EXECUTIVE SUMMARY

PAULA FLORINA. 2011. Adoption of Good Management Practice (GMP) in Small and Medium Scale Vannamei Shrimp Farms on the Northern Shore of East Java. Under the supervision of SRI HARTOYO and SUKARDI.

Indonesia has great comparative advantages in aquaculture industry which can be built into nationwide competitiveness to increase sustainability. Aquaculture product comprises 2.47% of total GDP and shrimp export comprises 18.7% volume (or 43.2% value) of total aquaculture product. East Java has a great potential for aquaculture production which contributes to national production. In former researches by Independent Research & Advisory (IRA, 2005) and Foreign Investment Advisory Service (FIAS, 2006), value chain of shrimp industry in Indonesia was mapped and some of possible gaps were identified. Considering that farming activity has a great contribution in the final product value of shrimp industry, the gap selected as the focus of this research was the poor management practice at the farm resulting in low productivity, where farmers have some degree of control and can make direct contribution to address the problems. There is a room for improvement on the productivity, especially in small and medium scale farms.

The objectives of this research were (1) to describe the value chain of Vannamei shrimp industry on the northern shore of East Java, (2) to identify the current management practice that is being implemented by small to medium scale shrimp farmers, (3) to analyze the level of adoption of Good Management Practice by small to medium scale shrimp farmers and (4) to identify the challenges that prevent small to medium scale farmers from adopting Good Management Practice. This research was focused on small to medium scale shrimp farms with net operating area less than 10 hectares that cultivate Vannamei shrimp (Litopenaeus Vannamei) using intensive methods on the northern shore of East Java.

This research utilized descriptive method with qualitative technique using multiple-case study. Data collection was conducted through individual depth interviews with experts and various actors in shrimp industry in Indonesia and individual depth interviews along with observations for selected shrimp farmers. Expert respondents were purposively selected based on their expertise and farmers were selected based on the feasibility and perceived level of Good Management Practice adoption to cover various level of adoption. The general strategy to analyze case-study data was to develop a descriptive framework for organizing the case study. A conjunction of Pattern Matching, Explanation Building and Cross-Case Synthesis techniques was utilized to analyse collected data with the emphasis on the Cross-Case Synthesis technique. Product Value Breakdown was also calculated based on the value of 1 kg of exported frozen shrimp. A scoring system was developed to assist the analysis of GMP adoption.

The actors involved in this industry are categorized into four groups, which are (1) producers (functioning in broodstock, hatchery and farming activities), (2) processors and distributors (functioning in processing and exporting activities), (3) consumers and (4) supporting actors. Product value is
created by the actors from the first and the second groups. Product value breakdown for exported frozen shrimp was 0.1% for broodstock, 3.4% for hatchery, 56.0% for farming activity and 40.6% for cold storage (processing) and exporting.

The cross-case analysis is based on data collected from four intensive shrimp farms and one traditional farm which was set as a comparison. Two of selected intensive farms had acquired CBIB certificates (Cara Budidaya Ikan yang Baik, a translation of Good Aquaculture Practice), that had been issued by Ministry of Marine Affairs and Fisheries Republic of Indonesia (Kementerian Kelautan dan Perikanan Republik Indonesia or DKP).

Detailed discussion about the current management practice and GMP adoption level is broken down to separate sections according to stages of farming activity, which are (1) site selection and pond construction, (2) pond preparation, (3) postlarvae selection and stocking, (4) water management, (5) feed and feeding management, (6) health management and chemical/drug utilization, (7) waste management and (8) handling and harvest management.

Overall GMP adoption level is high for the observed intensive farms and medium for the observed traditional farm. The observed intensive farms consistently showed a high GMP adoption level for all stages except waste management. There is no significant difference in management practices and GMP adoption level between intensive farms with CBIB certificates and those without CBIB certificates. The observed traditional farm showed mixed level of GMP adoption. It is high for postlarvae selection and stocking stage and for feed and feeding management stage. It is low for pond preparation and waste management. Other stages showed a medium level of adoption.

This research shows a tendency that farmers only follow good practices that have direct impact to the success of the crop. The success has been a natural incentive to adopt certain steps or practice. Waste management that has long term impact has not received the same attention or priority.

The main focus of discussion in this section is the intensive farm. Despite the high adoption level, intensive farmer found challenges that prevent the adoption or that make it more difficult to adopt. The major challenges were (1) the unavailability of a comprehensive and adequate manual to cover the intricate nature of the business, (2) the lack of structured way of technology dissemination in shrimp farming in addition to semi-formal information sharing that occurs in the form of associations and technical assistance from feed manufacturers, and (3) farmer’s reluctance to adopt the recommended practice in waste management despite their awareness of its importance due to the lack of financial incentive. The capital issue was not perceived as a major issue by the farmers. However, mitigation of this issue may encourage higher GMP adoption level among the shrimp farmers.

From this research it can be concluded that the farming activity gives the largest contribution in final product value of exported frozen shrimp. Current management practice in observed intensive Vannamei shrimp farms on the northern shore of East Java is in line with recommendations of various institutions, and therefore can be considered as having a high adoption level of Good Management Practice (GMP) for various stages of shrimp farming activity, with the exception of waste management. This research showed a tendency that
observed farmers follow the good practices that have direct impact to the success of the production. Therefore, waste management that has long term impact has not received the same attention or priority. The main challenges of GMP adoption are creating a comprehensive GMP manual that is thoroughly applicable despite the intricacy of the shrimp farming activity, ensuring that the information sharing and technology dissemination can be done in all levels of farming activity, creating an incentive for the farmers to adopt recommended practices for waste management and mitigating the capital problem.

Based on the result of this research, it is recommended that more focus should be given to information sharing and technology dissemination. In order to learn more about the effectiveness of GMP adoption, a further study is required to verify the result of the GMP. It is also recommended that in the future research, the existing associations as the closest point to the farmers. Regarding the low GMP adoption, it is recommended that in the future research, creating an incentive for the farmers to adopt recommended practices for waste management and mitigating the capital problem.

Keywords: Litopenaeus Vannameii, Shrimp Farm, Good Management Practice, Value Chain, Multiple-Case Study