

Strengthening Thailand's Agricultural Extension System through Agricultural Learning Centers for Increasing Production Efficiency (ALC) Using the FARMS Lifelong Learning Model



Executive Summary

Department of Agricultural Extension (DOAE) is the agency assigned by the Ministry of Agriculture and Cooperatives to formulate Thailand's agricultural extension guidelines and policies. The Agricultural Learning Center for Increasing Production Efficiency (ALC) serves as one of the key mechanisms for transferring appropriate agricultural knowledge,

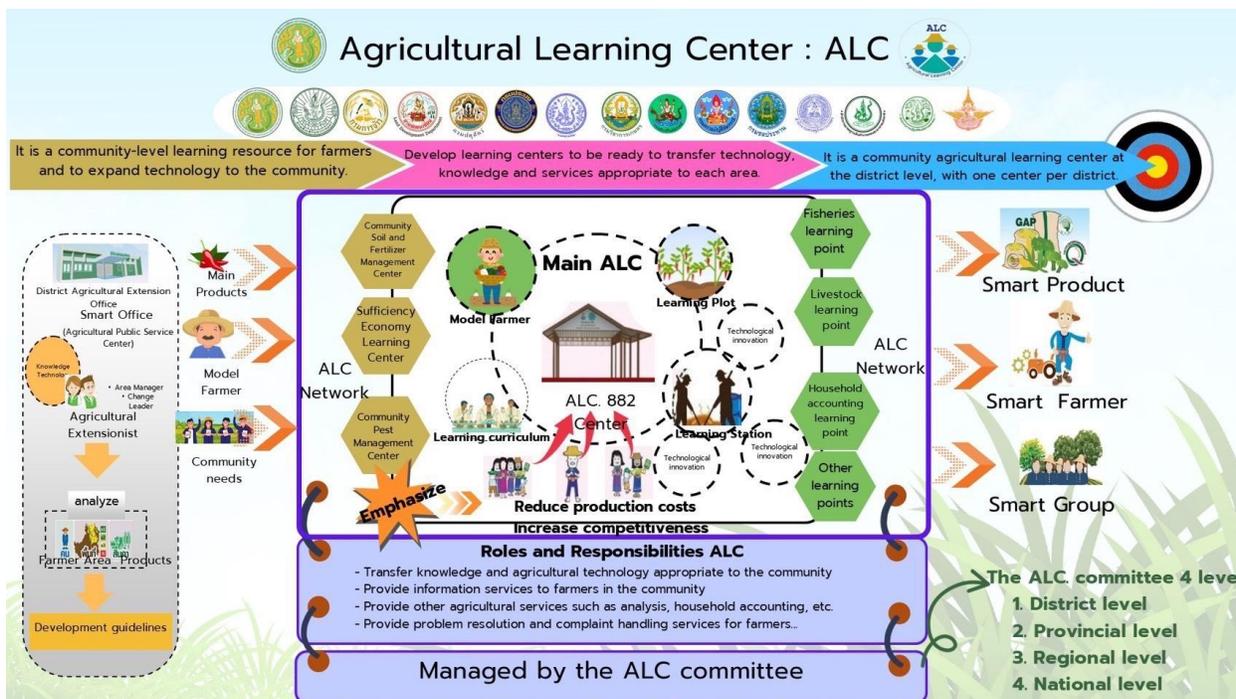
technologies, and services to farmers in the area through budget support, agricultural input, and materials for developing learning plots and learning bases within the ALC. Agricultural extension officers act as advisors and knowledge facilitators for farmers.

Under the AFACI-RATE project “Value Addition Technologies Promotion for Agricultural Products in Agricultural Learning Center for Increasing Production Efficiency (ALC)”, DOAE collaborated with researchers team from Kasetsart University to analyze the current agricultural extension system through ALC by collecting data, interviewing all stakeholder, and develop the “FARMS Lifelong Learning Model” to strengthening the existing agricultural extension system through ALCs to be more efficient, sustainable and respond to the real farmer’s needs.



Introduction

DOAE has adopted Training and Visiting (T&V) System in its agricultural extension work. In alignment with the National Strategy 2018 -2037, DOAE set up 882 Agricultural Learning Centers (ALCs) in 2017 as a main mechanism to drive and promote stakeholder participation and facilitate network management based on local resources, challenges, and farmers’ needs. Each ALC serves as a hub for learning in agricultural production, management, and marketing throughout the value chain. These centers aim to transfer agricultural services, appropriate information, and technologies to farmers. Located on the farms of exemplary farmers, ALCs also function as community-based models for agricultural innovation and knowledge sharing.



In the context of climate change, it severely impacts not only agricultural production in terms of yield, quality, and production cost, but also agricultural extension systems. It increases workload, requires new competencies, demands stronger partnerships, and pushes extension to adopt digital tools and climate-smart innovations. So, DOAE has set Thailand's agricultural extension policy for 2026 as "The Turning Point of Thailand's Agricultural Extension Work." The vision is to build the foundation for climate smart agriculture and ALCs remain the core mechanism for transferring technologies and enhancing farmer's capacity. Moreover, DOAE will enhance ALCs from general learning centers to "Climate Smart Agriculture Hubs." which agricultural extension officers will act as Extension Change Agents with digital competencies.

	Previous ALCs	New ALCs (2026)
Role	Technology transfer centers	Climate Smart Agriculture hubs
Operation approach	Knowledge transfer from the model farms	Driven by data-technology-market systems
Supporting technologies	Basic demonstration plots	Use of IoT, sensors, GIS, and digital warning systems
Management mechanism	Reliance on government budget	Integration with local authorities, private sector, and networks
Goal for farmers	Knowledgeable and skillful	Increased and sustainable income with competitiveness



Key Issues

“FARMS Lifelong Learning Model”, the results from AFACI-RATE project, can be aligned with Thailand’s Agricultural Extension Policy for 2026 and applied to strengthen agricultural extension by positioning ALCs as central mechanisms for integrated learning that connect among farmers (learners), extension officers (learning facilitators), and network partners (research institutes, private sector, and educational institutions). The model consists of five steps:

1. Focus (F); Setting goals and identifying key issues - define development targets at the local level, such as economic crop of the ALC, farmer’s needs and challenges etc.
2. Adaptation (A); Learning through experience and adaptation
 - 2.1 Adjust knowledge, attitudes, and behaviors to address risks such as natural disasters, market fluctuations, and budget constraints.
 - 2.2 Introduce new technologies and techniques such as IPM, greenhouse systems, drip irrigation etc.
 - 2.3 Conduct After Action Reviews (AAR) to capture lessons
3. Reinforcement (R); Empowering and validating new knowledge
 - 3.1 Promote repeated and experiential learning via model farmer plots and community learning bases
 - 3.2 Apply authentic assessments and record progress using DOAE’s RBM system
 - 3.3 Ensure learning content adapts responding to farmer’s needs
4. Management (M) ; Implementing effective management and driving actions
 - 4.1 Strengthening group and center-level management including planning, resource allocation, quality control, and marketing
 - 4.2 Promote appropriate and cost-effective technologies to reduce risk and improve productivity
 - 4.2 Strengthening farmer networks
5. Show & Share (S); Presenting, sharing, and co-creating learning - Disseminate knowledge via exhibitions, forums, social media, and online platforms, by ensuring accessible, simplified, and practical content

To enhance the model's effectiveness, factors contributing to success, potential challenges, and clear solutions at each stage must be considered. These include the role of clearly defined and fully committed model farmers, strong group formation with supporting networks, connectivity with local and external markets, and suitable

technology applications for management. Flexible planning aligned with local context is necessary, along with promotion on young farmers and youth development, emphasis on adopting appropriate technology to reduce risks, and integrated cooperation among all sectors to build stability and sustainability.

Thus, reinforcing these elements makes the FARMS Lifelong Learning model not only a conceptual framework but also a flexible, comprehensive practical tool addressing real challenges in the field, enabling ALCs and agricultural communities to sustainably develop and achieve success aligned with local conditions.

Policy Recommendations

1. Develop young farmers and farm youth as successor through schools and community learning hubs, including provide incentives and training program for them
2. Promote Climate-Smart Agriculture by developing natural disaster warning systems and risk-based cropping calendars, including scale up technologies for climate adaptation
3. Enhance workforce support and digital tools with flexible work planning and team-based support systems to reduce workload burden, including training on digital tools for officers and farmers
4. Strengthen funding availability by adopting multi-source financing: local budgets, community-based funding and public-private partnerships

Conclusion

The implementation under the “FARMS” model focuses on driving the mission of the ALC in alignment with the context of local farmers. It particularly emphasizes experiential learning promotion, integration of local wisdom with modern science, and the creation of flexible and open learning innovation spaces that respond to the needs of communities and society in the 21st century. This model reflects the lifelong learning process of farmers – a continuous and cyclical process that strengthens farmers, communities, and learning networks, enabling self-reliance and sustainable agricultural development.
