund Director of Master Classes, the CRCNPB coordinated the program and provided many of the presenters. The attention to detail by the organisers is reflected in the, generally, very favourable feedback.

In respect of accommodation, the hotel was engaged in extensive refurbishment activities which, unfortunately, impacted on several participants.

## 8. If we ran the Master Class again, what changes would you recommend?

**Comment:** feedback indicates some interest in broadening presentations in the policy and regulatory areas. As indicated by responses to Question 2, group discussions were appreciated (and were extremely lively). Achieving a balance between the need to inform then deploying the information is a perennial challenge in training. A desire to spread training around the region, rather than dissatisfaction with the Malaysian experience, is reflected in some feedback.

## 9. How do you propose to pass on the information you have learned to your colleagues in your home institution?

**Comment:** a range of formal and less formal means of dissemination was nominated. Before departure, all participants were provided with a CD containing copies of Master Class presentations; contact details for organisers and participants; a photo gallery, which includes the Opening Ceremony; the Closing Ceremony, and an audio-visual presentation prepared by the participants as a gesture of thanks.

#### 10.Will it be difficult to implement the knowledge you have learned from the Master Class into your work activities in your home institution? If so, can you provide details?

**Comment:** the range of responses reflects the differences prevailing in the ten countries represented at the Master Class, not least economic conditions. Overall, expectations of being able to implement learnings from the Master Class were high.

#### 11. Are there any other comments you would like to make?

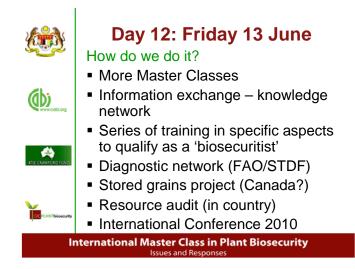
**Comment:** disparities in capacity between countries is, again, evident in responses to this question. There is optimism that a regional network could be developed and this may involve further training, whether in the form of Master Classes or alternative approaches. The availability of advanced technologies and the potential which these have for boosting regional plant biosecurity capability was clearly recognised.

'Above all the course was conducted in a very interactive discussion mode' is an accolade greatly appreciated by the Master Class personnel.

**Postscript:** Commencing on Day 2, each morning, Professor Lovett (the Master Class 'champion') presented a brief summary of the previous day's 'learnings' and sought feedback from participants as a 'reality check'. The summary for Day 1 (below) was re-visited and validated on Day 12.



### **Follow Up Activities**



Also on Day 12, participants were invited to suggest how the various follow up activities which they had nominated for consideration might be effected. Additional training and the establishment of a network for information exchange are priorities.

CABI is canvassing the establishment of a diagnostic network through which access to some of the contemporary techniques demonstrated through the Master Class might be achieved. This is an activity in which the CRCNPB might also wish to be involved.

Loss of grain in storage was perceived by all participants as a significant problem. The lowest losses suggested were 10% of crop stored. This appears to be an area where 'non-competitive' research and development might be carried out and may be of interest to the CRCNPB.

A 'resource audit' in each country was felt to be a useful and relatively inexpensive exercise which would be of value in targeting additional follow up activities to the areas of greatest need.

### Participant List

A full list of participants is provided as Attachment 3.

### Outcomes

In submitting the Master Class as Project CRC60072 the proponents forecast three major outcomes. The first was the establishment of stronger linkages between CABI, the Crawford Fund, ACIAR and the CRCNPB. Although ACIAR's input was limited, support was strong. The other three parties worked closely and harmoniously to mount and conduct the Master Class. Their efforts were greatly facilitated by the extent to which the Department of Agriculture and Agro-based Industry, Malaysia enthusiastically contributed to the execution of the Master Class.

The second expected outcome was 'enhanced awareness of biosecurity risks and the consequences of breaches of biosecurity in ASEAN countries and their neighbours'. Feedback from participants indicates that this outcome was also achieved.

The third outcome was 'positive benefits to Australia from reduced risk of incursions'. Enhanced awareness in neighbouring countries would be expected to contribute to the achievement of this outcome. Actions from Australia on several of the nominated follow up activities would consolidate progress made.





### International Master Class in Plant Biosecurity: Issues and Responses Legend Hotel, Kuala Lumpur, Malaysia, 2 - 13 June 2008

### **OFFICIAL PROGRAM**

	Time	Event
1 June 2008 (Sunday)	15:00 – 17:00	Participants arrive Registration

M'Class Day 1	Time	Event
2 June 2008	08:00 - 08:40	Arrival of invited guests
(Monday)	08:40 - 08.50	Arrival of Australian High Commissioner and Secretary General, MAABI
	08:50 - 09:00	Arrival of Secretary General, Ministry of Agriculture and Agro-based Industry Malaysia
	09:00 - 09:10	Welcoming Remarks by Director of Master Class program, The Crawford Fund <i>Dr Paul Ferrar</i>
	09:10 - 09:30	Welcoming Address by <i>Her Excellency Mrs Penny</i> <i>Williams, Australian High Commissioner</i>
	09:30 – 10.00	Opening address by <i>Y.Hg. Dato' Dr Zulkifli Idris,</i> <i>Secretary General, Ministry of Agriculture and Agro-</i> <i>based Industry, Malaysia</i> <i>Also attended by:</i> Mr. Ruseley b. Dato' Khalid Director General of Agriculture, Malaysia Mr. Sulaiman bin Md. Zain Deputy Director General of Agriculture (Operation), Malaysia
	10:00 – 10:10	Thank you notes and presentation of mementos <i>Professor John Lovett (Cooperative Research Centre</i> <i>for National Plant Biosecurity)</i>
	10:10 - 10:30	Master Class Group Photo with Distinguished Guests
	10:30 - 11:00	Morning tea
	11:00 – 11:30	Orientation of Master Class and discussion of desired outcomes (Dr Paul Ferrar)
	11:30 – 12:30	Key address "Strategic responses to global biosecurity challenges: An Australian perspective" (Professor John Lovett)

12:30 - 14:00	Lunch (and networking)
14:00 – 15:15	Research responses to global biosecurity challenges: An Australian perspective <i>(Dr David Eagling)</i>
15:15 – 15:30	Refreshments
15.30 - 16:30	Concurrent sessions (2): A response to biosecurity issues raised from the opening addresses <i>(Professor John Lovett; Dr David Eagling)</i>
16:30 – 17:00	A foundation for food security (The Global Crop Diversity Trust) (Professor John Lovett)
16:30 – 17:30	Informal discussions and refreshments (with introduction to networking opportunities)

Day 2	Time	Event
3 June 2008	08:30 - 09:00	Review previous day's activities (CRC - John Lovett)
(Tuesday)	09:00 – 10:30	Country presentations on approaches to plant biosecurity 1. Bangladesh 2. Cambodia 3. India 4. Laos
	10:30 – 11:00	Morning Tea
	11:00 – 12:20	Country Presentations (continued) 5. Malaysia 6. Myanmar 7. Philippines 8. Singapore 9. Thailand 10. Vietnam
	12:20 – 12:30	Reflections on Country presentations <i>(CRC – John Lovett)</i>
	12:30 - 14:00	Lunch
	14:00 - 15:30	Communities and their role in plant biosecurity (CRC – Kaler Surata, Ian Falk)
	15:30 – 16:00	Refreshments
	16:00 - 17:00	Diagnostic techniques (David Eagling)

Day 3	Time	Event
4 June 2008	08:30 - 09:00	Review previous day's activities (CRC - John Lovett)
(Wednesday)	09:00 - 10:30	Impact Management (theory and case studies) (CRC - David Eagling)
	10:30 – 11:00	Morning Tea
	11:00 – 12:30	Education frameworks for biosecurity <i>(CRC - Kirsty Bayliss)</i>
	12:30 – 14:00	Lunch

14:00 – 15:30	Risk Analysis (introduction to concepts and international frameworks) (CRC - Kirsty Bayliss)
15:30 -15:45	Refreshments
15:45 -17:00	Risk Analysis (introduction to concepts and international frameworks) (CRC - Kirsty Bayliss)

Day 4	Time	Event
5 June 2008	08:30 - 09:00	Review previous day's activities (CRC - John Lovett)
(Thursday)	09:00 - 10:30	Risk Analysis (Overview of tools) (CABI – Lina Yip)
	10:30 – 11:00	Refreshment
	11:00 – 12.30	Risk Analysis (Overview of tools) (CABI – Soetikno)
	12:30 – 14:00	Lunch
	14:00 – 17:00	Risk Analysis (practical exercises/CABI tools) (CABI – Soetikno)
	15:30 – 15:45	Refreshments
	15:45 - 17:00	Risk Analysis (practical exercises/CABI tools) (CABI – Soetikno)

Day 5	Time	Event
6 June 2008	08:30 - 09:00	Review previous day's activities (CRC - John Lovett)
(Friday)	09:00 – 10:30	Food traceability (MFIT project – Audrey Yong)
	10:30 – 11:00	Morning Tea
	11:00 – 12:30	Post-Harvest Integrity(theory) (CRC – John Lovett)
	12:30 – 14:45	Lunch / prayers
	14:45 – 15:30	Open Forum (Crawford – Paul Ferrar)
	15:00 - 15:45	Refreshments
	15.45 – 17:15	Discussion groups: biosecurity planning <i>(David Eagling; Paul Ferrar; John Lovett)</i>

Day 6	Time	Event
7 June 2008 (Saturday)	08:30 – 17:30	Field trip to Genting Highlands

Day 7	Time	Event
8 June 2008 (Sunday)	All day	Free activities

Day 8	Time	Event
9 June 2008	08:30 - 09:00	Review Friday's activities (CRC - John Lovett)
(Monday)	(Monday) 09:00 – 10:30 Diagnostic (theory and exercise) (CRC - Ga	
10:30 – 11:00 Morning Tea   11:00 – 12:30 Diagnostic (theory) (CRC – Amy Carmich   12:30 – 14:00 Lunch		Morning Tea
		Diagnostic (theory) (CRC – Amy Carmichael)
		Lunch
	14:00 – 15.30	Diagnostic (practical) (CRC – Darren Peck)
	15:30 – 15:45	Refreshments
	15:45 – 17:00	Informal discussions: diagnostics

Day 9	Time	Event	
10 June 2008	08:30 - 09:00	Review previous day's activities (CRC - John Lovett)	
(Tuesday)	09:00 – 10:15	Surveillance (theory) (CRC- Darryl Hardie)	
	10:15 – 10:45	Morning Tea	
	10:45 – 12:45	Surveillance (theory) (CRC- Darryl Hardie)	
	12:45 – 14:00	Lunch	
	14:00 – 17:00	Surveillance (field practical) (CRC- Darryl Hardie)	
	17:00 – 18:30	Free time	
	19:00 – 22:00	Master Class dinner (Seri Melayu restaurant) Attended by: Mr. Sabtu bin Slamat Deputy Director General of Agriculture (Development), Malaysia Nigel Corey, Australian High Commission	

Day 10	Time	Event
11 June 2008 (Wednesday)	08:30 – 17:30	Field trip to Selangor Fruit Valley, Batang Berjuntal and Taman Pertanian Malaysia (agricultural park)

Day 11	Time	Event
12 June 2008 (Thursday)	09:00 - 09:30	Review Tuesday and Wednesday activities (CRC - John Lovett)
	09:30 – 10:30	Reflections on biosecurity with responses by Master Class participants (CRC - John Lovett)
	10:30 – 11:00 Morning tea	
	11:00 – 12:45	Palm oil and rubber in a biosecurity context (CABI – KY Lum)

12:45 – 14:00	Lunch
14:00 – 17:30	Network building – "Beyond the Master Class" (CRC – John Lovett; CABI – KY Lum) Completion of Master Class surveys
15:00 – 15:45	Refreshments
15:45 – 17:30	Network building – "Beyond the Master Class" (CRC – John Lovett; CABI – KY Lum) Completion of Master Class surveys

Day 12	Time	Event
13 June 2008 (Friday)	09:00 – 10:15	"Where to next?" Building on the Master Class outcomes (including feedback surveys) <i>(CRC – John Lovett; CABI – KY Lum; Soetikno)</i>
	10:15 – 10:45	Morning tea
	10:45 – 11:15	Closing Ceremony: <i>(CABI – Soetikno; CRC – John</i> <i>Lovett)</i> Attended by: Mr. Sulaiman bin Md. Zain Deputy Director General of Agriculture (Operation), Malaysia
	11:00 – 11:15	Presentation of Master Class certificates <i>(CRC – John Lovett)</i> . Presentation of mementos <i>(CRC – John Lovett)</i>
	11:15 – 11:45	Informal discussions and networking
	11:45 – 13:00	Lunch and departure







#### International Master Class in Plant Biosecurity: Issues and Responses Legend Hotel, Kuala Lumpur, Malaysia, 2 - 13 June 2008

### FEEDBACK RESPONSES

## 1. What do you think is the most important thing you have learned from the Master Class?

'That biosecurity can be improved through a holistic approach that expands beyond plant quarantine parameters'.

'Concept of biosecurity'.

'Overall concept/meaning of biosecurity. Means/techniques/tools can be used for pest risk analysis. Access to pest information in the region'.

'CRC Plant Biosecurity is networking/coordinating scientists of different fields and institutes to work as a team for a common and most important for Australia – biosecurity'.

'The single most important thing I learnt was the importance of have a simple, reliable tests for diagnostics of pests which can pinpoint pest and be widely acceptable. Equally important is surveillance the difficulty of conducting authentic surveillance was also realised'.

'The application of diagnostic tools and techniques in pest detection and identification and risk analysis and management'.

'1. Concept and purpose of Plant Biosecurity. 2. How we can implement biosecurity in our country. 3. Think for the trade, what biosecurity should be implies legislation and technical condition. 4. Sharing the information'.

'Priority (1) What is 'Plant Biosecurity'. (2) How to do about plant biosecurity. (3) The importance of cooperative between each country in the region to protect and prevent plant biosecurity'.

'Biosecurity scope and definition'. Preparedness and Prevention. Diagnostic. Surveillance. Risk management and impact'.

'Preparedness, planning, communication and the importance of the economic losses done by the exotic pests and diseases'.

'More experience and new information for all countries. Increased awareness of plant biosecurity. Using new CPC system of pest risk analysis. Identification of pests and diseases following IPPC and usefully reference of plant biosecurity for each country'.

'The concept of plant biosecurity and diagnostic'.

'I learned (1) what is biosecurity (2) surveillance (3) incursion (4) preparedness (5) PRA (6) PaDIL (7) diagnostics and remote diagnostics (8) entry and establishment of pests, and some other new knowledge and practices'.

'The overview of plant biosecurity – encompassing more than Plant Quarantine'. 'Awareness of Emergency Plant Pest incursions. Preparedness and Prevention. Diagnostics. Holistic approach., Education and Training'.

## 2. What were the <u>two</u> most important aspects of the Master Class activities for you? [n = 15]

ctivities	s for you? $[n = 15]$	
•	Lectures	10
•	Practical sessions	9
•	Field visits	0
•	Meeting with other scientists with similar interests	5

## 3. Did you find anything missing from the Master Class? If so what would you have liked to have been included?

'The syllabus is OK'.

'No, within the time period of the training, all the topics were covered very nicely'.

'All the essential topics were covered but I felt that PRA (theory) could have been given one full day so that first timers can do the exercise better using CPC'.

'Information campaign and dissemination of pest of quarantine importance in <u>all</u> ports of entry'.

'1. How to define Market Access; what all the things we should consider? 2. Risk mitigation. 3. Publishing. 4. Human resource management. 5. Negotiation techniques'.

'No, it did not. However, all of the detail of Master Class we must get the criteria to make decision for our country'.

'Group discussion on how to solve real biosecurity problem – issue, challenges and mitigation. Each group could come out with the process of work'.

'The technique of surveillance'.

'The SPS and IPPC rules can be added in the Master Class course for better understand of the participants'.

'What is a Plant Biosecurity Policy. An example of the policy would be very helpful for implementation'.

'What can CRC do for ASEAN countries?

'Nil'. 'No'.

### 4. How has your view of biosecurity principles and practices changed as a result of the Master Class?

'The Master Class has covered many details, and has brought in many critical aspects and exposed several areas of weakness. These present weaknesses in the concurrent plant biosecurity system will be/should be attended to.'

'Biosecurity is more than quarantine, plant protection and free trade'.

'Biosecurity is quite wide issue/subject, to implement this thing it need to be collaborated and understood in the same meaning and following by same procedure in biosecurity principles'.

'We need to think of holistic approach to the problem, involving all sciences related to agriculture and networking around the globe only can solve (to some extent) the problem'.

'The basic principles and issues in plant biosecurity were clear to me, but the various practices/devices/tools available and needed has changed after the Master Class. I also learnt how other countries were viewing the issues under biosecurity'.

'Biosecurity would now be viewed in a macro-perspective level. Not just plant, animal and people but health, economic impact and environment'.

'We will get broader thinking on biosecurity and understand more on Plant biosecurity. What is the weakest point in our system - so how can we make P.biosecurity strong?'

'I got more information in term of 'plant biosecurity'. It is not only quarantine aspect but it cover all aspect such as environment, climate, human life etc.'

'Biosecurity is protecting economy, environment and human health which is broader than routine quarantine activities. At such integration of various fields in Agriculture is necessary such as Agronomy, Economic, Extension and Crop Protection'.

'Do not wait for invasive pests and diseases to enter your country. Execute public information about you learn pests diseases in other counties'.

'Increased awareness and increased knowledge on plant biosecurity principles and practice'.

'By knowing more things through lecture, practical, and group discussion who was focussed on plant biosecurity. I had an idea about plant quarantine but I understand a bit about plant biosecurity'.

'Highlight on Preparedness and Prevention of EPP incursions'.

'Very much'.

Nil response.

### 5. Has the range of your professional contacts changed as a result of this Master Class? If so please describe what has happened.

'This Class has brought together many influential people in the field of biosecurity of this region, and has provided a good opportunity for future interaction and exchange of ideas'.

'Yes, changing information with the participating countries'.

'After going back I would be a good teacher as I have to teach a course of Biosecurity to PhD students of IARI (Indian Agricultural Research Institute) at New Delhi and QUAD countries would be of great help'.

'I have made several new contacts. Primary contacts (PC): whom I met personally and discussed issues like fellow participants and the resource persons. Secondary contacts: I could also get information/emails of people working in areas of my interest in other countries from the PCs'.

'Yes, we meet experts in their respective fields introducing technology/current trends in diagnosis of P&D. Techniques that are fast, safe and accurate w/c has an important impact to trades and markets'.

'Yes, it has. Because we know more people, we get some experience from all of them. We know source of information and some R&D that will develop in the future'.

'Yes, the range of my professional contacts is wider than I have through exchange information between all participants and lecturers'.

'Yes, now I had better network with various professional in ASEAN, India, Bangladesh. Better integration of various discipline'.

'With the collaboration of different countries representatives who have shared and discuss their bright ideas, yes!'

'Change in term of Diagnostic approach whereby can get more information from PADIL and CPC. Communication with expert from other countries e.g. 'remote diagnostic'.

'I have got a fair idea about the holistic approach of plant biosecurity. It is a different from the existing system of plant quarantine'.

'Yes. (1) Research priorities for diagnostics, other than solely on diagnostics itself i.e. impact mgmt etc (2) Urban surveillance contacts – desperately needed'.

'Ability convince the policy makers regarding the importance of EPP incursions and its consequences as a scientist'.

'No'.

### 6. What should be done now to reinforce the activities of this Master Class?

'The overall activities of this Master Class were ideally strategised. You will need to recategorise the training should further reinforcements/improvements be possible and upgrade the activity to...maybe 'Super Master Class'.

'Rotation of the host but the participants are same class. Continue with the advanced class. Include participants from USA, Japan and EU'. [Maybe means 'presenters'?]

'Establish network among Asian region countries as well as with developed countries e.g. Australia. Sharing information on pests and also resources that we have, and do not have. It could be formulated a project proposal (project concept) to submit to Australian Government on biosecurity for the Asian regional countries'.

'Each participant should be given 5 min. to tell about the strengths of their country to share with the countries of region. They should share what (taxonomy/control/ eradication/diagnostics) would like to take up as a responsibility for the region'.

'1. Develop a full training module on the Plant Biosecurity which can be used for further training. 2. A network of Asia Pacific countries could be developed for diagnostics of common pests and also categorization of pests into A1 and A2 levels as done in EU. 3. CRC could help in developing PaDIL like databases in our respective countries which would be a big source of information in the region'.

'We could propose these diagnostic techniques and tools to PQ management group (w/c I belong) innovation in pest diagnosis and application. We do have quarantine funds solely for quarantine use'.

'How to open the new trade with biosecurity system? How to sharing pest or management information?'

'To reinforce the activities of the Master Class should be added the market access topic that related to plant biosecurity policy and follow up the country policy for each country too'.

'Produce report to the government and recommend changes to strengthen biosecurity in the country. Provide training to the younger officers and seek financial allocation to implement some of its activities'.

'Re-echo in your country what you have learnt in the Master Class. Implement what you have learn and communicate from time to time to the ATSE Crawford and CRC for updated information'.

'Increase the capability building, awareness among the public and policy maker. Enforce a new act and regulations include with plant biosecurity principles'.

'More Master Class course as well as advanced course is needed to reinforce of this Master Class'.

'To follow up with relevant contacts for practical follow-ups that can be implemented. There should also be follow-up e.g. workshops, training or forum on the Master Class for continuation'. 'Make more practical (exercises) works and discussion.

Nil response.

## 7. Were the accommodation, meals and general arrangements appropriate? If not, could you provide details?

'Yes'. 'Excellent'. 'Good'. 'Yes, excellent'. 'OK'.

'They were the best, with all appreciations for each and every one involved in making the arrangements'.

'The logistic arrangements were very good and local organisers most cooperative'.

'Accommodation – relatively good but the changing of rooms was a bit uncomfortable. Meals – amazing – we eat every two hours. General arrangements – good'.

'Yes, they were. Except: the accommodation should be arrange before workshop in the first day until finish. It will be appreciate very much if they can arrange transport to K.L.'

'1) Accommodation – don't change room during the workshop. 2) Meals - acceptable. 3) Handouts – should release before presentation.

'Yes, appropriate and luxury'.

'No matters, every things very good'.

'No complain. Good accommodation, good meals and good arrangement in term of logistic'.

'Yes. The accommodation, meals and all other arrangement were very perfect'.

'Meals and general arrangements – OK. Accommodation – refer to my letter to the Hotel mgmt on 20 service lapses in the Hotel'.

## 8. If we ran the Master Class again, what changes would you recommend?

'If the duration of the Class remain at 2 weeks, it may be possible to hold the Class at 2 different locations so as to maximise expose of the participants. If 'Euro 2008' can be co-hosted by 2 countries, why not a Master Class? This will be an achievement!'

'Shorten the duration'.

'More practical and group discussion. Visit plant quarantine office to share the experiences'.

'Everything was so good that I can hardly think of any change'.

'The country presentations could also include 1 slide each on National regulatory framework and on infrastructure available for biosecurity.

One person each from AQIS and Biosecurity Australia to give the participants their perspective should also be included in the faculty. 'One lecture in international Policy framework on issues dealing with Biosecurity could also be included'.

'If your funds permit I suggest this would be held in areas where they have strong quarantine procedures 1)Japan 2) USA 3) Australia'.

'The exercise should be increase so we will get more ideal'.

'It is O.K.'

'Increase discussion on experiences/lessons learn from implementation of biosecurity'.

'I recommend that venue will be change to other country'.

'We need more information before coming and we need pocket money very things expensive'.

'Doing the surveillance in the field where the plant has a pest or disease problem. Diagnose the pest or symptom in the field/lab'.

'More practical. More group presentation'.

'A shorter duration, can do with 2 days less. More emphasis on application of Plant Bisoecurity i.e. lessons learned from Australia on their way to the state today'.

'For Field Exercise, be aware of weather of host country!'

## 9. How do you propose to pass on the information you have learned to your colleagues in your home institution?

'The information will be disseminated both formally, and informally'.

'By email, personal contact'.

'Through internal seminar, meetings (weekly). Try to contact/communicate to resources person (scientists concerned) as well as stakeholders for making awareness'.

'During teaching a course on 'Biosecurity'; lecture to my colleagues on "What I learnt during the workshop"; by publishing a leaflet on 'Biosecurity'; by working on PaDil and CPC, the database will help all scientists at my place and country'.

'I will be making a presentation on what I learnt at the Master Class after I reach home. Also, all the reading material etc will be shared with my colleagues whoever is interested'.

'I will conduct an echo-seminar of Master Class especially the new technology and tools in diagnosis'.

'1. I will be present on the seminar in our division. 2. I will be told seniority person to understand more. 3. Try to arrange workshop for PQ officers and other related person'.

'Newsletter/magazine. Website. Focal group. Report to the department'.

'The material where appropriate will be duplicate and given to them. Provide short presentation on Biosecurity. Organised training. Ensure biosecurity activities include in the yearly program of work'.

'Re-echo the training, propagate the reading materials'.

'We propose for workshop and training to my colleagues'.

'Training – will give training to extension officer. Workshop with relevant agencies. Mass media and pamphlet'.

'(a) By arranging a seminar. (b) Group discussion. (c) Discussion in the policy meeting to the policymaker'.

'(1) Training report. (2) Presentation at internal forum. (3) Discussion to policy makers, colleagues on way forward towards Plant Biosecurity'.

'(1) seminar within Plant Protection Division (NPPO) and (2) researchers, university'.

#### 10.Will it be difficult to implement the knowledge you have learned from the Master Class into your work activities in your home institution? If so, can you provide details?

'The information will be integrated to improve current plant biosecurity practices'. 'Limiting budget'.

'It can be implemented but it takes some time and step by step; such as you can start from the awareness, convince policy makers, draft policy, strategy, plan as well as regulators concerned. It takes at least 2-3 years or more'.

'Will improve course contents of PhD students; we will work in a network, I have already registered for PestNet; I will keep on contacting persons whom I met; will propose a project for funding to CRC'.

'Some of the knowledge can be easily implemented but the modern techniques like remote microscope, MFIT, smart camera etc might be a bit difficult to implement due to shortage of funds'.

'Not really, like the CABI, Padil and remote microscope is easy to sell these ideas'.

'Because the high level person still don't understand Plant Biosecurity, they not pay much attention for Plant because it take time to get the problem it will be different from Animal or Human disease'.

'Not all, I can provide the knowledge that I have learned to my institution but just inform and building awareness only'.

'No, there isn't much difficulty in implementing the knowledge except limitation of budget will slow the implementation'.

'Not difficult'. 'No'.

'The knowledge of Surveillance technique and Diagnostic cane be easily disseminate to the relevant officer but the principle of plant Biosecurity Bill/Act need to be make known to policy maker'.

'It will be difficult to implement the knowledge but not impossible. I have to show my knowledge with my colleagues and my institute and other related institutes and try to implement my knowledge to my country'.

'Need to get more information e.g. urban surveillance. Research focus – only on those relevant to Singapore and within limited resources e.g. research on surveillance – too much to handle. Introducing a PBS policy would be an uphill task when there's none as example and manage staff from quarantine to biosecurity mindset'.

'It is not an easy task to convince the policy makers on how important of plant biosecurity (PB). Once they come yo know of PB, they will support activities regarding PB and other plant industries will be coordinating'.

#### 11. Are there any other comments you would like to make?

'I'm sure the participants would agree that some sort of feedback be made available as to the reaction and commitment from the sponsors as a result of this Master Class. This may be posted in a suitable website'.

'Make the participants as contact persons and have regular meetings. Crawford Fund continue funding these activities'.

'It could be continue to conduct like this course, if we could visit any border post, it will be very helpful to get more information'.

'It was the best workshop I have attended. With little more efforts, participants would have been motivated to take some (one or the other) responsibility of the region. Pests not occurring in the region and of quarantine importance should be listed with possible details on biology, hosts, etc.'

'The course was basically well structured and the faculty very knowledgeable and well versed in their respective subjects. Above all the course was conducted in a very interactive discussion mode'.

'Aside from being very informative, they have practical application and putting them to practice would be an accomplishment'.

'Is it possible to arrange Master Class in each country to spread the idea?'

'No'. 'No comments'.

'Overall the workshop is well done'.

'Very informative'.

'During Master Class - more expose the participants in practical session'.

'I am very much grateful to the organisers and resource suppliers to be participated in such a nice course. It would be appreciated if some advance course can be arranged to know about more'. 'An insight from AQIS on Plant Biosecurity during introduction would be helpful., We need to have concrete tools and kits after this course in order to hasten the implementation of plant biosecurity in the region. If not, the progress would be hindered by countries not on par with the rest and it would not be helpful for the region. More training on the Master Class should be arranged to train more as with only one course, the participants might not be properly trained to be trainers when they return to their countries'.

'Need to run more workshops like this Master Class in ASEAN countries. It will be better to demonstrate how to use PDA. Other softwares/websites like PaDIL; PestNet.

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