



Course Outline

Annual International Training Course

1. **Course Title:**

Animal Production for Sustainable Development Goal and Future Food Economy

2. **Duration:**

3 weeks (3 days per week)

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 be a contributor to international development cooperation. Believing that global challenges are best addressed through international cooperation and global partnership, TICA continues to work closely together with its development partners to realize the global development agenda through various capacity-building and human resources development programmes. 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 global reliable partner.

Since 1991, TICA, in collaboration with educational institutions in Thailand, has offered short-term training courses under its Annual International Training Course (AITC) programme. The number of courses offered each year varies between 25 to 35 courses for 20-35 participants per course. AITC not only fosters good 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 5 themes: Sufficiency Economy Philosophy (SEP), food security, climate change and environmental issues, public health, BCG Model related.

Faculty of Agriculture, Khon Kaen University

The Faculty of Agriculture was established in 1964. The responsibilities of the Faculty of Agriculture at that time were not only to be a resource of knowledge for students in various disciplines of agriculture but also to be a resource for contributing knowledge in agriculture in order to solve agricultural problems for the country as a whole. This included the search for new technologies in agriculture for the development and progress in the agricultural profession and the prosperity of Thai society.

From the beginning of the establishment until today, the Faculty of Agriculture has provided experienced lecturers, relevant and up-to-date technology, and equipment and textbooks in teaching and research for students and farmers in the region.

Moreover, the Faculty of Agriculture is responsible for coordinating both introductory and specialized training courses in a number of subject areas, including sustainable crop production, integrated pest management, dairy and beef cattle production technology, molecular techniques in agricultural biotechnology, and research and technology development for sustainable land management, tropical feed resource, area analysis of agricultural planning, sustainable agriculture and food security, utilizing indigenous food resources for food security, Utilizing Indigenous Food Resources for Food Security, Sustainable Animal Production and Resource Management for Sustainable Agriculture and Food Safety and Moving Local Agricultural Products from Self-Sufficiency Production and Household Consumption to Market by “Sufficiency Economy” Approach, etc.

4. Objectives:

The program is designed to share Thailand's knowledge and experiences in sustainable livestock production and inland aquaculture for future food economy.

5. Course Contents:

Topics of the training are divided into 2 modules.

- Module1:** Animal genetics, animal feed, and reproductive improvement from the indigenous animal for bioeconomy by moving local market to future-needed market
- Module2:** Sustainable livestock production, Inland aquaculture, edible insect management, Processing and marketing in animal production for future food economy

6. Participants' Criteria:

Applicants must fulfill the following requirements:

- Be nominated by their respective governments
- Currently working with at least two years of experience in a relevant field
- Universities graduated or possess an equivalent academic background in agriculture (animal science, veterinary, fisheries) or related fields
- Language: proficiency in English (speaking, reading and writing)

7. Attendance and Evaluation

- In-class participation.
- Module evaluation.
- Course evaluation.
- Submission and presentation of "Country Reports," which include information on agricultural, postharvest, and food security profiles of participant's respective country.
- Attendance - 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.

8. Venue:

Faculty of Agriculture, Khon Kaen University, Khon Kaen

9. Expected Results:

At the end of this course, participants are expected to;

- Get participants well acquainted with animal production, processing, and marketing concepts for food security and nutrition for the future.
- Provide the academic knowledge and practicum on sustainable livestock production leadership.
- Provide the academic knowledge on how to incorporate environmentally friendly and due with marketing sizes to achieve agricultural development in the entire food system.
- Stimulate participants to share experiences and lessons learned on Good Agricultural Practices.

10. Organization/Institution:

- Implementing Agency:**

Faculty of Agriculture, Khon Kaen University, Khon Kaen 40002, THAILAND

Tel: (66 43) 202360 Fax: (66 43) 202361

- Contact Person:**

Assoc. Prof. Dr. Vibuntita Chankitisakul.

Mobile Phone: (+66) 86-658-5988, E-mail: vibuch@kku.ac.th

11. Expenditure/Funding:

Thailand International Cooperation Agency (TICA)

Government Complex, Building B, 8th Floor,

Chaengwattana Rd. Laksi District, Bangkok 10210 THAILAND.

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

Email: aitic@mfa.go.th

Schedule for Training Programme:

Animal Production for Sustainable Development Goal and Future Food Economy

Date	Time	Session/Activity	Responsible / Speaker
10 Jun 2024	09.00-12.00	Opening and welcome session <ul style="list-style-type: none"> <input type="checkbox"/> Opening Session <ul style="list-style-type: none"> - Welcome Remarks and Opening Address by Dean of FOA - Explanation of program background, objectives & implementation by Vice Dean of Research and International Affairs, FOA <input type="checkbox"/> Program Introduction & synopsis 	Staffs
	13.30-16.30	Country reports <ul style="list-style-type: none"> <input type="checkbox"/> <u>Power point must be prepared (5 min presentation)</u> Translational Experiences <ul style="list-style-type: none"> <input type="checkbox"/> Case study in unsustainable animal production (livestock, fisheries, and insects) <input type="checkbox"/> Group discussion <input type="checkbox"/> Take home message I (for introduction) 	Dr.Monchai and staffs
Module I Animal genetics, animal feed, and reproductive improvement from indigenous animal for bio-economy by moving local market to future-needed market			
11 Jun 2024	09.00-12.00	Animal genetic resource management: key concepts <ul style="list-style-type: none"> <input type="checkbox"/> Overview and Introduction <ul style="list-style-type: none"> - The importance of the indigenous animal genetics from now and then? - How it relates to sustainable development goals? <input type="checkbox"/> Strategic utilizing of indigenous breeds from sustainable economy to bio-economy <ul style="list-style-type: none"> - Case study I: Native chickens for sustainable economy (chicken bank) - Case study II: Native chicken for bio-economy (value chain management) 	Dr. Monchai and Team
	13.30-16.30	Parent stock build-up and management <ul style="list-style-type: none"> <input type="checkbox"/> Setting up parent stock <ul style="list-style-type: none"> - Variety screening, population size, and location selection <input type="checkbox"/> Parent stock management: Native chicken example <ul style="list-style-type: none"> - Basic farm and hatchery management - Biosecurity and vaccination 	
12 Jun 2024	09.00-12.00	Animal breeding improvement <ul style="list-style-type: none"> <input type="checkbox"/> Basic genetic models 	Dr. Monchai and Team

Date	Time	Session/Activity	Responsible / Speaker
		<ul style="list-style-type: none"> - Genetics around us - Biodiversity concept <input type="checkbox"/> How to accomplish breeding goals <ul style="list-style-type: none"> - Breeding design, plans, & goals - Central testing, national herd evaluation, community breeding program <input type="checkbox"/> DNA technology: efficient tools for genetics management <ul style="list-style-type: none"> - Genetic characterization - Parentage testing - Marker assisted selection & genetic disorder diagnostics - Genomics applications 	
	13.30-16.30	<ul style="list-style-type: none"> <input type="checkbox"/> The importance of DNA technology or Biotechnology in sustainable development <ul style="list-style-type: none"> - A forum debate: Do we need DNA/Biotechnology in sustainable animal production? 	
17 Jun 2024	9.00-12.00	Reproductive management for sustainable production: current, and future <ul style="list-style-type: none"> <input type="checkbox"/> Application of reproductive technology in Thailand <ul style="list-style-type: none"> - Reproductive data in breeding stock: fertility assessment - Basic semen, oocyte, embryos collection and cryopreservation in domestic animals <input type="checkbox"/> Biotechnology useful in reproduction management 	Dr. Vibuntita and Team
	13.30-16.30	Group discussion on advanced reproductive biotechnology in their country	
18 Jun 2024	09.00-12.00	Nutrition management for sustainable production: current, and future <ul style="list-style-type: none"> <input type="checkbox"/> Feedstuff: Classification of feedstuff, Feed resource of farm animal, Categories local feed resources: Crop residues, Agro-industrial by-products, and non-conventional feed resources. <input type="checkbox"/> Workshop : Group discussion and presentation 	Dr. Sawitree and Team
	13.30-16.30	<ul style="list-style-type: none"> <input type="checkbox"/> Improvement of Feed Resources and Feed processing Workshop : Group discussion and presentation	
19 Jun 2024	09.00-12.00	<ul style="list-style-type: none"> <input type="checkbox"/> Nutrient requirement feed formulation <input type="checkbox"/> Workshop : Group discussion and presentation 	Dr. Chanon and Team
	13.30-16.30	Summary: Group discussion and presentation	Dr. Sawitree Dr. Anusorn

Date	Time	Session/Activity	Responsible / Speaker
			Dr. Chanon
Module II			
Sustainable livestock production, Inland aquaculture, edible insect management, Processing and marketing in animal production for future food economy			
24 Jun 2024	09.00-12.00	Introduction to GFM, GAP and organic production for livestock <ul style="list-style-type: none"> <input type="checkbox"/> GFM and GAP for livestock farm in Thailand <ul style="list-style-type: none"> - Farm standard & regulation for animal production in Thailand - Lesson learns: A study case from KKU farm Brain storming: Designing farm regulation for livestock production in your country	Dr.Wuttigrai and Team
	13.30-16.30	<ul style="list-style-type: none"> <input type="checkbox"/> Fundamental regulations for free range and organic livestock 	
25 Jun 2024	09.00-10.30	Sustainable aquaculture management	Dr. Wassana
	10.30-12.00	Traditional fish processing: an approach for sustainable aquacultural industry	Dr. Somsamorn
	13.30-16.30	Technology disruption and Smart Livestock Production	Dr.Wuttigrai and Team
26 Jun 2024	09.00-12.00	Edible insect production	Dr.Yupa and Team
	13.30-16.30	Closing session <ul style="list-style-type: none"> <input type="checkbox"/> Training summary from participant <input type="checkbox"/> Wrap up & Training reflection <input type="checkbox"/> Certificate announcement <input type="checkbox"/> Closing address by Dean Photo session	Staffs