



## Course Outline

### Annual International Training Course

**1. Course Title:** Market Access through Competency-Based Education and Training in Horticulture (MACBETH) Short Course: Training-of-trainers on Managing Food Safety in Fresh/Processed Fruit and Vegetable Value Chains

**AITC Theme:** Agriculture and Food Security

**Program type:** Online

**Number of participants:** Maximum of 80 persons

**2. Duration:** 13-24 May 2024      **Closing date for application:** 1 March 2024

### 3. Background:

#### Thailand International Cooperation Agency (TICA)

TICA is a national focal point for Thailand's international development cooperation. It was established in 2004 to realize Thailand's aspiration to contribute to international development cooperation. Believing that global challenges are best addressed through international cooperation and global partnership, TICA continues working closely with its development partners to realize the global development agenda through various capacity-building and human resources development programs. In response to the recent changes in the global landscape of development cooperation, TICA has strengthened its partnerships to harness the synergy of South-South and Triangular Cooperation to tackle global development challenges, including expediting the implementation of Sustainable Development Goals (SDGs). It also continues to realign our focuses in order to deliver Thailand's commitments as a reliable global partner.

Since 1991, TICA, in collaboration with educational institutions in Thailand, has offered short-term training courses under its Annual International Training Course (AITC) program. The number of courses each year varies between 25 to 35 for 20-35 participants per course. AITC not only fosters excellent and friendly relations, which Thailand has already enjoyed with recipient countries across regions but also helps Thailand to reach out to those countries with which we desire to engage more closely. The courses offered by TICA in 2023-2025 are categorized into five themes: Sufficiency Economy Philosophy (SEP), food security, climate change and environmental issues, public health, and the BCG Model.

#### Organization/Institution

**Department of Food Science and Technology, Faculty of Agro-Industry, Kasetsart University**

**Co-organizer:** Kasetsart University Food Innovation Research and Services in Thailand (KU-FIRST)

Kasetsart University has offered courses in Food Science since 1964. It was the first academy to offer a Food Science degree program in Thailand. In 1980, the department evolved and was renamed the Department of Food Science and Technology under the Faculty of Agro-Industry. The department offers degrees at various level including bachelor's, master's and doctorate. In 2020, a new certificate curriculum on Beverage Technology is launched. Nowadays, over 3,000 graduates have completed their studies from the department and are serving in technical and administrative positions at food-related industries as well as leading academic and research institutions.

## Schedule for the Training Program:

Market Access through Competency-Based Education and Training in Horticulture (MACBETH) Short Course:  
Training of trainers on Managing Food Safety in Fresh/Processed Fruit and Vegetable Value Chains

Date	Time (Thailand time)	Content	Speaker	Note
<b>Day 1: 13 May 2024</b>	8.00-8.30	<b>Opening Ceremony</b> (Greetings, Course briefing, pre-test)	TBA*	
		<b>Basic Level GAP</b>		
	8.30-9.00	1. Introduction to Food Safety-Trade Agreement		
	9.30-10.00	2. Agricultural Commodities Standard –Quality Assurance		
	10.00-10.30	3. Food Safety along Supply Chain-current status in the local market		
	10.30-10.45	Virtual break		
	10.45-11.15	4. Agro-chemicals and safe use		
	11.15-12.00	5. GAP requirement 1-3 (Water resource, Land use, and Agro-chemicals utilization)		
	12.00-13.00	Lunch break		
	13.00-14.30	6. GAP requirement 4-6 (Pre- and post-harvest, Postharvest, and Handling of produces)		
	14.30-14.45	Virtual break		
	14.45-16.30	7. GAP requirements 7-8 (Personal hygiene and Record traceback)		
	16.30-17.00	8. Specifications		
	17.00-18.00	9. Summary – Q&A		
<b>Day 2: 14 May 2024</b>		<b>Intermediate Level GAP</b>	TBA	
	9.00-9.30	1. Quality Control and Assurance		
	9.30-10.30	2. Production Planning		
	10.30-10.45	Virtual break		
	10.45-12.00	3. Water risk and plant optimization		
	12.00-13.00	Lunch break		
	13.00-14.30	4. Fertilizers and their risk		
	14.30-14.45	Virtual break		
	14.45-17.00	5. Integrated Pest Management (IPM), Scouting disease and insects		
	17.00-18.00	6. Summary – Q&A		

Date	Time (Thailand time)	Content	Speaker	Note
<b>Day 3: 15 May 2024</b>	9.00-10.00	1. Chemical substance and safe use	TBA	
	10.00-10.30	2. Alternative PPP and other methods		
	10.30-10.45	Virtual break		
	10.45-11.30	3. Information Accessibility		
	11.30-12.00	4. Available Training Materials and Training Principle		
	12.00-13.00	Lunch break		
	13.00-13.30	5. Hygiene and Personnel Hygiene		
	13.30-15.00	6. Traceability-Procedure and test run		
	15.00-15.45	Virtual break		
	15.45-17.00	7. Quality Management System		
	17.00-18.00	8. Summary – Q&A		
<b>Day 4: 16 May 2024</b>	9.00-12.00	Country report presentation and discussion on GAP/GMP	TBA	
	12.00-13.00	Lunch break		
	13.00-16.00	Country report presentation and discussion on GAP/GMP (continue)		
	16.00-17.30	Post-test (GAP)		
		Course evaluation Course summary and wrap-up		
	17.30-18.00	Closing ceremony		
<b>Day 5: 17 May 2024</b>		<b>Basic Level GMP</b>	TBA	
	9.00-9.30	1. Introduction to Food Safety Management System through Supply Chain (Pre-test on GMP)		
	9.30-10.00	2. Facilities and Environment		
	10.30-10.45	Virtual break		
	10.45-12.00	3. Personal Hygiene		
	12.00-13.00	4. Lunch break		
	13.00-13.45	5. Water Quality		
	13.45-14.30	6. Pest Control		
	14.30-14.45	Virtual break		
	14.45-16.00	7. Cleaning and Disinfection		
	16.00-17.30	8. Specifications		

Date	Time (Thailand time)	Content	Speaker	Note
	17.00-18.00	9. Summary – Q&A		
<b>Day 6: 20 May 2024</b>				
	9.00-9.30	1. Product Contamination Control	TBA	
	9.30-10.30	2. Control of Food Hazards- General and Specific		
	10.30-10.45	Virtual break		
	10.45-12.00	3. Control of Food Hazards – Allergens		
	12.00-13.00	Lunch break		
	13.00-13.45	4. Incident Management		
	13.45-14.30	5. Corrective Action		
	14.30-14.45	Virtual break		
	14.45-16.00	6. Control of Non-confirming Product		
	16.00-17.00	7. Traceability		
	17.00-18.00	8. Summary – Q&A		
<b>Day 7: 21 May 2024</b>				
		<b>Intermediate GMP</b>	TBA	
	9.00-9.30	1. Management responsibility		
	9.30-10.00	2. Document control		
	10.00-10.30	3. Procedures		
	10.30-10.45	Virtual break		
	10.45-11.30	4. Supplier qualification and approval		
	11.30-12.00	5. Suppliers' performance monitoring		
	12.00-13.00	Lunch break		
	13.00-13.45	6. Complaint handling		
	13.45-14.30	7. Control of measuring and monitoring devices		
	14.30-14.45	Virtual break		
	14.45-15.30	8. Product analysis		
	15.30-16.30	9. Training		
	16.30-17.00	10. Facility layout, product flow, and equipment		
	17.00-18.00	11. Summary – Q&A		
<b>Day 8: 22 May 2024</b>				
	9.00-9.30	1. Facility and equipment maintenance	TBA	
	9.30-10.30	2. Staff facilities		

Date	Time (Thailand time)	Content	Speaker	Note
	10.30-10.45	Virtual break		
	10.45-11.30	3. Waste management		
	11.30-12.00	4. Transport and storage		
	12.00-13.00	Lunch		
	13.00-17.00	5. Workshop/Group discussion on GMP case study		
	17.00-18.00	6. Summary – Q&A		
<b>Day 9: 23 May 2024</b>				
	9.00-9.30	1. HACCP – Introduction and preliminary steps	TBA	
	9.30-10.00	2. HACCP principle 1 – Conduct a hazard analysis		
	10.00-10.30	3. HACCP principle 2 – Identify critical control points		
	10.30-10.45	Virtual break		
	10.45-11.15	4. HACCP principle 3 – Establish critical limits		
	11.15-12.00	5. Workshop and Discussion		
	12.00-13.00	Lunch		
	13.00-14.00	6. HACCP principle 4 – Establish CCP monitoring procedures		
	14.00-14.30	7. HACCP principle 5 – Establish corrective actions		
	14.30-14.45	Virtual break		
	14.45-15.30	8. HACCP principle 6 – Verification activities		
	15.30-16.15	9. HACCP principle 7 – Record-keeping activities		
	16.15-17.00	10. Food defense		
	17.00-18.00	11. Summary – Q&A		
<b>Day 10: 24 May 2024</b>				
	9.00-12.00	Action planning		
	12.00-13.00	Lunch		
	13.00-16.00	Presentation of action plans		
	16.00-17.30	Post-test (GAP) Course evaluation Course summary and wrap-up		
	17.30-18.00	Closing ceremony		

\*TBA is To be announced.

#### **4. Objectives:**

The program is designed to:

- Share the knowledge of achievement on food security of fruit and vegetable production in Thailand by implementing the GAP in primary production and food safety management, including GMP and HACCP in food industries
- Training of trainer via online training on Basic/Intermediate GAP for primary production and Basic/Intermediate GMP for food processing

#### **5. Course Contents:**

This training course focuses on GAP requirements, including basic and international requirements, Food safety for farms & packhouses, Safety Farm 4.0, and Food safety management for general food manufacturers, including basic GMP, HACCP, and Food Defend. However, the example and workshop will be related to fruit and vegetable processing.

#### **6. Participants' Criteria:**

Applicants must fulfill the following requirements:

- Be nominated by their respective governments;
- Education: Agriculture, Agro-Industry, Food Science, or related field of study,
- Language: proficiency in English (speaking, reading and writing)
- currently working with at least three years of experience in the position of government officials, policymakers, executives of farmers' associations, senior academics, senior consultants, and extension officials in charge of promoting GAP and GMP in fresh/processed fruit and vegetable production.

#### **7. Attendance and Evaluation**

Participants who complete the training will receive a certificate based on:

- Real-time class attendance (not less than 90%): Participants must attend all activities organized during the course. TICA reserves the right to revoke its fellowship offered or take appropriate action if a participant is in attendance for less than 90 percent of the training hours.
- Interactive class participation during group discussions, VDO clips, and blended practice activities during the virtual class.
- Presentation and report: Participants are required to submit an advance assignment for presentation on a date assigned during the training program. Each assignment would not be less than four pages and no more than ten pages of A4. The advanced assignments are:
  - 1) "Country Report" includes information on the current status of productivity and food safety management for fresh/processed fruit and vegetable production, key issues and challenges, and the food security profile of the participant's respective country.
  - 2) "Concept paper" proposes a project using knowledge from this program in your country.
- Evaluation will be assigned as a pre- and post-test as assigned during the training program.

#### **8. Venue:** Online via Zoom meeting

Broadcast from the Department of Food Science and Technology, Faculty of Agro-Industry, Kasetsart University

## **9. Expected Results:**

Participants would well understand GAP requirements and food safety management for general food manufacturers related to fruit and vegetable processing.

## **10. Organization/ Institution:**

- **Implementing Agency:** Department of Food Science and Technology, Faculty of Agro-Industry, Kasetsart University
- **Contact Person:** Associate Prof. Chitsiri Thongson Rachtanapun
- **Email:** chitsiri.t@ku.th, fstku@ku.th

## **11. Expenditure/Funding:**

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