Presentation Outline

• Introduction to ASEAN
• ASEAN GMO Food Testing Network  
  – work priorities & challenges
• EU-Asia Regional Network on GMO Analysis  
  - work priorities
• Regional Perspectives at International Workshop of GMO-analysis Networking
ASEAN Member States

• The Association of Southeast Asian Nations (ASEAN)
  – Established on 8 August 1967 in Bangkok by the five original Member Countries, namely Indonesia, Malaysia, Philippines, Singapore and Thailand

• Brunei Darussalam joined in 1984
• Vietnam in 1995
• Lao PDR and Myanmar in 1997
• Cambodia in 1999
ASEAN Member States
Where We Are
ASEAN GM Food Testing Network
ASEAN GMO Food Testing Network: Genesis

- 1999: ASEAN Harmonized Guidelines on the Release of Agricultural Related GMOs

- 2004: ASEAN GMO Food Testing Network established by 25th ASEAN Ministers on Agriculture and Forestry Meeting

• Singapore designated as the Lead Country of the network

• To share and leverage on each others’ resources and expertise to build up GM food testing capabilities
ASEAN GMO Food Testing Network: Scope and Objectives

• As a regional cooperation platform for regulatory and scientific exchanges on issues related to GM food analysis
• To contribute effectively towards harmonisation and standardisation of methodologies for sampling, detection, identification and quantification of GM foods in ASEAN
• Enhancing collaboration and capacity building activities within and outside ASEAN
• Annual meeting organised on rotational basis among ASEAN member countries
Main Priorities for ASEAN GM Food Testing Network

(a) Information exchanges on regional and international developments in GMO analytical issues
   • Methods of detection/quantification
   • Reference materials
   • Method validation and proficiency testing
   • Performance criteria for testing methods
(b) Establishing a regional framework for method validation and proficiency testing alignment with international criteria
(c) Establishing a depository of GM reference materials
(d) Establishing a molecular registry of genetic manipulation for GMOs
(e) Updating listing of GMO testing labs and capabilities in AMCs
   • Services for AMCs without testing capabilities
(f) Organizing training and capacity building to address technical needs within AMCs
Technical Issues and Challenges

- Detection of unapproved events
- Lack of reference materials for GMO detection
- Detection of stacked events
- Analysis of highly processed food
- Production of plasmid DNA as alternative source of reference material
- Establishment of detection methods for GM crops developed in Asian countries
- Practical approach for screening unauthorised GM crops
- Practical approach for estimation of MU for GMO quantitative analysis
- Detection of transgenic animals
ASEAN GM Food Testing Network

For further information

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EU-Asia Regional Networking on GMO Analysis
EU-Asia Regional Network on GMO Analysis

- 1st Meeting in 2009
- EU and Asia network cooperation
- China, India, South Korea and Japan
- Link with ASEAN GMO Food Testing Network
- Objectives: platform for information exchange on GMO analysis, opportunities for collaboration and capacity building activities
Main Priorities for EU-Asia Regional Network on GMO Analysis

• Information exchanges on regional and international developments in GMO analytical issues
  ▪ Analytical Methods
  ▪ Reference materials and control samples
  ▪ Method validation and proficiency testing
  ▪ Quality systems, measurement uncertainty
• Determining training needs and organizing capacity building programmes
• Participation in proficiency programs organised by EURL-GMFF
1. **Forthcoming regional technical challenges for GMO analysis**

- Increasing number of GMOs and stacked events
  - need for GMO developers to be transparent and provide information in format similar to EU eg golden rice: In the field trial GM Rice developer provided information of the release but not about method for detection;
  - generally there is a lack of info about elements, sequence and detection method info because of confidentiality clause
  - potential risk of illegal release or trans boundary movements eg GM papaya

- GMO analytical issues
  - Analytical methods
  - Reference materials and control samples
  - Method validation and proficiency testing
  - Measurement uncertainty
2. Regional needs to meet these challenges

- GM information needs in advance is dependent on legal framework similar EU for transparency/harmonisation in the region

- Recognised need for region to improve transparency: facilitate standardisation of regional analytical methods

- Stronger network linkages within Asia, with ENGL and other regional networks

- List of events for GM crops by country and related analytical matrix approach

- Laboratories can cooperate in method validation, reference material providers
International Workshop of GMO-analysis networking  
8 – 9 April 2013  
JRC Ispra (VA) Italy  
Regional meetings – Asia Region

3. Road map / Prioritisation of necessary actions

1. EU Asia Networking  
   Proposal for EU to organise the next EU Asia meeting in Asia

2. Network linkages with ENGL and other regional networks

3. Detection Method  
   Information-sharing and updating of GM crops under field trial including molecular info eg cry events in India and validated methods for some cotton events  
   Plasmid control samples of endogenous genes

4. More trainings in MU and interpretation of results with case studies

5. More trainings in representative and cost effective sampling with case studies

6. Sharing and exchanges of national experiences in method adoption, development, validation
Regional meetings – Asia Region

4. Next steps at regional level / training needs that JRC could help to meet

1. EU Asia Networking
   Propose to maintain annual EU-Asia network meetings
   Can be back-to-back with ASEAN GMF network meetings

2. Network linkages with ENGL and other regional networks

3. Detection Method
   (a) Information-sharing on Detection of Unapproved GMOs
   (b) provision of plasmid control samples of endogenous genes
   (c) Golden Rice detection method (+ rice reference gene method): information sharing + participation in ring trial

4. Capacity building
   technical trainings on Measurement Uncertainty and interpretation of MU
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5. Identification of up to 3 regional representative(s) as contact person(s)

1. Paul Chiew (ASEAN GM Lab Network)
2. Randhawa Gurinder Jit (India)
3. Dabing Zhang (China)