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# Cost Monitoring for Clam Raising Farmers in the Northern Area of Vietnam

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## ABSTRACT

Clam farming in the coastal provinces of Vietnam has notably developed since the last decade. It generated high income, improve socio-economic development for many local communities. However, many clam raising farms were facing difficulties of farm management, disease control, markets and systems of quality control. This research aimed to study about the real situation of cost monitoring in the clam raising farms in the Northern area of Vietnam and suggested some recommendation to promote the benefits for farmers. The paper is based on the semi-structure, standard questionnaires and PRA method to collect data from 112 clam raising farms in two coastal provinces (Nam Dinh and Thai Binh) in the Northern area of Vietnam in 2014. The findings showed that clam raising provided farmers a chance of getting high income parallel with high risk. There were 32.14% surveyed farms that got profit; 32.14% of them met the break-even, and 35.72% was lost. The study has found out four key factors affecting farms' economic performance and efficiency. The first factor that impacted on the farms' outcome was the low capacity of farm cost control, thus the cost for clam raising was very high at 8,142 to 9,190 USD per ha. The second was the farmers' experience, skill, technique and ability to control risk. The third was the low, unstable market and unsuitable market. Final factor was the area and location of clam raising. Despite these difficulties, 57.14% surveyed farms still intended to expand their production; 25% of them would continue; and only 17.86% would stop or changed to other activities. In order to promote the benefits for clam raising farmers, cost control should be paid more attention, improvement of the farmers' capacity to control cost was necessary, and market should be regarded

## 1. INTRODUCTION

The traditional production systems of rice monopoly in coastal municipalities in Vietnam have been significantly changed since the 2000s. Faced with relatively low incomes, many rice farms and salt farms have converted the surfaces to aquaculture production. These changes have had a significant impact on revenues generated in coastal towns with changes in the organization of work and the creation of upstream markets for food plants (Thuyet and Dzung, 2013). This type of family aquaculture has grown rapidly to meet the domestic demand but also to export markets. Faced with these voluntary initiatives, the Vietnamese authorities have supervised and supported these new producers in sustainable patterns of development both for aquaculture in freshwater, brackish, and salt water (MARD, 2011).

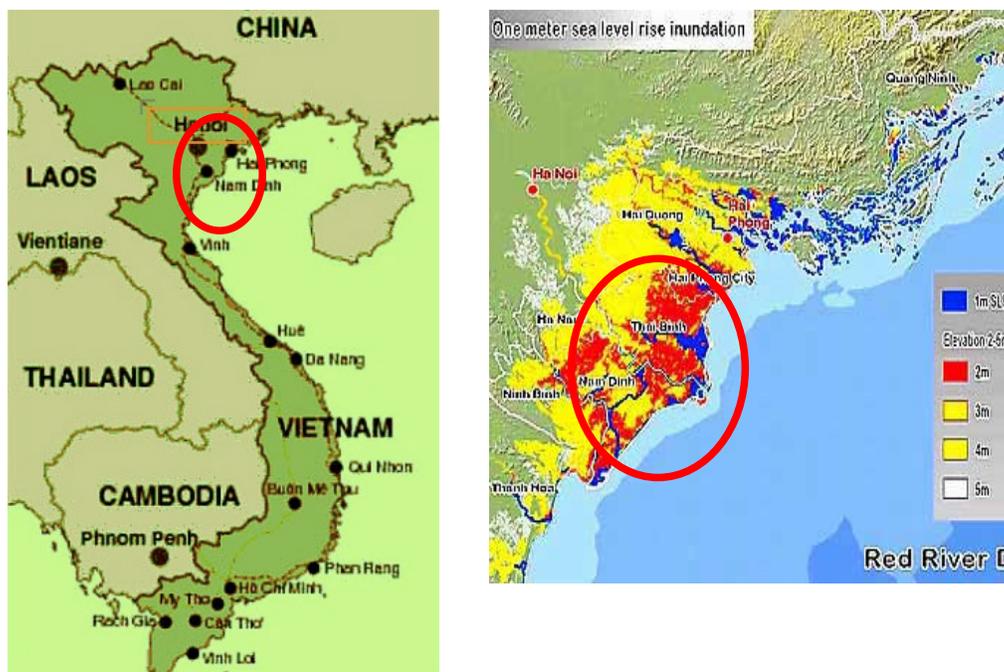
Similar to aquaculture farming, clam farming in the coastal provinces of Vietnam has notably developed since the last decade. It generated high income, improve socio-economic development for many local communities (WA and CA, 2009).

However, many clam raising farms were facing difficulties of farm management, disease control, markets and systems of quality control (AD, 2011; Tuan, 2005). In addition, climate change is likely to affect significantly these areas, particularly exposed to sea-level rise.

Thus, this research aims to study about the real situation of cost monitoring in the clam raising farms in the Northern area of Vietnam and suggest some recommendation to promote the benefits for farmers.

## 2. METHODOLOGY

This research chose Nam Dinh and Thai Binh as study sites because: (i) these two coastal provinces are located in the Northern area and have the highest productivity and quantity of clam raising farms in Vietnam; (ii) farmers in these two provinces have a longer time experience in clam raising compared to other provinces in Vietnam; (iii) clam raising is the key economic activities in these two provinces,



**Figure 1. Location of the study**  
Source: VKI, 2014; Huyen, 2008

The primary data came from a survey of 125 clam raising farms which accounted for 5% numbers of clam raisers in the study sites in the first half of 2014 based on semi-structure, standard questionnaires and PRA method. However, only 112 questionnaires can be used for analysis, 13 other questionnaires did not have adequate information.

## 3. RESULTS AND DISCUSSION

### 3.1 Performance and efficiency of clam farming

According to the survey results, the performance of the clam raising last year was quite low, but they had a chance of getting high revenue. The average productivity of clam production was around 43.2 tons per hectare (ha) at the price of 11.4 thousand

Vietnamdong (VND) per kg; the farmers got a revenue of nearly 500 million VND per ha of production. However, on average, after 21 months of raising, the clam farmers received only 12.48 million VND (583 USD) due to high operating cost. In which, the farmers had to pay for quite a high amount of intermediate cost at 190 million VND (nearly 9000 USD) for this production process. Besides, the labour and financial

cost also contributed a large amount to the operating cost of farms. It seems that, the added value for the clam farmers accounted for a high proportion (61.4% of revenue) but in fact, gross profit received by farmers was very low, accounted for only 2.5%. If the farmers can control better their operating cost, they will have a much higher gross profit.

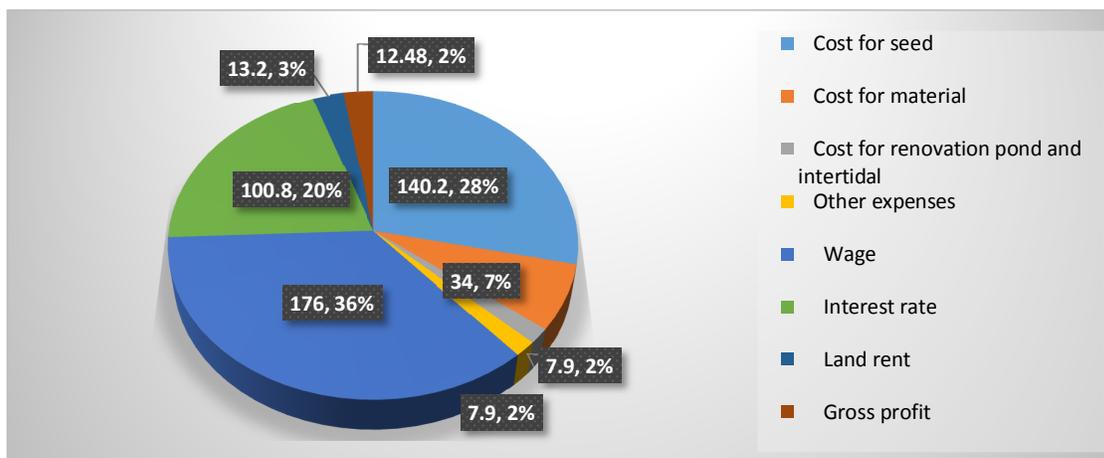


Figure 2. Cost of clam raising per ha in 21 months (million VND).

The survey results also showed that, clam raising was one of the very risky activity (Figure 3). Farmers had to face with many risks during the production process: unsecure quality of seed such as low growth rate, high death rate; late detection of disease; uncontrolled water source; natural disasters such as flood, storms, drought, sea level rise; etc. The most concern was the

high death rate. This situation also reported in previous studies (Thuyet BD, and Dzung TV, 2013; AD, 2011). There was 75% number of farms faced with the situation of massive death. In which, there were some farms that had been in massive death by 9 and 10 times during their production.

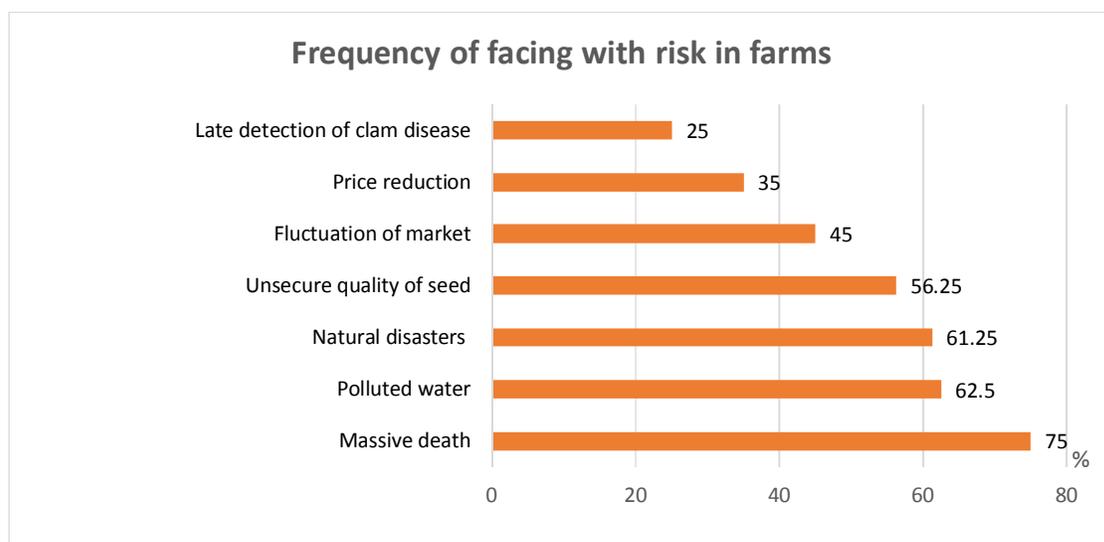


Figure 3. Frequency of facing with risk in farms

Due to the high risk, the performance results of clam raising farms last year was quite negative as there were more than one third farms that got lost, around

one third tried to get the break-even and only one third left got profit.

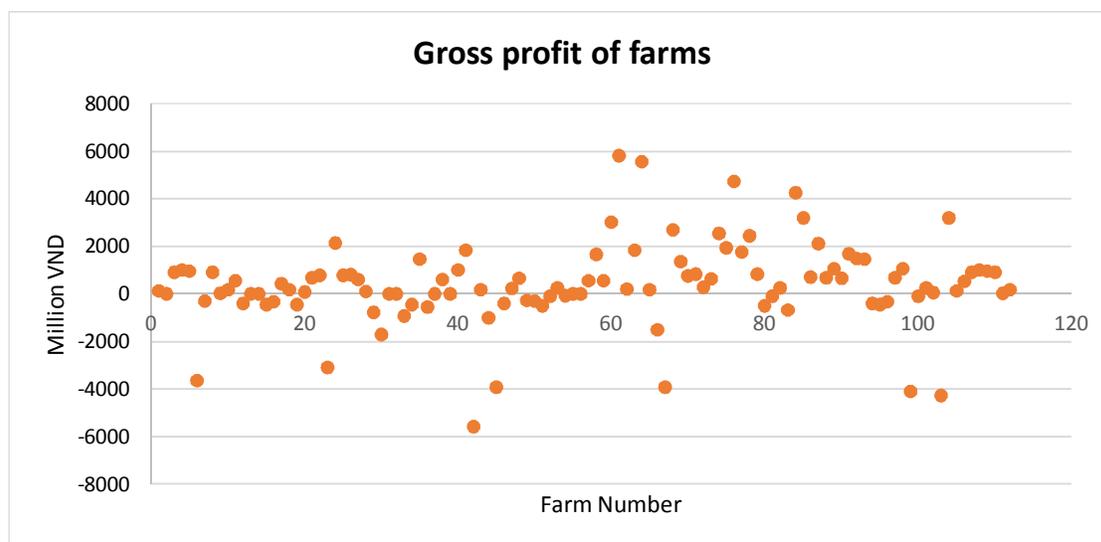


Figure 4. Performance situation of clam raising farms

### 3.2 Cost monitoring in farms

Although the farmers complained that the cost of production was quite high but most clam raising farmers did not pay attention to monitor their cost. Most of them thought about cost and how to reduce the cost of production. In order to manage the farms and their production cost, they have to base on the record of actual cost. However, the clam farmers did not have a habit of monitoring their cost based on the recording. They managed their farms and cost based on their experience and memories.

There were 56% surveyed farmers said that they had at least one time recording their input-output, but most of them based on traditional recording such as noted down on the roof of their house, in the door, into their books but not reconsider, re-read and not used for decision making. None of them use computer or any scientific sample of recording to manage their cost. There were 28% surveyed farmers usually record their transactions; 18% farmers often recorded their transaction, 5% sometime record, and the left almost did not record.

In which, only 10.7% farmers recorded detail their transaction; 42.8% farmers just record main information or transaction; the left did not record. There was 39% transaction recorded by the time of remember, none of them have the habit or routine of recording daily or weekly. Most of the clam farmers were concerned on the amount they gained after a period of production, than farmers interested on how much they invested in their project. However, there were 53% surveyed farmers that recorded the cost

transaction while there were only 28% of them that recorded the revenue. This implies that farmers did not know how to monitor their production process.

The farmers calculated their profit in their mind by subtracting their operating cost from total revenue they achieved after a period of time. However, they normally remembered only the main cost or recording main actual cost. They argued that they could estimate their production situation and profit with their memory and experience. Without recording, many of their transactions and cost had been omitted, thus they could not calculate exactly their profit. Besides, there were many farmers who thought that cost management was not important and not necessary to manage.

### 3.3 Factors affecting the farms' economic performance and efficiency

#### Farmers' characteristics

Age of clam raising farmers was quite high. Average age of clam raising farmers was 46 years old. Most of them were from 41 to 55 years old. At this age, farmers often had experience in life. They could accumulate a certain capital when switching from other occupations thus could make big investment decisions. However, this is a quite old age for the renovation and application of the new things in their farms such as knowledge, scientific method, technology, etc. Most of the respondent - farmers did not want to join any course of training or applying new things in their farms (even without any fee).

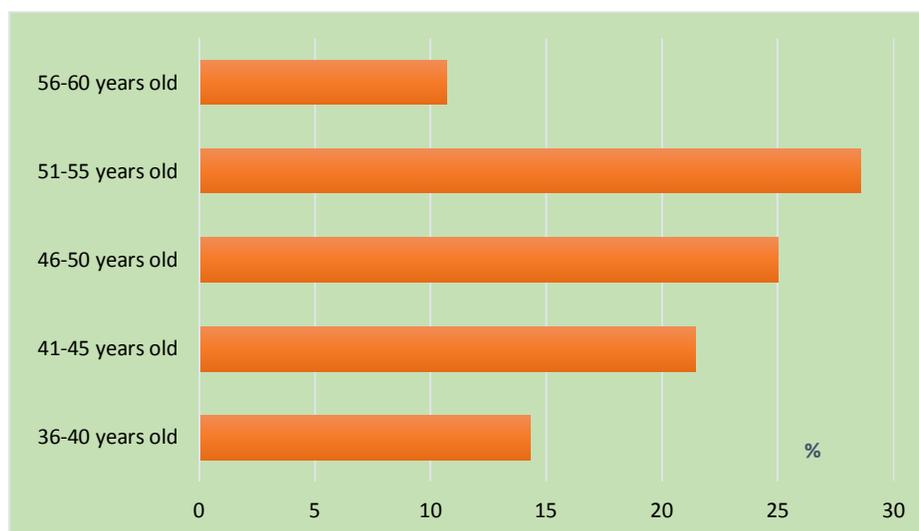


Figure 5. Age structure of farmer

Education level also affects positively and directly to the performance results of clam raising and cost management (Pearson value = 0.63). Most farmers had primary and secondary school, which dominated at 78.57%. Proportion of farmers had high school level accounted for the left (21.43%). None of them had higher degree or technical certificate. None of them was trained technical skill of clam raising or farm managing. Therefore, it is very difficult to acquire science-technology knowledge.

#### - Market

Aquaculture producers responded to individual entrepreneurs relatively isolated. They delivered most of their products to many collectors (90%) who were engaged in a fierce competition. Vietnamese market system for aquaculture products was generally considered to be competitive and efficient. It involved different actors (collectors, wholesalers, retailers and processors) who developed short-term strategies, which were often difficult to understand and that did not allow a good production traceability. At the producer level, understanding of market mechanisms was very limited, which made it difficult to support for investment decision and marketing. Value added within the clam chain was unequally distributed among actors in the chain in the bias orientation to the non-farmers (farmers accounted for 25% of added value while distributors gained 40%). Moreover, farmers were easily vulnerable due to the high fluctuation in the price. This was inevitable given the relative variability of supply and demand remained unstable, especially after the problems related to product quality and the vulnerability of the sector in the face of measures in international trade (barriers non-tariff and anti-dumping measures). Small producers were particularly exposed and vulnerable to this issue.

Besides, the poor distribution of the value generated within the sector for the benefit of producers, and volatility remained critical issues in terms of agricultural policy. The central themes for a family support aquaculture in coastal areas to reduce

poverty were linked in priority to better control production cost, and environmental management adapted. The two aspects were closely linked since the sustainability of these production systems involved as a key success factor taking into account the impact on the natural resources of this type of activity.

#### - Location and area of clam raising farms

According to the survey result, 62.5% respondent - farmers complained that clam raising farms located in the coastal line were easily affected by pollutants from the use of agro-chemicals in the upstream area and from areas of habitat, the water quality, flood, and climate change, have caused natural disasters (El Nino, el Nina, storms, flood, and drought). They thought that these were considered as one of the major reasons for the massive death of the clam in farms. These threats, inturn, particularly affect the performance of farmers who depend exclusively on aquaculture production for their survival. However, these result is different from the previous studies. Research from Thuyet BD, and Dzung TV (2013) supposed that reasons for massive death could be: (i) suddenly change in temperature (30.5% response); (ii) low quality water source (24.8% response) and (iii) salt level (14.3%). In the meanwhile, the results from the National conference to find out the reasons for massive death in clam organized by Ministry of Agriculture and Rural Development of Vietnam on the 21st of August, 2014 concluded that the major reasons for massive death were due to the hot weather led to high temperature, and high density of clam raising (Thu Hien, 2014).

Despite the unfavorable situation of production, there were many farmers (57.14%) still intended to expand their raising area, some other would like to continue the current area of production (25%), while there were only 17.86% surveyed farms would narrow their production area. This situation could be explained by two main reasons: the first, some farmers who got lost still wanted to continue developing their production

with the believable that they could gain the success in the future, and they were looking for the better signal from the market. The second one, because the farmers were quite old, they did not want to change their job or their field of work. Thus, they tried to continue and hoped that they would get success in the near future.

#### 4. CONCLUSION AND RECOMMENDATION

Clam farming in the coastal provinces of Vietnam has notably developed and provides farmers a chance of getting high income parallel with high risk of massive death and low performance results. Capacity of farm cost control; farmers' experience, skill, technique and ability of risk control; unstable market and unsuitable market channel; and the area and location of clam raising were the four major factors affecting the performance of clam raising farms. Despite these difficulties, many surveyed farms still want to expand or will continue their production.

In order to promote the value added for clam raising farmers, major problems should be taken into consideration. The first and most is that the capacity of cost control of the farmers should be improved. Skill and technique for cost monitoring of the farmers had better to be enhanced through training and self-training activities. Step by step, it contributes to change their behaviour and habit of cost recording. This will help them to improve their production performance situation and enhance their profit and benefit. The second thing should be done is to improve the ability of the farmers to manage their farms. If the management capacity of farmers improves, they could be able to cope with the risk situation in their clam production practices and their livelihood situation. Finally, it is necessary for the government and local authorities to support, create and, maintain a stable market for clam raising farmers. If the market is stable and expanded, farmers could sell their products with reasonable gain. In turn, they

can stimulate production, create employment opportunities for rural labor, improve community income, and improve their livelihood situations.

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