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**QUALITY OF PUBLIC SERVICE PROVISION FOR  
AGRICULTURAL PRODUCTION IN THE RED RIVER DELTA**

**Major: Economic Management**

**Code: 9.31.01.10**

**SUMMARY OF DOCTORAL THESIS**

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## INTRODUCTION

### 1. Rationale

In order to develop the agricultural economics, the government plays an extremely important role in orienting and supporting agricultural producers, through a system of public service providers.

In general, public services for agricultural production, including the system of agricultural extension and plant protection, have been synchronously organized from central to local levels, making important contributions to restructuring agriculture associated with new rural construction. However, there are still many inadequacies such as, the supply organization system is in the process of being restructured and inconsistent, inadequate facilities, staffs' professional capacity and organizational skills has not met the new requirements of modern agriculture, the budget for service activities is increasingly narrowed, .. while the demand in both quantity and service quality is increasing. This shows the need to innovate and improve the quality of public service provision for agricultural production in Vietnam in general and in the Red River Delta in particular.

Therefore, the study on the topic "*Quality of public service provision for agricultural production in the Red River Delta*" is necessary and meaningful in both theory and practice.

### 2. New contributions

#### 2.1. Theoretical contributions:

The thesis has (i) systematized and clarified the theories on the quality of public service provision for agricultural production as well as the factors affecting the service delivery quality; (ii) contributed to the development of a methodology and a model for assessing the quality of public service provision for agricultural production. Based on the characteristics of public services in the agricultural sector, the thesis builds appropriate quality assessment criteria and scales, creating a basis for future researches on the sector; (iii) conducted scale test and multiple regression analysis to determine the degree of influence

of the quality components of public service provision for agricultural production on the satisfaction of farmers.

### ***2.2. Practical contributions:***

The thesis has (i) analyzed the current situation of supply and quality of public service provision for agricultural production in the Red River Delta, discovered limitations and causes, forecast the context and social needs of the agricultural community, as a basis for proposing solutions; (ii) provided scientific arguments for the formulation of guidelines, quality policies, management mechanisms of the state and specialized units and solutions to improve the quality of service delivery, meet the needs of farmers and develop agriculture locally, inter-regionally and nationally; (iii) also be a reference for local authorities and specialized units in the agricultural sector to serve the renovation and improvement of service quality to better serve the needs of farmers and business organizations.

### **3. Thesis structure**

In addition to the introduction and conclusion, the thesis consists of 4 chapters:

Chapter 1. Literature review and research directions of the thesis.

Chapter 2. Theoretical and practical basis on the quality of public service provision for agricultural production.

Chapter 3. Situation of the quality of public service provision for agricultural production in the Red River Delta.

Chapter 4. Solutions to improve the quality of public service provision for agricultural production in the Red River Delta.

## Chapter 1

### LITERATURE REVIEW

#### AND RESEARCH DIRECTION OF THE THESIS

#### 1.1. LITERATURE REVIEW AND RESEARCH GAP

##### *1.1.1. Studies on service quality*

Typical authors include Parasuraman, Zeithaml, Gronroos, Cronin and Taylor... have conducted many qualitative and quantitative studies to establish models and scales to evaluate service quality from the user's perspective.

The Servqual or Servperf quality scale defines five quality criteria (RATERS) namely: Reliability, Assurance, Tangibles, Empathy, Responsiveness. However, the scales focus on the provision process, not mentioning the outputs of the services provided.

##### *1.1.2. Studies on the quality of public service provision*

Research in this direction can follow an assessment approach from the service provider itself with predetermined criteria, or based on user feedback. In particular, studies based on user feedback are used by many studies, through survey activities, based on theoretical models such as Servqual, thereby determining the level of quality and factors affecting customer satisfaction.

##### *1.1.3. Studies on the quality of public service provision in the agricultural sector*

Studies in this direction are quite diverse, including assessing the effectiveness of public service provision, building the index of agricultural and rural public services, assessing the quality of public administrative services in the agricultural sector, and assessing service quality of the agricultural agency, assessment the quality of extension services, etc. In which, the studies were conducted to survey groups of service beneficiaries, such as farmer households. Many foreign studies have used the Servqual or Servperf quality scale to assess the quality of public services in the agricultural sector, such as agricultural extension, from the perspective of service users. Domestic research based on this theoretical framework is still very limited.

#### ***1.1.4. Studies on the relationship between service delivery quality and customer satisfaction***

Studies in this direction show that service quality criteria are good predictors of customer satisfaction, but the level of impact of each factor on satisfaction will be different. Measuring service quality is the best way to understand customer satisfaction, better service quality corresponds to a greater level of satisfaction. The two concepts of service quality and satisfaction are independent of each other but have a close relationship with each other, the increase or decrease of service quality often leads to an increase or decrease in customer satisfaction.

#### ***1.1.5. Research gaps***

*Firstly*, the user approach is used by many studies to assess the quality of public service provision in the agricultural sector, however, the application of the Servqual quality scale has not been exploited much in agricultural service sector in Vietnam. Depending on each field, the quality criteria and indicators will need to be supplemented and adjusted, therefore, more in-depth studies in this field are needed. Practical studies help to verify the evaluation model and complete the scales of the quality of public service provision in the agricultural sector.

*Second*, public services in agriculture in general and public services for agricultural production in particular have not received much research attention, especially at the regional scale in Vietnam. Therefore, specific theoretical basis on the quality of public service provision for agricultural production need to be further improved and developed.

*Third*, the user is the center of the public service provision process and the goal of improving the quality of public service provision is ultimately towards user satisfaction. Therefore, assessing the quality of public service provision is not merely evaluating each dimension of service quality, but it is necessary to determine which quality factors affect user satisfaction. This is

also a gap that needs to be studied as a basis for proposing appropriate quality improvement solutions, towards improving user satisfaction.

*Fourth*, there have not been many studies using exploratory factor analysis and multiple regression to determine the quality components of public service provision for agricultural production and its influence on customer satisfaction. The results of using these methods can be served as a basis for proposing solutions to improve the quality of public service provision for agricultural production.

*Fifth*, research on service quality in the context of Vietnam's agriculture in general and the Red River Delta's agriculture in particular is almost unexploited, or only exploited in a few single services.

## **1.2. Objectives, object and scope of the study**

### ***1.2.1. Objectives of the study***

*Overall objective:*

On the basis of assessing the current situation of the quality of public service provision for agricultural production in the Red River Delta, then proposing solutions to improve the quality of public service provision for agricultural production in the Red River Delta in the near future.

*Specific objectives:*

- Systematize, interpret and clarify the theoretical basis and practical experience on the quality of public service provision for agricultural production.
- Analyze the current situation of delivery and quality of public service provision for agricultural production in the Red River Delta.
- Analyze the influence of the quality factor of public service provision for agricultural production in the Red River Delta on the satisfaction of farmers.
- Proposing viewpoints and solutions to improve the quality of public service provision for agricultural production in the Red River Delta.

### ***1.2.2. Object and scope of the study***

*Research object:* theoretical and practical issues on the quality of public service provision for agricultural production.

*Research scope:*

*a) Regarding the content:*

The study focuses on assessing the quality of public service provision for agricultural production in the Red River Delta, mainly in the field of crop production, specifically agricultural extension and plant protection services; The research also focuses on service users who are production household.

*b) In terms of space:*

The thesis studies the quality of agricultural service provision in the Red River Delta, including 11 provinces: Hanoi, Hai Phong, Hai Duong, Bac Ninh, Vinh Phuc, Hung Yen, Thai Binh, Nam Dinh, Ha Nam, Ninh Binh and Quang Ninh. In which, the survey of representative service users in 3 provinces is Hanoi, Ha Nam and Thai Binh.

*c) About time:*

The thesis studies the current status of the quality of public service provision for agricultural production in the period 2015 to 2020; proposed solutions until 2030.

### ***1.2.3. Research questions***

1) What is the content of the quality of public service provision for agricultural production? Criteria to evaluate the quality of public service provision for agricultural production?

2) What is the situation of service delivery and quality of public service provision for agricultural production in the Red River Delta? Which quality factors affect farmers' satisfaction?

3) What solutions should be taken to improve the quality of public service provision for agricultural production in the Red River Delta region up to 2030?

## **1.3. Research approach and methods**

### ***1.3.1. Analytical frameworks and approaches***

#### ***1.3.1.1. Approaches***



The thesis approaches to research the quality of public service provision for agricultural production from the perspective of economic management.

The customer is at the center of all efforts to improve service delivery quality.

The participatory approach of stakeholders affects service delivery quality.

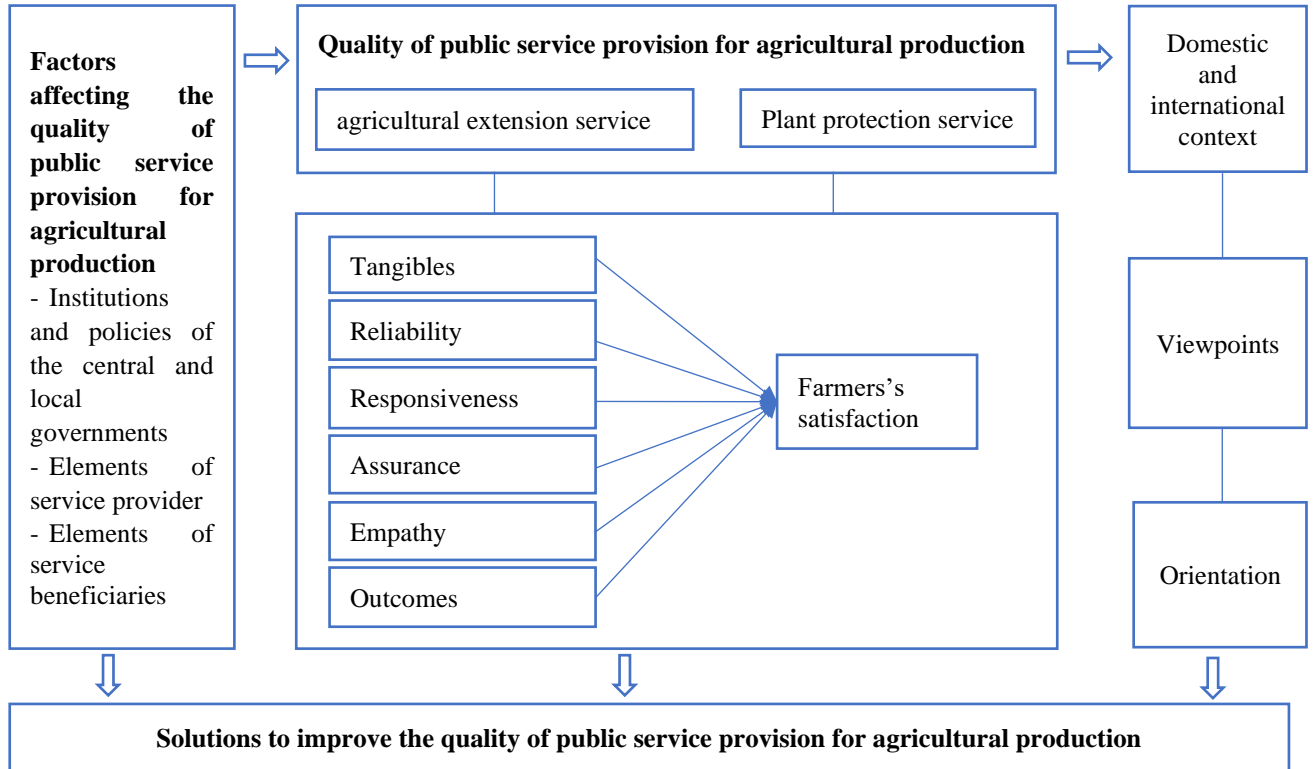
Use a combination of qualitative and quantitative research.

#### *1.3.1.2. Analytical framework of the thesis*

In order to propose solutions to improve the quality of public service provision for agricultural production in the Red River Delta, the thesis analyzes the current situation of the quality agricultural public service provision and the factors affecting the quality of agricultural public service provision in the region.

The system of public services for agricultural production is quite diverse, in which there are typical agricultural extension and plant protection services that the thesis focuses on. Evaluation of service delivery quality from the perspective of users is expressed in 6 aspects, namely tangibles, reliability, responsiveness, assurance, empathy and service outcomes. In addition, the study identifies factors affecting farmer satisfaction, to create more basis for proposing solutions to improve service quality, in which customers are the center of all improvement efforts.

The study also incorporates supplier-side performance analysis, based on interviews with supplier representatives, and performance reports of plant protection and extension suppliers, to support the findings from the user perspectives.



**Figure 1. 1: Analytical framework of the thesis**

Source: Author

### ***1.3.2. Methods of collecting secondary data***

Some secondary data sources approached and exploited by the author:

- Data reported from service providers: Report of the Agricultural Extension Centers of the Red River Delta provinces, the National Agricultural Extension Center; Report on plant protection of the Sub-Department of Cultivation and Plant Protection of the provinces in the Red River Delta.

- Database of the General Statistics Office, the Ministry of Agriculture and Rural Development, the Department of Agriculture and Rural Development and other related units.

- Information and data published from previous studies related to the thesis topic.

### ***1.3.3 Methods of collecting primary data***

#### ***1.3.3.1. Investigation of service beneficiaries***

##### ***a) Objects of investigation***

The objects of the survey are beneficiaries of public services for agricultural production, mainly farmers. This survey was conducted to collect farmers' assessments of service quality aspects and their overall satisfaction with agricultural extension and plant protection services.

##### ***b) Selection of survey sites***

Survey in 3 representative provinces of the Red River Delta, including Hanoi, Thai Binh and Ha Nam. In each surveyed province, study of 2 representative agricultural districts and each district has 2 communes representing agricultural site, especially households cultivating crops such as rice, vegetables and fruit trees, because these are the main crops of the region, ensuring the representativeness of the whole.

##### ***c) Survey sample size***

In this study, the author used convenient sampling method. The total number of questionnaires issued was 300, the total number of valid responses collected was 283, achieving a response rate of 94.33%. In which, Hanoi received 73 responses, Ha Nam 110 responses, and Thai Binh 100 responses.

#### *d) Contents of the survey*

The survey questionnaire structure consists of 3 parts: part 1 is demographic questions (gender, age, education level, cultivated area, and type of crop); Sections 2 and 3 respectively refer to the quality aspects of agricultural extension and plant protection services in terms of (1) tangibles, (2) reliability, (3) responsiveness, (4) assurance, (5) empathy, (6) outcomes, and (7) overall service satisfaction.

##### *1.3.3.2. In-depth interview with service providers*

In this study, in-depth interviews were used to clarify the limitations and causes of the quality of public service provision for agricultural production from the perspective of the suppliers-side. Interviewees are representatives of service providers, including managers and service implementation staff, including 6 representatives of agricultural extension and 6 representatives of plant protection.

#### **1.3.4. Data and information analysis methods**

##### *1.3.4.1. Descriptive Statistics*

This method is used to describe the characteristics of the survey sample, assess the situation of agricultural public service quality from the user's perspective..

##### *1.3.4.2. Comparative Statistical Methods*

Using the comparative method to compare data over time, between objects, types of services, between localities in the region. Compare the average values of the quality indicators of public service provision for agricultural production from the user's perspective, to figure out the advantages and limitations of each quality scale.

##### *1.3.4.3. Methods of using quantitative models*

In order to assess the influence of quality factors on farmers' satisfaction with public services for agricultural production, the thesis applies methods to

test the scale based on Cronbach's Alpha reliability, exploratory factor analysis (EFA) and multivariate regression model on SPSS software.

## **Chapter 2**

### **THEORETICAL AND PRACTICAL BASIS ON THE QUALITY OF PUBLIC SERVICE PROVISION FOR AGRICULTURAL PRODUCTION**

#### **2.1. Theoretical basis on the quality of public service provision for agricultural production**

##### *2.1.1. Public services for agricultural production*

###### *2.1.1.1. The concept of public services for agricultural production*

Public services for agricultural production are those directly provided or financed by the state in order to serve the essential needs and common interests of agricultural producers.

###### *2.1.1.2. Characteristics of public services for agricultural production*

*First*, public services for agricultural production are not just services, but they can be in the form of goods or services, tangible or intangible products.

*Second*, they are often essential services for a sustainable agriculture, serving the common interests of the entire farming community.

*Third*, do not aim to seek profit.

*Fourth*, the State ensures the supply but does not necessarily directly produce them.

###### *2.1.1.3. Classification of public services for agricultural production*

Based on the subject of provision: public services directly provided by state agencies; public services provided by private and non-governmental organizations; Public services are jointly performed by the state, non-governmental organizations and private organizations.

Based on the level of payment of the service user: free service, partially paid service, and fully paid service.

Based on areas of expertise: agricultural extension, cultivation and plant protection, animal husbandry and veterinary medicine.

### ***2.1.2. Providing public services for agricultural production***

#### ***2.1.2.1. The concept of providing public services for agricultural production***

Public service provision for agricultural production is the provision of intangible public services and tangible public goods to support the essential needs of the owner of agricultural production.

#### ***2.1.2.2. Ways of providing public services for agricultural production***

In the field of crop production, the provision of public services for agricultural production includes the provision of agricultural extension services (transfer of technical and technological advances to agricultural producers) and plant protection services (support plant owners to prevent pests).

### ***2.1.3. Quality of public service provision for agricultural production***

#### ***2.1.3.1. The concept of the quality of public service provision for agricultural production***

The quality of public service provision for agricultural production reflects customers' perceptions on specific aspects of the service, the degree to which it meets customer requirements and satisfies them. Customers are agricultural producers who can be individuals or organizations.

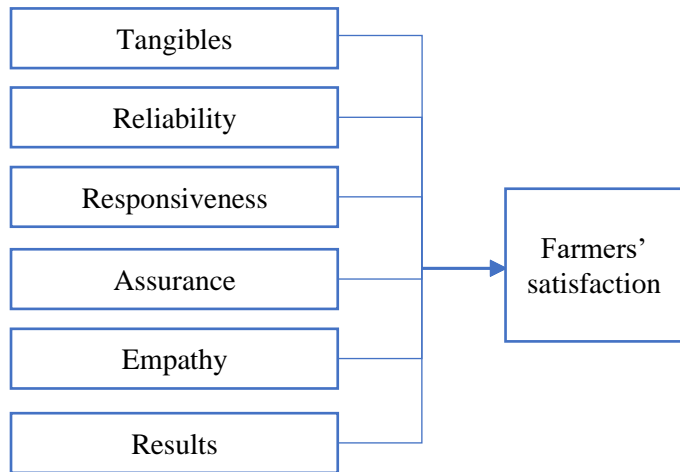
#### ***2.1.3.2. The role of the quality of public service provision for agricultural production***

Ensuring the quality of public service provision for agricultural production is important for (i) state management, (ii) providers, and (iii) service users.

### ***2.1.4. Models and hypotheses to assess the quality of public service provision for agricultural production***

Literature review of the works on service quality and public service quality in the agricultural sector allows the author to establish a model to evaluate the quality of public service provision for agricultural production from the perspective of users. At the same time, study the quality factors that affect

the satisfaction of farmers to supplement the basis for proposing solutions to improve supply quality.



*Figure 2. 1: Model to evaluate the quality of public service provision for agricultural production*

*Source: Adjusted from Parasuraman et al. (1988, 1991) and Gronroos (1984)*

**2.1.5. Factors affecting the quality of public service provision for agricultural production include** (1) *Factors related to State's institutions and policies;* (2) *Factors from the service providers;* (3) *Factors from the service beneficiaries.*

## **2.2. Practical experience in improving the quality of public service provision for agricultural production.**

The thesis studied experiences in improving the quality of public service provision for agricultural production of some agricultural regions in the world (agricultural region in the south of Korea, agricultural region in central Thailand, Great Plains in the US) and a number of regions and localities in the country (Mekong Delta, Central Highlands) from which to draw some lessons on improving the quality of public service provision for agricultural production in the Red River Delta.

## Chapter 3

### **SITUATION OF THE QUALITY OF PUBLIC SERVICE PROVISION FOR AGRICULTURAL PRODUCTION IN THE RED RIVER DELTA**

#### **3.1. Agricultural production and the State's policy on public service provision for agricultural production in the Red River Delta**

##### ***3.1.1. Situation of agricultural production in the Red River Delta***

According to the 2019 statistical report, 37.2% of the land area of the Red River Delta is for agricultural production, with 789,800 hectares, accounting for 6.9% of the country's agricultural land. The main crops of the Region include rice, maize, vegetables and fruit trees. Agricultural land area tends to decrease, but crop productivity tends to increase.

##### ***3.1.2. Situation of the policy framework of providing public services for agricultural production***

In Vietnam, the policy framework of providing public services for agricultural production is reflected in many different legal documents, corresponding to each service sector: agricultural extension, cultivation and plant protection, animal husbandry and veterinary medicine. The delivery system is established vertically from the central to the local. Services are provided through this system directly, along with cooperation mechanisms to related parties.

#### **3.2. Situation of public service provision for agricultural production in the Red River Delta**

##### ***3.2.1. Actual situation of providing agricultural extension services***

###### ***3.2.1.1. Trainings***

Trainings include short courses linking theory with practice, FFS field classes, distance learning, domestic and international study visit. Due to the characteristics of agricultural production in the Red River Delta, training courses in the field of crop production usually account for the highest proportion, followed by livestock and aquaculture.



### *3.2.1.2. Building and replicating the agricultural extension model*

Models are in all three areas of agriculture (cultivation, livestock, fisheries), the largest number in the field of cultivation. Cultivation models are focusing on the development of new plant varieties with high yield and quality, the value chain production associated with consumption, good agricultural practices and certification...

### *3.2.1.3. Information and communication*

Agricultural extension agencies in localities in the region use various communication channels, including the mass communication system (television, newspaper, local radio); publishing magazines, documents and other kinds of agricultural extension publications; organizing agricultural extension events (conferences, seminars, contests, fairs, exhibitions, study tours, forums, talks); newsletter, agricultural extension website. Many provinces (Hung Yen, Hai Duong,...) have integrated training with information and propaganda work.

### *3.2.1.4. Advices and extension services*

In general, agricultural consulting and extension services are free of charge, most activities are funded by the state budget, and paid services cannot be implemented due to the small and fragmented nature of agricultural production activities.

## **3.2.2. Current status of plant protection services**

### *3.2.2.1. Directing the prevention of harmful organisms*

Investigate, detect, estimate and forecast; promulgate guiding documents and organize the implementation of the prevention work and control of harmful organisms; propaganda against harmful organisms.

### *3.2.2.2. The transfer of technical advances into production*

The system of planting and crop protection stations plays an important role in bringing new technical advances into production such as integrated pest management IPM, improved rice farming techniques SRI, organic agriculture, ecological technology, etc.

### *3.2.2.3. Trainings*

Every season, the Sub-Department of Crop Production and Plant Protection of the provinces in the Red River Delta organizes training courses for staff and farmers on IPM, SRI, and effective, safe and environmentally friendly pest control measures.

3.2.2.4. *Other tasks:* inspection and examination of organizations trading in agricultural materials; domestic plant quarantine.

### **3.3. Evaluation of the quality of public service provision for agricultural production in the Red River Delta**

#### **3.3.1. Actual situation of quality of agricultural extension service supply**

##### *3.3.1.1. Status of delivery quality components of agricultural extension service*

*Tangible aspects of agricultural extension services:* There is not enough material and technical facilities and equipment to serve agricultural extension activities in a professional and modern way. Documents for agricultural extension needs to be improved in both content and form.

*Reliability of agricultural extension services:* Agricultural extension activities (training, model deployment, propaganda) are implemented in accordance with the season and agricultural production conditions of each locality. However, the reliability of agricultural extension activities is limited in some aspects related to training content; the organization, coordination and deployment of models; scattered, small and not high technical content of the model; or difficulty in choosing the point of deployment of large or high-tech models due to the majority of smallholder farmers.

*Responsiveness of agricultural extension services:* The agricultural extension system is organized to each locality at district and commune level. For each activity, there is a specific officer in charge, directly supporting the farmers participating in the model, answering questions during the implementation process. However, some limitations still exist related to the ability to respond, such as some localities still lack staff for agricultural extension activities, the connection between farmers and extension workers

needs to be improved, some agricultural extension projects and programs are behind schedule.

*Assurance of agricultural extension services:* Most of the observations showed a very positive record of farmers towards the capacity and attitude of the staff. However, a number of aspects still need to be improved such as an inadequate staff, lack of specialized staff, limited skills in organization, management and implementation of models, consulting capacity, economic knowledge and digital transformation in agriculture.

*Empathy of the agricultural extension service:* Through direct contact with farmers, officials grasp farmers' needs in terms of training content, actively research new models, advanced technical advances to advise on building appropriate models for local. However, budget constraints also make many needs unmet.

*Outcomes of agricultural extension services:* Farmers are well recognized for the contributions of local agricultural extension, helping farmers improve crop productivity, reduce production costs, improve farming knowledge and improve crop quality. However, there are still some aspects such as the replicability of the demonstration model, the ability of farmers to apply technical advances and knowledge learned from the model and training courses to actual production.

### *3.3.1.2. Effects of quality components of agricultural extension services on farmers' satisfaction*

The regression model shows the relationship between the independent and dependent variables as follows:

$$\text{Satisfaction on agricultural extension} = 0.418 * \text{Assurance} + 0.290 * \text{Reliability} \\ \text{and empathy} + 0.137 * \text{Outcomes}$$

The Assurance factor ( $\beta = 0.418$ , sig. = 0.000 < 0.01) has the strongest impact. Reliability-empathy factor ( $\beta = 0.290$ , sig. = 0.000 < 0.01) has the

second strongest impact. The service outcomes factor ( $\beta = 0.137$ , sig. =  $0.015 < 0.05$ ) has the third strongest impact.

### **3.3.2. Status of quality of plant protection services provision**

#### **3.3.2.1. Status of quality components of plant protection service provision**

*Tangible aspects of plant protection service:* The need for additional specialized equipment, especially the application of 4.0 technology for timely and effective disease surveillance. Costumes and documents for plant protection should be carefully invested.

*Reliability of Plant Protection services:* Farmers highly appreciate the reliability of plant protection, shown in a number of aspects such as the investigation, detection and prediction of harmful organisms are well done; information on pest and disease situation is informed accurately and timely; the concern and support of farmers in dealing with pest problems of plant protection officers. However, there is still a lack of confidence of farmers in the quality of local plant protection drugs.

*Responsiveness of Plant Protection Services:* Farmers highly appreciate the responsiveness of the plant protection work, reflected in a number of aspects such as the organization of pest control organized according to the local plan, information on the timing of the organization is informed to each farmer, ready to assist the farmer in answering questions and dealing with pest problems.

*Assurance of plant protection services:* Farmers have a positive feeling about the capacity and attitude of the plant protection officer, they feel secure when they are guided by the grassroots plant protection officer on how to prevent pests and diseases. However, in some localities, the number of officials is still small compared to the size of the area and the complexity of pests and diseases; the impact of the merger into the district agricultural service center on the protection of crops; regime for staff.

*Empathy of the plant protection service:* Farmers noticed the interest of staff and Plant Protection Station in the situation of pest control and the use of

pesticides in the locality. In plant protection work, top-down support and direction are key, based on local needs and conditions. Basically, the models are suitable for the locality because they will choose the appropriate area for that content to deploy. However, much of it is still technical support for farming.

*Outcomes of the plant protection service:* The results show that farmers have a positive feeling about the contribution of plant protection work in the locality, helping them to improve crop productivity, reduce production costs, and improve their knowledge of pest control and improve crop quality. The results of plant protection services depend on many factors such as funding sources, implementation capacity of service providers, coordination between parties, as well as farmers' awareness.

### *3.3.2.2. Effects of quality components on farmers' satisfaction with plants protection services*

The regression model shows the relationship between the independent and dependent variables:

$$\text{Satisfaction with plant protection service} = 0.448 * \text{Assurance} + 0.274 * \text{Tangibles} + 0.083 * \text{Outcomes}$$

The Assurance factor ( $\beta=0.448$ , sig. = 0.000 < 0.01) has the strongest impact. The tangibles factor ( $\beta=0.274$ , sig. = 0.000 < 0.01) has the second strongest impact. The service outcome factor ( $\beta = 0.038$ , sig. = 0.083 < 0.1) has the third strongest impact.

## **3.4. Overall assessment of the quality of public service provision for agricultural production in the Red River Delta**

### ***3.4.1. Achievements***

- The service delivery system is organized from central to grassroots level.
- The supply capacity of the system is increasingly consolidated.
- The content and method of service provision are improving.
- Basic service quality meets the needs of farmers.

### **3.4.2. Limitations and shortcomings**

- The service delivery system is not really synchronized
- Limitations on the tangible aspect of the service
- Limitations of staff capacity
- The service outcomes are not as expected
- Service reliability is not really high
- Service empathy has not been paid much attention
- The responsiveness of the service is somewhat limited
- The service provided is not comprehensive and does not meet the current requirements
- Service implementation is not really effective

### **3.4.3. Causes of limitations and shortcomings**

*Causes from the State's institutions and policies:* mechanisms and policies to support agricultural development are not synchronized and not strong enough; lack of guiding documents from the central government, especially the Ministry of Agriculture and Rural Development on reorganization; lack of coordination mechanism among stakeholders leading to low implementation efficiency, etc.

*Causes from service providers:* Limited ability to capture and direct demand for agricultural production subjects; the ability to design service packages and commitment to service quality; and service implementation capabilities

*Causes from service beneficiaries:* The education level, age, and participation of agricultural workers are still limited; fragmentation of agricultural production in the region.

**Chapter 4****SOLUTIONS TO IMPROVE THE QUALITY OF PUBLIC SERVICE PROVISION FOR AGRICULTURAL PRODUCTION IN THE RED RIVER DELTA.****4.1. Context and issues for improving the quality of public service provision for agricultural production in the Red River Delta in the coming period.*****4.1.1. The context related to public services and improving the quality of public service provision for agricultural production***

International economic integration requires Vietnamese agriculture to accept stronger competition and comply with increasing standards of domestic and international markets. Domestic context: the policy of transforming the mindset of "agricultural production" to the mindset of "agricultural economy"; digital transformation in agriculture; climate change; agricultural production along the value chain.

***4.1.2. Issues to improve the quality of public service provision for agricultural production in the Red River Delta in the coming period***

The domestic and international context sets requirements for improving the quality of public service provision for agricultural production towards modernity, application of high technology, formation of value chain links and adapt to climate change.

**4.2. Viewpoints and orientations to improve the quality of public service provision for agricultural production in the Red River Delta in the period to 2030*****4.2.1. Viewpoints on improving the quality of public service provision for agricultural production in the Red River Delta***

*First*, improving the quality of public service provision for agricultural production needs to be associated with satisfying customer requirements, taking customers as the center of all improvement efforts.

*Second*, improving the quality of public service provision for agricultural production is the task of the whole system from central to local levels.

*Third*, strengthening the application of new public management principles such as socialization mechanisms, total quality management to improve service delivery quality.

*Forth*, improving service delivery quality associated with information technology application and digital transformation in agriculture.

#### ***4.2.2. Orientations to improve the quality of public service provision for agricultural production in the Red River Delta***

*First*, agricultural public services are developed based on market demand, even oriente market demand to promote agricultural development in a sustainable direction, in accordance with the orientation of the Party and State.

*Second*, agricultural public services are provided to supplement the market, not to compete with the private sector.

*Third*, strengthening socialization in the provision of agricultural public services, attracting different economic actors to participate in the supply.

*Forth*, separation of public services from public administrative services for agricultural production.

*Fifth*, developing a quality, modern, professional and efficient agricultural public service supply system..

### **4.3. Solutions to improve the quality of public service provision for agricultural production in the Red River Delta up to 2030**

#### ***4.3.1. Group of solutions on mechanisms and policies of the State***

*First*, Planning land on a large scale and establishing production points in accordance with the strengths of the locality and region.

*Second*, Developing a unified operating mechanism for the agricultural public service provision system

*Third*, Strengthening the coordination mechanism and promoting socialization in the provision of agricultural public services.

*Forth*, Applying total quality management mechanism (TQM).



### **4.3.2. Group of solutions related to service providers**

*First*, Improve the ability to capture and direct demand for agricultural production subjects.

*Second*, Improve the ability to design service packages and quality standards to meet the needs of farmers.

*Third*, Improve capacity of service delivery organization in localities according to designed service quality standards.

*Forth*, Improve the quality components affecting farmers' satisfaction.

- *Assurance*: (i) Develop job descriptions and competency frameworks for the positions of managers and staffs; (ii) strengthen training for grassroots staff and service implementers; (iii) develop a motivation mechanism for managers and staffs.

- *Tangibles*: renovate and upgrade the physical and technical conditions and equipment for agricultural extension and plant protection activities in a professional and modern manner..

- *Service outcomes*: Establish service outcome standards. Conduct evaluations of services, programs and projects against designed standards. Build a unified reporting system on service performance (KPIs).

### **4.3.3. Group of solutions related to service beneficiaries**

- Improve the education level and awareness of farmers

- Encourage young people to start-up a business in agriculture

- Encourage the development of community agricultural extension groups to increase the proactiveness, solidarity and mutual support of farmers

## **CONCLUSION AND RECOMMENDATIONS**

### **1. Conclusion**

With the research objectives identified, the thesis has achieved the following results:

First: The thesis has systematized theoretical basis on the quality of public service provision for agricultural production from the user's perspective,

including 6 aspects: tangibles, reliability, responsiveness, assurance, empathy and service outcomes.

*Second:* A study on the current situation of the quality of public service provision for agricultural production in the Red River Delta shows a number of advantages: the supply capacity of the system is increasingly strengthened, the content and provision of services are improved gradually. However, some limitations still exist such as facilities, capacity of staff, service outcomes not as expected, service reliability is not high.

*Third:* Research has also shown the quality components that affect the satisfaction of farmers. For agricultural extension is assurance, reliability - empathy, and service outcomes. For plant protection, there are assurance, tangible aspects and service outcomes.

*Fourth:* The study has proposed a number of solutions on state mechanisms and policies, for service providers and service users in order to improve the quality of public service provision for agricultural production.

## **2. Limitations of the thesis**

The scope of the research focuses only on the field of crop production, with two service areas: agricultural extension and plant protection. Evaluation is mainly based on the user's perspective. The number of survey samples needs to be expanded in terms of both the number and diversity of beneficiaries. Currently, the survey only focuses on the main group of small farmers, not including agricultural enterprises and large farmers.

## **3. Recommendations for further research**

It is necessary to conduct further study to improve the theoretical and practical basis on the quality of public service provision for agricultural production, from the perspective of service users, from service providers and state management agencies.

If there are conditions to expand the survey object and increase the sample size, it will provide a better basis for proposing solutions to improve the quality of agricultural public service provision.

**LIST OF PUBLICATIONS RELATED TO THE THESIS**

1. Nguyen Thi Thanh (2020), *Quality of public services for agricultural production development in the Red River Delta*, Vietnam Journal of Agricultural Science, No. 5, p. 378-389
2. Nguyen Thi Thanh (2020), *Impact of quality of agricultural extension services on farmers' satisfaction: Research in the Red River Delta*, Journal of Economics and Development, No. 282, p. 84-93
3. Nguyen Thi Thanh, Le Quoc Hoi (2022), *Quality of agricultural extension services for agricultural production in the Red River Delta*, Asia-Pacific Magazine, No. 612, p. 80-82
4. Nguyen Thi Thanh, Le Hoang Lan (2022), *Solutions to improve the policy framework for providing public services for agricultural production*, Journal of Industry and Trade, No. 15, p. 154-159
5. Nguyen Thi Thanh (2022), *Quality of public service provision on plant protection in the Red River Delta*, Journal of Economics and Forecasting, No. 18, p. 53-56