

## **Contract farming application in the Vietnamese shrimp value chain**

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### **Abstract**

*Shrimp value chain in Vietnam functions with a large number of farmers. They stay in the weakest position in the chain due to their small individual scale with an average land of about 0.5 ha/farm, and low skills (Ho, 2012). As a leader and holding the strongest power in the shrimp value chain, the processors determine shrimp prices and set up requirements of shrimp quality and size in the market though quality control has not been completely implemented due to the limitations of financial capital, knowledge, awareness, as well as the quality of raw material supplied by collectors and farmers. In order to help the shrimp sector to work more efficiently, the Vietnamese government brought together shrimp farmers and plant processors through a farming contract. Two years after this application, the contract farming model failed due to the floor price mechanism, risk sharing, small scale of the model while there are excess suppliers in the market, administrative misconception and inefficient public management. As a result, farmers still stay at the weakest position and the shrimp sector could not improve its product safety to adapt to the requirement of import markets. The study results recommend necessarily a planning and projection of shrimp production zones, re-organizing shrimp farmers into legal teams or groups or cooperatives to increase the size of the existing shrimp cultivation units in Vietnam.*

**Keywords:** contract farming, value chain, shrimp, Vietnam.

### **1. Introduction**

Shrimp culture has played an important role in the economy of Vietnam. It ranks third among the key economic sectors of the country's agriculture after rice and pangasius. The total export value reached three billion USD in 2015 (Fistenet, 2015). Vietnamese shrimps were exported to 92 different countries in the world in which Europe, Japan, and the United States are the main importers (Kinhtevadubao, 2016).

Though it contributed significant figures to the economy, shrimp in Vietnam is still known as a very sensitive sector which includes many different actors in its value chain. Shrimp farmers have stayed in the lowest position comparing to collectors and processors who have been holding the highest power in the chain.

In order to help the shrimp sector to work more efficiently, the Vietnamese government brought together shrimp farmers and plant processors through a farming contract. This paper will analyse the unique case of contract farming in shrimp value chain in Vietnam and propose suitable policies.

### **2. Demand for contract farming in the shrimp value chain in Vietnam**

Contract farming is very important in agriculture in general, and in Vietnam aquaculture in particular. It helps actors in the value chain to reduce transaction cost, to give opportunities for innovation and product differentiation, to gain

advantage derived from market information, to reduce risk and increase market power (Rehber, 1996).

In shrimp production it also increases demand for capital during the production process and creates high competition in shrimp product markets. Furthermore, most of actors in shrimp value chain found that shrimp production in Vietnam is an unsustainable sector due to low and unstable prices, high competition and lack of information in market prices. The shrimp value chain functions with a large number of farmers. They stayed in the weakest position in the chain due to their small individual scale with an average land of about 0.5 ha/farm, and low skills (Ho, 2012). They also expect to improve their production activities to get more benefit by increasing the possibility to access to capital, new technologies and having supports from suitable aquaculture policies.

Besides, like most of other agricultural products, shrimp production in Vietnam is changed year by year because of an increase or decrease of the number of producers due to the fluctuation prices of shrimp products. More farmers will join in the sector and more farmers will increase their production area if the prices are high. By contrast, some will give up their production and move to other aquaculture products such as fishes, crabs if the selling prices are low. At some cases, there is an excess supply which leads to a broken bottom of selling prices and consequently, there is a lack of shrimp raw material supply the next crop season due to a reduction of production. As a result, processors do not have stable shrimp raw material suppliers for their process.

Shrimp processors usually sign contracts with importers to supply an amount of products at a given time. These contracts often give a plan of amount of raw materials that the processors need to buy shrimps from farmers for their processing activities. However, shrimp production is not stable so that processors are not sure if they have enough inputs at the time they sign a contract. They therefore might reduce buying prices if there is an excess supply from farmers. They also might have to increase buying prices to collect shrimp if inputs are not enough in the market. Thus, both actors are not in stable position to play the game.

In addition, as a leader with more than 530 members (Van Duijn, 2012), and holding the strongest power in the shrimp value chain, the processors determine shrimp prices and set up requirements of shrimp quality and size in the market though quality control has not been completely implemented due to the limitations of financial capital, knowledge, awareness, as well as the quality of raw material supplied by collectors and farmers. Processors also have to assure that their export products are safe and satisfy all the quality requirements of importers, especially product traceability profiles (Ho, 2016).

Above mentions remarked that there is a mutual dependence between shrimp farmers and processors in the shrimp value chain. These two actors need to work together to develop a sustainable value chain in the shrimp sector. Contract farming therefore could offer an opportunity for both sides to improve their situations.

### **3. Contract farming in the shrimp value chain in Vietnam**

A unique case of contract farming in the shrimp value chain was applied in Ben Tre province. This has been one of six provinces in the Mekong Delta (Ben Tre, Ca Mau, Bac Lieu, Soc Trang, Tra Vinh and Kien Giang) that is undergoing an intense shrimp production development which participated in the government program of promoting contract farming among farmers and processors. In this process, the Department of Agriculture and Rural Development of Ben Tre province played a key

role (Figure 1). With a mobilizing campaign based on voluntary participation, it created in three districts of Ben Tre province (Binh Dai , Ba Tri and Thanh Phu) a model of nine shrimp groups of farmers who have production area of two to three hectares. These shrimp farmer groups signed an annual contract with Ben Tre Forestry-Aquaculture Import Export Company (FAQUIMEX). The provincial Agriculture and Rural Development Bank (AgriBank) participated in the model by providing capital loans through FAQUIMEX. This farming contract model was promoted by Vietnam government.

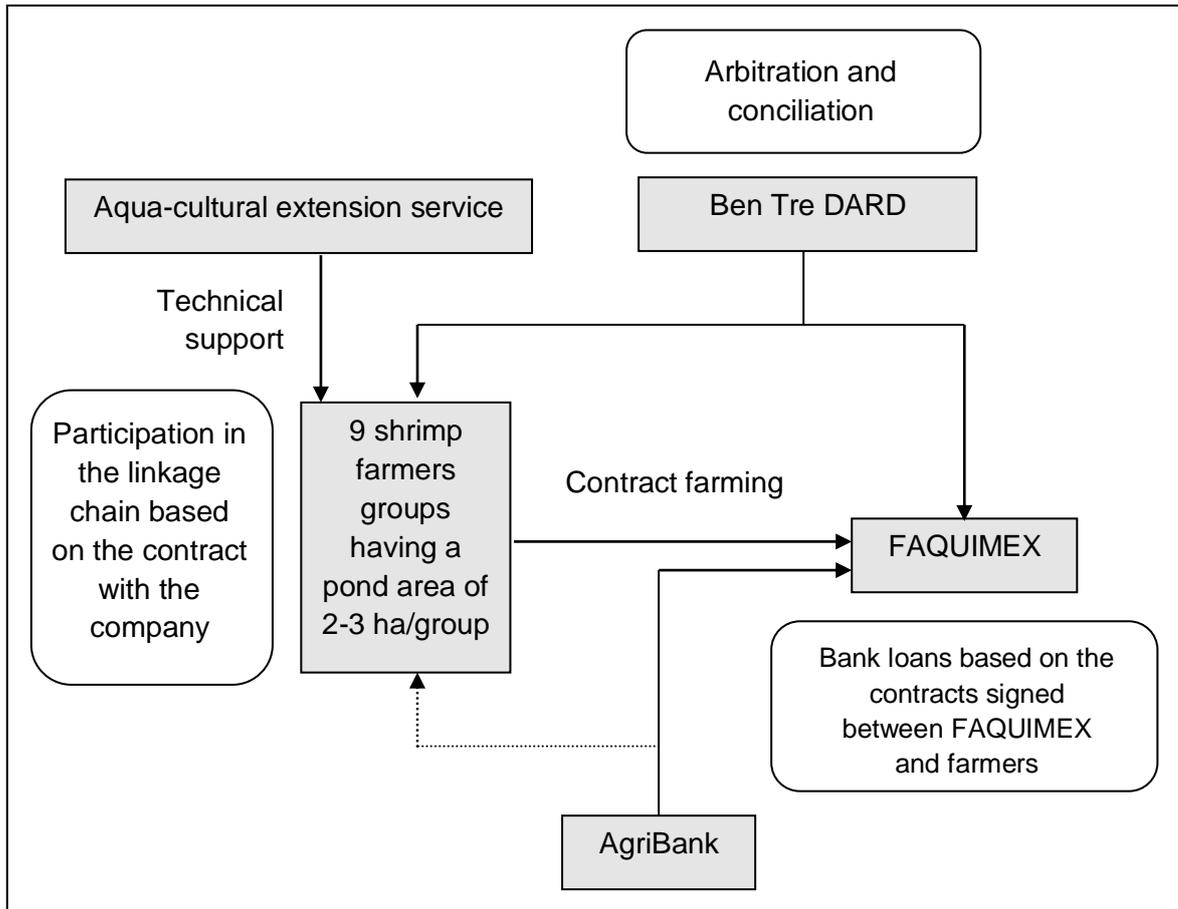


Figure 1 Contract farming model in the shrimp value chain in Vietnam

The main operating contract farming procedures were as follows:

- Farmers

- Annual contract signing at floor price, selling product to FAQUIMEX at market price;
- Free inputs purchase;
- After 75 days of shrimp production, farmers were supplied with funds provided that FAQUIMEX technicians assessed they complied with technical requirements;
- Farmers were allowed to sell shrimps to parties offering a higher price than FAQUIMEX, but would have to pay back their loan to FAQUIMEX with the Bank interest rate;
- Technical supports are provided by Aquaculture Extension Service throughout the shrimp crop season;
- Product must be compliant with food safety requirements.

- FAQUIMEX

- Establishing contract farming with farmers;
- As the legal entity to borrow funds from the bank;
- Inspecting and monitoring the whole shrimp crop production;
- Quantifying funds for farmers' loans.

#### 4. Results and discussion

After two years of implementation, the farming contract was broken. The model had ended and could not continue its activities because of the withdraw of the FAQUIMEX. The main reason leading to this failure had been explained by both sides that it was not harmonious according to the interest of each side.

FAQUIMEX wanted to establish a stable input network that guaranteed the raw shrimp food safety because it is a delicate export product that must comply with traceability and food safety requirements such as HACCP issued by the importing countries. Farmers who participated in contract farming model wanted to have opportunities to increase their access to financial support advancement and confirm the product consumption market at the shrimp harvest crops. However, objectively, the main aim of both sides participating in the linkage model was to “maximize their profits”.

The processing plant maximized their profits through the reduction of transaction costs (decrease of collecting and negotiating expenses) due to stable input supplies. Participant farmers maximized their profits through a stable price at the end of shrimp crop season and gained an access to fund after 75 days of shrimp production.

Analyzing the above-mentioned reasons, the following issues are standing out:

Firstly, the implementation of the “market price - floor price” mechanism was one of the main causes for this linkage model failure. With this shrimp price mechanism, participating farmers were allowed to sell their shrimp to the processing plant when the raw shrimp price on the market was lower than the “floor price”, and could sell to other parties when the price offered was higher than that of FAQUIMEX. Alongside contracts signed with farmers, processing plants signed monthly contracts with importers based on the signing date price. However, because of shrimp processing plants limited capacity, Vietnam has no stable consumption market. Thus, from time to time, processing plants would not collect shrimp at equal or higher market price, and indirectly lower shrimp prices for farmers. Consequently, there would be a failure in contract farming because the processing plant could not gain any profit at all when participating in the contract. Obviously the processing plants turned back to the traditional “product-handout” system with small and desultory components or to develop their own raw material production. In brief, the contract has no significance.

Secondly, the model omitted to address risk share. The contract signed between farmers and FAQUIMEX in Ben Tre indeed did not totally mentioned how losses would be shared, while risks linked with diseases and natural calamities were rather high. Shrimp farmers ended up bearing full responsibility for these risks, particularly for the first 75 days of production. As most Vietnamese consider that “comfort is better than pride”, this arrangement affected farmers enthusiasm to participate in the linkage chain or would lately lead farmers to leave after risk happening.

Thirdly, farming contract was disadvantaged in the market by the smallness of its scale compared to big shrimp production units. The linkages were established with 9 farmer groups scattered in three districts (Binh Dai, Ba Tri and Thanh Phu). Participant groups needed funds for their production. However, due to their business small scale, they could not legally borrow money from the bank, thus the loan had to

be provided by FAQUIMEX. This dependence pushed farmers in a disadvantageous position regarding the contract terms negotiation. The small scale of each farmer group prevented them to link up and benefit from group discounts by input suppliers (such as feed, veterinary medicine retailers). Besides, the supplies excess demands, in the fact, had no pressure from the market on the plants that they have to sign contracts with farmers provide that to develop their own raw material zones for competition.

Fourthly, the contract farming success has been affected by administrative misconception. As mentioned above, one of the processing enterprise's objectives in joining the linkage was to create a product traceability system. However, as farmers were freely allowed to buy inputs from different sources, processing plants were unable to control the raw shrimp quality and inputs uniformity - one of the first requirements in the administrative chain for product traceability. From then on, establishing a brand name for the shrimp products enterprise in order to access stringent international markets was jeopardized. This implies that the enterprise was unsatisfied with the model right from the start.

Fifthly, the Aquaculture Service could not fully play its management part in the linkage chain. For being the state management body in charge of the linkage chain coordination, the Aquaculture Service achieved in taking the initiative and driving model into operation. However, apart from production management, the Aquaculture Service had functions and power limitations that prevented it to solve the conflicts bursting between participants regarding their economic interests.

The foregoing are the main reasons that lead to the failure of contract farming in the aquaculture production between farmers and FAQUIMEX in Ben Tre province.

## 5. Conclusions

Theoretically, contract farming is very good for value chain actors to work together and help farmers to improve their negotiation power, increase their position in the chain. However, failure of contract farming in the shrimp value chain in Vietnam showed farmers still stay at the weakest position and the shrimp sector could not improve its product safety to adapt to the requirements of import markets.

The study results necessarily recommend a planning and projection of shrimp production zones, re-organizing shrimp farmers into legal teams or groups or cooperatives to increase the size of the existing shrimp cultivation units in Vietnam.

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