

# **Food Safety Program on Fruit Crops in relation to quality control in Thailand**



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# Outlines

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- **Food Control System in Thailand**
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# Introduction



# Introduction

- **Global tendency : Safety is the quality**
  - **EU White Paper**
  - **FAO : Food Standards**
- **Thailand : food and agricultural products exporting country**
  - **~40% of Thais are in the agriculture sector**
  - **In 2006 : World market share 3.72 % (about 1,600 billion US dollar)**
- **To be the leader group : keep in food safety**

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# Food Control System in Thailand



# Principle of Food Safety

- Physical
- Microbiological
- Hazardous Substances
- Food Additives
- Biotechnology



**FOOD SAFETY**



**Food**

**Standards**



**International**



# Food Control System in Thailand

- develop Food Control System and Food Network comply with international standards (Codex,IPPC,OIE)
- **2002- Food Control System-public sector : main driving mechanism**
- **In 2004**
  - Launch of “Food Safety Year” campaign
  - Establishment of “Road Map of Food Safety”
  - Integrated System
  - Core Agencies:
    - MOPH (imported food)
    - MOAC (exported food-from farm to table)







## Ministry of Agriculture and Cooperatives (MOAC)

- responsible for agricultural and food products for exports
- control the imports of agricultural and raw materials for food production
- apply Good Agricultural







กระทรวงสาธารณสุข  
*Ministry of Public Health*



## **Ministry of Public Health (MOPH)**

- **responsible for agricultural and food products within the domestic market**
- **set up standards for foods produced and consumed in the country which is comparable to international standards**
- **control and monitor food**



กระทรวงสาธารณสุข  
Ministry of Public Health



# Ministry of Public Health (MOPH) cont.

- inspect and control food selling
- contaminant set by Codex and Food MRA

labeling and inspection of



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# Road Map of Food Safety



# Road Map of Food Safety

## IMPORT

**Inspect  
Import Input  
Raw mat.  
Processed  
Food**

## Farm Level

**Register/Certify  
Stand. Farm  
Inspect/Follow up  
input**

## Facilities

**Inspect  
Certify  
Plant & Raw Mat.  
Advisor**

## Outputs

**Inspect/Certify  
Commodities**

## Market

**Foreign-negotiate  
Domestic- caution**

**Implement the traceability pro**

**FROM FARM TO TABLE**

# Road Map of Food Safety

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CROPS

GOV.

## **1. Inspect imported inputs including**

(manufacturing facility/domestic distribution)

- Animal Feed
- Aquatic Feed
- Chemical products/Hazardous Substances
- Drugs/Pharmaceutical/Chemicals/Semi-processed  
Pharmaceutical Chemicals

## **2. Inspect raw materials and imported processed foods**

Inspect plant, insect/pests diseases and animal diseases

Inspect chemical residue in meat, tuna, shrimp, food product

Private  
sector

***3. Importers/consumers/distributors aware of the quality and sources of input/raw materials including requesting health certificate***

IMPORT

# Road Map of Food Safety

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AGRICULTURAL PRODUCTS

Farm Level

GOV.

Private sector

**1. Register and certify the standardized farms**

**2. Inspect and follow up on the use of input in standardized farms**

*3. Farmers improve the quality of their farms to join the farm standards system*

*-Investment*

*-Use of inputs as recommended*



# Road Map of Food Safety

## Facilities

### GOV.

1. Inspect/certify the manufacturing facilities for processed foods for export
2. Inspect raw materials
3. Inspect/certify the facilities producing animal feed (including aquatic feed)
4. Inspect/certify slaughter houses
5. Inspect port/fish landing facilities/peeling shed
6. Inspect/certify the processing facilities for domestic distribution
7. Advisor for food standard system (GMP/HACCP)

### Private sector

8. *Entrepreneurs improve the quality of manufactory/port/fish landing facilities/peeling shed to join quality system*



# Road Map of Food Safety

**GOV.**

**1. Inspect/certify export commodities**

- Meat products
- Fishery products
- Plant products
- Central Laboratory company and private company accredited

**2. Inspect commodities in domestic markets which are produced for export**

**3. Inspect/certify commodities for domestic markets**

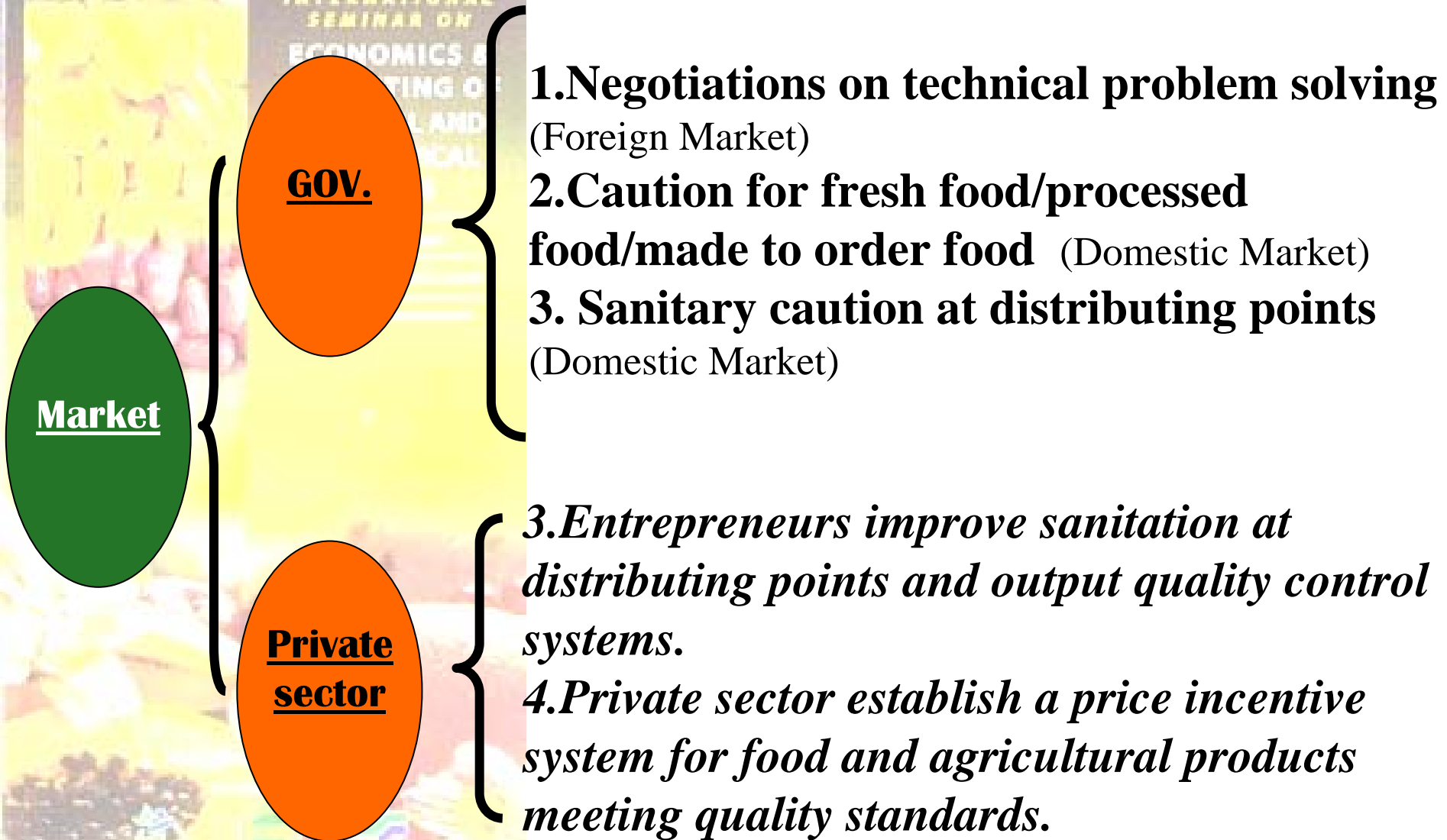
**Private sector**

*4. Private companies improve the quality to their laboratories to be accredited by government agencies.*

*5. Exporter requests fir health certificate to certify the quality of agricultural commodities and food.*

**Outputs**

# Road Map of Food Safety



# Road Map of Food Safety

IMPORT

Farm Level

Facilities

Outputs

Market

**Implement the traceability pro**

**Implement the traceability procedures for an inspection system for imported commodities, farm certification system, manufacturing certification system and a certification system for finished goods and set up the Central Information Center as a warning system for agricultural commodities and food.**

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# Quality Control : Accreditation System



# Quality Control : Accreditation System

**National Committee on Agricultural Commodity and Food Standards**

**National Bureau of Agricultural Commodity and Food Standards  
ACFS  
(National Accreditation Body)**

Apply for Accreditation

**Plant & Products  
DOA**

**Livestock & Products  
DLD**

**Fisheries & Products  
DOF**

**(National Certify Body)**

Apply for Certification

**Grower/Facilities/Entrepreneur**

# System Standards in Thailand

- designed to be the criteria to assess and certify manufacturer's practices from farm to packing houses facilities.
- include Good Agricultural Practice (GAP), Good Manufacturing Practice (GMP), and Good Hygienic Practice (GHP).
- more than 25 system standards are set
- 10 crops system standards : e.g. Hom Mali Rice, Longan, Orchid , Okra, Asparagus, Chili etc.

# Commodity Standards in Thailand

- set as national references for production, domestic and international trade, and guarantee of products.
- cover both safety and qualifications of products.
- more than 45 Commodity Standards are set.
- 19 Crops Commodity Standards: e.g. Durian, Pineapple, Pomelo, Litchi, Orchid, Mangosteen, Rambutan, Mango etc.



# Q – Mark: Accountable and Reliable Mark

- **Q-Mark can be classified into 2 levels of certification**
  - (1) Product Certification : to certify finished product , ensure the quality and safety of product.**
    - **Random testing is a must for ensuring the standard certification**
    - **Found on the label, container, wrapping, tying ropes or on the product**
  - (2) System Certification : to certify production system (GAP,GMP,HACCP,CoC)**
    - **Seen on the certification certified document or advertising materials**



# Q – Mark: An Accreditation Mark for Qualified Products

- **Quality and Safe Product**



AC XX-XX-XXXX-XXXX-XXX

**Traceability Code**

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AC XX-XX-XXXX-XXXX-XXX

# Fruit Quality Control in Thailand



# Fruit Quality Control in Thailand

- **Quality System:**

- **GAP : Good Agricultural Practice**
- **GMP : Good Manufacturing Practice**
- **HACCP : Hazard Analysis and Critical Control Points**

- **Accreditation Body**

- **ACFS**

- **Certifying Body**

- **DOA : Department of Agriculture**
- **Private Certifying Body**



# GAP : The First Step of Food Safety

- Food Safety start at farm level : **Do it right at the first time!**
- The concept of (GAP) : to meet specific objectives of ;
  - food security,
  - food quality,
  - production efficiency,
  - livelihoods and,
  - environmental benefitsat the local, national, regional and international levels.



# GAP :Four Principle of GAP

- economically and efficiently produce sufficient, safe and nutritious food;
- sustain and enhance the natural resource base;
- maintain viable farming enterprises and contribute to sustainable livelihoods;
- meet the cultural and social demands of society.





# **Key area of concern when implementing a GAP program**

- **prior land use**
- **adjacent land use**
- **water quality and use practices**
- **soil fertility management**
- **wildlife, pest, and vermin control**
- **worker hygiene and sanitary facilities**
- **harvesting and cooling practices**





# GMP : Quality System

- **GMP : Good Manufacturing Practice**
- **The control and management of manufacturing and quality control testing of food products**
- **Thailand Fresh Fruits Quality Control :**
  - Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RCP 53-2003)
  - Recommended International Code of Practice- General Principles of Food Hygiene, CAC/RCP1-1969, Rev.4-2003

# HACCP : Quality System

- **Hazard Analysis and Critical Control Points (HACCP)**
- **A systematic preventive approach to food safety that addresses**
  - **physical,**
  - **chemical and**
  - **biological hazards**
- **To prevent rather than finished product inspection.**

# Principles of HACCP

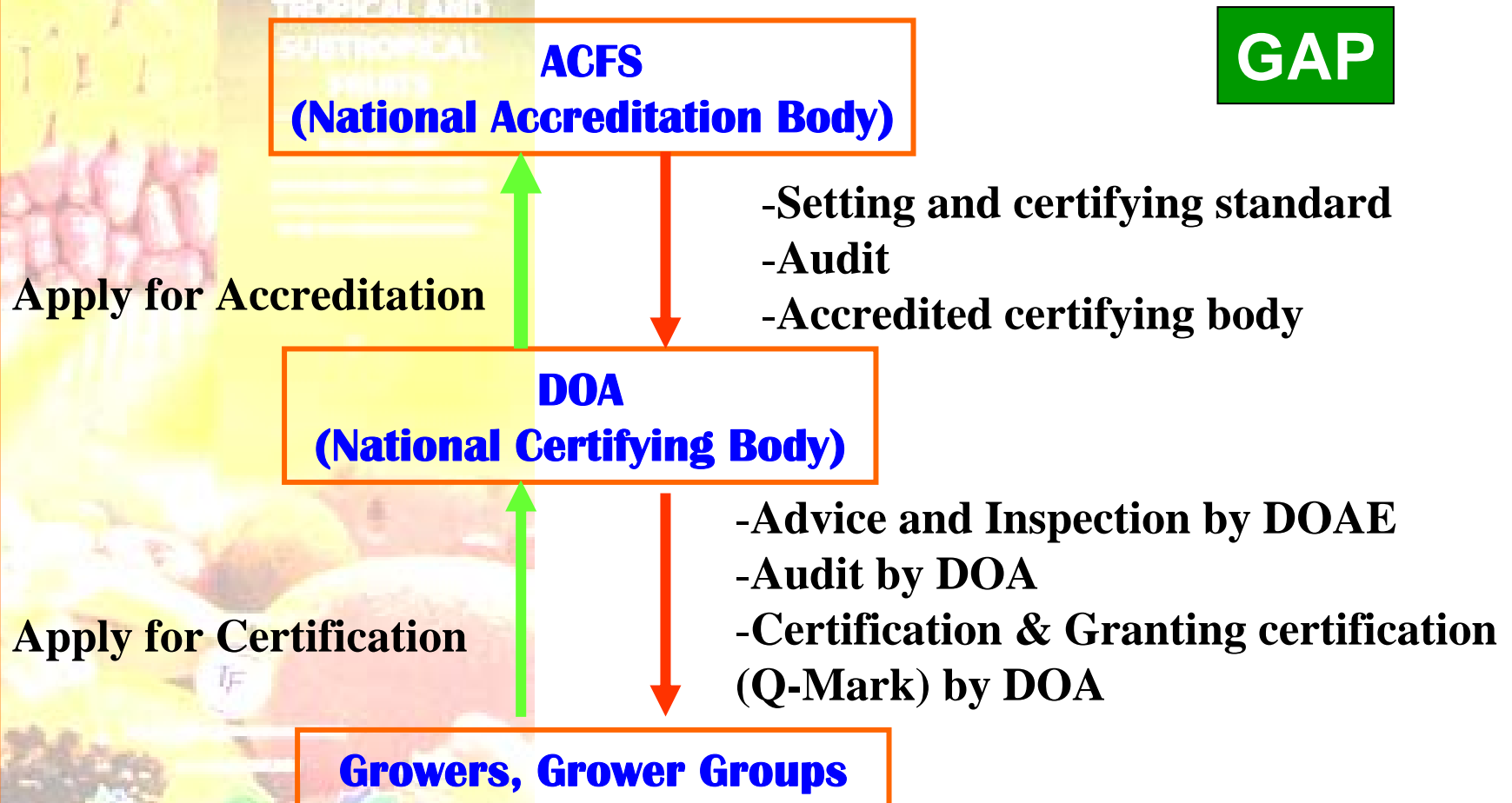
- 1. Conduct a hazard analysis**
- 2. Determine the critical control point (CCP)**
- 3. Establish critical limit**
- 4. Establish a system to monitor control of the CCP**
- 5. Establish the corrective action to be taken when monitoring indicates that a particular CCP is not under control**
- 6. Establish procedures for verification to confirm that the HACCP system is working effectively**
- 7. Establish documentation concerning all procedures and records appropriate to these principles and their application**

# Traceability

- **Traceability** : the completeness of the information about every step in a process chain.
- **EU** – one step up, one step down
- **Thailand** :
  - Q-Mark (paper and electronic based)
  - Pilot Project ( fully electronic based)
    - Pomelo
    - Okra
    - Shrimp
    - Chicken



# The Role of Government on Fruit Quality Control



# The Role of Government on Fruit Quality Control (cont.)

**GMP/HACCP**

**ACFS**  
**(National Accreditation Body)**

Apply for Accreditation

- Setting and certifying standard
- Audit
- Accredited certifying body

**DOA**  
**(National Certifying Body)**

Apply for Certification

- Advice and Inspection by DOA/Private CB
- Audit by DOA
- Certification & Granting certification (Q-Mark) by DOA

**Growers, Grower Groups**

# The Latest Development

Scope	Target	No. of Certified	No. of Certifying
<b>GAP (Crop)</b>	<b>554,116 farm</b>	<b>219,997 farm</b>	<b>334,119 farm</b>
<b>GMP/HACCP (Crop)</b>	<b>853 plant</b>	<b>662 plant</b>	<b>191 plant</b>

As of June 2007



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POINTS

# Conclusion



# Conclusion

- **Thailand Food Standards and Safety Measures**
  - **Harmonize with international standards (Codex, OIE , IPPC)**
  - **Based on sound scientific justification**
- **Raise International Acceptance of Thai Products on following aspects: Safety and Quality**
- **Promote Thai Food Safety and Standards Accreditation Mark: Q-Mark**
- **MOAC : From Farm To Table Policy**
- **Public concern of food safety for the whole food chain**

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Q

A

Thank you & Sawasdee

