

Abstract

This research aimed to study the situation of agricultural services, service utilization and satisfaction of agricultural service users, and guidelines for the development and optimization of agricultural services. Data were collected by interviews with agricultural service providers and farmers who produce rice and palm oil that use 5 agricultural services: 1) soil preparation 2) rice planting 3) caring (agricultural drones in rice fields and mowing in oil palm plantation) 4) harvesting and 5) transportation of produce. Service quality satisfaction was analyzed in 5 aspects: 1) credibility 2) confidence building 3) physical appearance 4) care and 5) response. SWOT analysis and focus groups were used to define guidelines for the development of agricultural services. The results of the study were as follows:

In rice fields, service providers were farmers, the private sector, and farmer institutions. Most of the service providers' occupations were farmers who buy machinery to use on their farms and brought that machine to serve other farmers. The service was not fully capable of the machine. Therefore, service providers could increase the number of service areas. For service users, most of them used agricultural machinery because the number of agricultural workers decreased and it was convenient and faster than manual labor. 70% of service users used soil preparation, rice planting, harvesting, and transportation of produce that had less than 30 rai of machinery utilization area. While the area of using agricultural drones was more than 40 rai. If farmers used all agricultural activities. Their average cost was 1,575.83 baht per rai, which was lower than the manual operation with an average cost of 2,275.39 baht per rai.

The overall level of satisfaction with agricultural services had an average score of 4.39 at the highest level. The service users were most interested in the physical appearance of the service provider with an average score of 4.47. Next was reliability, building confidence in caring and response. So, the service providers must provide modern machinery and have sufficient quantity.

The guidelines for the development of agricultural services were: 1) Enhance the service process by developing the skills of personnel, knowledge of chemical use, related regulations, and maintenance and repair of machinery. Accelerate the procurement or develop machinery to support services that cover the production process. Maintain existing customer base by using information technology and social media to communicate, build a system to monitor and control and queue services. In addition, the government should expedite the formulation of policies, quality control requirements, and service price standards. 2) Expand value chain business, and organization structure and formulate strategies to support the growing demand for services. Build a network of service

providers for setting the rules, allocating service areas, knowledge exchange, helping, and requesting government support. Develop personnel's machine modification skills to serve a variety of plants. And use alternative energy instead of fuel.

In oil palm plantations, service providers were farmers, the private sector, and farmer institutions. Most of the service providers' occupations were farmers who buy machinery for convenience and speed to use on their own farms and brought that machine to serve other farmers. The service was not fully capable of the machine. Therefore, service providers could increase the number of service areas. Cause, soil preparation, planting, and harvesting required knowledge and expertise to operate then farmers prefer to use the services of agricultural providers. Mowing and transporting produce, farmers did it themselves. If farmers used all agricultural activities. Their average cost was 4,065.60 baht per rai, which was more than the manual operation with an average cost of 2,276.35 baht per rai.

The overall level of satisfaction with agricultural services had an average score of 4.09 at the high level. The service users were most interested in the reliability with an average score of 4.18. Next was the response, caring, building confidence, and physical appearance. Therefore, the service providers should have a good image, history, and reputation for good service. And the service is as agreed.

The guidelines for the development of agricultural services were: 1) Enhance the service process by increasing the service to cover all activities, queue for service, define service area scope, focus on quality, fair payment of personnel, and use modern machinery and technology with high efficiency. 2) Expand value chain business, by developing communication channels and disseminating information to be diverse and match with the target group. Build a network of service providers and users for knowledge exchange, allocate service areas, and support in various fields.

Based on the results of this research the suggestion could be set as follow: The government sector should promote the establishment of agricultural service standards according to academic principles. Support low-interest loans to purchase agricultural machinery for users who will be the next service providers. Promote the production of agricultural machinery, parts, and maintenance of machinery. Service providers should have a good service image, and develop communication channels between service providers and users by using online channels. Establish a group, association, or community enterprise for service management and increase the service to cover all activities. Service users should be a group to provide a large service area and establish a group of service users with agricultural machinery to upgrade to be an agricultural service provider.

Keyword: agricultural services providers, rice, oil palm