



GAP-FOOD SAFETY

AGROCHEMICAL SAFE USE

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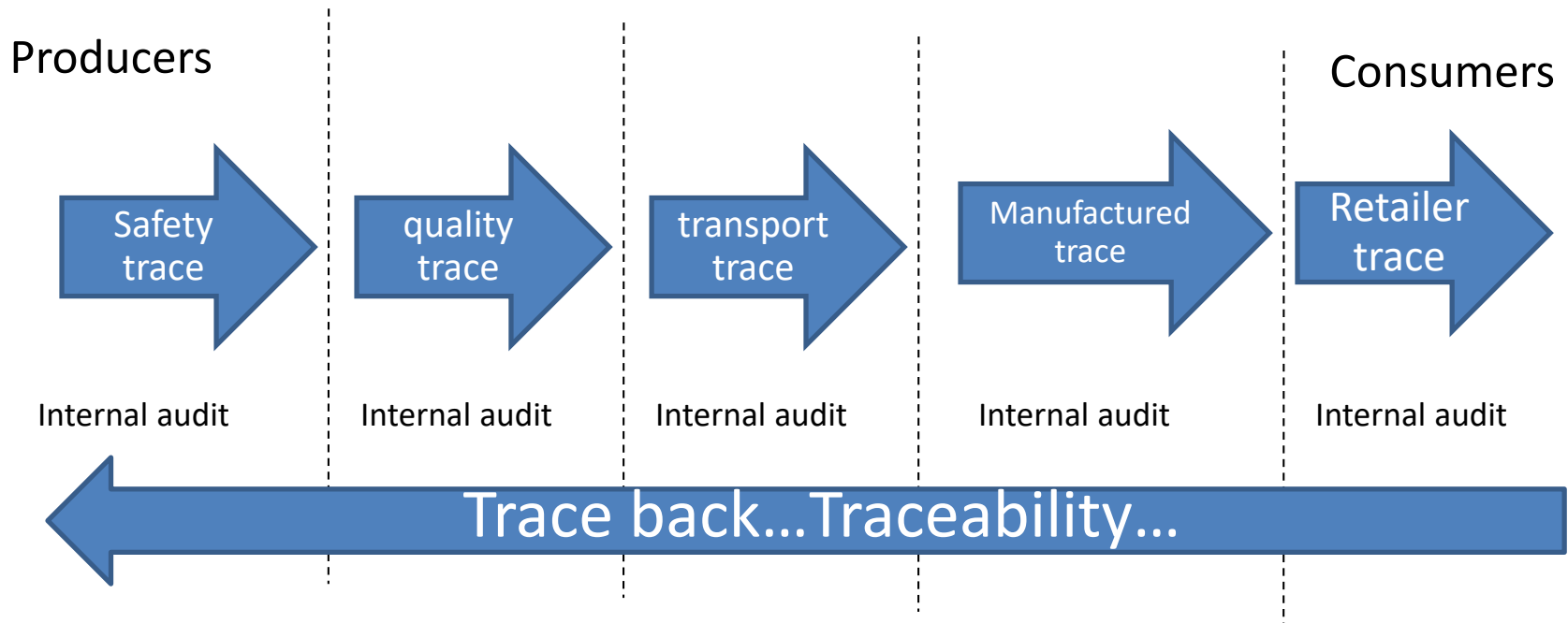




FARM...FOOD...FEAR...FACT

- General Profile:

Trace back and Internal Audit model



Core Concept of GAP on Farm Q&S

Quality and Safety items	Quality Objectives
1. Water	physical, chemical and biological safety
2. Field and land history	
3. Pesticide issues...	
4. On-farm stocking, produce transport	
5. Crop Protection	Free of Pests
6. Production process	Quality to meet customers satisfaction
7. Postharvest handling	
8. Records	Traceability

NTBs

WORLD TRADE
ORGANIZATION



Inventory

“technical
barriers
to trade”

Part III Technical Barriers to Trade

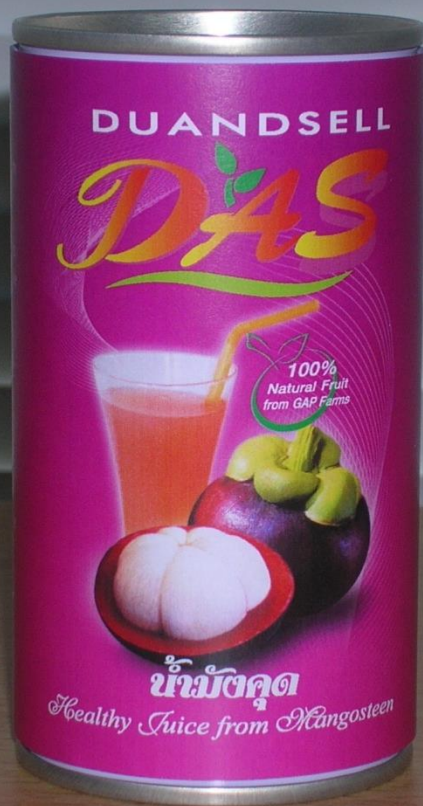
- A General
- B Technical regulations and standards
- C Testing and certification arrangements

Part IV Sanitary and Phytosanitary Measures

- A General
- B SPS measures including chemical residue limits, disease freedom, specified product treatment, etc.
- C Testing, certification and other conformity arrangements

Voluntary และ Mandatory

GAP, GMP, HACCP,
QUALITY,
SPECIFICATION



TAS..GAP

Private Std,
GLOBALGAP

ORGANIC,
FAIRTRADE
GI

Market

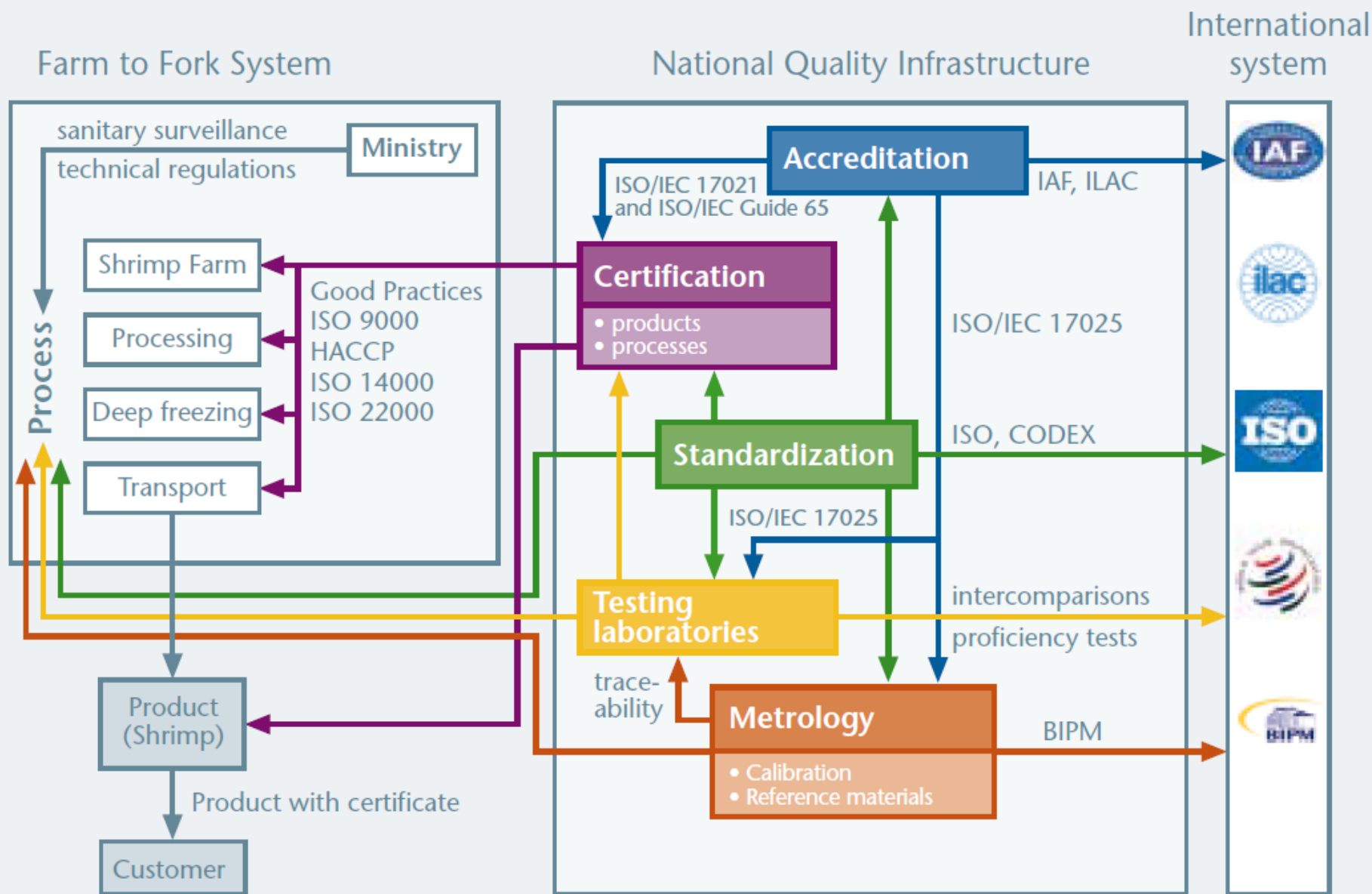
USA

JAPAN

EU

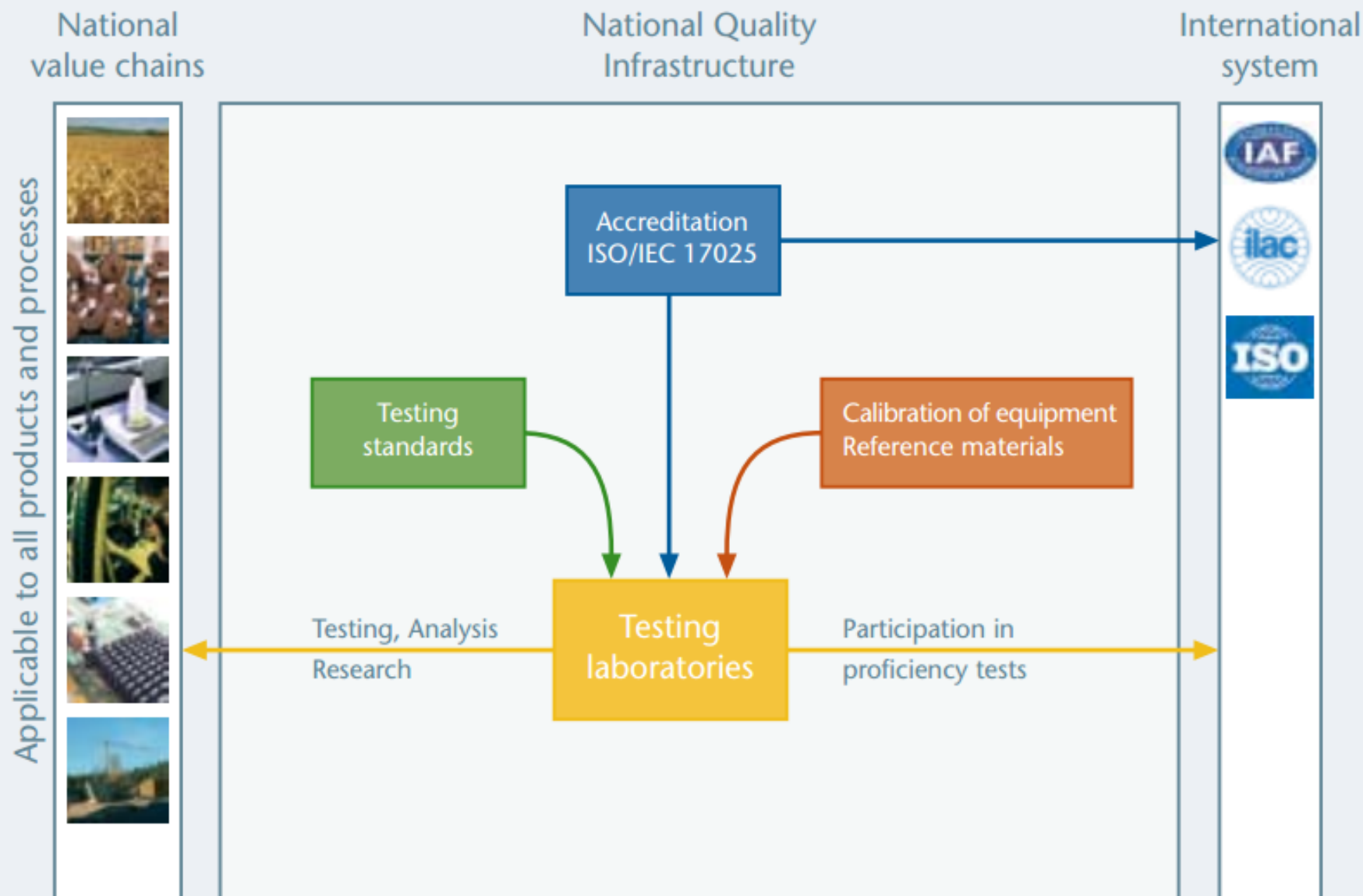
ASEAN

National Quality System



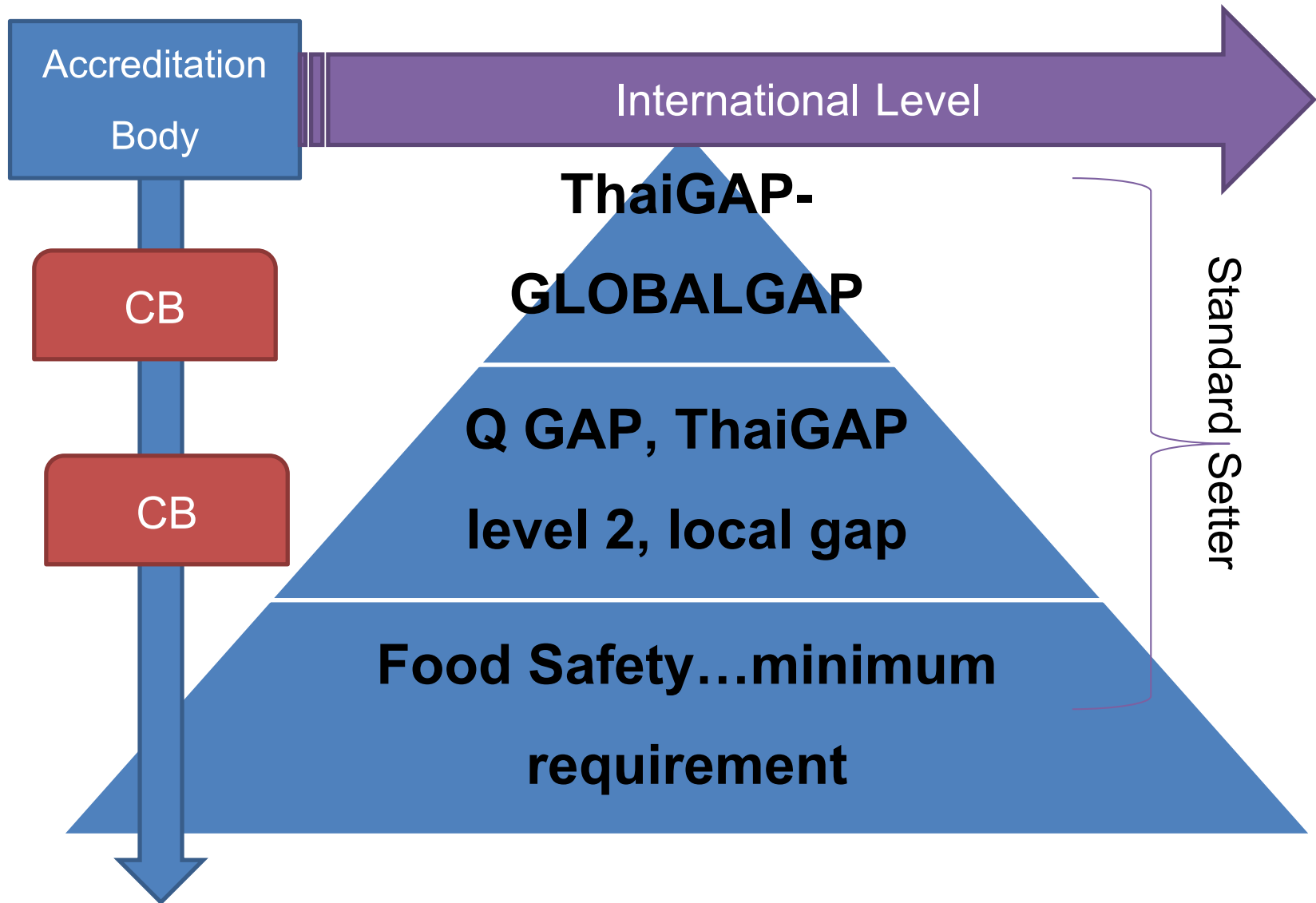
Source: PTB report

Testing System



Source: PTB report

PRIVATE STANDARD



What is Pesticide?

- ▶ A pesticide is any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest.
- ▶ “Pesticide” includes herbicides, fungicides, insecticides, or any other substance used to control pests.
- ▶ Pesticides are carefully regulated by the Environmental Protection Agency (EPA), which reviews studies to determine the risks posed by individual pesticides.

Pesticide

Hazards

How pesticides get in

Inhalation

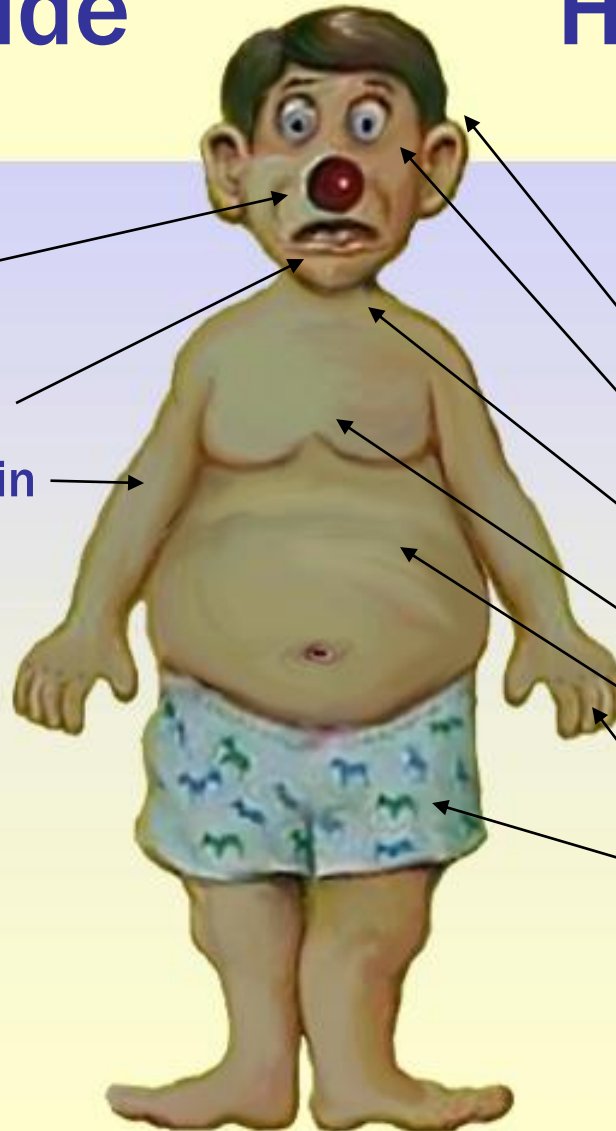
Through food or water

Absorption through skin

Exposure levels

Chronic exposure

Acute exposure



Health effects

(depends on specific pesticide)

Central nervous system

Eye irritation

Hormone imbalance

Cancer

Liver damage

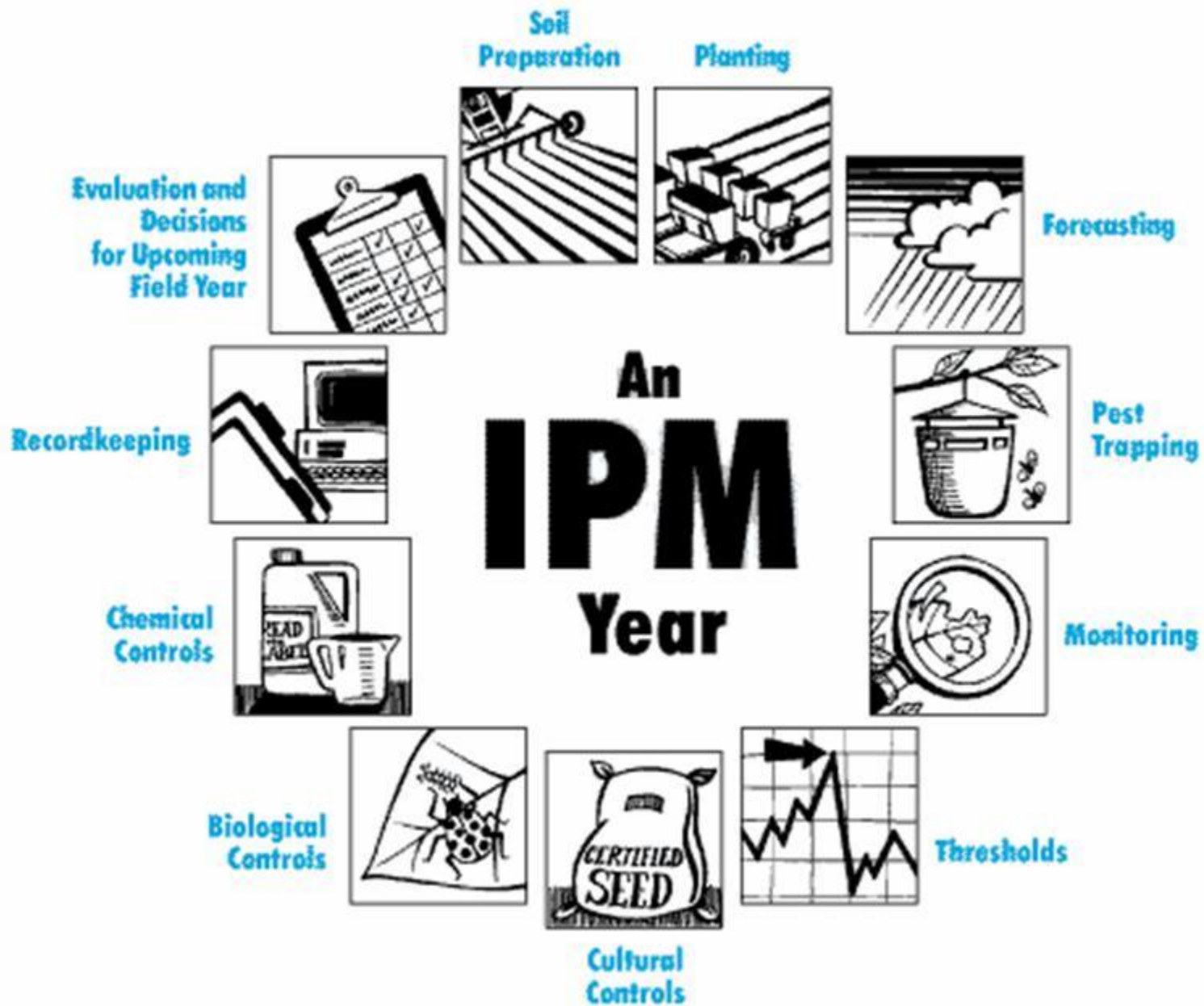
Skin irritation

Reproductive effects

Minimum Requirement for Food Safety

FFV in Farm Practice

- **PPP.... Plant Protection Product, Pesticides**
- **SAFE USE**
- **Before USE**
- **DECIDE TO USE**
- **WHILE USING**
- **AFTER USING**





การเรียนรู้ระบบ IPM



Cluster of Western GAP

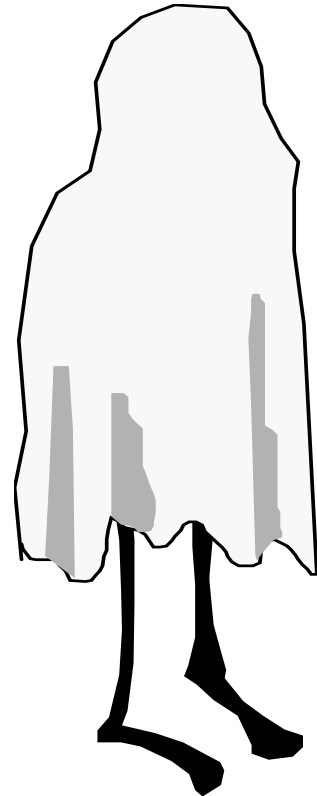


HAZARD = Toxicity x Exposure



- What is the best way to keep the hazards of pesticide handling at a minimum?

— AVOID EXPOSURE !

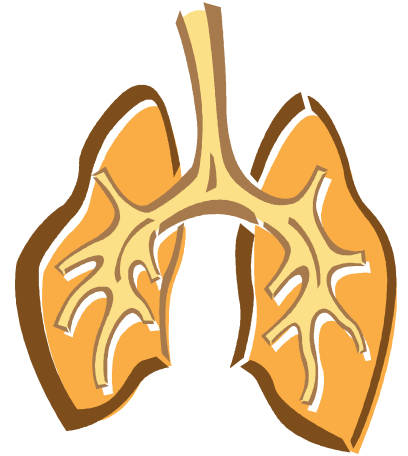


Routes of Pesticide Exposure

OCULAR



INHALATION



INGESTION



DERMAL



Basic Pesticide Safety: Method Selection

- Always treat pesticides with
 - Respect
 - Know the product
 - Know its limitations
 - Read the label
 - Know the label requirements
 - Care
 - Know the application equipment and its limits
 - Know and follow proper storage, transport and use procedures

- Avoid contact with the pesticide
 - Wear all designated safety equipment
 - Be careful of drips and spills
 - Keep hands away from eyes and mouth
 - Wash your hands before
 - Smoking
 - Eating
 - Bathroom breaks

- If you contact a pesticide
 - Clean the body parts contacted
 - **Immediately**, and
 - **Thoroughly**
 - Change clothes if necessary
 - Apply First-Aid, if necessary
 - If pesticide was swallowed, if it has gotten into the eyes, or if the person contacted is showing **any symptoms** resulting from the contact – get him or her to a doctor **immediately**

Protective Cloth

- **What is PPE for?**
 - To protect the human from contact with pesticides.
- **Examples of PPE:**
 - Coveralls or protective suits, footwear, gloves, aprons, respirators, goggles, headgear, etc.



What to wear?



- **READ THE PESTICIDE LABEL !**

The pesticide label lists the minimum personal protective equipment that you must wear while handling the pesticide.

Ways to avoid exposure in addition to using the proper PPE

- Greatest risk and potential for exposure to the pesticide applicator occurs during **mixing and loading.**
- Why? **most concentrated state**
- Limit the hazard by **selecting a pesticide with a lower toxicity.**



CAUTION

WARNING

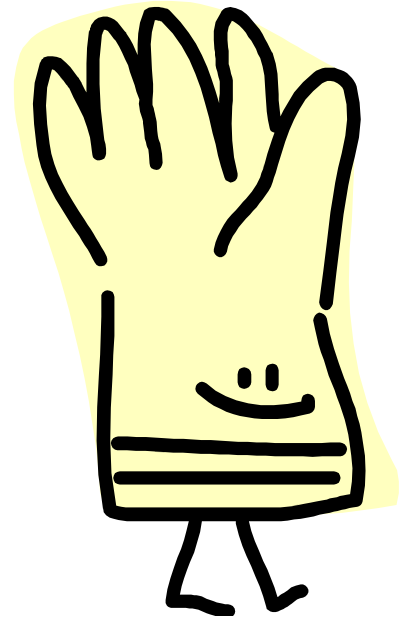
DANGER

Chemical Resistant PPE

- **What is chemical resistant?**
 - **Material** (*different materials for different pesticides*)
 - Neoprene, nitrile, polyvinyl chloride (PVC), butyl rubber
 - Latex gloves? (**no: latex rubber has natural pores, often lined**)
 - Chemical Resistance Categories (A-H)
 - **Type of pesticide** (*formulation, diluents, solvents*)
 - **Length of exposure** (*nothing lasts forever!*)
 - How quickly does your PPE become damaged?
 - Do you carry extras?!

Gloves

- Chemical resistant
- Unlined
- Check for leaks
- Wash your gloves on the outside before removing them.
- Wear outside or inside of your long sleeved shirt?



Coveralls, Aprons, Raincoats

- Coveralls should be made of sturdy material such as cotton, polyester, cotton-synthetic blend, or denim.
- Aprons used while mixing and loading to protect against spills and splashes of concentrates.
- A rainsuit should be worn whenever mist or spray drift is likely that would wet the coveralls.



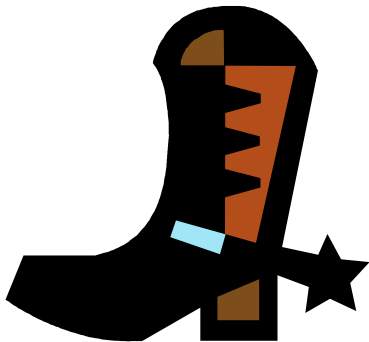
Hats

- Protective head coverings should be.
 - Liquid proof
 - Wide brim to protect face, ears and neck
 - Easily cleaned with soap and water
 - No absorbent material



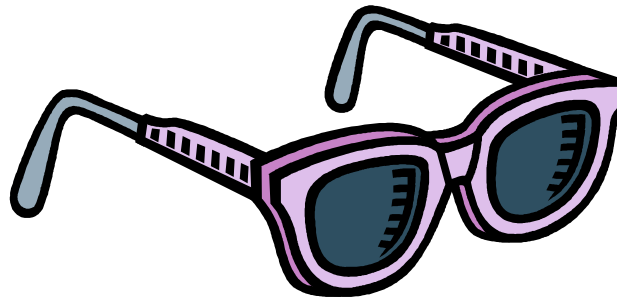
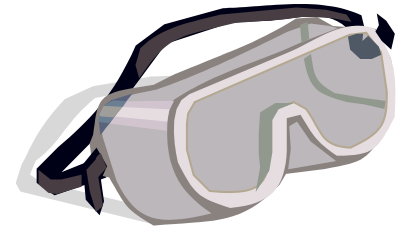
Boots

- Unlined
- Rubber
- NO leather, canvas or cloth
- Pant legs on the outside to prevent pesticide from running down into the boot



Goggles and Face Shields

- Tight fitting, non-fogging goggles
- Goggles with indirect ventilation
- Wash often – especially if goggles have headbands made of absorbent material
- Full face shield



Respirators

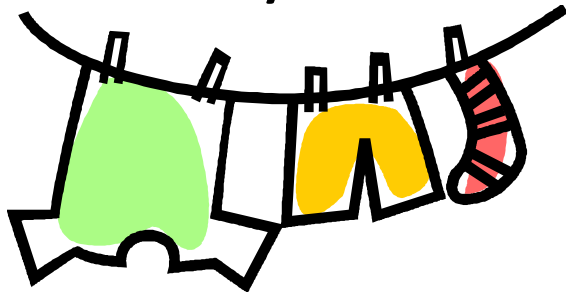
- Approved by National Institute of Occupational Safety and Health (NIOSH)
- Proper fit
- Clean regularly
- No not store with pesticides
- Store in a clean, dry and tightly sealed plastic bag



Laundering Pesticide Contaminated Clothing

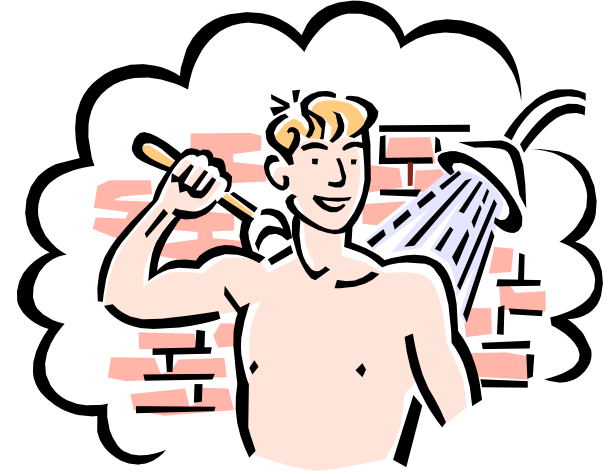
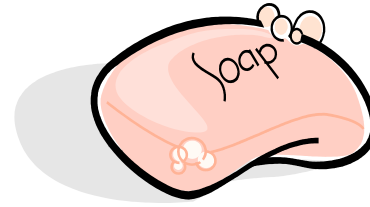


- All PPE should be washed at the end of each day
- Store and separate from family laundry
- Heavy duty liquid detergents are best
- Never use bleach or ammonia
- Full load – Hot water
- Line dry



Personal Care After Application

- After cleaning PPE
- Wash hands and face before eating, drinking or smoking
- Shower
- Be sure to scrub your scalp, neck, behind ears and under fingernails
- Change into clean clothing



Emergency !



SPILLS * INJURIES * POISONING

Personal Decontamination Supplies:

clean water paper towels extra coveralls

First Aid Equipment:

well stocked first aid kit plastic eye wash

Spill Cleanup Equipment:

**plastic bags, shovel, dust pan, kitty litter,
absorbent containment materials**

Transportation

Carry a spill kit

Containers should be undamaged and have readable labels

NEVER carry pesticides in passenger areas

NEVER leave your vehicle unattended with pesticide storage unlocked





วันที่พ่นสารเคมี 5/6/50
สารเคมีที่ใช้พ่น สารเคมี
ระยะปลอดภัย 2 วัน









กุล

นายไต้ง อ่อนรุ่งเรือง



Cluster of Western GAP









Summary 1

1. Because pesticides are toxic, they could be misused to intentionally harm people, animals, or crops.
 2. A pesticide is any substance used to control a pest – including insects, rodents, and weeds.
 3. Employees have a right to know what chemicals they are working with, the hazards of those chemicals, appropriate personal protective equipment, and appropriate first-aid and medical response.
 4. Pesticide misuse and methods of prevention, response and reporting for each one:
 - unintentional misuse
 - unintentional release
 - intentional misuse
-

Summary 2

5. Examine storage and handling procedures and develop a security plan that covers the following areas:

- Storage
 - Transportation
 - Personnel
 - Disposal
 - Response
-

