

**Changing the linkage mode in order to improve
The production efficiency of agricultural products in vietnam
The case of shrimp chain in the mekong river delta**
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Vertical integration in agriculture is an indispensable trend not only in Vietnam. Through the integration of primary and end product producers, the linkage could bring more profits for both sides in the chain. In the fact, however, it indicated that this linkage only existed in a short time with low efficiency due to contractual failings come from the both sides.

From the practical research results shrimp chain in Ben Tre province, the linkage established in 2006 through yearly contract farming between 9 shrimp farmer groups with the pond areas of 2-3 ha/group in three districts (Binh Dai, Ba Tri and Thanh Phu) and Ben Tre Forestry-Aquaculture Import Export Company (FAQUIMEX) was taken into account to analyse the failure reasons.

This linkage was operated basing on the following elements:

- Farmers: Yearly contract signing at floor price, selling product to FAQUIMEX at market price; free buying inputs as farmer's choices; farmers are supplied financial capital at 75 days of shrimp crop with satisfied technical requirement assessing by FAQUIMEX technicians; harvested shrimp can be sold to other actors in the market with higher price, and then the loan would be reimbursed to FAQUIMEX with the bank interest; technical supports are attended throughout the shrimp crop; product safety should be met.
- FAQUIMEX: Signing contract farming with farmers; as the legal factor to borrow financial capital from the bank; inspecting and monitoring throughout the shrimp crop; quantifying fund for farmers' loans.

After 2 years of implementation, the linked model had broken because of FAQUIMEX's withdraw. The main reasons leading to this failure had been explained by both sides that it was not harmonious the interest of each side.

FAQUIMEX participated in the linkage model with a purpose to establish a stable input network for guaranteeing the quality of raw materials in term of food safety through traceability system required by importers while farmers participated in the model with a wish to increase their financial capital and confirm the product consumption market at the shrimp harvest crops. Objectively considering, however, the most important aim of the both sides was "profit maximization". Besides, the pressure of implementation of the Decision No-80 of the Primer Minister on the production linkage might be other reason to establish the model.

The processing plant maximized their profits through reduction of the production costs (decrease of collecting and negotiating expenses) through stable input supplies. Participant farmers maximized their profits through a stable shrimp price at the end of crops and available fund supply at 75 days of shrimp crops.

However, the operational process as mentioned led to a failure linkage with the main reasons: 1) the mechanism "open-price - floor price" which allowed farmers sell their output to other collectors/processing plants if they had higher farm gate price than FAQUIMEX. Therefore the linkage through contract farming would not be longer significant at a certain time because the factories could totally not gain any profit from cooperation; 2) The losses sharing did not mention in the contract, and shrimp farmers were obviously totally responsible to the risks, specially, from 1 to 75 days of shrimp crop; 3) The small scale of the model in comparison with the big shrimp production in the market gave no pressure to processing plant in term of raw material volume to sign contract; 4) Chain management in the linkage. By allowing farmers freely bought inputs, the processing plant could not meet purpose of having traceability system. 5) The Aquaculture Service participated in the linkage as a secondary actor who was a clue for

solving the interest conflicts given by two primary actors. However, with the limiting functions and power, the Aquaculture Service can never solve the conflicts occurred on economic interests of the participants other than special production management.

In order to improve the quality of vertical integration between farmers and processing plants, it needs to have a planning and projection of shrimp production zones to prevent from the overload of shrimp raw material. Re-organizing farmer's production towards the legal team/group is also a solution to limit the smallness of the existing aquaculture production in Vietnam. Establishment and development of insurance in aquaculture production is also one solution which can solve the risk for all sides when participating in the linkage chain. Creating a legal framework to enhance the position and the role of authorities in order to solve the interest conflicts of the factors could be consider as a solution for improving the efficiency of linkage.

The establishment of linkage should first carry out in pilot model on some target products. The large extension of linkage will only be permitted to develop and multiply in the locations after the success of the pilot model with the view to avoid the phenomenon of following the crowd, "one and all men take part in linkage, one and all houses take part in linkage", causing an negative impact on the thinks of the producers when linkage failing.

In brief, re-structuring the production organization through linkages is the indispensable trend of the production process of agricultural products not only in Vietnam. Development of the linkages is necessary to improve the production efficiency toward to a sustainable agriculture development. The combination between the legal farmer group and collectors as well as processing plants through the contract farming is considered the optimal solution under existing condition in Vietnam. This way will ameliorate the farmer's capacity, ensure the right and interests, enhance household income and maintain the dynamics and strength of the agricultural products market in Vietnam. By this, the product quality will also be controlled through the almost closed production cycle.

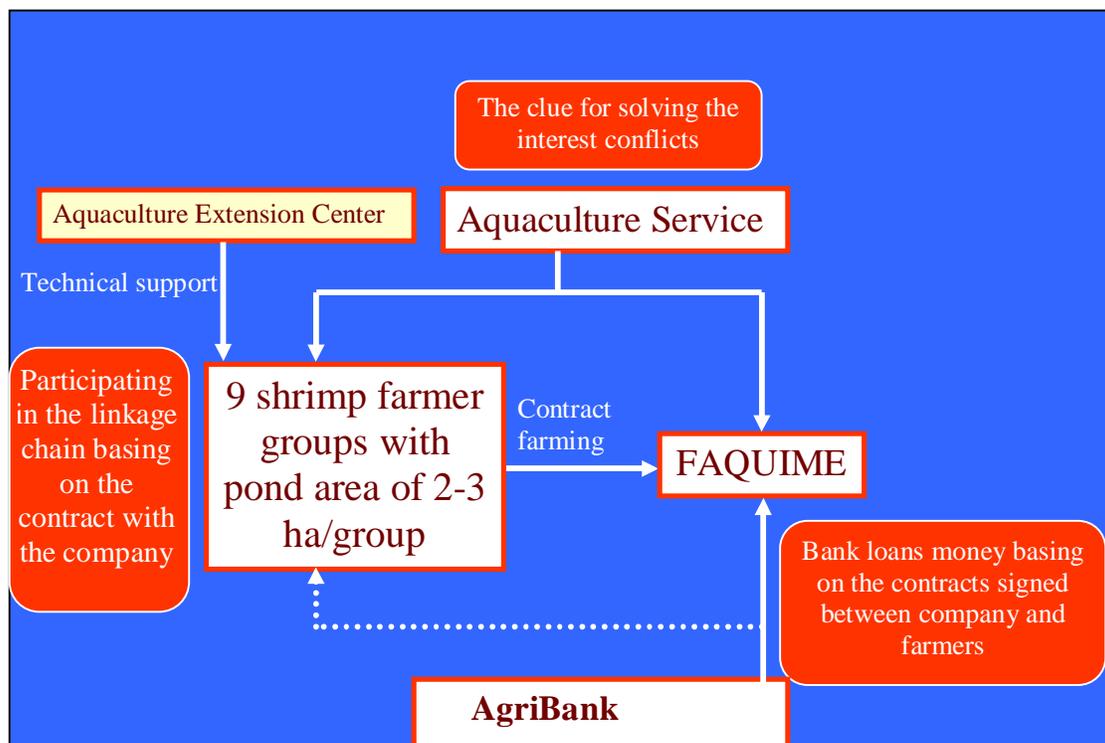


Figure 1: Shrimp production linkage in Ben Tre province