



Course Outline

Online International Training Course via Zoom Meeting

1. Course Title:

Food Safety and Security from Animal Origin: Strengthening the Network for Sustainability

2. Duration:

1-19 August 2022

3. Background and Rationale

Food in good quality and safety is fundamental requisites for human being to live. Moreover, to produce high quality and safe food can increase trade volume and income of the country. However, living in globalization era, it has rapid change on people, cultures, economics, social, environment e.g. global warming, international trade regulation, non-tariff trade barrier. Those factors have impacts on food security and sustainability of the country. Recently, many countries are at risk of food insecurity especially in developing countries. The definition of food security given by Food and Agriculture Organization of the United Nations (FAO, 2002) is “the state when all people at all times have physical, social and economic access to sufficient, nutritious and safe food to meet their dietary needs and food preferences for an active and healthy life”. Food from animal origin like meat, milk, eggs, and other animal products also supply major amounts of human nutrition, as a source of proteins, fats, vitamin and mineral. Moreover, it is an importance export commodity in many agricultural countries which can support farmer income and increase employment of livestock labor. Apart from meat consumption, the edible insects (for example edible crickets or silkworm) are potential to develop and play a role as a source of protein for future food. Honey is another example that produced by insects which is a valuable commodity in international trade and support reduction poverty of farmers.

Safety of food from animal origin is significant effect to food security because meat and animal product contains high risk of foodborne pathogens, zoonotic agents, chemical and antibiotic residues as well as antimicrobial resistance (AMR) which is a global public health issue. If people access to unsafe food, it is consequently lead to getting illness which pose higher risk to vulnerable group (young, old, pregnant and immunocompromised). Food security could not happened without food safety. Food safety plays the critical role to ensure food security. To control safety in food, hygienic practice should be apply from farm to fork, from animal feed to consumer, and apply regular program for surveillance and monitoring system.

Veterinary Public Health and Food Safety Centre for Asia Pacific (VPHCAP), Faculty of Veterinary Medicine, Chiang Mai University, Thailand has been established since 2003 under collaboration of 2 Veterinary Faculties between Chiang Mai University and Freie University Berlin. The aim of collaboration is to establish a regional center for research, graduate education, academic services on food production and trade of animals and animal origin products from Southeast Asia and the Greater Mekong Sub-region. The mission of Centre are conducting the international master degree curriculum for students from Asia Pacific, Southeast Asia and South Asia. Moreover, the primary objective of VPHCAP is to build capacity in academic services through training course and scientific international conference every year. Recently, the World Organization for Animal Health (OIE) designated the VPHCAP and Thailand's Department of Livestock Development as an OIE Collaborating Centre for Veterinary Services Capacity Building since 2016 which aims to be a center for developing and increasing the capacity of Veterinarians who work relates to food safety of animal origin, control of animal disease and zoonotic disease in the Asia Pacific region.

VPHCAP has realized the significance of food safety impact to food security therefore, we has attention to organize the short course training on Food Safety and Security from Animal Origin: Strengthening the Network for Sustainability. The aims of conducting the course are to develop and exchange knowledge and skill on food production, food safety in food chain, surveillance and monitor safety in food as well as international food regulations through the training course that provides participants to gain knowledge and experience from lectures, practices, and field visits. The course will be beneficial for food security challenge which has complexity and require multidimensional understanding including academic knowledge as well as socio-economic.

Organization/Institution

Veterinary Public Health and Food Safety Centre for Asia Pacific (VPHCAP)

Faculty of Veterinary Medicine, Chiang Mai University, Thailand

4. Objectives:

The program is designed to: build an understanding of the production chain of animal origin food and its safety control in the food security constraint.

After complete this course, the participants will be able to

- Describe food animal production chain and its importance to global food security
- Illustrate a best practice of food quality assurance and surveillance systems including meat inspection and other products
- Identify potential risks in livestock and animal production chain
- Apply food standard and policy in the international trade framework
- Exchange and sharing knowledge and experience about food safety and food security in food of animal origin

5. Course Contents:

Module 1: Animal Production and Food Security

This module will review the process of animal production, emphasizing the food system in Southeast Asia. A variety of animal products, such as meat, milk, egg, honey or other alternative novel food, will be used as learning examples. The discussion of sustainable development goal (SDGs), Food Security, will encourage the importance of resource limitation, climate change and multidisciplinary collaboration.

Module 2: Food Quality Assurance and Surveillance Systems

This module will specify to safety in food production. Begin with hazard and potential risk identification in each steps, the quality assurance system will be discussed in order to reduce the risks and control them. To maintain the food safety, surveillance system should be implemented. Practical approaches will be demonstrated, such as the inspection of meat and other products, sampling plans and sample collection.

Module 3: Implication of Food Standard and Policy in the international Trade Framework

The final module will integrate the technical knowledge from other modules into food standard and policy. The international trade framework will be highlighted and underline the importance of international standard organization.

6. Participants Criteria:

Applicants must fulfill the following requirement:

- Be nominated by their respective government;
- Young and mid-level professional in related to food or livestock production, quality control and assurance, animal husbandry, government authority, meat inspection, and other-related interest;
- Sufficient English communication skill
- Able to participate in online training using basic computer skill
- Be required to dedicate to this training course as a full time

7. Attendance and Evaluation

Participants who completed the online training will receive E-certificate base on:

- Real time Online Class (not less than 80%)
- Online class participation and discussion
- Online presentation and report
- Online evaluation

8. Venue:

Online platform

9. Expected Results:

- 9.1 Participants will be able to apply knowledge and skill in their working area
- 9.2 Strengthening the food safety and food security network among participants
- 9.3 Improving and promoting food safety and food security in global strategy

10. Organization/ Institution:

- **Implementing Agency;**

Veterinary Public Health and Food Safety Centre for Asia Pacific (VPHCAP)

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- **Contact Person**

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11. Expenditure/Funding:

Thailand International Cooperation Agency (TICA)

Government Complex, Building B (South Zone), 8th Floor,

Chaengwattana Rd. Laksi District, Bangkok 10210 THAILAND

Website: <https://tica-thaigov.mfa.go.th/en/index>

Email: aitc@mfa.mail.go.th

**Schedule for the Online Training Programme:
Food Safety and Security from Animal Origin: Strengthening the Network for
Sustainability**

Date/ Period /Topic	Time (Thailand time)	Content	Speaker	Note
Day 1 :				
	09:00-09:30	Opening ceremony		Live
	09:30-10:00	Course orientation		Live
	10:00-11:00	Overview of global food security and food safety	TBD	Lecture
	11:00-12:00	Food production and trading system in Southeast Asia	TBD	Lecture
	12:00-13:00	Food security and food safety		Self-study & Assignment
Day 2 :				
	09:00-09:30	Pre-module quiz		Quiz
	09:30-10:30	Pig production	TBD	Lecture
	10:30-11:30	Chicken production	TBD	Lecture
	11:30-12:30	Beef production	TBD	Lecture
Day 3 :				
	09:00-10:00	Milk production	TBD	Lecture
	10:00-11:00	Egg production	TBD	Lecture
	11:00-12:00	Aquaculture production	TBD	Lecture
Day 4 :				
	09:00-10:00	Honey production	TBD	Lecture
	10:00-11:00	Edible insects production	TBD	Lecture
	11:00-12:00	Local backyard chicken production: economic sufficiency production	TBD	Lecture

Day 5 :				
	09:00-10:00	Sharing information on food production and trading system		Discussion
	10:00-10:30	Summary of module1		Reflection & discussion
	10:30-11:00	Post-test		Quiz
	11:00-11:30	Module evaluation		Evaluation
Day 6 :				
	09:00-09:30	Orientation to module2		Live
	09:30-10:00	Pre-module quiz		Quiz
	10:00-11:30	The role of veterinarian on food safety at local, national and global level	TBD	Lecture
	11:30-12:00	Sharing experience from each work: How do they contribute to food safety?		Discussion
	13:00-13:30	Food safety assurance system		Lecture video
	13:30-14:00	General Good Manufacturing Practice		Lecture video
	14:00-14:30	Exercise for general GMP	TBD	Practice
	14:30-15:30	Specific GMP	TBD	Lecture
	15:30-16:00	Exercise for specific GMP	TBD	Practice
Day 7 :				
	09:00-10:00	Lecture on principle of HACCP	TBD	Lecture
	10:00-11:00	Exercise: HACCP	TBD	Practice
	11:00-12:00	Discussion from Exercise: HACCP	TBD	Discussion

	13.00-14.00	Principle of risk analysis	TBD	Lecture
	14.00-15.00	Risk-based food safety	TBD	Lecture
	15.00-16.00	Exercise for risk-based food safety	TBD	Practice
	16.00-16.30	Discussion from exercise		Discussion
Day 8 :				
	09.00-10.00	Meat inspection and animal Welfare	TBD	Lecture
	10.00-11.00	Species specific meat inspection: Pig	TBD	Lecture
	11.00-12.00	Species specific meat inspection: ruminant	TBD	Lecture
	13.00-14.00	species specific meat inspection: poultry	TBD	Lecture
Day 9 :				
	09.00-10.00	Principle of surveillance and monitoring system	TBD	Lecture
	10.00-10.30	Exercise	TBD	Practice
	10.30-11.00	Discussion from exercise		Discussion
	13.00-14.00	Sampling techniques	TBD	Lecture
	14.00-15.00	Sampling plan	TBD	Lecture
	15.00-16.00	Hazards in food from animal origin production	TBD	Lecture
Day 10 :				
	09.00-10.00	Detection method of biological	TBD	Lecture

		hazards		
	10.00-11.00	Detection method of chemical hazards	TBD	Lecture
	11.00-11.30	Best practice: National food surveillance		Lecture video
	11.30-12.00	Exercise: National food surveillance		Assignment
	12.00-12.30	Reflection and discussion	TBD	Discussion
	13.30-14.30	Example of data management: scientific evidence to policy implementation	TBD	Lecture
Day 11 :				
	09.00-09.30	Exercise of module integration		Discussion
	09.30-10.00	Report back of best practice: national food surveillance		Assignment
	10.00-10.30	Reflection and discussion		Discussion
	10.30-11.00	Summary of food quality assurance and surveillance system	TBD	Lecture
	11.00-11.30	Post-test of module2		Quiz
	11.30-12.00	Evaluation of module2		Evaluation
Day 12 :				
	09.00-09.30	Pre-module quiz		Quiz
	09.30-10.00	Orientation to module3		Live
	10.00-10.30	Sharing experience from each work		Forum
	10.30-11.00	Overview of		Lecture video

		international trade framework		
	14.00-15.00	Bilateral agreement for international trade		Lecture video
	15.00-16.00	Experience sharing for international trade		Forum
Day 13 :				
	09.00-09.30	World Organizational for Animal Health (OIE)		Lecture video
	09.30-10.00	SPS and TBT agreement		Lecture video
	10.00-10.30	Codex Alimentarius		Lecture video
	10.30-11.00	Experience sharing for international organization		Forum
	11.00-11.30	Public policy process		Lecture video
	11.30-12.00	Food policy		Lecture video
	12.00-12.30	Reflection and discussion: food policy and international standards		Forum
	12.30-13.00	Post-test of module3		Quiz
	13.00-13.30	Evaluation of module3		Evaluation
Day 14 :				
	09.00-16.00	Project assignment		Assignment
Day 15 :				
	13.00-15.00	Project presentation		Presentation
	15.00-15.30	Course wrap up		Reflection & discussion
	15.30-16.00	Evaluation		Evaluation
	16.00-16.30	Final examination		Test