



➔ **STDF - CABI - ICCO PROJECT- TRAINING OF MASTER FACILITATORS (TOMF)**
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FOOD SAFETY & HACCP
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Objectives

- 1. Food safety**
- 2. HACCP**
- 3. Harmonizing components to ASEAN GAP**

Food

- Food can transmit diseases
- As a growth medium for bacteria that cause food poisoning
- Food poisoning can be prevented -100%
Thus, the need for food safety measures.

FOOD SAFETY

- Is a scientific discipline on :-
- **handling,**
- **preparation &**
- **storage** of food –to prevent food poisoning.
- Smart business operators – need to implement food safety systems.
- Eg of food safety management systems is **HACCP** principles

HACCP

= **H**azard **A**nalysis and **C**ritical **C**ontrol **P**oint

Is a systematic **preventive** approach to food safety.

Q1. How to make sure that the bomb made will
explode? WW2

Q2. What happens when “Angkasawan” – spaceman
get food poisoning while in space? - 1960 NASA
& Pillsbury

HACCP principle:-

based on hazard analysis from contamination which can be generalised into **3 categories** :-

1. **Biological** hazard e.g. E coli, aflatoxins,
2. **Chemical** hazard e.g. Pesticides, heavy metals
3. **Physical** hazard e.g. glass, screws & nuts

Harmonizing Cocoa safe and Food safety modube by Asean GAP

	COCOA SAFE		FOOD SAFETY MODULE– ASEAN GAP
3.1	Crop management		Site history & management
	Raising nursery		Planting material
3.2	Crop nutrition + Water		Fertilizers & soil additives
			Water
3.3	Crop protection + IPM		Chemicals- Agrochemicals
			Other chemicals – eg oil

Harmonizing Cocoa safe and Food safety modube by Asean GAP

	COCOA SAFE		FOOD SAFETY MODULE– ASEAN GAP
3.4	Worker safety & hygine		Personal hygiene
3.5	Cocoa harvesting		Harvesting & handling produce
3.6	Post-harvest handling		Buildings & structures
3.7	Waste management		Cleaning & sanitation
			Storage and transport

Harmonizing Cocoa safe and Food safety modube by Asean GAP

	COCOA SAFE		FOOD SAFETY MODULE– ASEAN GAP
3.8	Farm record keeping/ Traceability		Traceability & recall
			Documents & records
3.9	GAP Training &		Training
	Self check/ Self audit		Review of practices/ Self audit

Fertilizers

- Appropriate training on fertilizer application given to workers/employees.
- Proof of a technical competent advisor on fertilizer usage.
- Inorganic fertilizer – potential of heavy metals contamination from mines.
- Is **chicken dung** an organic fertilizer?



Chemicals - Agrochemicals

- Appropriate training on chemical application given to workers/employees.
- Proof of a technical competent advisor on chemical usage.
- IPM, cultural & other methods of pest control are considered.
- Crop protection measures are appropriate for the control of the pest.
- Chemicals are only purchased from licensed suppliers.



Chemicals - Agrochemicals

- A rotation strategy for chemical application are used to avoid pest resistance.
- The application of chemicals is managed to minimise the risk of spray drift to environmentally sensitive areas & others.
- Appropriate volume of chemicals are mixed to minimise waste.
- Disposal of packaging of agrochemicals must be managed responsibly
- Personal protective clothing and equipment must be used and properly maintained.



Other chemicals

- Fuels, oils, & other chemicals are handled, stored & disposed off in a manner that minimises the risk of contaminating the environment.



Harvesting & handling produce

When produce is harvested, care is required in order to maintain the quality of produce.

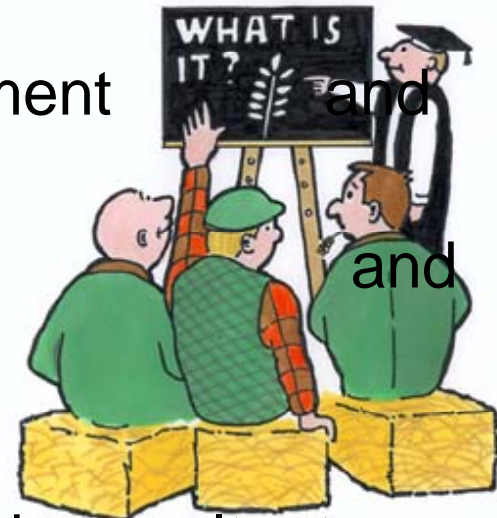
- Ensure there is no possibility of contamination during packaging of the produce
- Use packaging material that has no detrimental effects on the produce and environment
- Rats, birds, etc



Training

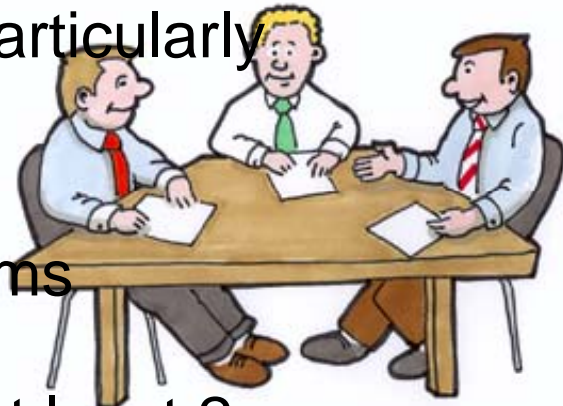
Knowledge is a starting point for implementing GAP and is achieved through:

- Provide training for employees
- Continuous training of management personnel
- Employing competent trained workers
- Keep record of training.
- Using the support of experts and consultants when needed (irrigation, fertilization, soil laboratories, crop protection)



Documents & records

- Availability of up to date records demonstrate that all activities of production are compliant with GAP and allow the history of products, from farm to final consumer, to be traced.
- Keeping a transparent record system, help to clarify any possible issues, particularly in terms of liability
- Record keeping can help the understanding of how problems develop and to help prevent them in the future. Keep for at least 2 years or more.



Self- assessment

Review of practices

- All practices are reviewed at least once a year to ensure that they are done correctly.
- Actions are taken to correct any deficiencies identified - CAR, Corrective Action Report.
- A record is kept for documentation.
- Actions are taken to resolve Complaints related to environmental management and records are kept .





THANK YOU

Now we start.....

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