PLANT QUARANTINE AND RISK MANAGEMENT

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Yukio Yokoi is the Director for World Trade Organization (WTO), International Affairs Department, Ministry of Agriculture, Forestry and Fisheries (MAFF), Japan. Before that, he contributed to international plant protection efforts during his stints with the Yokohama Plant Protection Station (2015-2019) and the IPPC (2010-2014). He was involved in tackling various development issues with Japan International Cooperation Agency (JICA), and marketing issues with Japan External Trade Organization (JETRO) (2005-2009). He also worked at Osaka University, Tokyo University of Foreign Studies and Gakushuin Women’s College.
The plant quarantine system, which is an integral part of risk reduction efforts to protect plant resources, will be presented, followed by a discussion of improvement ideas for possible further collaboration with the research community. Fundamental to the whole plant quarantine issue is pest risk analysis, for which international standards provide guidelines, and countries add their own perspectives according to the situation and within the national legal framework. Japan, like other countries, has developed its own pest risk analysis guidelines. Information on pest distribution and detection as well as revisions in trade partners’ regulations are regularly collected through various sources, based on which immediate consideration is made and pest risk analysis is conducted when necessary. Based on pest risk analysis, the plant quarantine legislative scheme has been continuously developed, which is the legal basis to support various regulative activities, such as import and export inspections at ports and airports, as well as pest surveillance throughout the country, among others. In order to strengthen the effectiveness, collaborative efforts are made between national authorities such as with Customs, and also with trade partner countries regionally and internationally. Particular importance is placed on identification of how certain pests have been introduced as well as development and establishment of pest control methods in emergencies. Regulative actions are essential to protect plants against harmful pests, for which research has been also playing important roles to support them. Plant quarantine can be further improved against the increasing pest risks, through regional/international collaboration and with emerging technologies and innovative approach.
Plant Quarantine and Risk Management

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National Plant Protection Organization (NPPC)
Ministry of Agriculture, Forestry and Fisheries (MAFF)

- Plant Protection Div.
  - bilateral and multilateral issues, such as IPPC/ISPM
  - international cooperation
  - preventing establishment or spread of pests
- legislative revision
- infestation and analysis

47 Prefectural governments (Plant Control Stations)

- Surveillance
- Outbreak management
- Pest Control

Plant Protection Stations
- import/export inspection/verification
- surveillance, outbreak management
- R & D, NRA

- Plant Products Safety Division
- Pesticide Management

Plant Quarantine

- Seed inspection
- Entry
- Surveillance
- Emergency controls
- Movement restriction
- Export PQ

Plant Quarantine in Japan

In peace:
- risk analysis
- global info search
- border inspection
- field surveillance
- and more

On detection alert:
- specific risk analysis
- specific info search
- border inspection (enhanced)
- surveillance (density adjusted)
- notification to consultation with trade partners
- emergency controls
- legislative revision if needed

NPPC

Yokohama

Tsukuba

Naha

Kobe

Osaka

56 offices
- 5 main stations
- 16 sub-stations
- 35 branch offices
- 547 quarantine officials (as of October 2019)
Session 2

**Pests of particular importance to Japan**
- Medfly & Oriental fruit fly
- Sweet potato weevil
- Codling Moth
- Fire Blight
- Potato cyst nematode

**Challenges**
- Availability (pests & relevant info): no actual presence
- Increase in *risk* (of pest introduction)
- Global faster movement (trade volume, travelers)
- Climate change (extreme weather incidents)
  - e.g. fruit flies carried by typhoons
- Increase in *complexity*
  - Divergent paths: post, retail shopping, sea containers, ...
- Environment for pest distribution
  - Climate change (shift of pest-favor conditions)

**Incoming travelers**
- **2018**
  - > 30 mil.
  - > 40 mil. in 2020 (target)
- Japanese travelers
- Non Japanese travelers

**Collaboration efforts in place**
- Among border control agencies
- With trade partners
- Regionally and internationally
  - IPPC: strategy, standards, implementation, ...
  - IYPH
  - Technical cooperation
  - Research community (G20MACS)

**Next steps:**
- Regulatory actions - 1
  - Strategic **awareness** raising
  - Timely info provision
  - Regional and/or international collaboration
  - More effective and efficient **controls**
  - Legislation to allow swift actions
Next steps: regulative actions - 2

- Risk analysis with emerging pests
  - Simulation, big data use, focus on specific importance ...

- Strengthened regional & international collaboration
  - Semi-real-time pest info sharing
  - Pest identification
  - Pest control info, tools, technology

Next steps: with innovative ideas

- Strengthened inspection
  - AI with big data use
  - Detection sensor technology

- Strengthened surveillance
  - Drone
  - Surveillance sensor technology
  - traps with AI, IoT...

Monitoring survey for fruit flies

Collection of fruits from wild host plant

Monitoring survey for fruit flies

Current PC cycle ...

When ePhyto hub is fully in use...

Conclusions

- Various efforts being made for plant health
- Introduction risk of plant pests in increase
- Needs of further strengthened collaboration
- Potentials for innovative approach