Forging Stronger Relations among National Governments and the Private Sector in the Region's Seed Industry Workshop

Plant Quarantine Session

PROCEEDING

30-31 July 2007
Arnoma Hotel
Bangkok, Thailand

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Session on Plant Quarantine System of National Governments in Asia Pacific Region

Meeting declared open at 0830 with Dr. Jai Singh as Chair of the PQ Session

Order of Presentations:

Each report from the representative of National Plant Protection Organization (NPPO) was followed by the corresponding stand, comments, suggestions of the same country's representative from the National Seed Association (NSA). After the report of each set of countries, an open forum followed.

Session 1
India, Nepal, Sri Lanka

Session 2
China, Korea, Japan
Taiwan (NSA report only)

Session 3
Malaysia, Philippines, Indonesia, Vietnam, Thailand
Australia, New Zealand (NSAs report only)

Session 4
IPPC Report

Meeting adjourned at 1730

Welcome Remarks

Mr. Madoka Koshibe
APSA 1st Vice President

On behalf of APSA President Mr. Zhang Mengyu, I would like to extend our warmest greetings to everyone, especially those who we didn't get the chance to meet last night during the welcome dinner. Under the leadership of APSA Director Dr. Sampan Campiranon, the Secretatiat is also extending its sincerest appreciation of your attendance here/

Today will be a very long day of discussion. This is the first time that APSA is having a big meeting of both government and the private sector and we hope that this will serve as a good start of future efforts to have more regular forum between the two sectors.

I would first like to take this opportunity to introduce the representatives of the two organizations who have supported in making this workshop possible: First, we welcome Ms. Alexis Ellicott of the American Seed Trade Association, through which the United States Department of Agriculture coursed through its support. We are also pleased to have Mr. Francois Burgaud from GNIS who is also a long-time supporter of APSA activities.

Then let me introduce you, first, to the representative of APSA Standing Committee on International Trade and Quarantine, Mr. Gilbert Hernandez and the Plant Variety Protection Committee Co-chair, Mr. Damien Plan.

Let me also have the pleasure of intruding Mr. Kevin Nalder as our guest who will discuss about the International Plant Protection Convention.

One with the hope of these people, APSA hopes that this meeting will result to better relations among all of us. Thank you and good morning.

Plant Quarantine System in India

Dr.C.M. Srivastava
Assistant Director (PP)
Regional Plant Quarantine Station
India

Structure of Plant Quarantine Organization in India

- The PQ regulations are administered by the Directorate of Plant Protection, Quarantine & Storage established under the Ministry of Agriculture (Dept of Agriculture & Cooperation).

- The Plant Protection Adviser to the Government of India is the head of organization.

- Five regional stations with modern scientific laboratory facilities are commissioned at Amritsar, Chennai, Kolkata, New Delhi and Mumbai.

- With the help of Electron microscopes , ALISA ,Spectrophotometers , X-ray scanner, Trans illuminator facilities detect infestation/infection

- The regional stations are headed by Dy. Director (Ent./PP) and assisted by specialists in Entomology/ Plant Pathology/ Nematology/ Bacteriology/ Virology/ Weed Science/ Chemistry

- 60 Entry Points operating through out the country (34 sea ports/ 12 airports/ 14 land border stations)

- 61 In-land depots to carry out plant quarantine inspection and to facilitate safe import of plants/ plant materials.

Mandate
- PQS within the Directorate of Plant Protection Quarantine & Storage is to prevent entry, establishment of pest into India

- Detain plant consignments not covered under PQO, 2003

Quarantine legilation (DIP ACT)
- Plant Quarantine Regulations are operative in India through the *Destructive Insects & Pests Act (DIP Act), 1914*
  - Section 3 of the Act empowers Central Government to prohibit or restrict the import into India of any article.

Import Quarantine Regulations
- At present the import of plants and plant material are covered under *The Plant Quarantine (Regulation of Import into India) Order, 2003* issued under the Section 3 (1) of DIP Act , 1914 and amendments issued there under from time to time

- *The Plant Quarantine (Regulation of Import into India) Order, 2003*
  - PQ Order, 2003 vide S.O.1322(E) dated 18th November, 2003
  - Amendments
    - S.O.167(E) dated 6th February, 2004,
    - S.O.427(E) 29th March, 2004,
    - S.O.644(E) dated 31st May, 2004,
    - S.O.162(E) dated 31st March, 2005
    - S.O.263(E) dated 25th February, 2005 issued, regulates the import of various plants into India.
  - PQ Order, 2003 effective from 1.1.2004 replaces the PFS Order, 1989 and otton Regulations, 1972

Salient features of PQ Order, 2003

- Points of Entry are notified vide Schedule-I, II & III

- Seeds and propagative plant material can only be imported through five major ports viz., Amritsar, Chennai, Kolkata, Mumbai & New Delhi

- Commodities prohibited are notified in Schedule-IV

- Commodities restricted to enter are notified in Schedule-V

- Commodities regulated to import with additional declarations and special conditions are covered in Schedule –VI
  - Import Permit and PSC mandatory for any import of plant materials covered in Schedule-VI

- Commodities for consumption purpose without import permit are specified in Schedule-VII.
  - PSC is a must for the commodities covered in Schedule-VII.

- The 31 Quarantine weeds are notified in Schedule-VIII

- Import Inspection fee and treatment fee are stipulated in Schedule-IX

- Import Permit Issuing authorities are notified in Schedule-X

- Inspection Authority to carry out Post-Entry Quarantine Inspection is notified in Schedule-XI

- The Schedule-XII stipulates the quantity of seeds permitted for trial purpose including accession to gene bank at NBPGR

- PRA is must for import of Plant/Pl.Material

- Import can be made only for the commodities which are covered in Schedule-V, VI and VII.

- The relaxation shall be accorded only by Joint Secretary, DAC, Ministry of Agriculture, for Import of commodities which are not covered in Schedule-V, VI & VII

- One time relaxation of IP and PSC shall be granted by the Officer-in-charge, after fumigation (if mandatory) and 5 time inspection fee and 5 times IP fee to be collected in such cases for the commodities covered in Schedule-VI & VII .

- Import of live insects, bio-control agents, microbial cultures permitted only by IP issued by PPA to GOI

- Import of soil, peat, sphagnum, compost prohibited. Permitted for specific research work only with an IP issued by PPA to GOI

- Import of Germplasm/ Transgenics/ GMOs permitted only with an IP issued by Director, NBPGR, New Delhi

Key Requirement for import into India

- Import permit
- Phytosanitary permit from country of origin
- Off-shore treatment (wherever required)
- PEQ facilities (wherever required)

Plant Quarantine Key Achievements

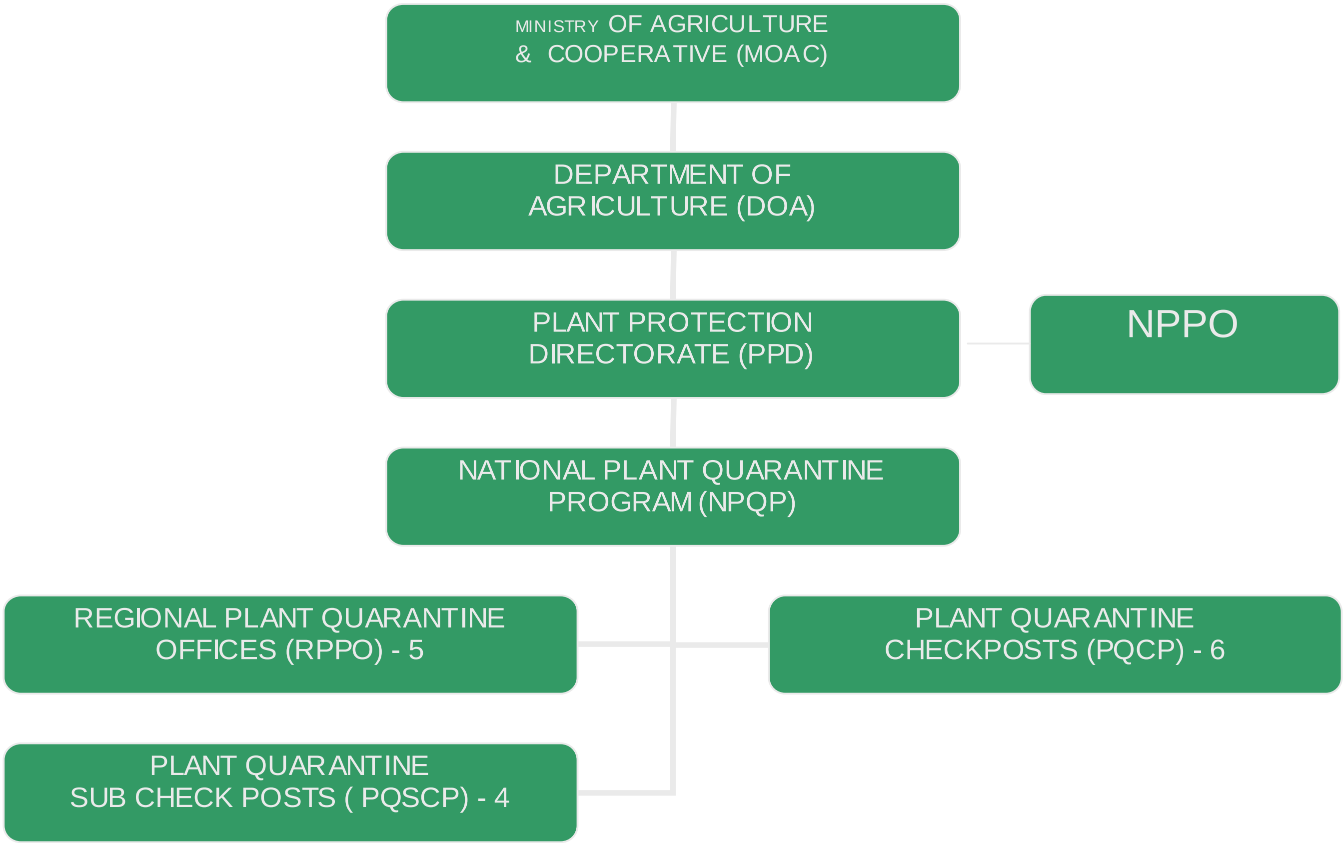
- National Standard Of Phytosanitary Measurers (21 Standards)
- National Fruit Flies Survey Programme
- Pest Risk Analysis
- ISPM 15 Compliance
- Computirisation of Quarantine Stations

Plant Quarantine System in Nepal

Ms. Nalini Singh Upadhaya
Senior Plant Protection Officer
Nepal

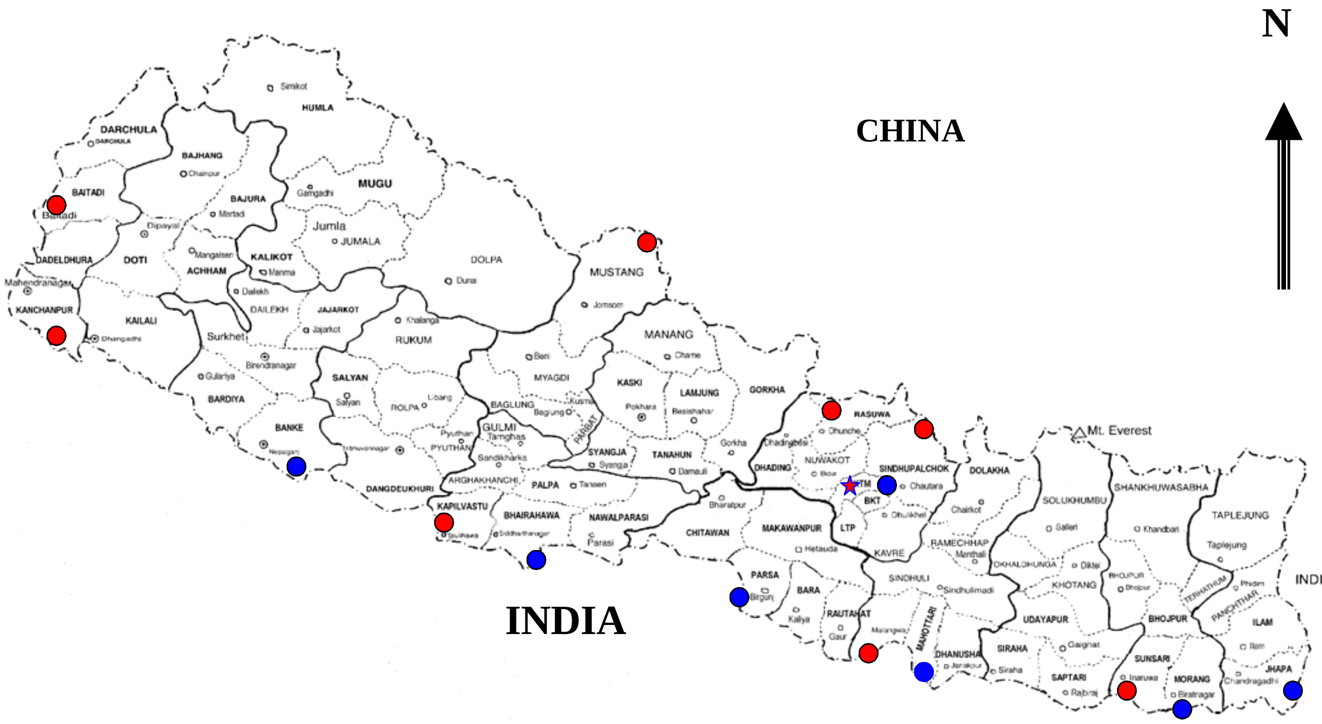
- Established in 1972
- Nepal : 147th member country of WTO since 24 April, 2004.
- Member IPPC
- Member APPPC
- Regulate the safe trade of agro/forest plant & plant products.
- Prevent the introduction & spread of exotic pests (disease, insects, weeds) of plant & plant products.
- Promote the appropriate phytosanitary measures for controlling the introduced pest within the specified territory of a country.
- Facilitating the trade by developing the standards or procedures.

Plant Quarantine Organization of Nepal



Location of Plant Quarantine Offices in Nepal

Map Showing Plant Quarantine Offices of Nepal



★ **National Plant Quarantine Program**

● **Previously Established Plant Quarantine Offices**

● **Newly Established Plant Quarantine Offices (Regional/Check Posts/ Sub-Check Posts)**

Human Resources of Plant Quarantine Nepal

Level	No.
Gazetted Class I	1
Gazetted Class II (S. Plant Protection officer)	6
Gazetted Class III (Plant Protection Officer)	13
Junior Technician	26
Junior Technical Assistant	23
Administrative Staff	7
Finance Staff	14
Driver	1
Peon	26
Total	**117**

Phytosanitary Regulations

- Existing Legislations (In the process of Amendment)
  - The plant Protection Act 1972
  - The Plant Protection Regulation 1974

- Nepal Gazette Vol. 3 Section 24 No. 51 date 7th April, 1975 (Prohibitions and Restrictions regarding the import of plants or Plant products into Nepal)

- Export Import Certification System Guideline (Notified) - 2006

- Phytosanitary Operations Manual for Import Export Certification of Nepal (Notified) 2006

PEST LIST PREPARED

Priority No:	**Priority Commodities**	
1.	Lentil	*Lens esculenta*
2.	Ginger	*Zingiber officinale*
3.	Mustard	*Brassica compestris*
4.	Potato	*Solanum tuberosum*
5.	Onion	*Allium cepa*
6.	Radish Seed	*Raphanus sativus*
7.	Wheat	*Triticum aestivum*
8.	Citrus	*Citrus spp.*
9.	Mango	*Mangifera indica*
10.	Tea	*Camelia sinensis*
11.	Coffee	*Coffea spp.*
12.	Cardamom	*Amomum subulatum*
13.	Linseed	*Linum usitatissimum*
14.	Paddy	*Oryza sativa*
15.	Maize	*Zea mays*
16.	Coriander	*Coriandrum sativum*
17.	Pea	*Pisum sativum*
18.	Tomato	*Lycopersicum esculentum*
19.	Cabbage	*Brasica oleracia*
20.	Banana	*Musa spp.*
21.	*Apple*	*Malus domestica*
22.	*Zinger*	*Zingiber officinale*

Generic Pest Risk Analysis

- Potato (Tuber)
- Ginger (Rhizome)
- Apple (Fruit & Saplings)
- Garlic (Bulbs)

Trade Issues

- Issuance of Phytosanitary Certificate
- Human Resource Development
- National Pest Database
- Mutual Recognition of Certificate
- Additional List of NTEP
- Reduction of Quarantine Inspection Fee in by Product
- Co-operation in Technical Field

Advantages/Constraints on the Implementation of the Plant Quarantine Policies in Nepal

Durga P Adhikari
General Secretary
Seed Entrepreneurs' Association of Nepal (SEAN

General background of Nepalese agriculture

- Agriculture: main basis of economy- 78% people dependent
- Land-locked between large agrarian economies (India and China)
- Thirty-nine percent of total GDP share is from agriculture
- India is major trading partner in agricultural products in terms of export (80% export)
- Indian SPS related policies play direct impact on trade of Nepalese agricultural produces (very much import restrictive)
- 147th Member of WT(2004): SPS Agreement obligatory
- Lack of market oriented institutional infrastructures and service delivery capacity and weak competitive strength in agricultural trade

Nepal's obligation under WTO for SPS requirements

- Changes in Plant Protection Act and HRD and declaration of disease free areas (Prior to July 2005): National pest status database established and database of 20 prioritized crops developed
- Approval/amendments to Plant Protection Rules 1974 and membership of IPPC (Prior to 1Jan 2006): New bill finalized and will be implemented soon
- Development of SPS Guidelines and Protocols (Prior to 1July 2006): Guidelines prepared
- Laboratory strengthening, quarantine check posts, control inspection and approval procedures and full implementation of SPS measures (prior Jan 01, 2007): eight PQ Check posts established
- Streamline and scientifically build land boarder quarantine procedures: Underway

Potential impact and challenges of PQ system to the Nepalese seed industry

- Positive
  - Promotes a system whereby products are 'once tested, once certified, accepted everywhere
  - Facilitate market transaction
  - Reduce the cost of uncertainty
  - Increase elasticity of substitution
  - Promote economies of scale
  - Provide guidelines for production process
  - Benchmark for technological capabilities
- Negative
  - means of non-tariff barriers
  - Higher compliance cost
  - Loose definition of standard
  - Unclear risk assessment
  - Non-mandatory equivalence

Inspection fees imposed by India for vegetable seeds

Import Product Weight	Fee (Indian Rs.)
Seeds for sowing	
i) Up to 10 kg	Rs. 250
ii) Above 10 kg and up to 100 kg	Rs. 250/- plus Rs. 250/- per 10 kg. or thereof
iii) Above 100 kg and Up to 1000 kg	Rs. 1,000/- per 100 kg. or part thereof
iv) Above 1000 kg	Rs. 11,500/- plus Rs. 5,000/- per 1000 kg or part thereof

Suggestions/recommendations

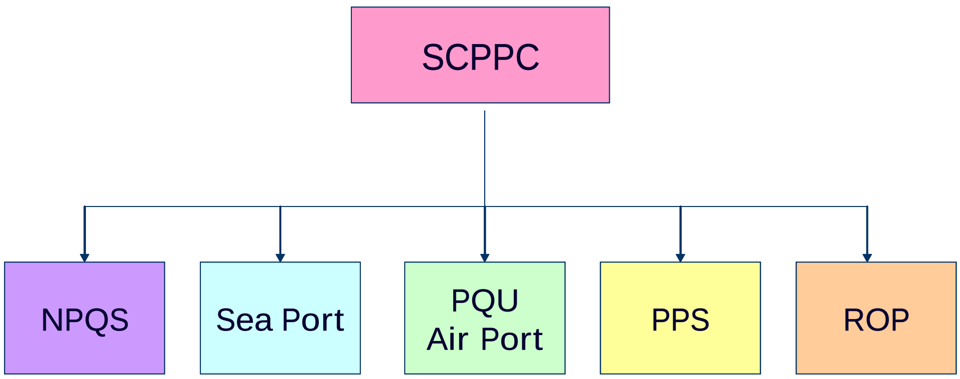
- Update and enforce laws and regulations in accordance with SPS requirements of WTO
- Develop and apply good agricultural practices to use in commercial production areas
- Improve the investment environment through developing human resource and institutional capacity
- Organize awareness campaigns and introduce some incentive schemes to encourage stakeholders to fulfill the
- SPS requirements and to initiate various measures to reduce compliance costs

The Plant Quarantine System of Sri Lanka

Mr. P.W. Ratnasiri
Head,Evaluation Division
Plant Generic Recources Centre
Sri Lanka

- Plant Quarantine Station, Seaport, Colombo was established in 1912 under Port commission with the technical assistance from the Department of Agriculture with the aim of promoting international trade while ensuring no harmful organisms enter into the country.
- This is achieved by facilitating the export and import of pest free plants and plant products which will lead to the development of the agriculture and related industries thereby enhancing the national economy of the country.

Organizational Structure of NPPO (SCPPO)



SCPPC	:	Seed Certification & Plant Protection Center
PQU	:	Plant Quarantine unit
NPQS	:	National Plant Quarantine Service
PPS	:	Plant Protection Service
ROP	:	Registrar of Pesticide

Objectives

- Interception of quarantine pests that could be threats to Sri Lanka.
- Dissemination of information useful to stakeholders on plant quarantine matters
- Ensuring the export of pest free material by inspection and certification for the building up of the image of the nation.

Activities

- Export :
  - Export cargo inspection
  - Factory inspection
  - Provision of phytosanitary certificate on behalf agricultural export products to satisfy plant health requirements of the importing country.
- Imports:
  - Verification of the accuracy of the documents according to the Plant Protection Act.
  - Inspection of consignments according to the plant protection act.
  - Interception:
  - Prevention entry of restricted/prohibited plant materials and quarantine pests.
- Treatments:
  - Many items can be safely allowed but some may need treatment before entry.
  - Export cargo may need special treatments to satisfy phytosanitary requirements of the importing country

Present Situation (Data of 2006)

- Sea port
  - Phytosanitary certificate issued : 8871
  - Export/ Tea, Rubber &Coconut : 8057mt
  - Import/ Fruits and Maize : 38560mt
- Air port
  - Phytosanitary certificate : 4706
  - Export / Fruit and Vegetables : 3160mt
  - Export / Tea and coconut : 152.37mt
  - Rejected amount/fruits : 2252 kg
  - Rejected amount / vegetables : 100 kg

Non- Compliance (2006)

- 08 consignments were rejected out of 46340 consignments for which phytosanitary certificates have been issued
- Reasons:
  - Non compliance of international standard for wood packaging (ISPM 15)-3
  - Harmful organisms(white fly)-1
  - Nematode interception-1
  - Incomplete phytosanitary certificate-3

International Plant Protection Convention (IPPC)

- Provides International Phytosanitary standards on how to prevent the spread and introduction of pests of plants and plant products
- They are designed to protect the environment and human health while facilitating international trade
- 160 countries are parties to IPPC
- Each contracting country has a National Plant Protection Organization (NPPO)

National Legal System

- Every country operates system to prevent introduction of alien pest into its territory
- The plant protection Act No. 35 of 1999 is" An Act to make provision against the introduction into Sri Lanka and the spreading therein, of any organisms harmful to or injurious to or destructive of plants and for the sanitation of plants in Sri Lanka"

International Cooperation

- Exchange information between the governments on trade related principles
- Exchange information on research data on pests and pant health issues
- Exchange specialist officers to provide training on areas relevant to plant quarantine
- Share the experiences on pest occurrence, pest out breaks, pest spread ,control measures, pest surveillance and emergency programs
- Share the knowledge on upgrading policy on plant heath.

Driving Competitiveness of Sri Lanka's Seed Sector through Public - Private Partnerships

Mr. Reginold Sumitha Mario De Alwis,
Chairman
National Agri Business Council of Sri Lanka,

The National; Agribusiness council of Sri Lanka

- The NAC is the Apex Body for the Private sector in Agribusiness for the last 7 Years .
- Our Membership consist of 23 Trade Associations & 12 Corporate bodies .
- Total institutions and individuals represented by the NAC is 2340 .

About the National Agribusiness Council (NAC)

- Our Vision:A Globally competitive Agribusiness sector by 2015 .
- Our Mission: To create an enabling environment to support Competitiveness & profitability of National Agribusiness .
- NAC objectives
  - To fulfill the need for a private sector apex body to coordinate and strengthen the agribusiness sector .
  - To engage the government in policy, regulatory and institutional reform through regular policy dialogue
  - To offer technical assistance and services to member Associations and their stake holders to improve competitiveness
  - To encourage cluster development achieve economies of scale, eliminate duplication of services, and facilitate the reduction of the knowledge gap within the sector.
  - To provide business and market information , improve planning skills , facilitate opportunities for market linkages for member organizations .
  - To establish a strong and vibrant institution capable of attracting bilateral support for the sustainable development of national agribusiness .
  - To promote public-private partnerships collaborative research and backward integration .
  - To provide a one stop business information center for the agribusiness community
  - To facilitate a formal structure among regional farmer associations creating an institution accessible to corporate Sri Lanka

Seeds & the NAC

- There are two Private sector member institutions representing the private sector in the seed industry within the NAC Umbrella .
  - The Seed producers association
  - The Seed importers Association
- They represent 85 % of the Totality of the Seed industry in the country

A snap shot of the Agriculture Inputs industry

- Total Value 290 million US$
- Consisting of
  - Agrochemicals : 42Million US$ – 15 %
  - Fertilizer : 214 Million – 73%
  - Seeds : 08 Million -3%
  - Equipment : 26 Million – 9%

State Institutions & Bodies

- Ministry of Agriculture
- Department of Agriculture
  - Seed Certification Division
  - Quarantine Division
  - Seed and Planting Material division
  - Genetic Resources Division
  - Horticulture Research Division
  - Agricultural extension Division
  - Agrarian Services Department
  - Ministry of Mahaweli Development .
  - Customs Department

State Institutions

- There is a general environment of Cooperation between the Institutions & Their Management with the private sector .
- However Due to the many institutions involved there is a lack of coordination and •Communication among the different levels of officers and also the Private sector .
- It is Time consuming for a private company to go through due process of working with the multitude of institutions restricting growth .

Seeds & the Farming Community

- Average Farm sizes are 0.2 Hectare .
- There is a need for Higher returns from Small plots of land to keep farming sustainable .
- Inputs such as Fuel, Fertilizer & Chemicals have increased in price
- Seeds are supplied through 4800 Retail suppliers and 540 Agrarian services centers .
- It is estimated that the use of High breed seed is low among farmers but is on the increase .
- Promotion of High breed seed is currently a Private sector monopoly

Seeds

- Basic Open pollinated seeds are supplied by government
- Multiplication of this seed is done by the private sector
- Government provides the Certification for theses seeds
- High breeds are Totaly imported and distributed by the private sector
- Genetically modified seeds are not allowed into Sri Lanka
- Higher yields has brought better returns to farmers and is a motivational factor for more high breed seeds to be used
- Lack of knowledge and a general mistrust towards the private sector among state extension staff has stifled the use of High Breed seed
- There is a need to formulate an awareness and relation building exercise for the benefit of the entire sector

Public , Private Partnerships .

- A Joint national Agenda for promotion of High breed seeds
- A frank and open dialogue to build relationship among Private sector and Government .
- Private Sector & Public Extension services needs to work together
- Need to use modern communication technology to reduce extension costs

Measures Recommended

- Recommendations for further consolidation of Institutions making it more convenient to access
- Farmer Information Gateway as a means of improving the access and accumulation of information
- Appointment of an Agribusiness ombudsman to speedily clear issues.
- To increase the number of accredited laboratories.

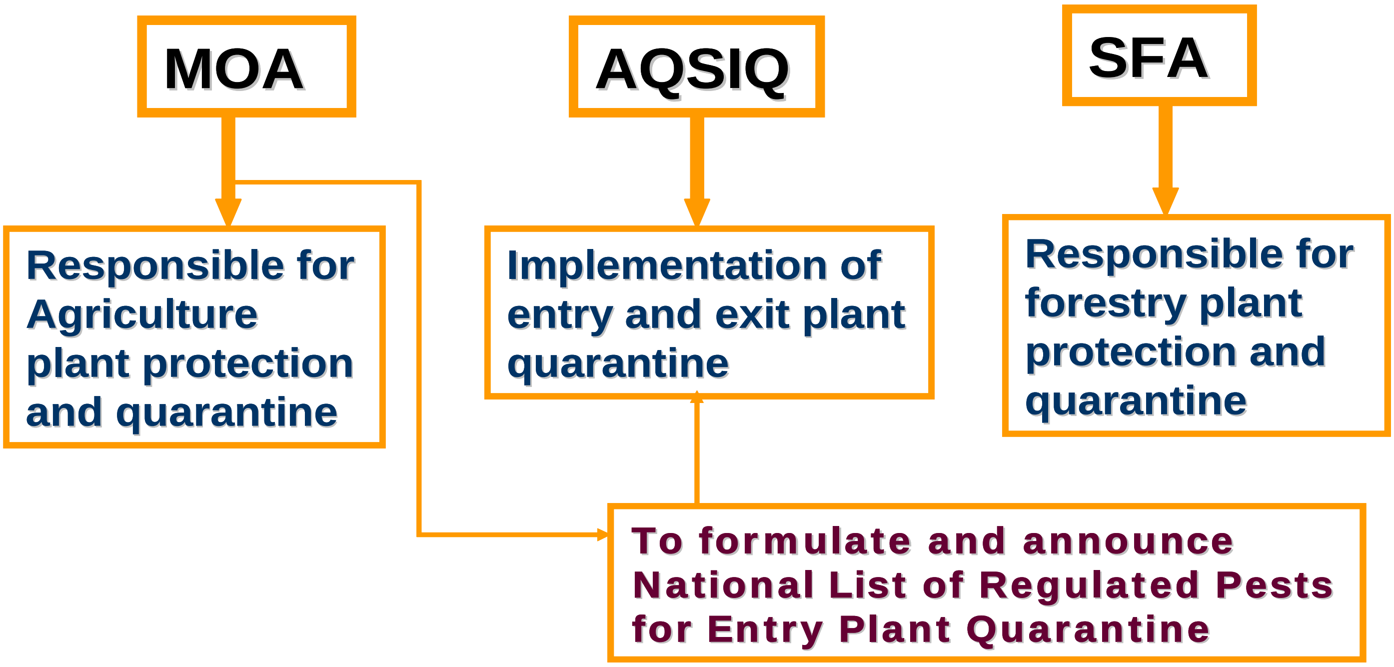
A Brief Introduction of China's Plant Quarantine System

Mr. Xiang Yu
Plant Quarantine Division, National Agro-Tech Extension and Service Center
China

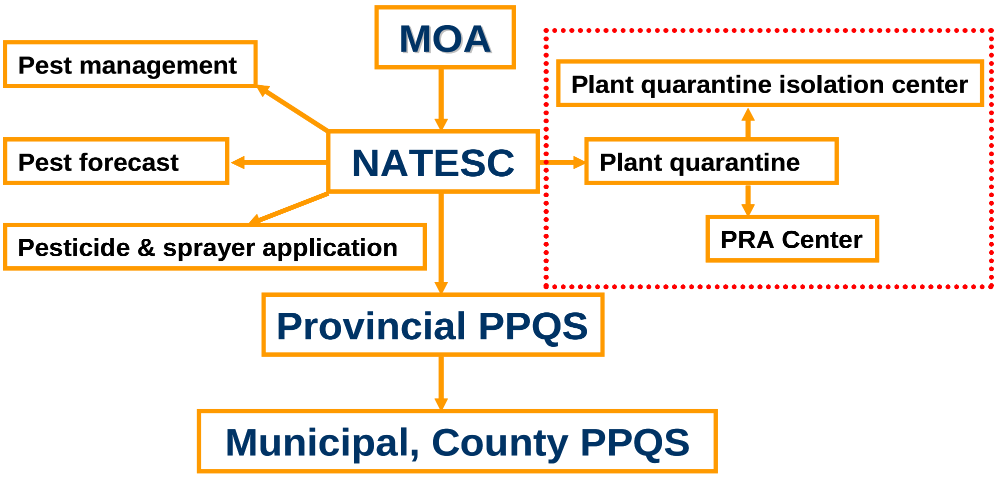
Structure of the National Plant Quarantine Office

- Main Law and Regulation on Plant Quaratine
  - Law of the People's Republic of China on Entry-exit Animal and Plant Quarantine
  - Regulations of the People's Republic of China on Plant Quarantine
  - Ministry of Agriculture, P. R. China (MOA)
  - General Administration of Quality Supervision, Inspection and Quarantine of the P. R. China (AQSIQ)
  - State Forestry Administration, P. R. China (SFA)

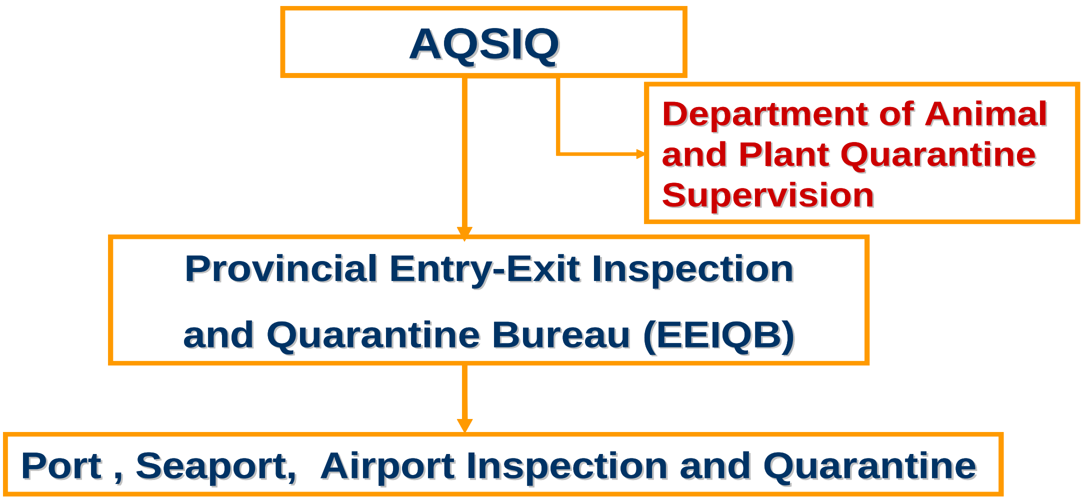
Organizational Chart of the Plant Quarantine Office



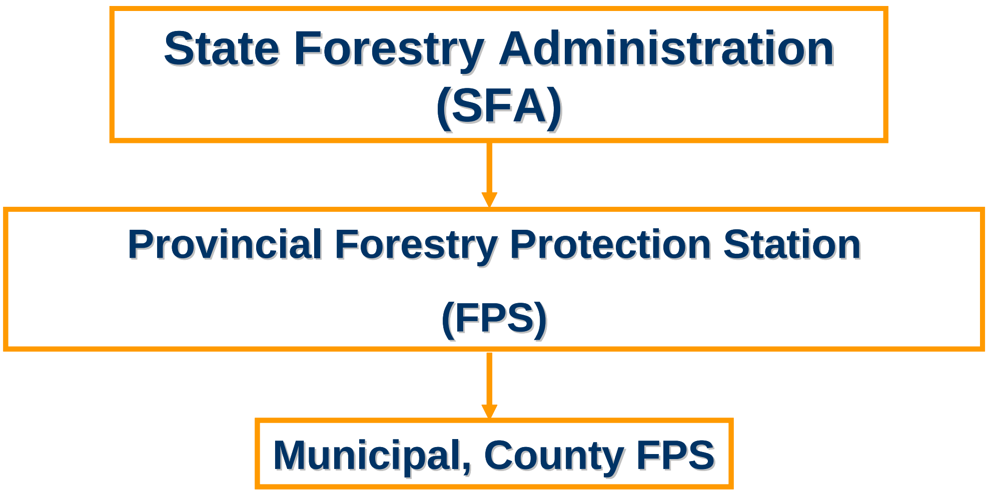
Ministry of Agriculture, P.R. of China (MOA)



AQSIQ



State Forestry Administration, P.R. of China



Quarantine Approving for Seed and Seedling Import

Focus on:

- **National agricultural plant quarantine pests list (43 Species)**

1 *Acanthoscelides obtectus* (Say)

2 *Bactrocera dorsalis* (Hendel)

3 *Bactrocera minax* (Enderlein)

4 *Bactrocera tsuneonis* (Miyake)

5 *Liriomyza trifolii* (Burgess)

6 *Brontispa longissima* Gestro

7 *Callosobruchus maculates* (Fabricius)

8 *Cydia pomonella* (Linnaeus)

9 *Daktulosphaira vitifoliae* Fitch

10 *Eriosoma lanigerum* (Hausmann)

11 *Hyphantria cunea* (Drury)

12 *Leptinotarsa decemlineata* (Say)

13 *Lissorhoptrus oryzophilus* Kuschel

14 *Opogona sacchari* Bojer

15 *Solenopsis invicta* Buren

16 *Sternochetus frigidus* (Fabricius)

17 *Sternochetus olivieri* (Faust)

18 *Aphelenchoides ritzemabosi* (Schwartz) Steiner & Buhrer

19 *Ditylenchus destructor* Thorne

20 *Radopholus similes* (Cobb)Thorne

21 *Acidovorax avenae* subsp. *citrulli* (Schaad *et a.*) Willems *et al*

22 *Candidatus liberobacter asiaticum* Jagoueix *et al*

23 *Clavibacter michiganensis* subsp. m*ichiganensis* (Smith) Davis *et al*

24 *Pseudomonas syringae* pv. m*aculicola* (McCulloch) Young *et al*

25 *Pseudomonas syringae* pv.*tomato* (Okabe) Young, Dye & Wilkie

26 *Xanthomonas axonopodis* pv. c*itri* (Hasse) Vauterin *et al*

27 *Xanthomonas oryzae* pv. *oryzicola* (Fang *et al.*) Swings *et al*

28 *Cladosporium cucumerinum* Ellis & Arthur

29 *Fusarium oxysporum* f.sp. *cubense* (Smith) Snyder & Hansen Race 4

30 *Peronosclerospora* sppÿ

31 *Phytophthora sojae* Kaufmann&Gerdemann

32 *Synchytrium endobioticum* (Schilb.) Percival

33 *Venturia inaequalis* (Cooke) Winter

34 *Verticillium albo-atrum* Reinke & Berthold

35 *Verticillium dahliae* Kleb.

36 *Prunus necrotic ringspot ilarvirus*

37 *Tobacco ringspot nepovirus*

38 *Tomato spotted wilt tospovirus*

39 *Ambrosia* spp.

40 *Cuscuta* spp.

41 *Lolium temulentum* L.

42 *Orobanche* spp.

43 *Sorghum halepense* (L.) Pers.

- **National Forestry Plant Quarantine Pests List (19 Species)**

1. *Dendroctonus valens* Le Conte
2. *Brontispa longissima*(Gestro)
3. *Hemiberlesia pitysophia* Takagi
4. *Cryptorrhynchus lapathi* Linne
5. *Laspeyresia pomonella*(Linnaeus)
6. *Heterobostrychus aequalis*(Waterhouse)
7. *Opogona sacchari*(Bojer)
8. *Eulecanium gigantean*(shinji)
9. *Rhyncnophorus ferrugineus* oliu.
10. *Xylotrechus rusticus* (Linnaeus)
11. *Hyphantria cunea*(Drury)
12. *Pseudomonas syringae* pv. Actinidiea Takikawa et al.
13. *cronartium ribicola* J. C. Fischer ex Rabenhorst
14. *Guignardia laricina*(sawada) Yamamoto et K. Ito
15. *Agrobacterium tumefaciens*(Smith and Townsend)Conn.
16. *Poplar Mosaic* Virus
17. *Rhizoctonia solani*)
18. *Bursaphelenchus xylophilus*(Steiner et Burher)Nickle
19. *Mikania Micrantha* H.B.K.

Some Aspects of Plant Quarantine in China

Dr. Ruiqing Huang
Vice President of Haidian Seed Chamber of Commerce
Beijing, China

Advantages of plant quarantine in China

- In recent 10 years, a lot of work have been done and great achievements have been made.
- Many good varieties have been introduced to China through quarantine and the Chinese variety list has been optimized.
- Government pay more attention on research and development, many projects have been finished and quarantine level has been improved greatly.
- Relevant government structure has been improved gradually.

Constrains of plant quarantine in China

- The promotion of rules and regulations on plant quarantine needs more enforcement.
- Weak consciousness of quarantine knowledge of seed operators.
- Knowledge of quarantine officers need to be updated.
- Cross-functional management of government in plant quarantine.
  - Ministry of Agriculture ——— Agriculture plants
  - State Forestry Administration ——— Forestry plants
  - General Administration of Quality Supervision, Inspection and Quarantine ——— Entry and exit plant quarantine
- Management needs more specialization.
- Imperfection of plant quarantine system and technical facilities, especially in the lower level.
- Too long quarantine time can’t always fit the need of import and export.

Suggestions of plant quarantine in China

- Periodical training will accelerating the knowledge updating of quarantine officers.
- Increase quarantine facilities to improve quarantine levels.
- Improve quarantine system to speed up quarantine procedures.

Plant Quarantine in Korea (Focus on Plants for Planting)

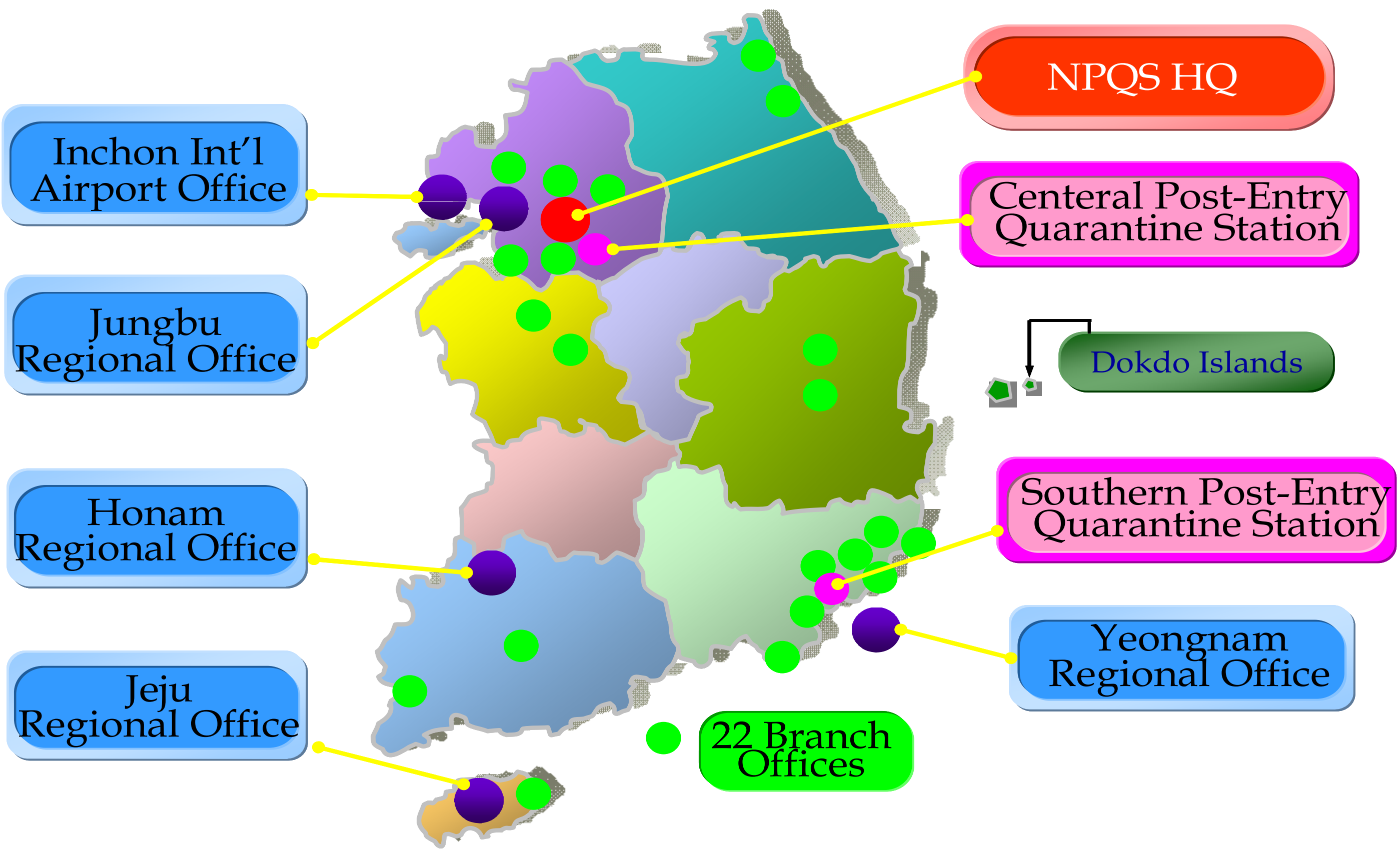
Dr. Kyu-Ock Yim
International Quarantine Cooperation Division
National Plant Quarantine Service (NPQS)
Korea

Organization and Personnel

- Headquarters : 5 Divisions (75 persons)
- 5 Regional Offices (199 persons)
- 2 Post-Entry Quarantine Stations (25 persons)
- 22 Branch Offices (150 persons)

* Most of the offices are located in airports /seaports

Location Map of Offices



Regulations and Activities

- Prohibited Items
  - Prohibited Item can not be imported
    exception with special permit for research purpose
  - Non-prohibited item can be imported with PC
  - Plants for planting are subject to laboratory test for latent pathogens
  - Some plants for planting are subject to post-entry quarantine

- Exampls of Prohibited Plants for Planting
  - Seeds: Rice (world except Japan and Taiwan)
  - Fresh underground parts: *Ipomoea* spp., Solanaceae , Jasmine, *Musa* spp, *Anthrium* spp, Rutaceae (most part of world)
  - Plants for planting except seeds: Pomoideae, *Prunus* spp, *Rubus* spp, *Citrus* spp, Vitis etc.
  - Nursery stock: Pinus spp. etc (Japan, China, Taiwan, Viet Nam, North America)

- Quarantine Procedures

1. Application of Inspection
2. On-site inspection
3. (Lab. Inspection)
4. No plant pests detected
5. Release
6. Incase of detection of regulated pests:
   - Released after proper treatment, or
   - destroyed/reshipped if appropriate treatments are not available

7. In the case of detection of prohibited pests or items:
   - Destroy or reship

Inspection by Various Methods

- **Documentation Inspection-** To check the prohibited plants or plant products :
  - Needed: PC, application form, and related materials (e g. B/L, packing list, invoice, etc)

- **On-site Inspection-** To examine the actual commodities, and to decide whether pests are attached or not :
  - Needed: portable inspection kits

- **Laboratory Inspection-** To identify pests by such measures as incubation, rearing, and culturing :
  - Needed: high-tech equipments

- **Post-Entry Inspection-** To check latent pathogens, such as virus, viroids, phytoplasma of fruit seedlings, flower bulbs, nursery stocks, and other planting plants:

  – Needed: PCR, ELISA, indicator, etc.,

Commodities for Post-Entry Quarantine

- Flower bulbs (except for some varieties), potato tuber, sweet-potato tuber, nursery stock, cutting and graft of fruit trees, nursery stocks of strawberry, etc.

Methods of Post-Entry Quarantine Inspection

- During the development period, inspections are conducted between one to four times.
  - PCR, ELISA, Bioassay using indicators, etc.

Laboratory Inspection

- Inspection Subjects
  - plants and plant products such as fruits, vegetables, seeds and seedlings suspected for latent pests
- Inspection methods
  - Stereo/compound microscope, image analyzer
  - SEM, TEM, laser microscope
  - DNA analysis (PCR, electrophoresis, sequencing)
  - Immunological tests (ELISA)
  - BIOLOG

Importance of Asia Pacific Region in Import to Korea

	Seeds (1000ton)	Nursery stock (Mil)	Flower bulbs		Total	
			1000ton	Mil.	1000ton	Mil
Total	29.1	112.5	2.3	63.4	31.4	175.9
Asian Pacific Region	27.0	101.7	2.1	36.3	29.1	138.0
%	**92.8**	**90.4**	**91.3**	**57.3**	**92.7**	**78.5**

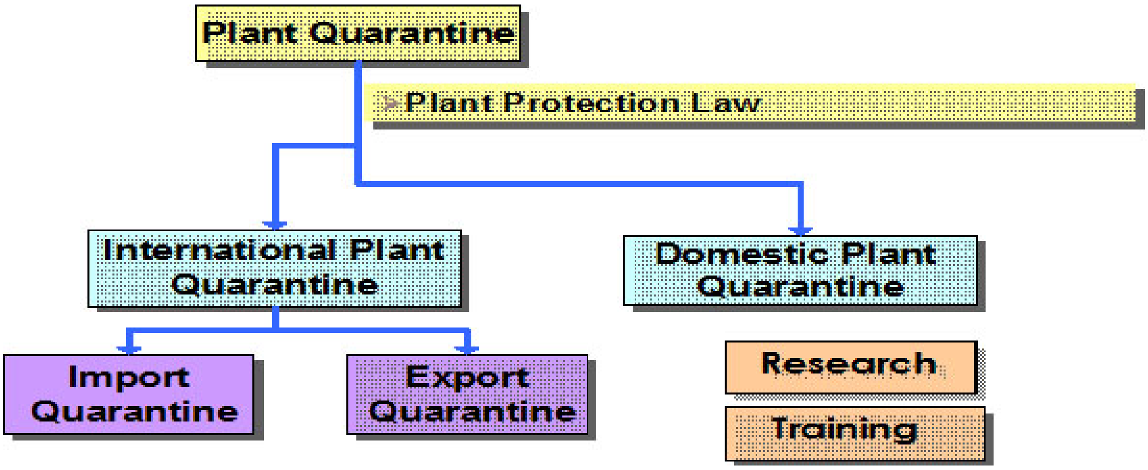
Importance of Management in Production Country

- Highest risk item
- Latent infection
- Multi -country production
- Growing demand for exotic plants and new variety

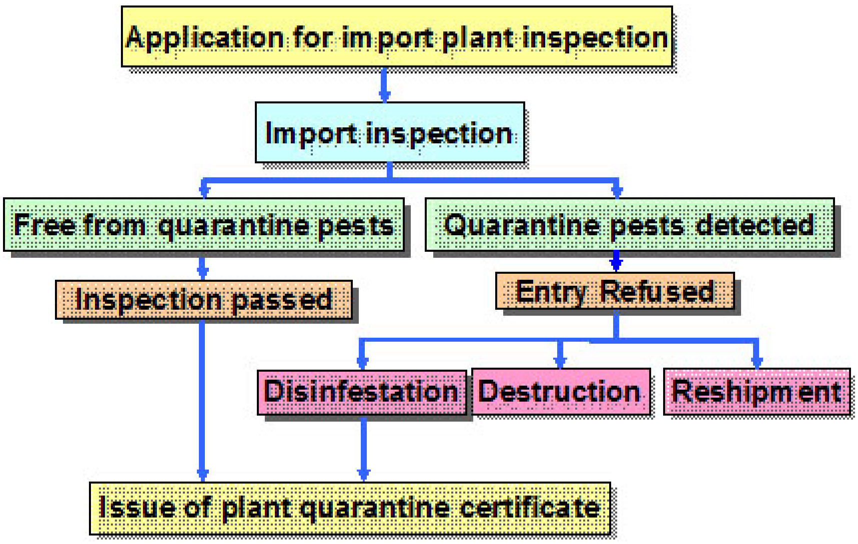
Plant Quarantine System of Japan

Mr. Toru Semba
Deputy Director
Plant Variety Protection and Seed Division
Japan

Plant Quarantine System in Japan



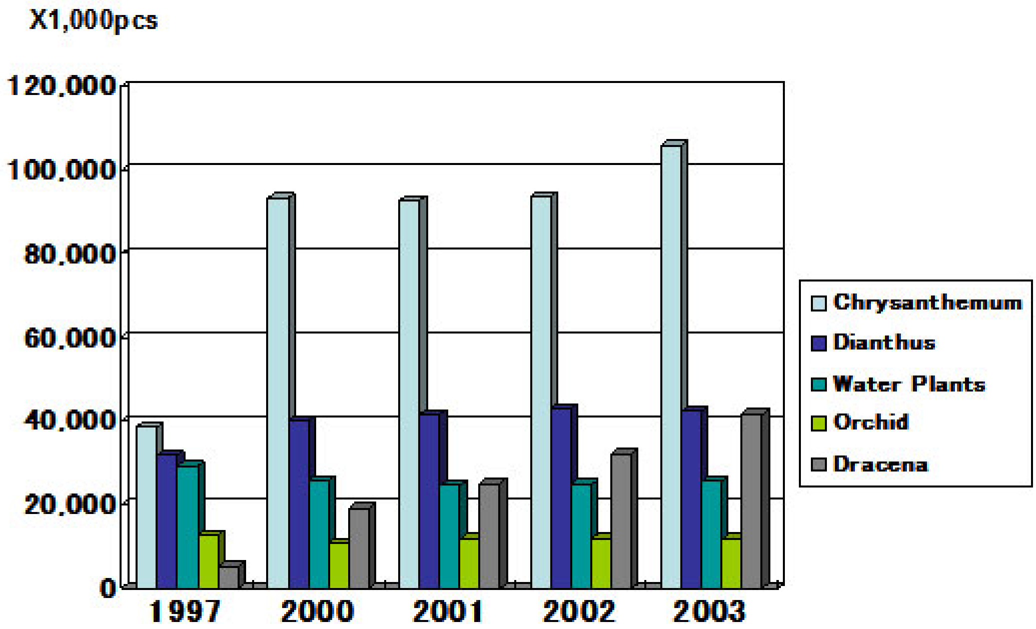
Import Quarantine Procedures (1)



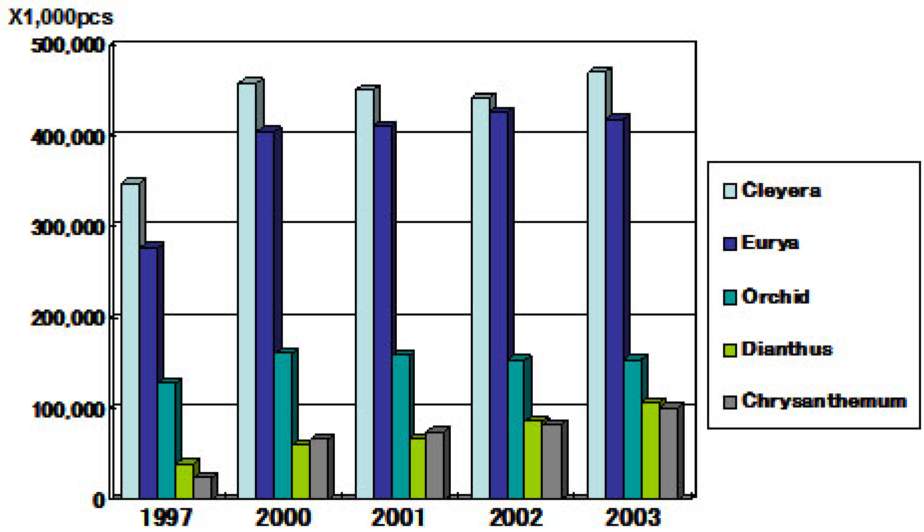
Amount of Import Inspection of Major Group of Plants and Plant Products (in 2006)

Cut flowers	2.1 billion pcs
Flower bulbs	528 million pcs
Seedlings	383 million pcs
Cereals	27 million tons
Legumes	4.4 million tons
Fruits	1.7 million tons
Vegetables	1.1 million tons
Seed for propagation	23 thousand tons
Logs	17 million cubic meters

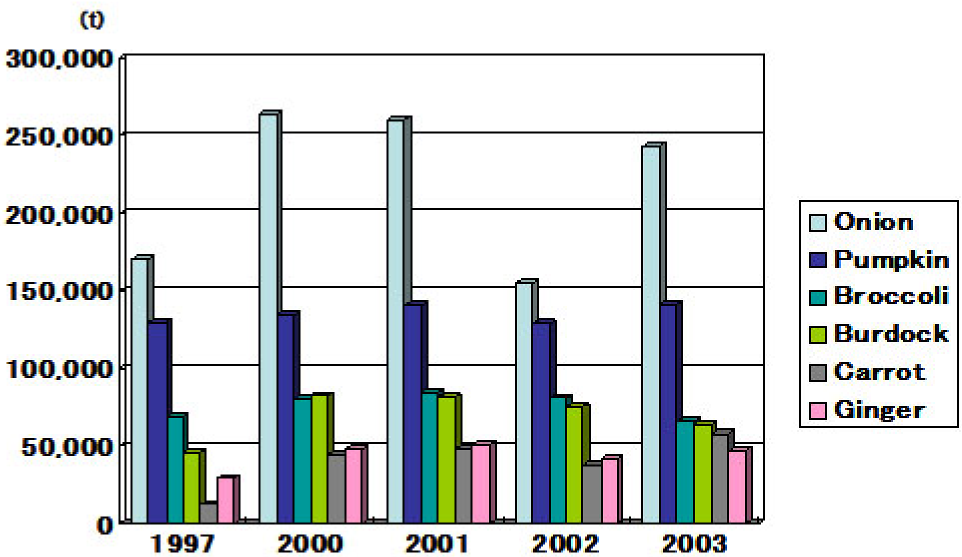
Volume of Major Import Plant Quarantine Items: Nursery Stocks

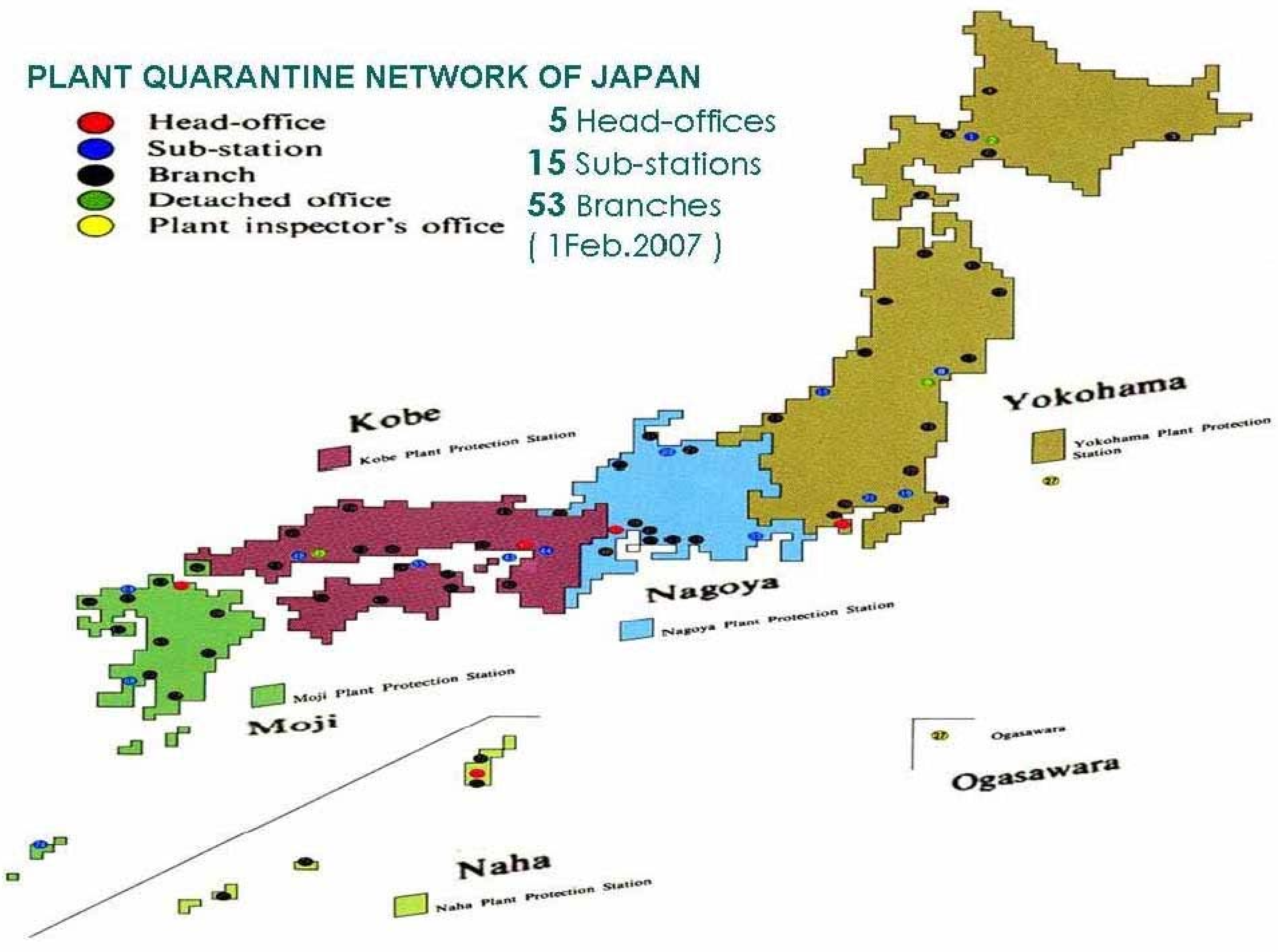


Volume of Major Import Plant Quarantine Items: Cut Flowers



Volume of Major Import Plant Quarantine Items: Vegetables




PLANT QUARANTINE NETWORK OF JAPAN
Head-office
Sub-station
Branch
Detached office
Plant inspector's office
5 Head-offices
15 Sub-stations
53 Branches
(1Feb.2007)
Kobe
Kobe Plant Protection Station
Yokohama
Yokohama Plant Protection Station
Nagoya
Nagoya Plant Protection Station
Moji
Moji Plant Protection Station
Naha
Naha Plant Protection Station
Ogasawara
Ogasawara

Suggestions and Concerns about PQ System in Asia Pacific Region

Mr. Kazuo Hatsuda
Japan Seed Trade Association

Out Line of JASTA

- Japan Seed Trade Association (JASTA) was established and authorized by the Ministry of Agriculture, Forestry and Fisheries in 1973. JASTA itself has been a member of ISF and APSA.

- A breeder or/and distributor of seeds and seedlings can be for a regular member of JASTA. The number of its members is 1,403 (May 2007) There are 45 local branches of JASTA in each prefectures of Japan.

Divisions and Committees

- There are six divisions and several committees in JASTA for the sake of its smooth business activities, and its members can participate in any divisions. Each division has a regular meeting twice a year, usually in spring and in fall, and temporary meetings would be arranged if necessary.

Main Activity of JASTA

- Research and study on the productivity and distribution of horticultural and harbage seeds and seedlings, and report the results to the members of JASTA.
- Promotion and development of good seeds and seedlings.
- Promotion of the breeding activities done by seed companies and protection of the breeders' rights.
- Maintenance and improvement on genetic quality of stock seeds.
- Cooperation on suitable distribution of the varieties bred by governmental or prefectures research institutes.
- Providing standards of variety-denomination, and prevention against duplication for the denomination of new vegetable varieties.
- Storage operation of seeds against natural disasters, etc..
- Cooperation with international organizations for the seed trade.
- Publications regarding the seed industry.
- Other necessary activities to attain the objects of this association

Concern about PQ

- Increase of international trade and re-export of seeds
- Many Free Trade Agreement and threats to farmer and agriculture
- Threat of new pests spreading across the international boundaries.
- Unreasonable, scientifically baseless PQ regulations.

Suggestion for PQ

- Issue certificate for re-export countries
- Importance of seed assay vs. Field inspection certificate (acceptance of ISTA or ISHI seed testing method)
- Do not use PQ regulations as non tariff barrier.
- PRA should be lifted for the pests that already exist in the country.
- Definition of seed born disease.

Guidelines for the Importation of Plant and Plant Products into Taiwan

Bureau of Animal and Plant Health Inspection and Quarantine, COA, Executive Yuan,
Reported by Steve Yen
Taiwan Seeds Trade Association

Requirements for importation of plants or plant products

- For importing plants or plant products, please fill in an application form for quarantine inspection. They will be released only when meet the quarantine requirements.
- For importing the following articles, quarantine inspection should be performed: plants or parts of plants, vegetables, seeds, cereals, cultivating media, and packages and containers of the aforementioned articles.
- Quarantine requirements for imported plants or plant products:
  - Import prohibition
  - Import under precautionary requirements
  - Post-entry quarantine.
- Plants or plant products unloaded and transshipped through the prohibited countries or districts will be treated as imported from the prohibited countries or districts.

Import prohibition

- Fresh fruits carried by passengers
- Soil, plants with soil, and cultivating medium with soil.
- Plants or plant products imported from the prohibited countries or districts
- Plants or plant products transshipped through the prohibited countries or districts.
- Plants or plant products form unidentified countries or districts
- Live insects and pests.

Plants subject to post-entry quarantine.

- Importation of the following living plants or propagules (excluding seeds and fruits) should be approved by the Bureau prior to import, and the imported plants or propagules are subject to post-entry quarantine at designated nurseries before released.
- Plants subject to post-entry quarantine for at least two (2) years: tea, pineapple, *Citrus* spp., banana.
- Plants subject to post-entry quarantine for at least one (1) year: *Carica* spp., *Euphoria longana*, *Fragaria* spp., *Litchi chinensis*, *Malus* spp., *Mangifera indica*, *Morus* spp., *Passiflora* spp., *Prunus* spp., *Psidium guajava*, *Pyrus* spp., *Rosa* spp. (excluding cut flowers), *Vitis* spp.

Prohibited plants or plant products.

Prohibited plants & parts of plants	Reasons for prohibition	Countries of districts of origin
Fresh fruits	Mediterranean fruit fly	Australia, Hawaii, Central & South America, Africa, Europe, Hong Kong, Singapore, etc.
Mango	Mango weevil, Mango seed weevil	South-East Asia, Bhutan, U.S.A., United Arab Emirates, Hong Kong, Singapore, P.R.C., etc
Fresh fruits of citrus and cucurbitaceous plants.	Chinese citrus fly, Peach fruit fly, Cucurbit fly, Guava fruit fly	South-East Asia, Bhutan, United Arab Emirates, Hong Kong, Singapore, P.R.C., etc.
Any parts of living eggplant, tobacco, red pepper, and sweet pepper (excluding seeds)	Tobacco blue mold	North America, Australia, Europe, Singapore, Hong Kong, Argentina, Mexico, etc.
Underground portions and adventitious roots of living plants	Burrowing nematodes	U.S.A., South-East Asia, Hawaii, Africa, Hong Kong, etc.
Fresh fruits of carambola, wax apple, mango, guava and Malpighia spp.	Carambola fruit fly	Indonesia, Malaysia, Singapore, Thailand, etc.
Fresh fruits of papaya, citrus, mango, and banana	Papaya fruit fly	Indonesia, Malaysia, Singapore, Thailand, etc.
Fresh fruits of papaya, mango, Artocarpus spp., Syzygium malaccensis, and olive	Bactrocera philippinensis	Philippines

Enterable under precautionary requirements

- A phytosanitary certificate issued by the official plant quarantine authority in exporting country is required for importation of plants or plant products classified as enterable under precautionary requirements. The certificate should state that the plant and plant products were inspected and found free from the designated plant pests, or were disinfected by appropriate treatments prior to export.

- Fresh fruits from the U.S.A., New Zealand, P.R.C., Canada, etc.

- Fresh (or living) plant roots, stems, leaves, flowers, and seeds from America, Europe, Australia, Japan, P.R.C., etc.

Penalty

- Those who are in violation of the plant quarantine requirements, by importing or transshipping prohibited plants, plant products, pest, soil, plants with soil, and their packages, containers, and cultivating media, will be penalized with imprisonment for not exceeding three (3) years, detention, and/or a fine of not exceeding NT$150,000. The imported articles will be confiscated.

- Importer or the agent should apply for quarantine inspection prior to the arrival of plants or plant products at a port (airport or seaport). The said importer or agent shall not unwrap or move the said plants or plant products before completion of quarantine inspection. Those who are in violation of the aforementioned requirements will be penalized with a fine ranging from NT $30,000 to NT $150,000.

Quarantine Inspection Stations

- Keelung Branch Office:
  - Taipei Inspection Station
  - Hsichih Inspection Station
  - Suao Inspection Station
  - Hualien Inspection Station
  - Mazu Inspection Station

- Hsinchu Branch Office:
  - Taoyuan Inspection Station
  - Hsinchu Inspection Station

- Taichung Branch Office:
  - Taichung Harbor Inspection Station
  - Chiayi Inspection Station

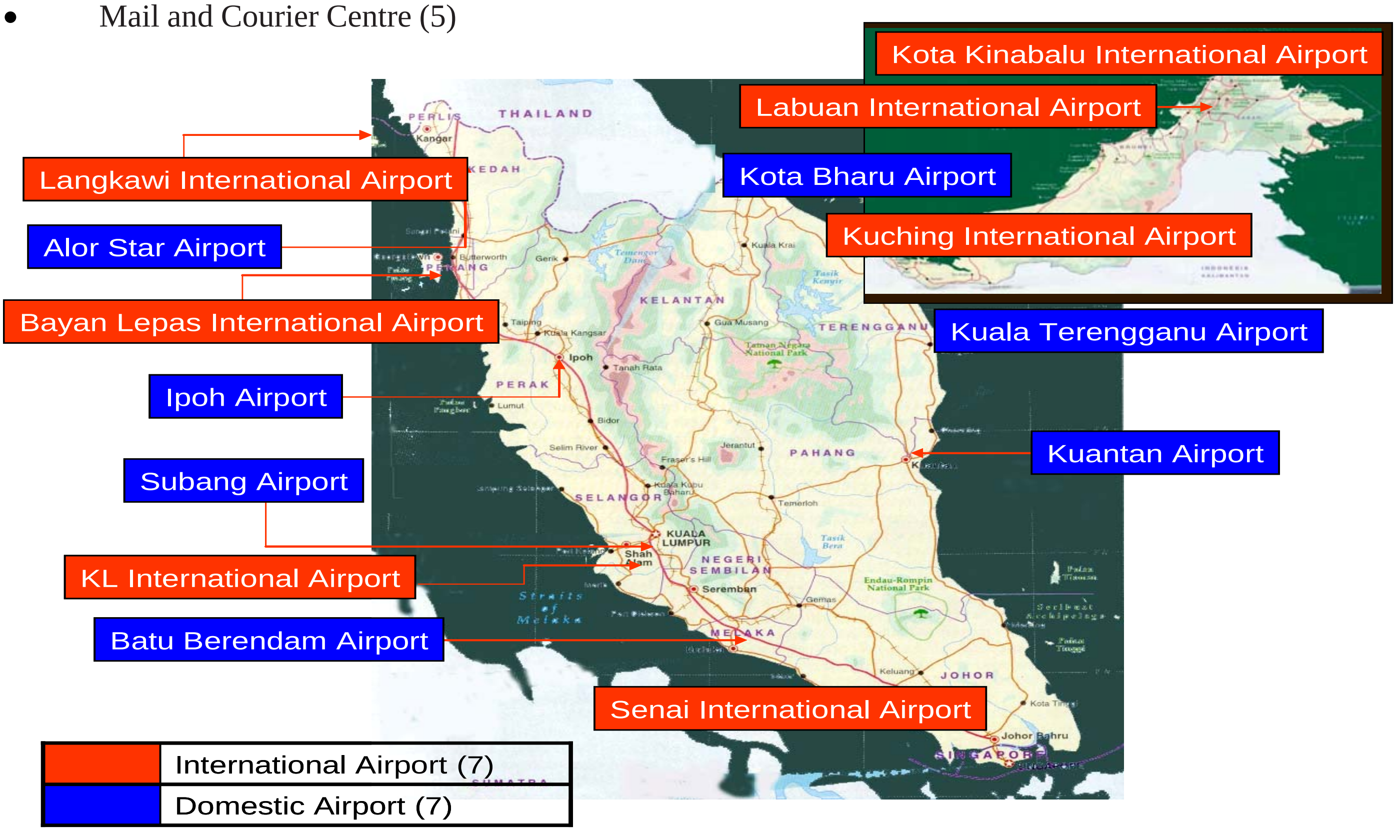
- Kaohsiung Branch Office:
  - Tainan Inspection Station
  - Kaohsiung Harbor Inspection Station
  - Kaohsiung Airport Station
  - Kinmem Inspection Station

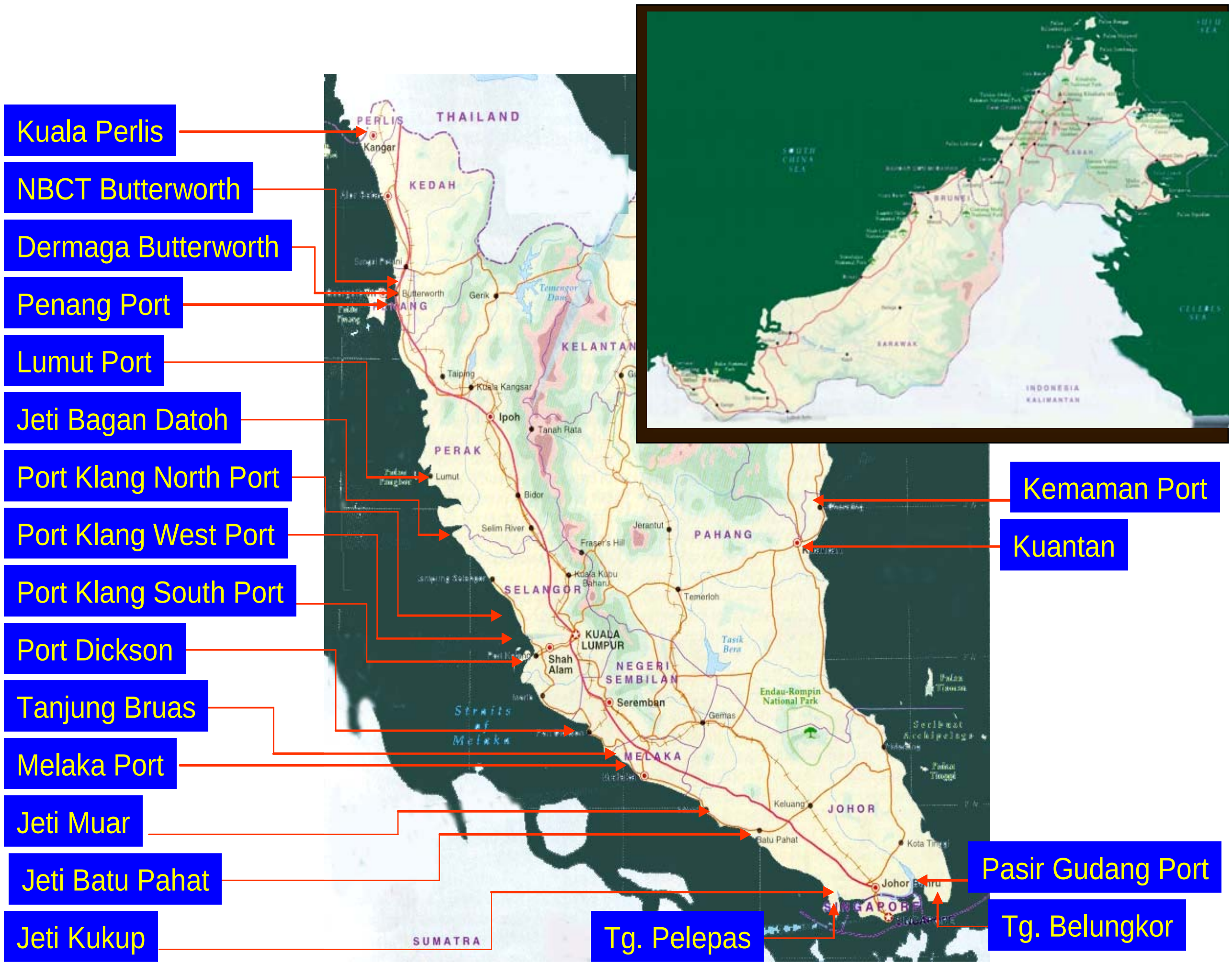
Current Plant Qurantine System in Malaysia: Malaysia Plant Quarantine Import / Export Procedures And Legislation

Dr. Mohammed Selamat bin Madom
Head
Planting Materials, Seeds and Livestock Breed Production Unit
MARDI, Malaysia

54 Plant Quarantine Entry Point

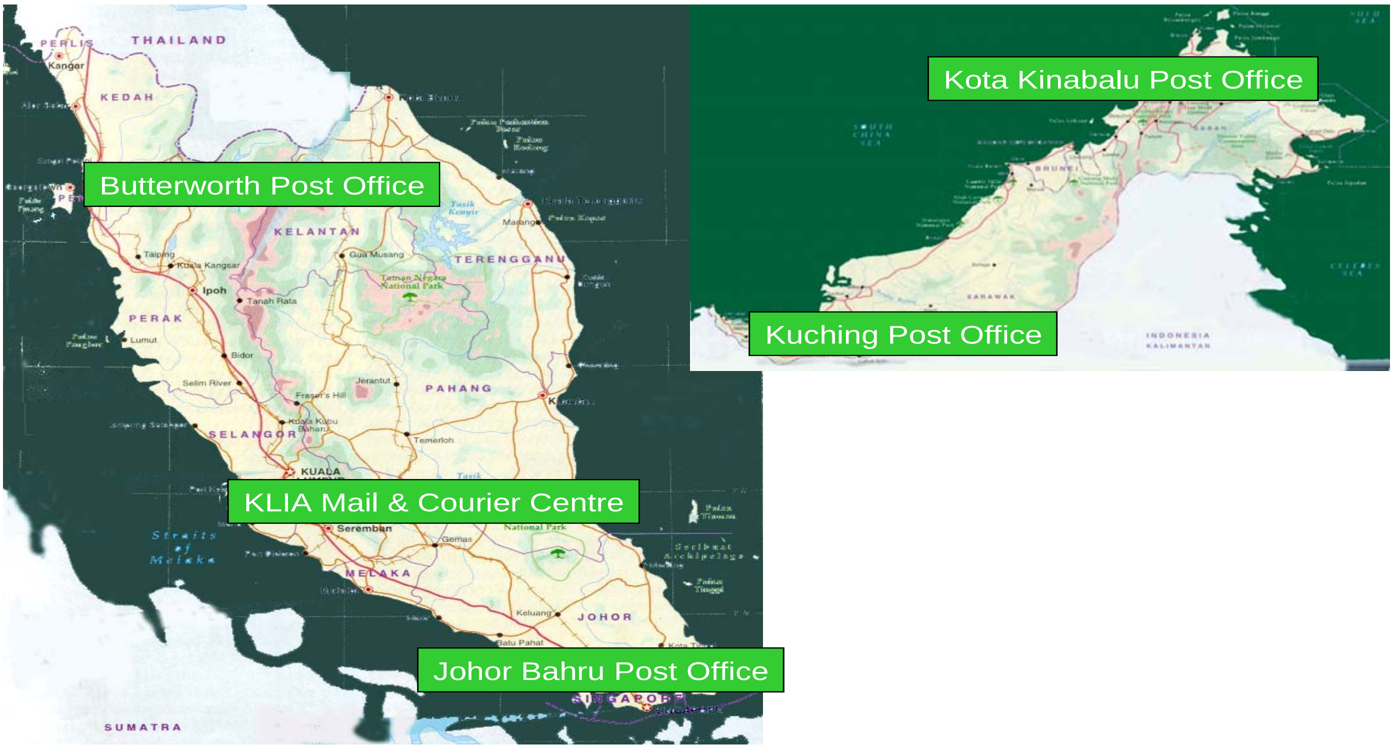
- Seaports (23)
- Airports (12)
- Land Entry Point (14)
- Mail and Courier Centre (5)





Kuala Perlis
NBCT Butterworth
Dermaga Butterworth
Penang Port
Lumut Port
Jeti Bagan Datoh
Port Klang North Port
Port Klang West Port
Port Klang South Port
Port Dickson
Tanjung Bruas
Melaka Port
Jeti Muar
Jeti Batu Pahat
Jeti Kukup
Tg. Pelepas
Kemaman Port
Kuantan
Pasir Gudang Port
Tg. Belungkor
THAILAND
PERLIS
KEDAH
KELANTAN
PERAK
PAHANG
SELANGOR
NEGERI SEMBILAN
MELAKA
JOHOR
SINGAPORE
SUMATRA
Straits of Melaka

Padang Besar
Wang Kelian
Bukit Kayu Hitam
Pengkalan Hulu
Rantau Panjang
Pengkalan Kubor
Bukit Bunga
Johor Bahru
Kompleks Sultan Abu Bakar, Tg. Kupang
Tg. Pagar, Singapura
THAILAND
KEDAH
KELANTAN
PERAK
SELANGOR
NEGERI SEMBILAN
MELAKA
JOHOR
Straits of Melaka



Responsible Authorities

- National Plant Protection Organization (NPPO) – IPPC
  The Crop Protection and Plant Quarantine Division, Department of Agriculture (DOA), Ministry of Agriculture and Agro-Based Industry, Kuala Lumpur, Malaysia.

Main Responsibilities as NPPO

- Issuance of Phytosanitary Certificate (PC)
- Inspection of consignment
- Disinfestations / disinfection treatment
- Conduct of PRA's and determining management options
- Action on non-compliance & notification
- Surveillance – pest status, pest reporting

Legislation (Importation and Exportation)

- The Plant Quarantine Act 1976 (Act 167)
- The Plant Quarantine Regulations 1981 (amendment 1986)
- Custom Order (Prohibition of Exports) 1998
- Convention on International Trade in Endangered Species of Wild Fauna & Flora (CITES 1973)

Plant Quarantine Act and Regulations

- The Plant Quarantine Act and Regulations stipulates the requirements which must be met for the importation of plants, plant products or any regulated articles into Malaysia.

Plant Quarantine Act and Regulations Enforcement

- Prohibition
  - Importation of pests and soil
  - 'PEST' – means any vertebrate or invertebrate animal (including the eggs of such animal), fungus, bacterium, virus, viroid, mycoplasma-like organism, weed, or any other organism which is or is capable of being injurious to plants and includes any dangerous pest.
  - 'SOIL' – means any earth, ground or other naturally occurring organic and mineral material in which plants may be grown.

- Restriction
  - The importation of all host plants and host organisms of the pests of agriculture.
  - The importation of specific plants or plant products of which dangerous plant pests and diseases are known to be endemic in the country of origin i.e. Hevea plant, Theobroma cacao from American Tropics region & African Cacao region.
  - Rooting compost or other growing media.
  - Beneficial organisms.

- Post Entry Quarantine
  - Required for plants and other regulated items which are of high risk and known to be hosts or from endemic countries or suspected to be infested with quarantine pests.

- Inspection
  - Required for all plants, plant products and regulated items at the Entry Check Points prior to clearance by Royal Customs of Malaysia.

- Treatment
  - Required for plants and other regulated items in the country of origin prior to importation.
  - Plant products found to be infected or infested upon inspection will be treated upon arrival.

- Non-compliance To Regulations
  - Plants, plant products and other regulated items imported in contravention of the Plant Quarantine Regulations shall be treated, destroyed or refused entry.

- Import Permit and Phytosanitary Certificate Required in the following:
  - Plants and the regulated items, including beneficial organism and other micro-organisms, dried flower etc.
  - Plant products for consumption, medicinal purpose, manufacturing and processing and any processed plants from the American Tropics Countries by air.
  - Coconut (whole or husked) and oil palm (fruit bunch)

- Plant products imported from endemic khapra beetle countries require only Phytosanitary Certificate

- Plant products for consumption, medicinal purpose, manufacturing and processing and any other processed plants do not require Import Permit and Phytosanitary Certificate

- Import Permits are issued by the Department of Agriculture for each component regions.

- Phytosanitary Certificate must be issued by the official regulatory authority of the exporting country and it should accompany the consignment.

Countries of highest concern to Plant Quarantine

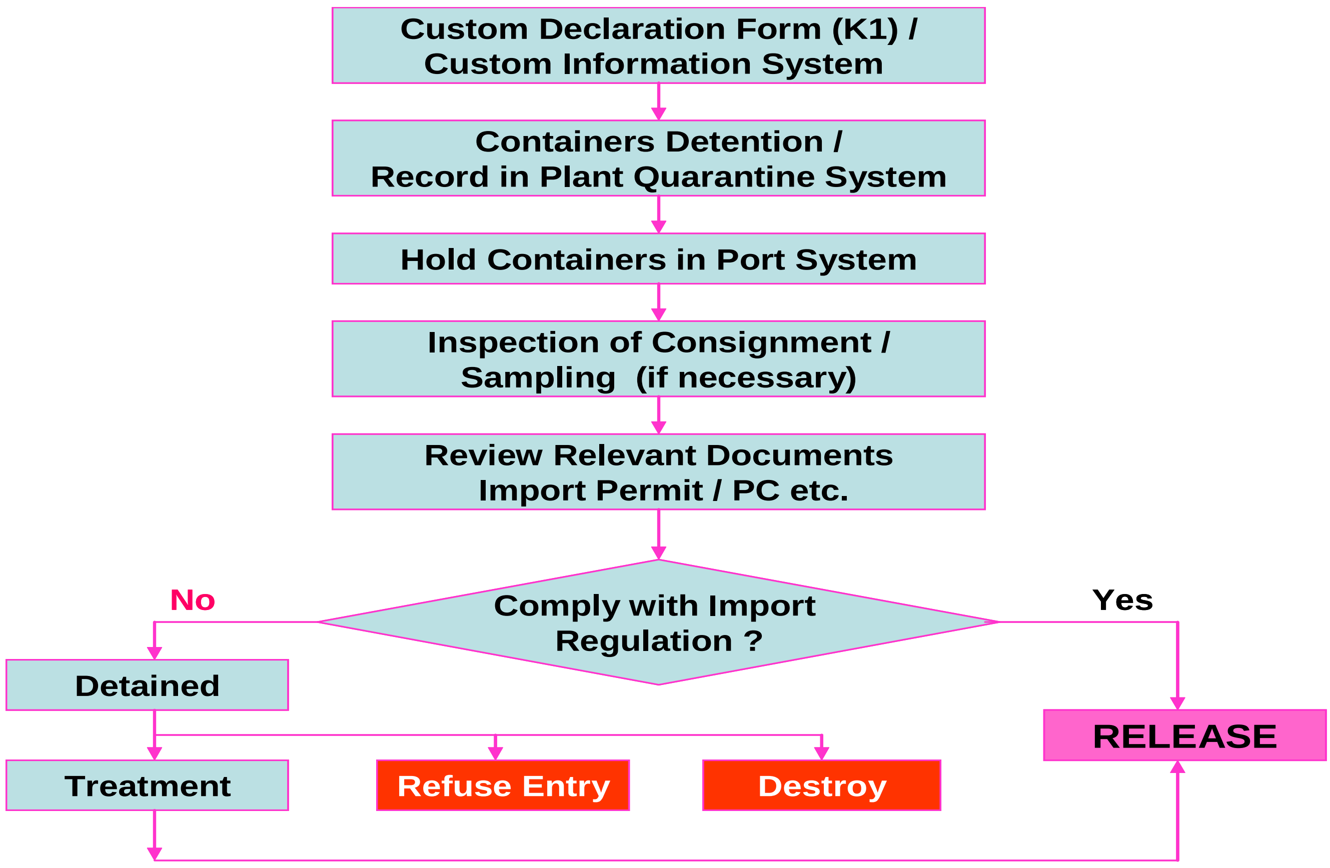
- American Tropics Countries: American' Tropics means those parts of the continent of America, including adjacent islands, which are bounded by the Tropic of Capricorn (latitude 23 ½ ^{o}S) and the Tropic of Cancer (latitude 23 ½ ^{o}N) and by the longitude 30 ^{o}W and 120 ^{o}E and includes that part of Mexico which is north of the Tropic of Cancer.

  – Barbados
  – Belize
  – Bolivia
  – Brazil
  – Colombia
  – Costa Rica
  – Cuba
  – Dominican Rep.
  – Ecuador
  – El Salvador
  – French Guiana
  – Guatemala
  – Guyana
  – Haiti
  – Honduras
  – Jamaica
  – Mexico
  – Nicaragua
  – Panama
  – Paraguay
  – Peru
  – Puerto Rico
  – Surinam
  – Tobago
  – Trinidad
  – Venezuela

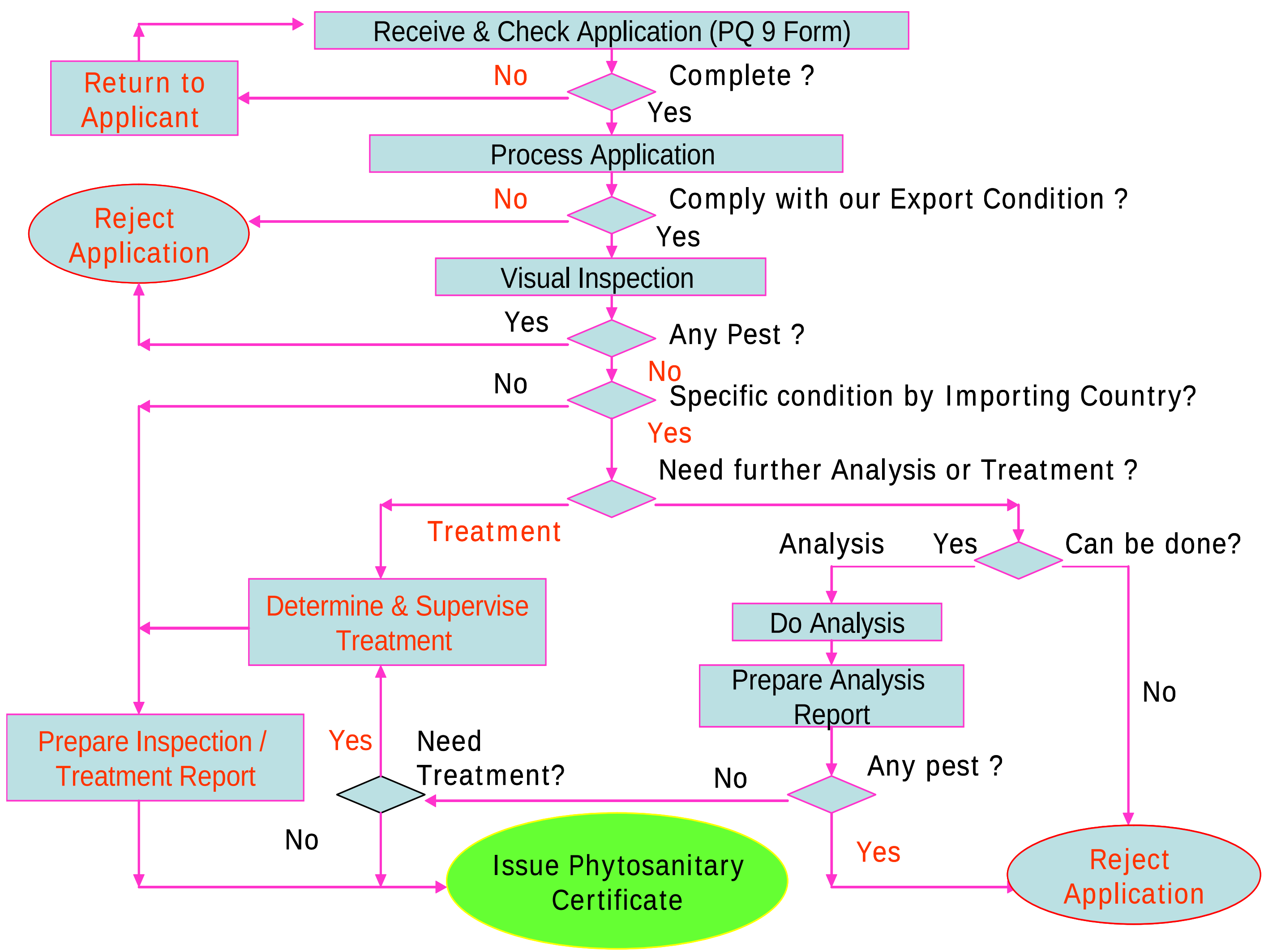
- African Cacao Region:The African Cacao Region' means any African territory in which any disease of cacao or Mirid (Capsid) bug affecting cacao is known, or believed, to occur.

  – Angola
  – Benin Rep
  – Cameroon
  – Congo
  – Ghana
  – Guinea
  – Ivory Coast
  – Liberia
  – Nigeria
  – Rhodesia
  – San Tome
  – Sierra Leone
  – Sudan
  – Togo
  – Zaire

Procedure For Plant Quarantine Inspection (Import)



Prosedure For Plant Quarantine Inspection (Export / Pc)



Current Development in the Seed Industry of Malaysia

Dr. Mohammed Selamat Bin Madom
Head
Planting Materials, Seeds and Livestock Breed Production Unit, Malaysian Agricultural Research and Development Institute

Objectives

- Updates the latest developments on the seeds industries in Malaysia
- Covering activities in 2007
- Government initiatives
- Private Sectors Initiatives

Latest Initiatives: Private Sector

- Sime Darby Seeds and R & D Centre in Perlis
- Launched by The Malaysia Prime Minister 30th July 2007
- Supported also by University Malaysia Perlis and MARA University of Technology
- The centre will have a JV projects with CAAS
- Main activities of NCER for the state of Perlis
- Half Day Seeds Seminar was carried out, 30th July 2007 at Perlis

Latest new Initiatives: National Seed Association of Malaysia (NSAM)

- NSAM is under the registration process with ROS
- NSAM is planning to organize the 5th National Seeds
- Symposium in KL next year, 11-12 March 2008
- First announcement in July 2007

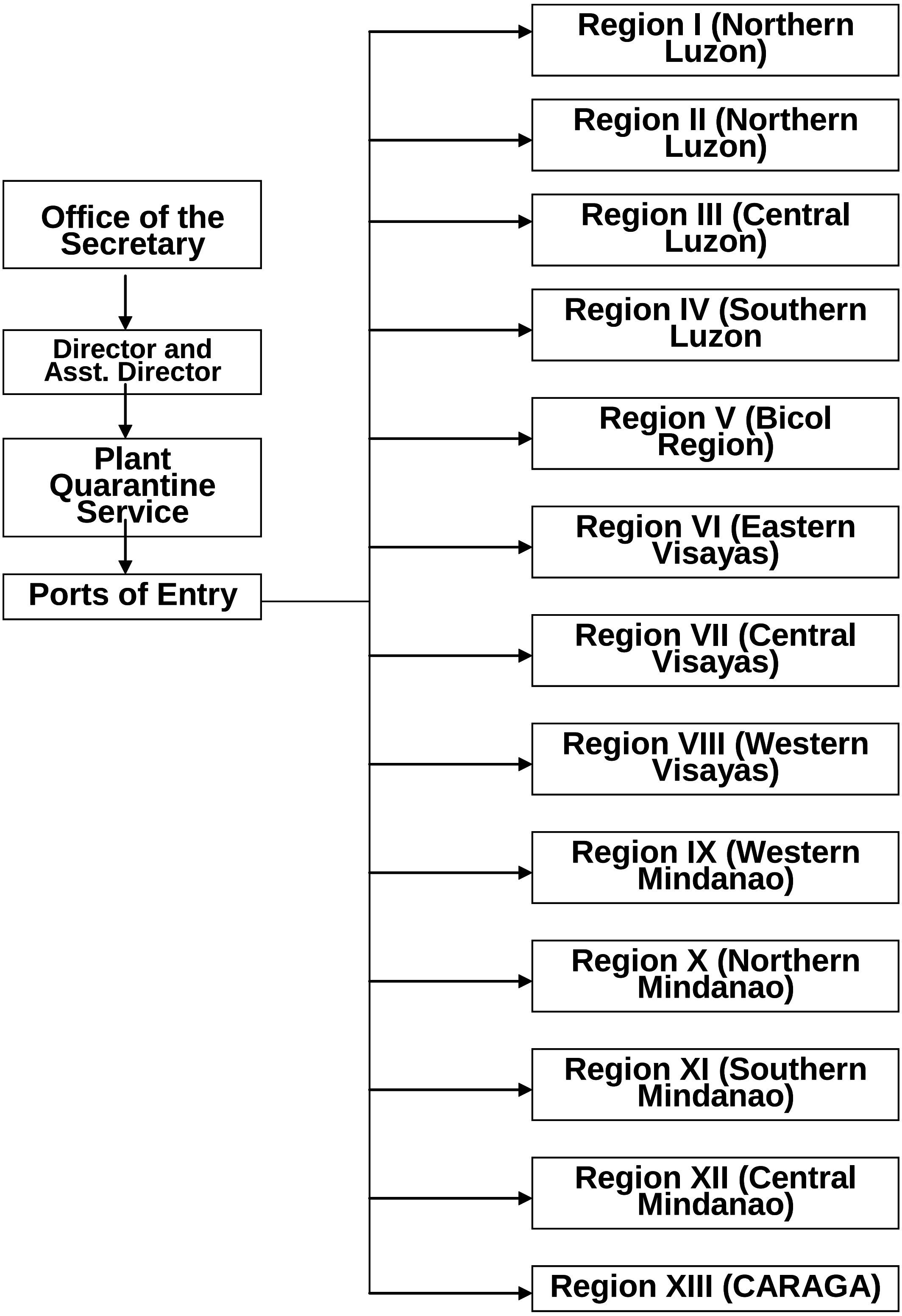
Latest Initiatives: Government Sector

- Johor Plant Tech. (The State Government of Johore) establishing commercial tissue culture labs to produce fruits and herbs planting materials
- MARDI through the UBB Unit establishing commercial tissue culture labs to produce fruits and herbs planting materials.
- MARDI is building a new seed quality labs., and expected to be ready by December 2007
- MARDI is upgrading the Rice Seeds Gene Bank in Penang
- Preparation of the NPVP Regulation 2006 by PVB.To be ready by end 2007
- Preparation of the Seed Act (draft)
- Preparation of the National Seed Council (draft)

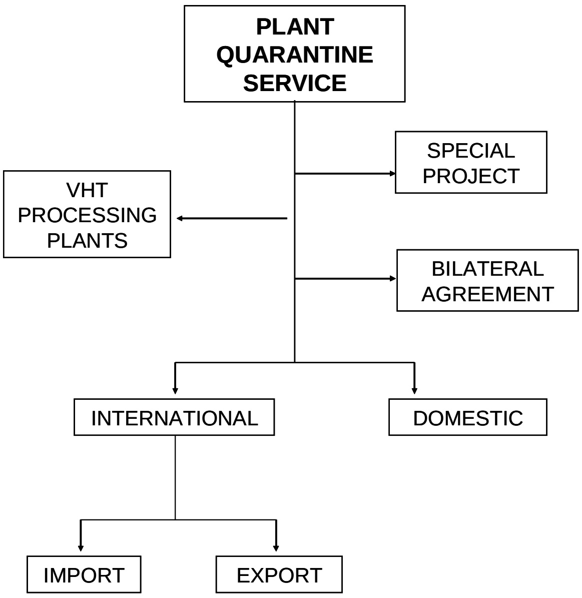
Philippine Plant Quarantine System

Ms. Sophia P. Taburnal
Senior Agriculturist
Plant Quarantine Service

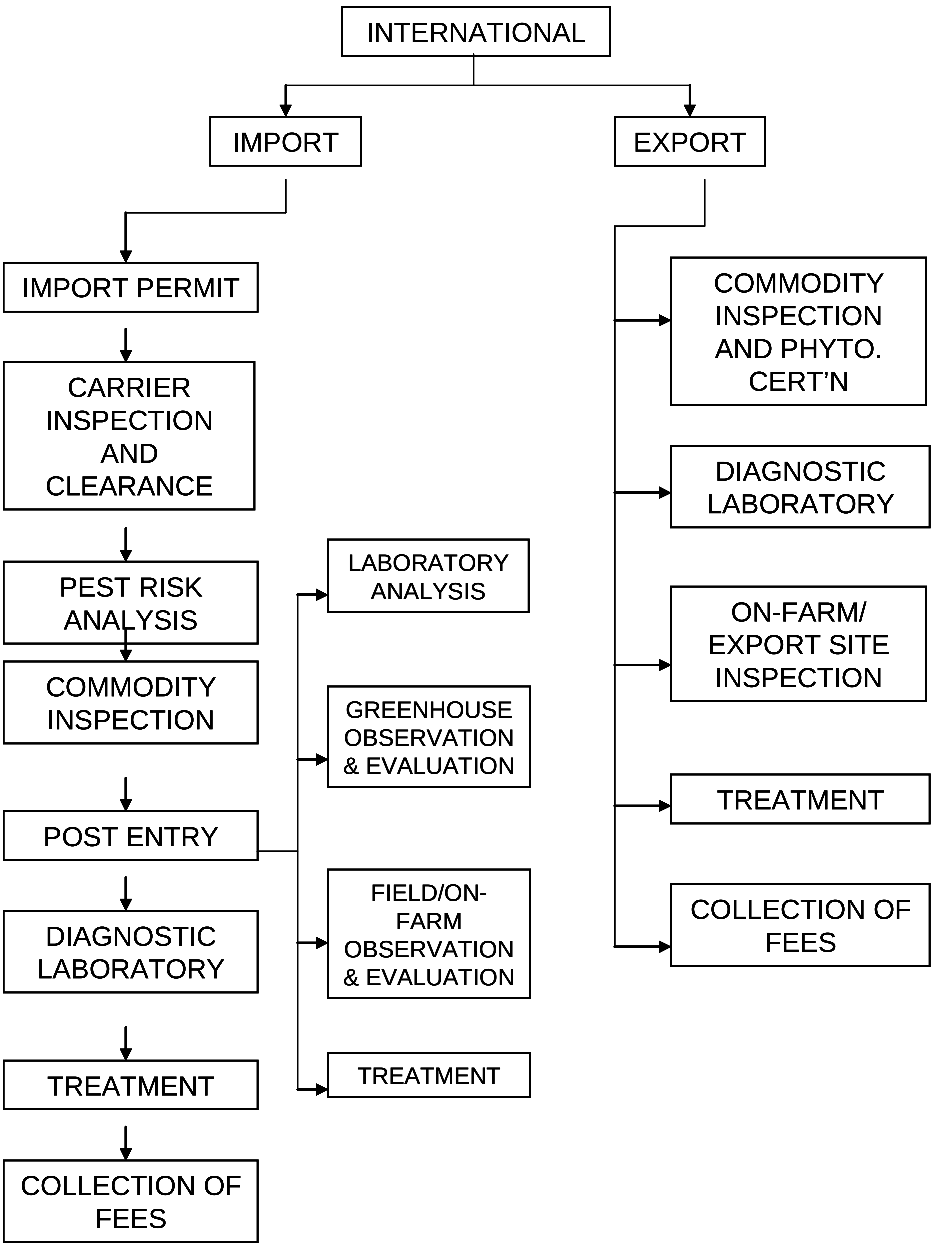
BPI- Plant Quarantine Service Organizational Chart



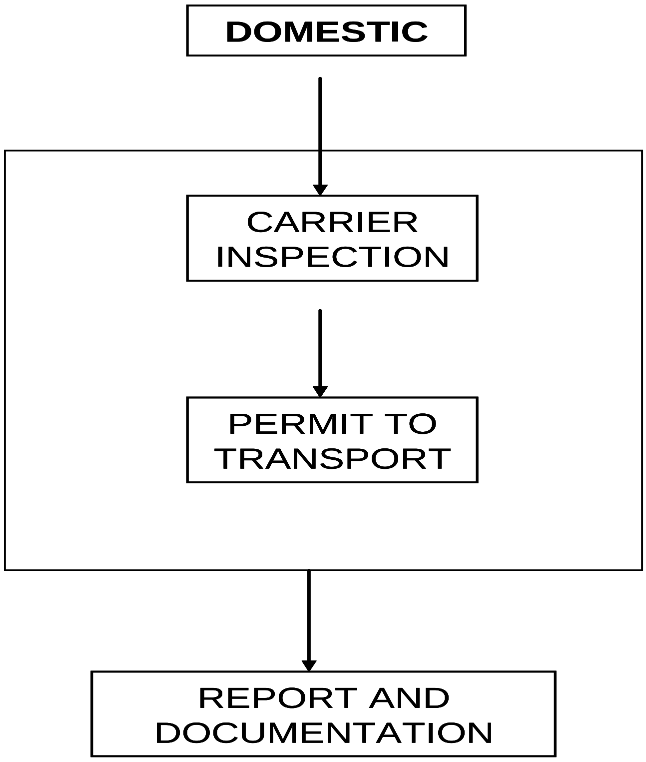
Plant Quarantine Service Functional Chart (1)



Plant Quarantine Service Functional Chart (2)



Plant Quarantine Service Functional Chart (3)



Legislations

- AO Order No.8 s of 2002 – *Rules and regulations governing importation and release into the environment of Plants/plant products derived from the use of Modern Technology".*
- BPI Special Quarantine Order No.2 s of 2005 – *Quarantine Measures to prevent the introduction and spread of chlorotic ringspot virus of oil palm.*
- BPI Special Quarantine Order No.3,s of 2005- *Declaring Coconut Leaf Beetle,Brontispa longissima (Gestro) an Invasive Quarantine Pest of Coconut Cocos nucifera, and Providing Measures to Regulate and Prevent its Spread*
- Memo Circular dated Dec.2, 2005 –*Guidelines for the Importation of Oil Palm planting materials*
- BPI Q. Administrative Order No.4 s of 2005- *Amendment to BPI Q.Adm.Order No.2 re Prohibition of exports of "saba"banana (Musa paradisiaca) planting materials from the Philippines.*

Enforcement Authority

- Bureau Of Plant Industry
  - Prevent further spread spread of pests already in the country
  - Comply with the phtyosanitary requirements of importing countries**General Functions**
- Prevent the introduction of foreign pests into the country

PQ Accomplishments

- Development of procedural manual for seed import and export
- Development of quarantine pest list for seeds (rice, maize,tomato, cucumber,eggplant, cabbage, cauliflower,hot pepper ,watermelon and sunflower)
- Development of guidelines for the processes involved in the approval of importation of genetically engineered materials

Philippine Seed Industry Association Comments on Philippine Plant Quarantine

Dr. Renato Mabesa
Director
Phlippine Seed Iindustry Association

Philippine Seed Industry Association (PSIA)

- Founded 1974
- Private Sectors – 21: Multinational – 5 , Local – 16
  - Importer/distributor - 12
  - Seed producer/importer - 4
  - Seed producer/exported – 1

- Public Sector – 3
  University of the Philippines Los Baños
  Bureau of Plant Industry
  Department of Agriculture – Rice Program
- At present there is a very *harmonious relationship* between the private and public sectors in the local seed industry. The prevailing policy is: *Cooperation not confrontation.*

Plant Quarantine:

- There is already an existing "Seed Import/Export Procedures Manual."
- Formulated in consultation with major stakeholders.

Comments

- As stated in the manual it will take only 3 days from filing up to approval if all supporting documents are attached. But unfortunately it takes more than that even with follow up.
- Conduct of seed health testing even with a phytosanitary import permit and a post quarantine procedure maybe even required for imported seed. The compounded delay usually results to disruption of timetable for a specific planting season.
- Furthermore it must be pointed out that most pests are already present in the country, hence flexibility in quarantine regulations must be observed.
- GMO detection or screening for imported seeds is not an absolute necessity, for we are in the firm belief that you can not prevent development of new technology.

Advantages of Plant Quarantine

- Seed exporters can be informed of all phytosanitary requirements and the needed tests to satisfy the requirement.
- Plant quarantine is a non-trade barrier hence can be utilized for the benefits of the local seed industry. Unabated smuggling maybe controlled by imposing some quarantine regulations. Furthermore the required Pest Risk Analysis may be used to protect the local industry.

Recommendations

- Implementing new provisions not in the manual must need prior information drive for all stakeholders.
  eg: requiring a research outline in importing seeds for research purposes must be reviewed.
- Provisions for importing small quantity of seeds for research purposes must be exempted from some quarantine regulations.
- Constant dialogue between the Plant Quarantine Services and the National Seed Association is highly recommended. Member companies of PSIA must be given priority over "fly-by-night" seed companies in the issuance of import permit.

Plant Quarantine System in Indonesia

Mr. Suwanda, ZA, M.Sc
Director
Plant and Quarantine Centre
Indonesia Agriculture Quarantine Agency

- Indonesia is endowed with exceptional resources in land, climate and people for year-round agricultural production. Its diversity of ecological condition permits intensive production of tropical and sub tropical crops. Since more than 50 percents of the population engaged in agriculture, therefore, agriculture play a very important role in Indonesia's national and economy development.

- Yield loss of agricultural products caused by the presence of pests is a major constraint in Indonesian agriculture. Fortunately, a number of major pests are not yet widely spread, but are still confined to certain island. Besides, the country is also still free from many different exotic pests which are reported to cause a lot of damage and losses of different crops in the areas or countries where they occur. Pest problems will certainly increase if these pests are introduced into and spread within the country. Plant quarantine, therefore, plays a very important role in preventing them from being introduced into and spread within the country.

PLANT QUARANTINE IN INDONESIA

- In Indonesia, the implementation of plant quarantine is placed under the responsibility of Indonesian Agency for Agricultural Quarantine (IAQA) of the Ministry of Agriculture. IAQA is in charge of the management of plant and animal quarantine. The Director General (DG) of the agency reports directly to the Minister of Agriculture for the execution of the Minister's policies regarding agricultural quarantine.

- The Head Office of IAQA which is located in Jakarta, consists of a Secretariat, Centre for Plant Quarantine, Centre for Animal Quarantine, and Centre for Quarantine Information and Bio-safety. The main duty of Centre for Plant Quarantine is to manage plant quarantine activities all over the country.

- To carry out its duty, Centre for Plant Quarantine has three divisions, i.e. (1) Division of Plant Import; (2) Division of Plant Export and Domestic; and (3) Division of Technique and Method.

- Plant quarantine activities, i.e. inspection of documents and consignments, detention of consignments, isolation and observation, treatment, refusal, destruction, and release are carried out by plant quarantine services/stations at seaport and airports (including post offices). There are 43 plant quarantine services/ stations located at 43 seaports and airports throughout the country. Each service or station supervises a number of checkpoints which are seaports, airports, container terminals, and post offices

Quarantine law

- Indonesia's first plant quarantine measure dates back to 1877 when by the Ordinance of 19 December 1877 (Government Gazette No. 262) an absolute prohibition was placed on the importation of coffee plants and seeds from Sri Lanka to prevent the introduction of coffee leaf rust (*Hemileia vastatrix*). Several more ordinances concerning importation, exportation and inter-islands movement of planting materials to prevent introduction and spread of pests were issued in the past. However the first ordinance of a general character designed to prevent the entry of plant pests and diseases by regulating the importation of living plants and their part including seeds and fresh fruit was the Ordinance of 15 February 1922 (Government Gazette No. 84).

- The latest law, i.e. Law No. 16 of 1922 concerning Animal, Fish, and Plant Quarantine was published and came into effect on 8 June 1992. The Government Regulation No. 14 of 2002 which was designed to provide a strong legal foundation and to conduct the provision of the law in implementing plant quarantine activities enacted on 23 April 2002. With the issuance of these law and regulation, ordinances issued previously are all invalid. However, all existing executive regulations as long as they are not in contravention of these law and regulation remain in force pending the issuance of new executive regulations under these law and regulation.

Objectives of Plant Quarantine

to prevent the introduction of plant quarantine pests into the territory of the Republic of Indonesia;
to prevent dissemination of quarantine pests from one area to another within the territory;
to prevent the concomitant exportation of plants if required by the country of destination.

Quarantine requirements

- *Requirement for imported carrier:* Any carrier of plant quarantine pests imported into the territory of the Republic of Indonesia shall be:
  - accompanied by health certificate from the country of origin and the country in which the carrier was landed and from which it was later re-consigned, for plant or parts of plant, except carrier classified as other articles;
  - through the designated place of entry;
  - notified and presented to the plant quarantine officer at the place of entry for quarantine action.

- *Requirements for inter-area within the country:* Any carrier of plant quarantine pests to be moved from one area or island to another within the territory of the Republic of Indonesia shall be:

  - accompanied by health certificate from the area of origin of plant or parts of plant, except carrier classified as other articles;
  - through the designated place of entry and place of exit;
  - notified and presented to the plant quarantine officer at the place of exit and entry for quarantine action.
- *Requirement for export* : If so required by the country of destination, any carrier of plant pests exported from the territory of the Republic of Indonesia shall be:

  - accompanied by health certificate of plant or parts of plant, except carrier classified as other articles;
  - through the designated place of export;
  - notified and presented to the plant quarantine officer at the place of export for quarantine action.

Quarantine Actions

- Any carrier of plant quarantine pests imported into, or destined to be moved from one area to another within the territory of the republic of Indonesia shall be subjected to quarantine actions. Carrier of pests to be exported from the territory of the republic of Indonesia shall not be subjected to quarantine actions, unless required by the country of destination.

- Any carrier of plant quarantine pests imported into, or destined to be moved from one area to another within the territory of the republic of Indonesia shall be subjected to quarantine actions. Carrier of pests to be exported from the territory of the republic of Indonesia shall not be subjected to quarantine actions, unless required by the country of destination.

- Quarantine actions performed by the quarantine officers include
  - inspection
  - isolation
  - observation
  - treatment
  - detention
  - refusal
  - destruction
  - release

Kind of Pests and Their Carriers

- The government shall designate:
  - the kinds of plant quarantine pests;
  - the kinds of carrier of plant quarantine pests; and
  - the kinds of carrier of plant quarantine pests the importation of which into, or the movement of which from one area to another within the territory of the Republic of Indonesia is prohibited.

Place of Entry and Export

- Place of entry and export of carriers of plant quarantine pests shall be designated by the Government.

Penalty Provision

- Any person who willfully violates the provisions regarding the plant quarantine requirements and plant quarantine actions laid down in Law No. 16 of 1992 shall be punishable by a maximum imprisonment of three years and a maximum fine of Rp. 150,000,000,00. The punishable act shall be a crime.

- Any person due to negligence violates the provisions shall be punishable by a maximum imprisonment of one year and a maximum fine of Rp. 50,000,000,00. The punishable act shall be an offence.

Ministerial Decrees

- All the existing executive regulations remain in force provided they are not in contravention of Law No. 16 of 1992. There are number of Decrees of Minister of Agriculture concerning plant quarantine issued after the Law No. 16 of 1992 came into force.

Prohibited Importation

- The following plants and non-plant materials may not be imported:
  - plant propagating materials and plant products of *Hevea* and plant propagating materials of non-*Hevea* from countries where South American Leaf blight is present.
  - Declared quarantine pests;
  - Soil and compost, excluding sphagnum and peat;
  - plant materials when used as packing materials (straw of rice, cotton waste, leaves of banana, husk ofcoconut palm, etc.).

Restricted Importation

- Import requiring a permit:
  - planting materials of any species of plant;
  - soil and compost for research purposes;
  - biological agents.

Import requiring a Phytosanitary Certificate

- The following plant materials must be accompanied by phytosanitary certificate from the country of origin:
  - all planting materials;
  - fresh fruits, seeds and other parts of living plants for purposes other than further growth or propagation.

Import not requiring a Phytosanitary Certificate

- Processed or manufactured plant materials which are not capable of carrying or harboring plant pest may enter without phytosanitary certificates.

ASBENINDO

Ms. Elda D. Adiningrat
President
ASBENINDO

Indonesian Seed Association

- Established in 1992

- Division In Asbenindo
  - Food Crop
  - Horticulture
  - Estate Crops
  - Forestry

- Mission
  - As a strategic partner for governmental body in agriculture and forestry development
  - To use high quality seed for supporting national agricultural development as well as sustainable forest development

- Indonesian Strategy
  - Self sufficiency of food crops, rice, corn, soybean
  - e.g. 2 million ton rice increase in 2007
  - Crop seeds subsidy
  - Supporting local seed industry development indirectly by some ministerial decree

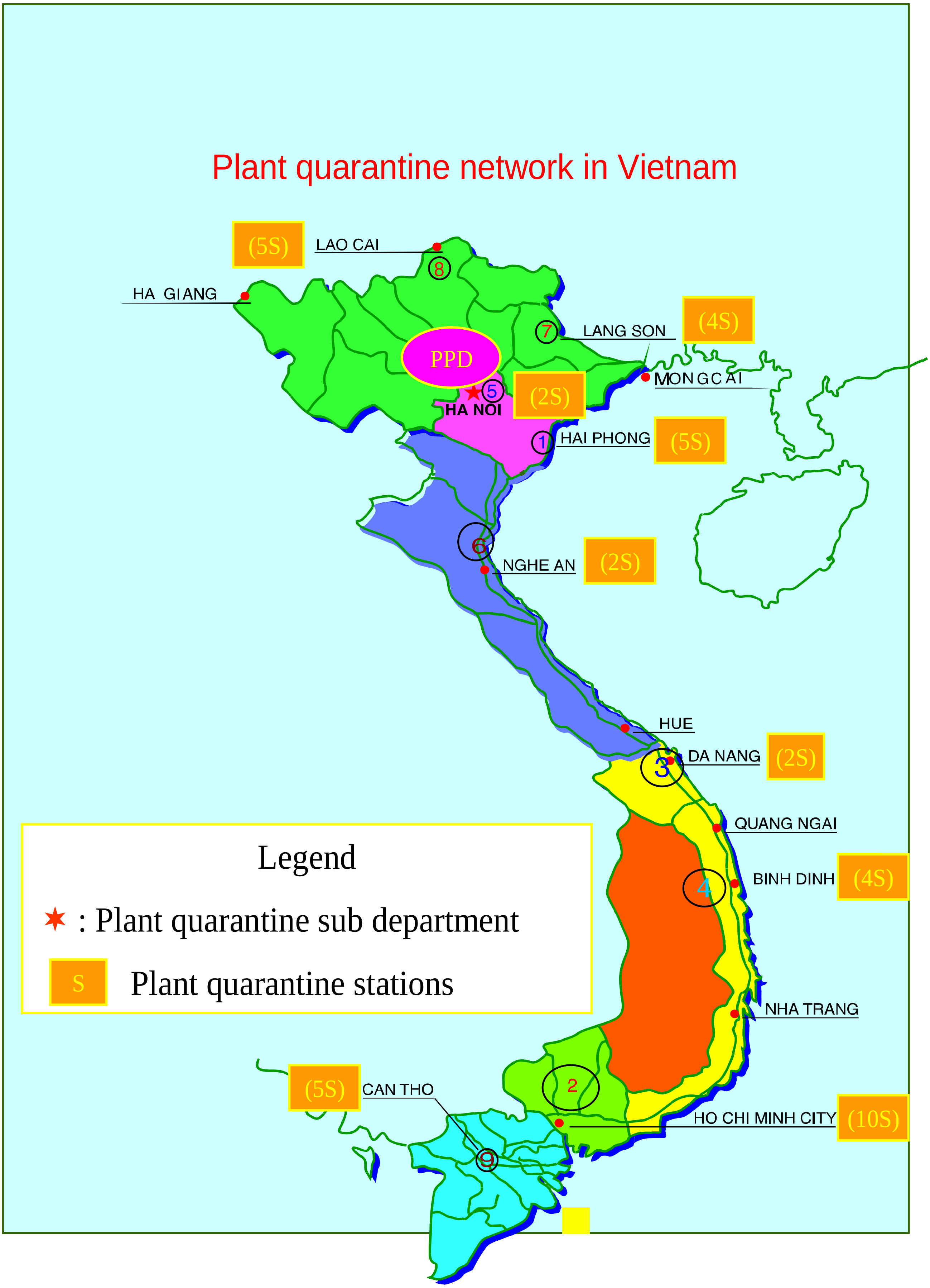
Current Condition

* **Climate change and High world bio ethanol demand leads to high imports**

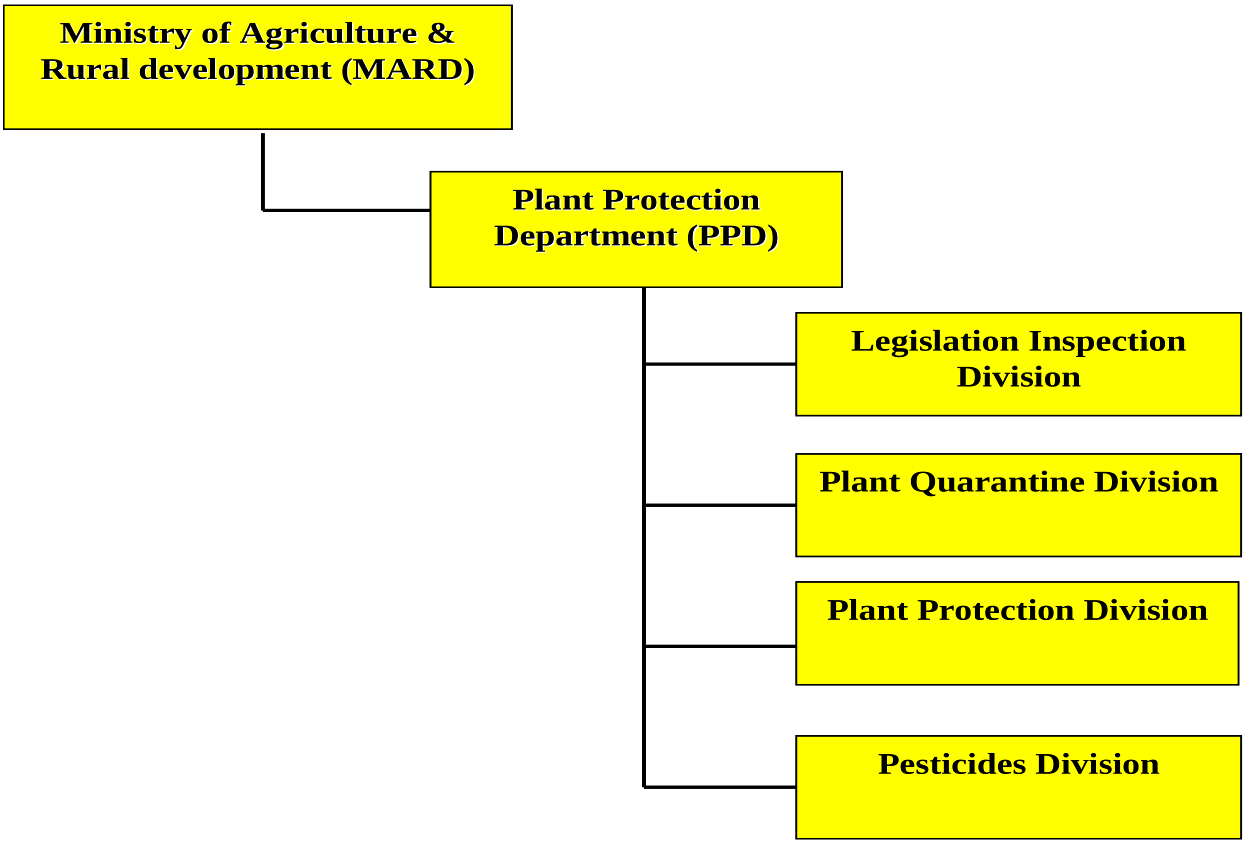
* Decrease production capacity
* High seeds demand
* New seed companies

Plant Quarantine System of Vietnam: Success and Problem

Mr Le Duc Dong, Director, Post Entry Quarantine No 1,
Plant Protection Deopartment (PPD)
Ministry of Agric. and Rural Development (MARD), Vietnam



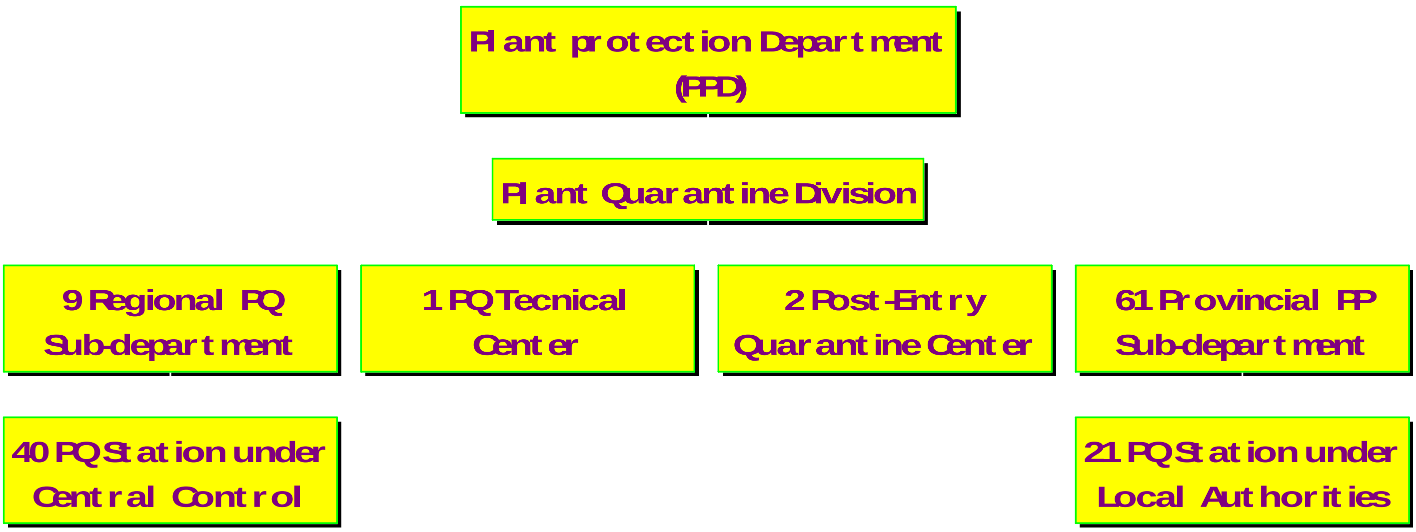
MARD Organizational Chart



Plant Protection Deparment

- Was established in 1961 and has mandated to:
  - Carry out plant protection extension work through out the country
  - Pesticide registration and management
  - Implementation of all plant quarantine activities.

PPD Organizational Chart



Key Issues

- Nine regional plant quarantine sub-departments with more than 40 plant quarantine stations were established and functioned through out the country.

- One technical center and two post-entry quarantine centers were established to support for PQ operation.

- More than 300 plant quarantine staff are involved in PQ work at present.

- At present Vietnam has trading relationships and issues phytosanitary certificate to more than 15 countries worldwide.

Plant Quarantine in Vietnam is governed by the following legislations:

- Ordinance on the Plant Protection and Quarantine Promulgated: since 1993
  - Revised: in August 2001
  - Come into force: in January 1th2002

- Regulation on Plant Quarantine
  - Issued together with the government's Decree
  - No 58/2002/ND-CP of June 3th 2002

- Decree No 02/2007/ND-CP January 5th 2007 for Plant Quarantine

- Decision No 72/2005 QD-BNN, Nov 14 th 2005 Regarding the issuance of the List of Regulated Articles

All importation of seeds and planting material are subjected to the following conditions:

- Inspection at entry point.

- Requirement of Plant Quarantine import permit.

- Requirement of Phytosanitary certificates (PC).

- Samples require for analysis before release

- Post-Entry Plant Quarantine requirement

PQ Success

- More than 10 millions tones of Agric. commodities were inspected annually (70% imported and 30 % exported) among them and a thousand tones of seed and planting material

- Survey, collections, detection & identification of pests occurred on commodities and new crops

- PQ Research focused on:
  - Study on distribution, biology, ecology and control measures for important quarantine pests
  - Training for plant quarantine staff at central and provincial levels.
  - Formulation of National plant quarantine standards in consistent with the International standards

- Implementation National and bilateral projects

- Official member of ASEAN, APEC, FAO and WTO, therefore Vietnam commits to implement IPPC, SPS Agreements

PQ Problems

- National regulatory system is still not in conformity with the WTO/ SPS Agreements.

- Importation of large quantity of seed and planting material is associated with high risk of quarantine pest infestation.

- Limited capability of PRA; PQ technical difficulties in the implementation of SPS agreements (Like PRA, International, Regional standards....)

- Lack of information sharing system, database

- Lack of modern equipment for research and operation plant quarantine activities

- Insufficient staff working for plant quarantine at check points.

Solutions

- Adjust national regulatory system in conformity with the WTO/ SPS Agreement.
  - Revise Ordinance and Regulations on Plant protection and Quarantine;
  - Review other sub-law documents;
  - Develop plan of action to implement SPS Agreement;

- Enhance Phytosanitary capabilities in support to Agr. commodities export and import promotion, enhance International cooperation in preshipment quarantine of origins

- Technical assistance from International organization to implement SPS, which should be emphasized on PRA, formulation and implementation International, Regional standards...

- Information sharing system need to be provide

- Modern equipment should be provide in order to ensure effective plant quarantine activities.

- Staff need to be trained overseas and local in diagnosis and identification of pests and diseases

Some Ideas on Plant Quarantine and Plant Variety Protection from Vietnam Seed Trade Association

Mr. Ngo Van Giao
Chairman
Vietnam Seed Trade Association

Laws And Regulation For Vietnam Plant Quarantine

NATIONAL ASSEMBLY	GOVERNMENT	MINISTRY OF AGR. AND RURAL DEVPNT
• Act on Plant Quarantine No. 36/2001/PL-UBTVQH issued on July 25, 2001	• Decree for regulation on Plant Quarantine No. 58/2002/ND-CP issued on June 3, 2002 • Decree for administrative penalty to violation in Plant Quarantine No. 26/2003/CD-CP issued on March 19, 2003 • Decree on Plant Quarantine 2003 no. 2/2007/ND-CP issued on January 5, 2007	• Decision on Plant Quarantine on seeds No. 89/2002/QD-BNN issued on October 10, 2002 • Circular on domestic Plant Quarantine No. 73/2003/TT-BNN issued on July 01, 2003 •Decision on list of target pests and diseases for Plant Quarantine No. 73/2005/QD-BNN issued on November 14, 2005

Problems

- All of seeds imported for sale have Phytosanitary certificates. However, small seed samples imported for trial usually do not have phytosanitary certificates, causing problems for both quarantine offices and receiving companies.
- Up to now, Vietnamese quarantine offices require importing companies to declare provinces where the seeds to be distributed. Distributing the seeds to provinces out of their declaration are to be fined and the seeds are not permitted to be sold.
- Poor human resource and facilities for quarantine institutions makes inspection activities usually late and sometimes inaccurate

Suggestion

- Partner countries should cooperate closely to harmonize their regulation on Plant Quarantine
- Do not require declaration on provinces in Vietnam where the seed should be distributed. Once phytosanitary certificate is issued, the seed is permitted to be sold all provinces through out the country
- Enhance international cooperation to increase human resource and modernize facilities, making inspection activities faster and more accurate

Thailand: Implementation of Revised Import Regulations

Mr. Wichar Thitiprasert
Director
Office of Agricultural Regulations, Thailand

Prohibited Articles-Pests (369)

- Fungi 68
- Bacteria 27
- Protozoa 2
- Virus 71
- Rickettsia 1
- Viroids 15
- Mycoplasma 2
- Phytoplasma 7
- Insect 79
- Mites 8
- Nematodes 41
- Weeds 39
- Unknown 9

Restricted Articles:Exceptions & conditions

- Preserved food
- Importation of certain restricted articles shall comply with conditions stipulated by DG DOA before import

Restricted Articles: List

- Dried tea leaves
- Coffee beans
- Cotton lint
- White rice
- Broken rice

- Par-boiled rice

- Agaricaceae

  – mushroom

- Apiaceae

  – *Coriandrum sativum*,
  – *Daucus carota*,
  – *Pastinaca sativa*
  – *Petroselinum crispum*,
  – *Apium* spp.

- Araceae.

  – *Colocasia esculenta*
  – *Aglaonema* spp.
  – *Anthurium* spp.
  – *Caladium* spp.
  – *Dieffenbachia* spp.
  – *Philodendron* spp.

Prohibited Articles-Plants:

- Fresh fruits
  – 27 species
  – 25 Genera
  – 6 Genera in Family Cactaceae
  – Family Cucurbitaceae

- Any parts of plants
  – 8 species
  – 11 Genera
  – Family Solanaceae

Prohibited Articles-Fresh fruits 27 species:

- *Aegle marmelos* (bael fruit)

- *Anacardium occidentale* (cashew nut)

- *Areca catechu* (betelnut palm)

- *Averrhoa carambola* (carambola)

- *Casimiroa edulis* (casimiroa)

- *Chrysobalanus icaco* (icaco pulm)

- *Clausena lansium* (wampi)

- *Cydonia oblonga* (quince)

- *Dimocarpus longan* (longan)

Prohibited Articles-Fresh fruits 25 Genera:

- *Actinidia* spp.
- *Annona* spp.
- *Artocarpus* spp.
- *Chrysophyllum* spp.
- *Diospyros* spp.
- *Eugenia* spp.
- *Ficus* spp.
- *Flacourtia* spp.
- *Fragaria* spp.
- *Garcinia* spp.
- *Juglans* spp.
- *Malus* spp.
- *Manilkara* spp.
- *Morus* spp.
- *Passiflora* spp.
- *Pouteria* spp.
- *Prunus* spp.
- *Psidium* spp.
- *Pyrus* spp.
- *Rollinia* spp.
- *Rubus* spp.
- *Spondias* spp.
- *Syzygium* spp.
- *Vitis* spp.
- *Ziziphus* spp.

Prohibited Articles-Fresh fruits 2 Families:

- Cactaceae (6 Genera)
  - *Acanthocereus* spp.
  - *Cereus* spp.
  - *Echinocereus* spp.
  - *Escontria* spp.
  - *Hylocereus* spp.
  - *Stenocereus* spp.
- Cucurbitaceae

Prohibited Articles-Any parts of (8 species):

- *Ananas comosus* (pineapple)
- *Camellia sinensis* (excluding dried tea leave)
- *Carica papaya* (papaya)
- *Cocos nucifera* (coconut)
- *Elaeis guineensis* (oil palm)
- *Manihot esculenta* (cassava)
- *Theobroma cacao* (cocoa)
- *Zea mays* (corn) (excluding pop corn for consumption)

Prohibited Articles-Pests and carriers:

- Soil, organic fertilizer, agricultural microorganisms, animal pests of plants, earthworm, insects, mites, nematodes, snails, slugs, weeds, parasites and predators

Prohibited Articles-Exceptions or conditions:

- Preserved foods;
- Organic fertilizer from carcasses, bones, and bloods of animals
- Frozen fruits at lower than -17.8□□C (0□□F) stating specified temperature at time of export on PC re-confirmed while passing process of import clearance
- Prohibited Article that passed PRA process and withdrawn from list however, has to comply with criteria, methods and conditions set by DG DOA

Published in the Royal Gazette:

- 1 June 2007

Enter into force:

- 31 July 2007

Prohibited Articles: (Transitory Provisions)

- Prohibited articles imported in form of trade prior to enforcement are subjected to exemption allowed to be imported until PRA be completed

Prohibited Articles (Excemption)

- NPPO of exporting country make <u>importation request</u> to DG DOA <u>evident doc</u> of previous importation
  within period of last 5 years within <u>29 September 2007</u>
- NPPO of exporting country submit <u>technical information</u> of <u>prohibited articles concerned</u> for PRA within <u>27 January 2008</u>

Methods And Conditions of Pests Risk Analysis For The Importation Of Prohibited Articles

- Exceptions or conditions for permission to import (as in the case of) Plants and Carriers as Prohibited Articles after completion of PRA in accordance with specifications, methods, and conditions issued by DG-DOA
- NPPO of exporting country must submit a request in writing for import permission of prohibited article to DG-DOA

NPPO of exporting country must provide

- Complete address of NPPO
- Information about proposed export commodities to Thailand:
  - Scientific name, including author
  - Taxonomic classification
  - Synonyms
  - Common name, var./cultivar
  - Plant part to be exported
  - Purposed end use
  - Export destination
  - Photo
- Information about production area
- Information about production and cultivation
- Information about pests associated with proposed export commodity
- Information about
  - post-harvest management,
  - packing methods,
  - inspection procedures,
  - post-harvest disinfestation /
  - disinfection treatments,
  - storage condition and security,
  - transportation

- Current phytosanitary certification procedures
- Results of PRA which have been carried out in other countries
- All data (if possible) provided be less than 10 years old endorsed by NPPO
- NPPO Thailand will conduct PRA in accordance to ISPM
  - Pest categorization
  - Evaluation of introduction potential
  - Assessment of econ. and env. impact of introd.
  - Specification of risk mitigating measures
- Completion of PRA may involve
  - visiting of PQ officials to exporting country to carry out
  - pre-shipment inspections
  - for certain period or
  - throughout export season
- Exporting country is responsible all expenses incurred during the visit of PQ officials.

View on PQ by Thai Seed Trade Association and Seed Association Of Thailand

Mr. Sakorn Tripetchpisal
President
Thai Seed Trade Association

- Thai PQ is very cooperative and supportive to industry

- Thailand needs to have process to protect the herself from pest coming from out side of the country

Issues:

- Pest Risk Analysis (PRA) is concerned by exporting countries

- PQ has limited resource to handle this project. It may take time to finish the project.

Comments:

- THASTA and SAT support the PRA

- Seed exporting countries should not be worried since there is provision.
- PQ practice of all countries should be harmonized

Australia's Quarantine Approach

Mr. Christopher Melham
Chief Executive Officer
Australian Seed Federation

- Work within WTO Framework
- Adopt Appropriate Level of Protection
- Assess Potential Quarantine Risks
- Manage Risk through Quarantine Measures
- Protect our Agricultural Industries and Environment from Pests and Diseases

Import Control Program

- Two Government Agencies Manage Seed Imports
- Biosecurity Australia advise AQIS of pest and disease risks – scientific analysis conducted
- AQIS implements appropriate risk mitigation procedures;
- Amends Legislation or instruction as appropriate;
- Updates ICON; and
- Provides training of staff where applicable
- Quarantine Proclamation 1998

AQIS Border Activities

- AQIS has eight quarantine programs
  - Cargo Management Group
- Import Clearance (Seed), Sea ports, Biological Unit, Live Animal Imports
  - Border Program
- International Mail Program, Airports Program, NAQS, Detector Dog Unit

ICON Database

- ICON is AQIS's import conditions database
- Simple and convenient way to access information about Australian import conditions
- Used to determine if a seed intended for import to Australia needs a quarantine permit and/or treatment or if there are any other quarantine prerequisites
- Website: www.aqis.gov.au/icon

Two List System

- Post December 2006 all seed needs to be identified to species level – including seed contaminants
- Australia uses a two list system i.e. 'Prohibited List and Permitted List' to regulate imports of seeds for sowing
- Any seed not on the 'Permitted or Prohibited List' requires a Weed Risk Assessment by BA
- Quarantine Proclamation 1998:Schedule 5 is the Permitted Seeds List

Import Procedure

- AQIS intercepts, samples and inspects every line of seed entering Australia
- Samples from consignments over 10kg are sent to an ISTA laboratory for analysis
- The exception is if the seed has been sampled in an an internationally AQIS recognised laboratory under the Global Seed Import Clearance Protocol
- Inspected for pests, diseases and contaminants (prohibited or regulated seeds, soil)

New Zealand Plant Quarantine

Mr. David Melhuish
President
New Zealand Grain & Seed Trade Association

- Administered by BIOSECURITY NEW ZEALAND (BNZ)
  MINISTRY of AGRICULTURE and FORESTRY (MAF)

- All Plants and plant products are prohibited entry into New Zealand unless an IMPORT HEALTH STANDARD (IHS) has been issued.

- Import health standards include the phytosanitary measures that must be taken in the exporting country, during transit and during importation and quarantine before biosecurity clearance can be given.

- IHSs are documents issued under the Biosecurity Act 1993.

- Located on the website: www.biosecurity.govt.nz
  - Search by entering the commodity or genus
  - Located under: "Importation of seed for sowing"

- Seeds of plant species for which IHSs have been developed are listed in the MAF Biosecurity Authority Plants Bisosecurity Index.

- If a species is not listed, then this may be a NEW organism.

- An application for a NEW organism may be made to the Environmental Risk management Authority (ERMA)

- These applications are rare and may be expensive.

- For seed imports into New Zealand;
  - A phytosanitary certificate is optional
  - A seed analysis certifciate is optional

- No seed lot will be released for sowing in New Zealand if it contains:
  - Unidentified seed
  - Regulated pests
  - In excess of 0.1% weight of soil particles
  - Seed of any of the quarantine weed species as per list.
  - (see Shedule of regulated (quarantine) weed seeds.)

- The New Zealand Seed Industry has different sectors.These sectors include:
  - New Zealand Grain & Seed Trade Association NZGSTA
  - New Zealand Plant Breeders Research Association NZPBRA
  - Federated Farmers
  - Crown Research Institutes CRIs
  - Biosecurity New Zealand BNZ
  - Foundation for Arable Research FAR
  - AgriQuality – Seed labs and seed certification
  - Independent Seed Cleaners Association

- The New Zealand Seed Industry sectors often get together in various working groups:
  - Seed Quality Management Authority SQMA
  - Arable Food Industry Council AFIC
  - Seed Imports Strategy Group SISG
  - Plants Market Access Council PMAC

Advantages

- When IHSs are developed or changed, they undergo public consultation.

- In New Zealand, seed industry groups can mobilise quickly when issues arise.

- The New Zealand seed industry has had MAF change some IHSs

- New Zealand has no seed laws, apart from the Biosecurity Act and the Plant Variety Act.

- So once seed enters the country, the industry is unencumbered with further regulations.

Constraints:

- MAF web site is not fully developed.

- ALL genus need to be listed to make the website more user friendly.
  - e.g. Lolium is not listed but fall under Agropyron.
- Difficult to get new organisms into the country.

Suggested Improvements:

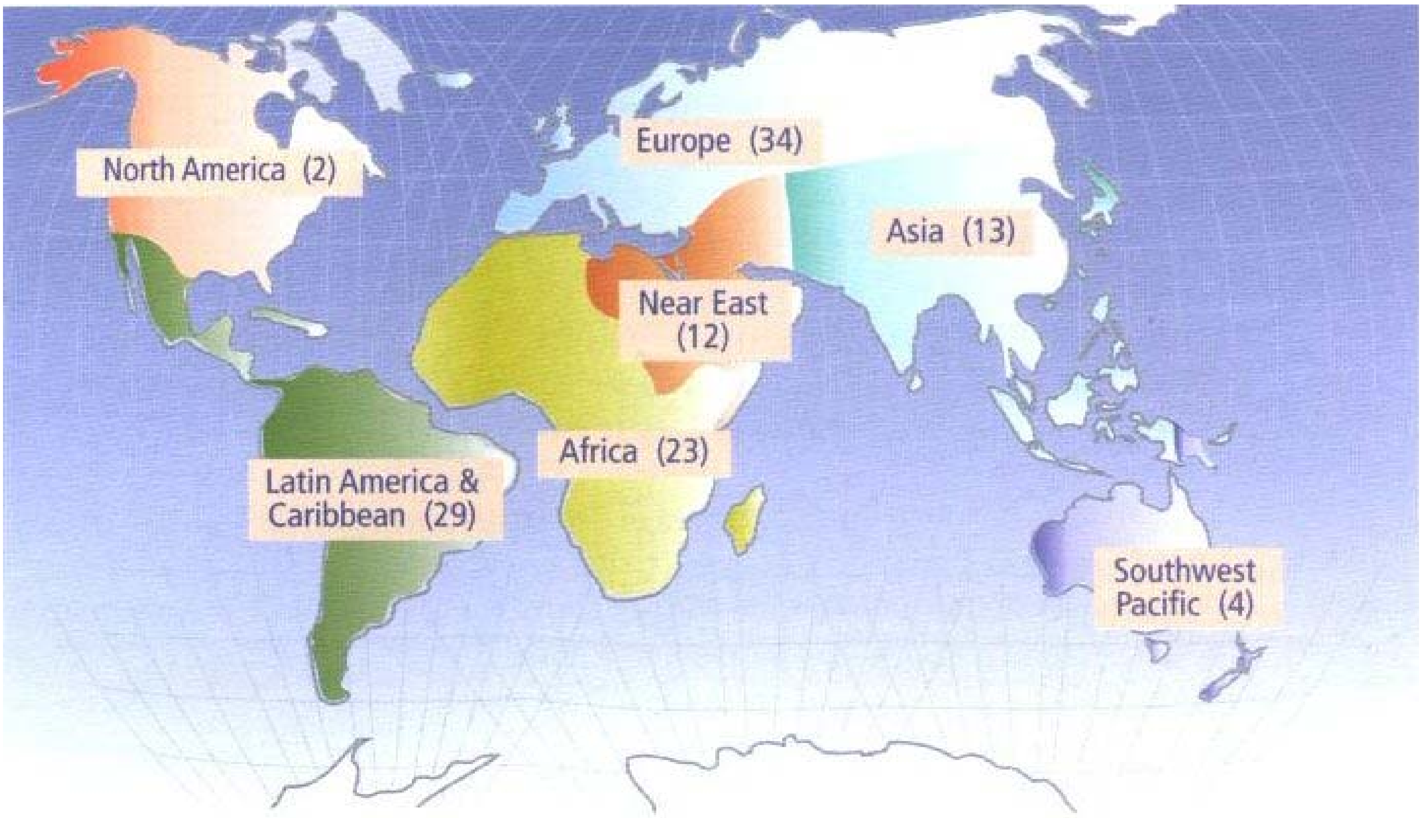
- MAF has to ensure that its staff have the required skills to handle plant importations. e.g.seed trained people to audit seed imports.

- Seed sampling at the border be undertaken using ISTA standards.
- Seed analysis certifciates be accepted at the border provided they are from approved laboratories e.g ISTA

The International Plant Protection Convention (General Overview)

Mr. Kevin Nalder
Contracted Specialist
Independent Evaluation of the IPPC

- An international treaty relating to plant health
- Deposited with the Director-General of the FAO since its initial adoption by the
- Conference of FAO at its Sixth Session in 1951
- Provides a framework and a forum for international cooperation, harmonization and technical exchange between contracting parties
- Currently 160+ contracting parties, across seven FAO regions



- National plant protection organizations (NPPOs)
  - The official services established by governments to discharge the functions specified by the IPPC, and
- Regional plant protection organizations (RPPOs)
  - RPPOs function as coordinating bodies on a regional level for participation in the activities to achieve the objectives of the IPPC (e.g. the APPPC and the PPPO)

The 1997 revision of the IPPC

- Undertaken to reflect contemporary phytosanitary concepts
- SPS Agreement identifies the IPPC as the <u>organisation</u> providing international standards for phytosanitary measures (ISPMs)

The 2006/2007 independent evaluation of the IPPC

- Comprehensive evaluation covering IPPC governance, administrative structures, funding and functions

- Final version of the *Evaluation Team* report just released

… to prevent the spread and introduction of pests of plants and plant products, and to promote appropriate measures for their control

- Seeds create some unique challenges:
  - Consignments range in size (large shipments to small packets)
  - Smuggling is relatively easy (e.g. via mail or passengers)
  - Seeds can be legitimate cargo as well as "contaminants"
  - Establishing the history of production, (official) phytosanitary measures and actual seed origin is difficult
  - The seed industry are very important partners for implementing effective phytosanitary measures internationally

International cooperation (Article VIII)

- The contracting parties shall cooperate with one another and shall in particular:
  - cooperate in the exchange of information** on plant pests, particularly the reporting of the occurrence, outbreak or spread of pests that may be of immediate or potential danger

  - participate in any special campaigns for combatting pests that may seriously threaten crop production and need international action to meet the emergencies; and

  - cooperate, to the extent practicable, in providing technical and biological information** necessary for pest risk analysis

*** Technical information from industry often underpins <u>official</u> information*

Standards (Article X)

- Contracting parties agree to cooperate in the development and adoption of international standards (ISPMs*) in accordance with the procedures adopted by the Commission
  - Regional (phytosanitary) standards: should be consistent with the principles of the Convention
  - *Such standards could be considered as candidates for international standards (e.g. testing and certification protocols for specific seed borne pathogens).*
  - Contracting parties should take into account international standards when undertaking activities related to this Convention.

**Note: 29 ISPMs now adopted.*

International standard setting procedure

1 Priority of Standard decided by the governing body – the Commission on Phytosanitary Measures (CPM)

2 Working Group of Experts draft standard**

3 A "Standards Committee" reviews proposed standard

4 (Draft) Standard released for country consultation**

5. Standards Committee incorporates comments

6. Adoption of *International Standard for Phytosanitary Measures (ISPM)* by the CPM

*Notes**:*

Report of the Independent Evaluation Team recommends increased industry participation in the future

Well structured trade associations with <u>strong technical competence</u> will facilitate pre-active participation at all levels

Industry Participation in IPPC Matters - The Future

- NPPOs have *<u>accountability</u>* for meeting official IPPC obligations ….However, there is:
  - Increased global, regional and national recognition that industry participation is critical as we move forward.
  - Industry now have a greater *<u>understanding</u>* of the IPPC in an increasingly complex phytosanitary/trading environment.
  - Industry now have greater *<u>ownership</u>* for implementing phytosanitary measures to meet importing country requirements and the over-arching purpose of the IPPC (i.e. Preventing movement & establishment of pests into new and endangered areas).
  - Industry have greater awareness of technical issues affecting trade (e.g. "barriers" trade) but struggle to get timely resolution
  - The Independent Evaluation of the IPPC recommends more pro- active industry participation in standard setting and in "frontline" implementation strategies for ISPMs.

- APSA is very well placed to contribute to IPPC activities into the future via the International Trade & Quarantine Committee (ITQ) APSA:
  - APSA embraces important IPPC principles such as harmonization (of measures) and technical co-operation (e.g. provision of technical pest list data).
  - APSA are involved in implementing measures using "partnership" approaches (e.g. standardized seed testing practices).
  - The challenge is for all affected parties to further strengthen their existing relationships and systems to achieve the ultimate goal of "mutual recognition".
  - The joint benefits accrue though:
    - Effective and technically sustainable systems
    - Minimal (but meaningful and targeted) interventions
    - Credible phytosanitary assurances via officially recognized export certification systems
    - Least-cost and least-trade restrictive measures (i.e. facilitating "safe" trade)

IPPC Matters - When things go wrong

- IPPC - ARTICLE XIII (13): Settlement of disputes
  - Disputes regarding the application of the IPPC, including contracting parties not meeting their obligations, especially regarding the basis of prohibiting or restricting the imports of plants and plant products …., *shall consult among themselves <u>as soon as possible</u> with a view to resolving the dispute.*

  - If the dispute cannot be resolved bilaterally, the contracting party or parties concerned may request the Director-General of FAO to appoint a committee of experts to consider the question in dispute, in accordance with rules and procedures that may be established by the Commission.

APSA role(?): Co-ordinate phytosanitary related trade issues on behalf of members and assist to facilitate the (technically based) resolution at the earliest opportunity?

Highlights of the Open Forum between NPPOs and NSAs

Chair: Dr. Jai Singh, *APSA Program Secretary / Co-Chair of Standing Committee on International Trade and Quarantine*

Following are among the most important exchanges at the Open Forum after the presentation of National Plant Protection Organization (NPPO) and National Seed Association (NSA) representatives of each country.

Sri Lanka NSA Rep to India NPPO: Sri Lanka imports onions from India but India does not allow onion seeds to be exported and according to Indian exporters, the government does not certify onion seeds to be exported. Why do you have this kind of restriction?

India NPPO Rep: In India, there is a vast requirement for onion thus the country's policy is not to export otherwise we will face scarcity of onions.

Vietnam NPPO Rep to India NPPO Rep: Does your PQ office do treatment and what is the fee? Also, there are 27 international sanitary and phytosanitary measures (ISPM) but India only has 21. What is the difference?

India NPPO Rep: *Our* PQ does not do treatment but only accredits. The point of entry treatment is stated in the import permit. Regarding the phytosanitary measures, Indian legislations do not supersede ISPM but are in accordance with the ISPM.

India NSA Rep comments on India PQ: The government should give a one year allowance for new restrictions. The one year period to disseminate information would be appreciated by all stakeholders. There is no proper seaport and airport proper storage facility in the country.

Japan NSA Rep to China: The Field Provincial Government unit issues Field Inspection certificate for bacterial fruit blotch but China National Plant Quarantine (PQ) office will not endorse this document that is why a Taiwan company could not get the FI Certificate of the seed produced in China. Why can't the National PQ office endorse such certificate?

China NPPO Rep: The seeds of a Taiwanese company produced in mainland China which will be exported to Japan require a certificate from AQSIQ of China who is responsible for export quarantine. The provincial PQ office is one part of MOA system of China as I have presented in the workshop. And they are two different management systems. So the certificate from the provincial PQ office is not enough for seeds export, and the one authorized by AQSIQ (entry-exit quarantine system) is needed as well.

(AQSIQ: Administration of Quality Supervision, Inspection and Quarantine)

Taiwan NSA Rep to China: How long does it take to get the certificate from the central PQ office?

China NPPO: 15 working days according to the Law.

Japan NSA Rep expressed a general feeling that after the free trade agreement that Japan has made with many countries, plant inspections has become more severe than before.

China NSA Rep: From the Chinese part, as far as what I heard from many importers and exporters, they feel that this is the real case because very often, even when they have an existing agreement for exports of certain vegetables to Japan, suddenly the new rules for certain things are set which they cannot do it a period of time and farmers suffer a lot from this. For the Chinese government, they feel like the governments use PQ regulations as a non-tariff barrier.

Japan NSA Rep: Generally speaking we can solve every problem like our export of rice to China because there were PQ issues with China but this is OK now. I will inform the PQ of Japan on this and keep the communication open.

APSA Standing Committee on ITQ Rep: On communication, I think what we get sometimes are just broad and general. I know in China, there is a requirement for no virus or diseases. And when I presented this to our plant and quarantine people, they cannot issue a phyto certificate because you have to be specific. I think what we have to do and what we have been trying to work on is to get specific diseases that are system borne but not to have damaging diseases or virus. I see only a few countries are doing this and I want to see more of that.

Vietnam NPPO Rep to Korea: You prohibit importing rice from countries except Japan, Thailand or Taiwan. Why do you prohibit importing rice from say, our country?

Korea's NPPO Rep: There is a certain pathogen in your country that we are very careful and worry about that leads us to prohibit rice seeds from most countries. But if there is a special request from a certain country, then we are going to do the PRA and then we can decide if we can permit to import or not. But of course, Korea is a major rice seed production country so we don't have a need to import rice seeds so far.

Indonesia NSA Rep to China: One of my members is importing seeds from China and had some problems with the rice rat virus. They received information that such virus has already been deleted from your pest list or Rice Track is no longer in your country. Is it supported by your team? For hybrid rice, there is a rice rat virus and there are statements from private companies that this kind of virus is not seed-borne. And they said that his is no longer in your country?

China NPPO Rep: We have a quarantine list of seeds in the country. There are around 460 in the list of prohibited viruses. When it is in the list, it is prohibited. If not, then you can import and/or export. These list changes from time to time. We will provide you with the latest list.

Chair: Can I just request all Plant Quarantine Officers to provide the list of prohibited pests in your countries to APSA so we can have all these together and keep the stake holders or those in the seed industry updated. Can I add a request to put specifications whether such pest is seed-borne or not.

Thailand NPPO to Taiwan NSA: For Taiwan, you mentioned in your presentation about post-entry quarantine–that crops must undergo post entry quarantine. Some crops stay in the post-entry quarantine for a year. Who bears the cost for this? The importer? Or is it free of charge? Let's say, I want to export papaya to Taiwan. Then according to your law, it must be in the post entry quarantine for 1 year. How much will that cost?

Taiwan NSA Rep: As far as I know, this is free. But I have to check and confirm later.

Thailand NSA to Australia NSA: What is the level of soil contamination that is allowed in Australia?

Australia NSA Rep: I think the government's standard is 0.1 because firstly, it was an arbitrary figure because if you look globally, different countries have different tolerance levels for what might be their comfort zone. We tried to explore it because in our opinion, 0.1 is as good as 0.0 if you look at sampling and methodology and how efficient the variation is. That 0.1 is literally meaningless so one of the challenges is to put some signs around on soil tolerance level and get it to the level consistent with the signs of the trade. The answer that we received when we question this (also with the IPPC), was that (and this is on the export side), you don't have to have 0.1. Like Japan they reduced their tolerance to 0.0 because in some of the countries in IPPCs, soil is listed as a prohibited substance. You can't export and the NPPO has an obligation to ensure that soil is not exported. So the trade at the moment especially to those exporting to Australia should take comfort that there is a tolerance level around 0.1. All I want to add is that frankly, 0.0 is hard to achieve. It's impossible, so the tolerance that you see is actually standard but it actually is 0.0

Thailand NPPO Rep: The reason I ask is because we are importing potato seeds from many countries and somehow, we can't say that it has 0% soil. There are some contaminations in potato seeds and we don't know the level. How do you monitor this, say in Australia and New Zealand?

Australia NSA Rep: Database with historical records of the crops' contamination levels especially those coming from Australia. That is the sort of a guide they use and then if you look again globally, I've seen figures of 0.5 and I should mention on the export side again. Our Plant Quarantine and NPPO will not issue a phyto certificate if it's going to a country which has not specified a tolerance level. The assumption is it's zero in that country so the message to our country exporters: contact your customers in that country so they can ask their government to issue a tolerance level and our government will issue a certificate according to that level. But in the absence of it, like Thailand on soil, we won't be sending seeds to Thailand.

APSA Secretariat to Australia: I've heard from your presentation that in seed sampling and testing, you recognize the methodology used by ISTA members. I wonder if Asia Pacific countries use the same kind of methodology. Or if they use any other kind of methodology, is it possible to do business with Australia? Or you don't recognize other means?

Australia NSA Rep: The simple policy that AQIS has now adopted is that if you send seed to Australia and it's not from a recognized lab under this new system, they will resample and retest every line of seed. We continue to recognize ISTA methodology but we will also continue our right to resample and retest every line if not from an approved lab (ISTA approved). It does not recognize AOSA, it has to be ISTA.

AQIS- Australian Quarantine Inspection Service
AOSA-Association of Official Seed Analysts

New Zealand NSA Rep: New Zealand exports a lot of seed to Australia and AQIS in Australia has a special relationship of recognizing the main ISTA labs in NZ. That's a very good example where Australia recognizes analysis certificates issued by our lab. So we have a very good flow of seeds going into their country

I should just mention that the first lab in America, in Oregon, has just been recognized by AQIS. So the seeds that have been tested in that laboratory will only be resampled one in 20 lines, not every line of seed. So now thru ASTA, they are promoting to the American seed trade the global protocol that incidentally we wrote with new Zealand but is now being extended globally.

Indonesia NPPO to Australia/New Zealand NSA Reps: How do you recognize the overseas laboratory because when the AQIS didn't recognize our fumigator for instance, they send people to my country and do assessment there. Is that the same in New Zealand?

Australia NSA Rep: AQIS will not send staff to Indonesia. In the case of America, AQIS did not send staff to the US but they corresponded and the American laboratory furnished us copies of the seed sampling and testing protocol or the QA system that they have and AQIS simply did what we call a desktop order. And obviously now, knowing that the seeds come from that laboratory, they obviously now have the advantage of doing live orders and the tolerances that we use allow to have different results between the laboratory and Australian lab and ones again they use the ISTA system and because they use it globally, so now we have a very simple system.

Vietnam NPPO to Australia: Could you explain the three classifications in your pest list?

Australia NSA Rep: Biosecurity Australia has three (3) lists—prohibited, permitted and restricted. Those restricted have tolerance levels. If the species is not on either prohibited or restricted list, then the importer will issue a request to Biosecurity Australia to conduct a risk assessment so they can determine the list underwhich that species will fall. Now there is a scoring system. There are 49 questions and at the end of the day and if your score is 0-6, it's permitted, 6-12 further work, above 12 prohibited. So it's a very clean cut.

Japan NSA Rep to Indonesia NPPO Rep: In Indonesia, some companies' seeds were rejected because of infestation of turnip mosaic virus. That part is fine but all the seeds had to be destroyed (burned) including other seed species we shipped together with that. That is what we don't understand, because the seeds were sealed in cans or packet and there's no chance of virus spreading out. So why couldn't we ship it back and why did they have to be destroyed in Indonesia

Indonesia NPPO Rep: In that case, the seeds were already infected and were already in the port, and under our regulation, it should be destroyed. If it is still in the vehicle, it can still be shipped back to your country.

Japan NSA Rep to Thailand NPPO Rep: For the new regulations of Thailand, the seeds from countries that have a 5-year exporting history with your country can be imported on the same conditions as before but we have to submit technical information about the species we trade until September 29. Thasta explained that this only temporary. Can you explain this?

Thailand NPPO Rep: You have to submit if you want to further export to Thailand. You have to submit the evidence that during the past five years, you have been exporting to Thailand the following species. You can send bills, phytosanitary certificates, and other evidence and then you have to submit more technical information–the name of the crop, the name of the place of production in your country and other information–within 120 days after that we are going to analyze all the information you sent. And if we find out that it is safe, we can withdraw that from the list of prohibited materials and it means you can export to Thailand. And if we found that there are conditions or some control, we are going to inform you that you can export to Thailand on certain conditions. In short, if you submit the list of plants/ seeds you want to export, you can continue to export to Thailand until we finish the risk analysis or until it has been concluded that the species is prohibited.

Japan NSA Rep to Thailand NPPO: What if the seeds are re-export. The seeds are produced in another country and then exported to Japan and then Japan will export to Thailand. In such case, is it the original NPPO who should submit the PRA to the government of Thailand?

Thailand NPPO Rep: Yes, the NPPO of the country of origin should submit.

GNIS Rep to Indonesia NPPO Rep: I'd like to go back to the question for Indonesia because I was not quite satisfied with the answer. The question was why when you find some problem in the cabbage seeds, you don't authorize the re-export of the cucumber seeds. And your answer was because it is the regulation. The question is why is it in the regulation? And I would like to know if there is any possibility of changing this regulation because this regulation is very restrictive.

Indonesia NPPO Rep: How to change the regulation, this is still and quite often among the important issues and we agree that it can be changed. It is not easy to change the regulations because it is a collaboration of different institutions in the Ministry. If we need to change a regulation, we need to bring it to a forum. In the near future, we will be bringing this concern to the forum.

GNIS Rep to Indonesia NSA: I would like to know on how the NSA of Indonesia is funded? What are the fees of your organization and how many private breeding companies in Indonesia are members of your association.

Indonesia NSA Rep: The Indonesian Seed Association doens't have a very big fund. We have an entrance fee about 300 US dollars and we have a yearly fee of about 200 dollars. But some companies are very supportive and they give more. In the last four years, Asbenindo has been attached to the Department of Agriculture and we support each other and we have many members. We don't make the joining fee or yearly fees compulsory to them because we are hoping to make the seed industry grow with us. We go around and help farmers even in distribution and research. We do this hand-in- hand with the government. We have a lot of multinational breeding companies but there are also local companies. For example, for hybrid rice, we have nine local breeding companies.

Thailand NPPO Rep to IPPC Rep: I would like to ask more information about dispute settlement. My understanding is that the IPPC is under FAO and the SPS is under WTO. How do you settle the dispute between and among the members of IPPC and WTO. In case both cannot settle the dispute under the FAO consultation, can the case be handled by WTO?

IPPC-International Plant Protection Convention

IPPC Rep: Trade disputes caused by disagreement over phytosanitary measures associated with the international movement of plants are fairly common occurrences in the work of National Plant Protection Organizations (NPPOs). These disputes usually involve the use or misuse of phytosanitary measures included in import regulations but rarely do they result in formal international dispute settlement procedures being initiated. Article XIII of the IPPC, and recently implemented procedures, provides the basis of the dispute settlement system for the IPPC. It encourages the concerned contracting parties to consult among themselves as soon as possible with a view to resolving the dispute. If they cannot resolve the dispute in this way, one or both parties may request the FAO Director-General to appoint a Committee of (phytosanitary) Experts, with the mandate to prepare a report and (non-binding) recommendations on technical aspects of the dispute. The parties also are free to develop other means to resolve the dispute, including the WTO Disputes Settlement process. The IPPC Dispute Settlement Procedures are relatively new and have not yet been actively tested in a trade dispute between contracting parties to the IPPC. The new procedures are aimed at objectively evaluating the ***technical aspects*** of phytosanitary disputes, and they encourage contracting parties to enter into active dialogue based on technical issues.

A subsidiary body known as the *Subsidiary Body on Dispute Settlement (SBDS)* is specifically devoted to overseeing, administering, and supporting the IPPC's dispute settlement procedures. The SBDS consists of seven experts, one from each of the seven FAO geographic regions, and is working with the IPPC Secretariat in assisting contracting parties in dispute settlement. The main benefits of the IPPC Dispute Settlement System are:

- it offers dispute settlement processes at a different level from those offered by the WTO;
- they therefore offer complementary alternative processes for IPPC contracting parties;
- ithe IPPC procedures operate at a **technical level** and this confers benefits for contracting parties. The disputing parties have the opportunity to resolve their differences at this technical level in comparison to potentially more complex legal processes of other dispute settlement systems;
- it has the potential to be less costly than other dispute settlement systems;
- it has the potential to allow resolution of disputes more quickly than other dispute settlement systems – recognising that most of the IPPC mechanisms do not provide binding decisions;
- the IPPC system offers support to disputing parties from the Secretariat, subject to available resources, and the SBDS. This may take the form of advice on how to use the system and facilitating the efforts of parties to resolve their dispute; and
- the IPPC system offers a range of mechanisms that contracting parties can select from to deal with their specific dispute.

APSA Secretariat to IPPC: Thank you for your presentation and thank you for including APSA's role regarding the IPPC. I talked to representatives of some countries and they said they follow WTO SPS and use guidelines from the IPPC, those standards that you mentioned. But it seems to me that when they present the phyto regulations of their countries, the procedure seem to vary. Does FAO have a body that monitors the members or a body that can ensure that the members follow the ISPM and how do you evaluate these standards?

IPPC Rep: The variability among various contracting parties to implementing the IPPC is an ongoing issue. As more countries become contracting parties, and implement IPPC related standards and principles into their import regulations, more issues are likely to arise over time. The recently completed independent review of the IPPC raised this very issue with specific recommendations to strengthen the uptake and monitoring of international standards by IPPC contracting parties. In reality, the resources available to actively implement an effective international monitoring program will continue to be a challenge.

Thailand NPPO Rep to IPPC Rep: I would like to get your viewpoint on the use of methane bromine as a treatment for wood packaging. Under the Montreal Protocol, methane bromine is said to have caused depletion in the ozone layer. All the members of the Montreal Protocol want to decrease the use of methane bromine. I don't understand why ISPM 15 endorses methane bromine as treatment of wood packaging.

IPPC Rep: ISPM 15 recognises methyl bromide as an effective option for the treatment of wood packaging but (as far as I am aware) does not specifically "endorse" the use of methyl bromide. While an exemption exists for the use of methyl bromide for "critical quarantine use", international standards will continue to recognise methyl bromide as an effective treatment option for a number of uses albeit with strong international pressure to reduce its use and to develop viable alternatives. It is worth noting that heat treatment plays a major role for the treatment of wood packaging particularly in the Asia region. Other alternatives to methyl bromide continue to be researched internationally.

Australia NSA Rep to IPPC Rep: That was an excellent presentation. It is the first time that I have been presented with some of the key articles within the convention. And the presentation is a lot clearer than what I get from my national government in many cases. I wanted to say that because one of the issues that we speak about prior to afternoon tea was the issue of soil and you presented us with articles relating to standards. And what you said to me was there is an opportunity for us, for example or what I understand is that the ISF has on its agenda to get the ISTA's standards officially recognized by the IPPC. So if we extend and include the issue of soil, the challenge for us is to get ISTA to justify a soil tolerance level and if achieve the adoption of those ISTA standars, we effectively now have what I consider to be a harmonized scientifically proven level of the soil tolerance and also overcoming the national politics of each country's government by going straight to the IPPC through ISTA. So it's more of a comment.

IPPC Rep: Thanks for your positive feedback. I believe that there will be more opportunities for well organised, technically competent trade associations to proactively contribute to the IPPC standard setting process in the future. Again, the recently completed independent review of the IPPC made some recommendations around this issue that would be of interest to this group. The potential use/adaptation of recognised industry standards may well provide the foundation for some International Standards for Phytosanitary Measures (ISPMs) in the future. All current standards, and proposed standards, are available on the IPPC website: www.ippc.int/IPP/En/default.jsp

Closing Remarks/ Summary

Mr. J. Gilbert Hernandez
APSA-ITQ Chairman

On behalf of APSA and APSA ITQ Committee, I would like to thank all of you for a very fruitful session. I hope this is not the end and that we are able to open communication between the private and the government sectors.

Some very important things that we have been talked about include the standardization of using ISTA rules, a thing that we need to follow and do some workshops in the future. APSA has decided to more of these workshops to help the region to come up with some of own standards. We will organize committees on what we are going to do about this global testing protocol.

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