Thailand's Annual International Training Course (AITC) 2017

"Diversified Farming Practices using Participatory Approach for Food Security and Safety"

I. Course Title: Diversified Farming Practices using Participatory Approach for Food Security and Safety

II. Duration: 24 September – 15 October 2017

III. Closing Date for Applications: 30 June 2017

IV. Background and Rational

"Diversified farming practice" is an approach that integrates of farmers' local knowledge in order to maximize the use of available resources for sustainable production of agriculture produces and food products. It can also reduce farmers' dependence on external inputs and enable farmers to make better use of farm resources. Properly designed and managed, diversified farming is more economically and ecologically resilient. It helps create a buffer against market uncertainty and biological risks. Diversification can also help small farm holders integrate farm business into wider rural economy, generating employment and stimulating spin-off business opportunities. For example, biodiversity-based clean and safe production systems not only enable farmers to produce agricultural products that meet food safety standards but also help them upgrade value of the products to be an organic food. The production of novel and niche products, such as from an integrated organic farms, can generate high return. A diversified farm of agro-forestry system design is now being considered as land use adaptation to climate change.

It is now well recognized that agriculture has multiple roles and functions. It plays important roles in society beyond primary production. Agriculture produces outputs that have environmental, social, and cultural value. In the context of sustainable agriculture and rural development (SADP), FAO identified three essential goals for the attainment of SADP. These include food security, rural employment and income generation, and natural resource conservation and environmental protection. These goals can be achieved through diversified farming.

There are several approaches to making our food system safer and more sustainable, and yet still accessible to the poor. One is public policy and government investments in food and agricultural research. More effective regulation, improved consumer literacy on food systems, better educated and healthier school

environments, and participation of local institutions who care about quality of the food consumed, and take initiative in promoting clean and safe production of food through diversified farming practices.

The other approach is through coordinated collective action of multi-stakeholders to help solve problems of food insufficiency, pricing and inequality. The rising cost of energy and recent food crisis push the system towards locally produced and healthier alternatives. Participatory approaches are being adopted, modified and implemented to enhance technology generation and local innovation, as well as integrating production and marketing to improve supply chain management.

Thailand is a major exporting country of agricultural produces and food products. Agricultural sector accounts for about 10 percent of the country's GDP. The sector also plays an important role for the country's economic growth, poverty reduction and food security. Over time, small holder farmers practicing a wide range of diversified farming systems plays an increasing role. Thus, Thailand hopes to share best practices and lesson learned regarding small farm holders adaptation in the globalizing economy, by linking social and ecological systems for sustainable food production and enterprise as well as market development.

Center for Agricultural Resource System Research (CARSR), Faculty of Agriculture, and Chiang Mai University has adapted systems approach in agricultural research, education and development since 1980s. The CARSR has offered the International Master's of Science program in Agricultural Systems since 1988 and the Doctor of Philosophy program in Agricultural Systems since 2008. The Center, in collaboration with the Faculty of Agriculture, has provide a number of short term international training workshops and courses on sustainable agriculture. The Center's facilities include fully irrigated experimental station working on biodiversity-based production systems and community market operated through MCC-Farmers' Pesticide-free Vegetable Production Network. The market which is operated in close collaboration with farming communities in Chiang Mai province provides favorable and convenient learning environment for participants for short term training program.

V. Objectives:

The training program is designed to;

- provide participants with systems and participatory approaches in promoting diversified farming systems and practices;
- expose participants with wide range of diversified farming practices, their systems properties, and enabling conditions under which the systems operate;

- provide participants with practical experience on how farmers manage their farming diversification and improve their market access;
- provide participants with methods and tools of analysis, monitoring and evaluation, with emphasis on participatory approach in diversified farming.

VI. Course Contents

The course will be facilitated through a number of teaching methods, including lectures, group discussion and presentation, case studies and field trips.

Course outline:

1. Agro-ecological principles and practices in diversified farming systems

- productivity and sustainability of farming systems
- integrated nutrient management
- integrated pest management
- integrated water management
- farm management for sustainability
- biodiversity in agro-ecosystem management
- resilience and equity consideration

2. Diversified farming systems: typology, structures and functions, systems properties and their contributions to small farm development

- Typology of farming systems
  - multiple cropping systems
  - agroforestry systems
  - low external input sustainable agriculture
  - specialized and intensified farming practices
- information and decision for farm planning

  Each system will be examined in relation to its contribution to food security, income stability, employment opportunity, environmental protection, and resource conservation.

3. Diversified farming for food security and safety

- individual farm management
- Community and collective action
- farmer-consumer interaction
- production quality control
- agricultural standardization
- small enterprise and market development

4. Selected diversified farming practices and production-marketing arrangement

- rice-based irrigated lowland systems
- clean and safe vegetable-based farming systems in peri-urban areas
- high value diversified fruit-tree based production systems
- contract farming arrangement
- non-contract farming arrangement
- farmer network in community market

5. Institutional arrangement and intervention

- farmer capacity development
- social learning and agricultural knowledge management systems
- new paradigm in institutional intervention

Practical exercise

- principles and practices in agro-ecosystem analysis
- participatory action research
- participatory monitoring and evaluation
- multi-stakeholder analysis
- case study research methodology

Field trip

a number of selected sites will be organized to expose participants with different organizational arrangement and management

- community rice seed production in rice based farming systems
- horticulture based farming systems
- integrated land use for food security and environmental protection
- integrated organic farming systems
- integrated crop-livestock systems

Advance assignments

Country report

All participants are required to prepare and submit a country report on diversify farming systems for food security and safety in his/her countries/territories. The full report including abstract should be approximately 10 pages long with double-spaced and should be submitted before the beginning of the programme. Suggested format for the report is as follows:

- Introduction
- Types of diversified farming systems
- The biophysical and socio-economic circumstances of selected study site
- Characteristics of small farmers who are practicing diversified

farming systems
- Production technology and farmers innovation
- Marketing arrangement
- Institutional interventions in farmer capacity building, technology development and market arrangement
- The future of diversified farming in sustaining food security and rural economy.

VII. Number of participants: 20

VIII. Participant criteria

Candidates must possess qualifications as specified in "Guideline for Thailand's Annual International Training Course Programme" No. 2 "Qualifications." Moreover, candidates with the following qualifications are preferred.

- University graduate or with equivalence academic background on agriculture, community development, social sciences, economics, extension or related fields;
- Under forty-five (45) years of age;

IX. Venue and Training Institution

Center for Agricultural Resource System Research (CARSR),
Faculty of Agriculture,
Chiang Mai University campus (CMU),
Chiang Mai, Thailand.

X. Contact

For more information, please contact;
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