

# Principles of Systems Approaches



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# Systems Approaches Definition

The integration of different pest risk management measures, at least two of which act independently, and which cumulatively achieve the desired level of phytosanitary protection

*ISPM 14*

# Fundamental principles

- Linked to Pest Risk Analysis
  - Technical justification
- Measures applied throughout pathway
  - Point of origin through to end use
- Independent measures
  - Measures that act independently

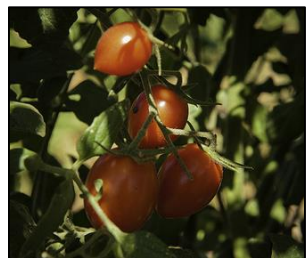


# Risk-based

- Linked to Pest Risk Analysis (ISPM 11)
  - ISPM 38 discusses PRA for seeds
  - Technical justification
- Identification of uncertainty
- *Informs* development of systems approach for managing identified risks
- *Where is the burden of proof?*



# Pathway approach



## Pre-harvest

## Harvest

## Post-harvest

## Shipping

## Distribution

## End use

- Treatment
- Cultivars
- Sanitation
- Certification
- Areas of Low pest prevalence
- Pest free areas
- Planting time

- Treatment
- Culling
- Sanitation
- Ripeness
- Harvest timing
- Handling

- Treatment
- Inspection
- Sanitation
- Certification

- Treatment
- Inspection
- Sanitation
- Type of transport

- Inspection
- Treatment
- Restrict end use
  - Timing
  - Location
  - Quantity
- Post-entry quarantine

- Packaging, and re-export
- Limited or contained planting
- Testing, research or destruction
- Wide distribution

# Independent measures

## Independent

- Hand culling
- Certified propagation material

## Dependent

- Inspection
- Treat if pest found



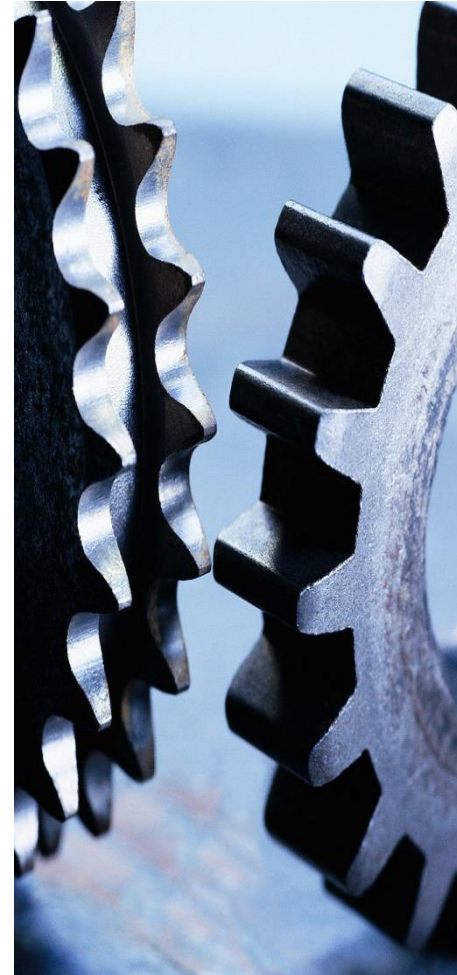
# Some other things to think about



- Types of systems approaches
- Efficacy of measures
- Risk reduction / safeguarding / verification
- Redundancy
- Uncertainty
- Monitoring and feedback

# Types of Systems

- **Combination measures**
  - Combine existing measures to achieve a qualitative ALP
- **Control point systems**
  - Define control points and the efficacy of measures
- **HACCP systems**
  - Control points defined, measured and managed





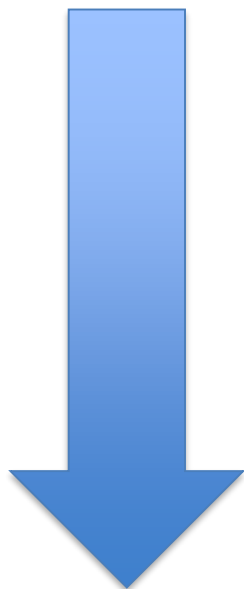
# Efficacy

- **Defining an endpoint**
- **What can be measured and achieved**
- **How does the endpoint relate to risk**
- **How is this expressed and communicated**

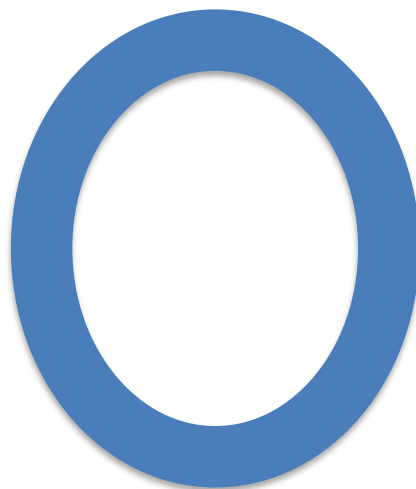


# What do measures do

**Reduce Risk**



**Safeguard**



**Verification**



# Redundancy

Adding measures / adding strength to measures:

- Compensate for uncertainty
- Compensate for lack of experience
- No less stringent measure is available
- May need to be re-assessed



# Uncertainty



- Variability
  - Identify
  - Quantify (qualitatively or quantitatively)
- Information gaps
  - Identify
  - Quantify
  - Communicate priority needs

# Monitoring and feedback

- To validate the efficacy, feasibility, impacts
- To gather info for modification of measures
  - identify strengths
  - weaknesses
  - research opportunities
- As an indicator of system integrity
- To maintain technical dialogue



# We should keep in mind...



- “Appropriate level of protection” (Art. 5 of SPS)
- Least trade restrictive (Art. 2 of SPS)
- Harmonization
- Evidence and risk based

dank u  
 Tack ju faleminderit  
 Asante 谢谢 Tak mulțumesc  
 kiitos **Salamat!** Gracias  
 Merci Terima kasih Aliquam  
 ありがとう **Dankie** Obrigado  
 köszönöm grazie  
 Aliquam Go raibh maith agat  
 děkuji **Thank you**