Ensuring Food Safety and Restoring a Agriculture Production Following a Nuclear or Radiological Incident
Radioactive Contamination of Agricultural Products

1. Air Contamination
   - Surface contamination of plants and animals
   - Inhalation by animals
   - Radioactive fallout

2. Water Contamination
   - Rainfall carries radioactive fallout to surface water
   - Fishery products contaminated
   - Plants and animals contaminated through water uptake

3. Soil Contamination
   - Plant and feed uptake of contamination
   - Animal ingestion of contaminated soil and plants
25% of Japan’s rice production is from 6 prefectures in east Japan.

60% of spinach in central market in Tokyo is subject enhanced food control measures.

60% decline in fermented soybean production.

41% of the national share of mackerel pike are from affected areas.

15% of milk for 13 prefectures in east Japan come from Ibaraki and Fukushima.

Egg prices increased by 40%.

80% of the national wakame share comes from Sanriku region (affected by tsunami).

Production facilities in affected areas make up for 60% of national share of processed fish.

Source: Nikkei Business (18 Apr 2011)
Framework for FAO’s responsibility

- Convention on Early Notification of a Nuclear Accident
- Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency
- Joint Radiation Emergency Management Plan of the International Organizations (JPLAN)
- Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE)
- FAO/IAEA Cooperative Arrangements
- FAO Food Chain Crisis Management Framework (FCC)
Advise governments:

- Acceptable levels of radionuclides for agricultural products entering national and international trade
- Measures to minimize the impact of radionuclides on food and agricultural production
- Development of procedures for alternative agricultural practices and for decontamination of agriculture, fisheries and forestry products, soil and water
FAO/IAEA cooperation during a nuclear or radiological emergency
FAO activities related to nuclear or radiological emergency

- Coordinated research projects
  - Focus on the development of agricultural countermeasures and remediation strategies
  - Assist capacity development in Member States
  - Provide guidelines and international standards

- Technical assistance and policy advice

- Intra- and inter-agency cooperation in emergency preparedness and response

- Dissemination of knowledge and increased public awareness
Improving response to nuclear or radiological emergency in food and agriculture (1)

Early and immediate phase

- Rapid monitoring techniques
- Sampling strategies and methodologies
- Safeguarding agricultural production
- Minimizing radioactive contamination
- Decontaminating techniques for agricultural commodities
- Disposal techniques for contaminated agricultural products
- Information sharing mechanisms
- Food restrictions and food trade
Improving response to nuclear or radiological emergency in food and agriculture (2)

Short-term phase

- Minimizing radionuclide transfer
- Implementation of monitoring strategies
- Decontamination / disposal procedures for affected agricultural products
- Remediation strategies and approaches
- Policy advice on national and international trade issues
Improving response to nuclear or radiological emergency in food and agriculture (3)

Medium- and late-term phase

- Decontamination procedures for affected soil and water
- Implementation of remediation strategies
- Strategies for modified or alternative land use
- Development and application of technologies for agricultural countermeasures
- Traceability mechanisms to help ensure food safety
Coordinated preparedness and response to nuclear or radiological emergency

- Improve mechanisms of preparedness and response
- Provide technical assistance and policy advice
- Strengthen International and national capacity building
- Review and revise UN sponsored frameworks for inter-agency collaboration
Thank you