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ORGANIC BLACK TIGER SHRIMP FARMING SYSTEM (ISO 65 IFOAM): STRATEGY THROUGH OPEN SPIRIT REAP BACK TO NATURE

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ABSTRACT: The strategy is very logical considering cultured shrimp is for export, not to meet the domestic market demand. The object studied is the traditional shrimp farmers and organic shrimp farmers. The purpose of research is to find a strategy of foreign exchange earned through the implementation of organic shrimp farming systems (ISO 65 IFOAM). The study used a descriptive approach. To find a strategy using SWOT analysis of foreign exchange earned by weighting the Balanced Score Card. While the effects of the implementation of shrimp farming organic systems analysis with Snow Ball Effect Matrix Balanced Score Card. The results showed that through the implementation strategy organic shrimp farming systems following priority actions are: strengthening the bargaining power in the international market through the supply of organic shrimp exports were stable throughout the year, improving the quality of the supply of organic shrimp.

KEYWORDS: organic, black tiger, shrimp farming system, strategy, nature

INTRODUCTION

Ministry of Maritime Affairs and Fisheries (MMAF) requires seed until 43.22 million and 2.97 million stem tail shrimp exports in order to meet the target and reach the stage of self-sufficiency. Target national shrimp production during the period 2010-2014 amounted to 699 000 tonnes in 2014, an increase of 74.75 percent [2].

Barriers to developing broodstock shrimp is the declining quality. The resulting seed the slower growth and higher mortality when cultivated. The results showed that the problem is due to the occurrence of 'inbreeding' [3] [4] [5].

There is no regulation of the Government of GBP (Good Breeding Practices) or SOP (Standard Operation Procedures) of shrimp breeding that are technically capable of guaranteeing seeding procedure free of antibiotics. In other words, the perpetrators of seeding are: fishermen of broodstock and breeders in hatchery require a valid SOP or able to guarantee high productivity and healthy seed. Procedures should be implemented in different places and times, and easily understood by business people seeding.

Observations in Tuban, Situbondo and Banyuwangi indicates that: since 2004-2005 then gradually hatcheries have started doing the change of seeding. These changes are starting to leave the use of antibiotics and other chemicals; promote the use of probiotics as well as vitamins and other nutritional supplements for both the broodstock and seed shrimp.

Technicians at the hatchery there are still some who liked the use of antibiotics. Antibiotics that have been harmful active ingredients prohibited by the Government, and no longer sold by companies engaged in the marketing of fishery production facilities. For that, each year

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ASPAKINDO (Indonesia Aquaculture Facility Association) publishes an index that contains fish medicine drug outstanding fish and shrimp, [12][17] which are permitted and prohibited the circulation; following the rules of government agencies.

Strong support from the business line of the main of Indonesia shrimp business in East Java such as: aquaculture entrepreneurs; largely determine the development of the breeding technical, methodological and encourage a change of mindset most businesspeople seeding. Changes pembenih thought to produce seed naturally it was not followed by the same thinking among farmers shrimp in ponds.

The phenomenon of high-density stocking of fry in the ponds, the pursuit of the national production target as well as the great economic benefits is conflicting policies. The government still seems to think chasing a target of foreign exchange for the country through the approach of quantity rather than quality. Meaning: great production is believed to generate a substantial income. Strategy should be developed is an attempt to obtain foreign exchange from high quality shrimp; among others, by the way berbudidaya shrimp organic systems. Implemented the strategy is very logical considering shrimp farming is for export, not to meet the domestic market demand.

Purpose

Finding the foreign exchange earned through implementation strategy shrimp farming organic systems (ISO 65 IFOAM).

METHODOLOGY

The study used a descriptive approach. Location studied is the business of hatchery and shrimp farming in East Java. When the study began in January 2011 s / d in December 2012 for 2 years.

The method used is a terrestrial survey by visiting hatcheries and aquaculture shrimp randomly. Tools to obtain data was a questionnaire. The substance under study obtained from direct interviews and questionnaires openly by the respondent. Respondents were pembenih and shrimp farmers have experienced, selected based on the information and observations on the credibility of research respondents.

Results of the interviews were analyzed using the SWOT matrix by weighting the Balanced Score Card to find strategies to reap foreign exchange. While the effects of the implementation of shrimp farming organic systems (ISO 65 IFOAM) was analyzed by matrix Snow Ball Effect Balanced Score Card.

RESULTS AND DISCUSSION

The results of the appreciation of the farmers in order to implement the shrimp farming organic systems had shown a very positive response. The main reason put forward by the respondent is a strong desire to maintain the sustainability of the carrying capacity of natural resources in hatcheries and shrimp farms theirs.

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However, a strong desire is still feared to encounter many obstacles. The most severe constraint is to build solidarity among pembenih perception in hatcheries and growers. Respondents believe that in addition to shrimp farming with organic systems will provide business continuity in the long run, the economic benefits will also bring benefits not less.[7][8][15][16] Based on the calculation of the farmers business, results of organic shrimp will certainly bigger size and quality that will bring additional minimum price equivalent to 1 USD per kilogram head on. In addition, the price of shrimp in the world shrimp market average is higher than the price of vannamei shrimp. So if the productivity per hectare farmed shrimp with traditional systems are able to produce at least 400 kilograms per cycle: by cultivating organic systems even though productivity is the same but the size of the harvested shrimp tend to be larger so that the value of the money earned is greater.

Black tiger shrimp is one of mainstay export fisheries should pay attention to quality and food safety aspects [1].

Benefits of the implementation of organic farming systems is the lack of production costs, as well as antibiotic substances obtained from natural probiotics around the pond [3] [5][9][10][13]. Therefore, it is important for farmers to know how applicable the manufacture of antibiotics and probiotics from mangroves and mangrove plants instead. From the results of the interview, the foreign exchange earned through implementation strategy shrimp farming organic systems can be formulated as follows:

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Table 1. SWOT-BSC Analysis Strategy Through Open Spirit Reap Back to Nature

	INTERNAL FACTOR		STRENGHT WEAKNESS					
			• The price is more	90	• The price of shrimp is	-30		
			expensive than black tiger		determined by export			
			shrimp vannamei shrimp	90	destination countries	-80		
			• Shrimp Tiger shrimp is		• The quality of the natural		COMP <u>ILA</u> TION	
			native to Indonesia	90	parent shrimp tend to be low	-50		
			• The quality is higher than		Post-harvest handling can			
			the black tiger shrimp		be improved		-	
	EXTERNAL FACTOR		vannamei shrimp		-			
			TOTAL SCORE	270	TOTAL SCORE	-		
		\sim	STRENGHT		WEAKNESS	160		
	OPPORTUNITY		STRATEGY S-O		STRATEGY W-O		STRATEGY SWO	
	Price fluctuations are more	70	• To strengthen the	160	• To strengthen the	40	Strengthen bargaining	200
	stable shrimp		bargaining position of		bargaining position of		shrimp prices in the	
	• Parent comes from local	80	international market prices		international market prices		international market	170
	waters and easy to obtain		• Increase parent handling a	170	• Improving the quality of	0	• Improving the quality of	
	• The share of open market	100	good technical		local shrimp broodstock		local shrimp broodstock	240
	with very high demand		• Maintaining the quality to	190	• Improve the performance	50	• Maintaining the quality,	
			ensure market demand		of post-harvest and		improve the performance of	
			remains high		processing		the post-harvest	
	TOTAL SCORE	250	SCORE STRATEGY S-O	520	SCORE STRATEGY W-O	90	-	
	OPPORTUNITY							
THREATH			STRATEGY S-T		STRATEGY W-T		STRATEGY SWT	
	Prices can be influenced	-40	• Strengthen the export	50	• Strengthen the export	-70	• Strengthen the export	-20
	another shrimp supply		supply that is always		supply that is always		supply that is always	
	• Indication of any outbreak	-80	available	0	available	-	available	-
	of the virus in the waters of		Develop a marine		• Develop a marine	160	• Develop a water sanitation	160
	Indonesia	-90	sanitation program Indonesia	0	sanitation program		program Indonesia	
	• Low productivity due to				Indonesia		 Apply organic cultivation 	
				-				-

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illness and bacterial infections		• Improving the quality of		Designing systems	-	and harvesting systems of	-
		the application of organic		minimize the risk of partial	140	partial	140
				harvesting			
TOTAL SCORE THREATH		SCORE STRATEGY S-T	50	SCORE STRATEGY W-T	-		
	220				380		
		STRATEGY SOT		STRATEGY WOT		STRATEGY SWOT	
		• To strengthen the	210	• To strengthen the	-30	• To strengthen the	180
		bargaining position through		bargaining position through		bargaining position	
	N	export supply	170	export supply	-	through export supply	10
		• Develop a program of		• Develop a program of	160	• Improving the quality of	
COMPILATION	/	sanitation and handling a	190	sanitation and handling a		the broodstock through the	
	V	good parent		good parent	-90	sanitary water	100
		• Improving the quality of		• Improving the quality of		• Improving the quality of	
		the supply of organic shrimp		the supply of organic shrimp		the supply of organic	
						shrimp	

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SWOT analysis Balanced Score Card shows that there are 3 (three) strategies can be pursued with the following priorities:

- 1. Strengthen their bargaining position in the international market through the supply of shrimp shrimp exports were stable throughout the year; scores 180.
- 2. Improving the quality of the supply of organic shrimp, shrimp farming organic means must be developed to generate good quality shrimp and highly competitive in the international market; scores 100.
- 3. Improving the quality of parent shrimp through the application of marine sanitation program Indonesia; scores 10.

Based on the priority actions SWOT analysis results are then translated into programs and actions to be taken by the Government holistically with all parties concerned. Programs and actions taken must be based on a common vision and mission of all stakeholders to improve the environmental quality of the waters of Indonesia to be able to produce high quality organic shrimp, while maintaining natural resources and sustainability.

Being programs and actions to be performed on the matrix effects appear shrimp aquaculture implementation organic system implementation is measured by using the priority ranking matrix Snow Ball Effect Balanced Score Card (Table 2).

Based on the analysis; then four (4) priority ranking appropriate action to be taken within the framework of the implementation of shrimp farming organic systems ISO 65 (IFOAM) as a strategy for foreign exchange earned through the spirit of back to nature is:

- 1. Subsidies in the form of additional selling price of organic shrimp into cold storage; whereby unnecessary subsidies provided through the Government's budget but are automatically derived from the difference between the export price of organic shrimp is higher than the export price of shrimp is not organic. The price difference should be transformed by both the farmers and hatchery through the marketing chain running [6][7][11][15][16].
- 2. Tightening up the circulation of harmful active ingredients to pharmacies and drugstores. ^{[1][8][12][17]} This effort can only be done by the drug regulatory revitalize and chemicals and strict supervision in distribution.
- 3. Subsidizing prices to farmers selling organic seed. ^{[6][7][11][15][16]} The process of granting these subsidies will occur automatically as additional subsidies in the form of the sale price of organic shrimp to cold storage.
- 4. FGD among professional organizations to create a unified vision, mission and technical follow the steps in the production of organic shrimp; an important activity that should be increased intensity of implementation through government facilitation. ^{[6][8][14][15][16]} stated that: vision, mission and action steps that synergistic inter-professional organization will encourage the spirit of back to nature by applying the shrimp farming organic systems which will ultimately be able to reap the expected foreign exchange together.

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Table 2. Snow Ball Effect Matrix Balanced Score Card Implementation System Organic Tiger Shrimp Cultivation

Factor	Score	Effect 1	Score	Effect 2	Correction	Ranked of
SWOT Strategy		Programs		Action	Score	Priority Action
To strengthen the bargaining position through export supply	180	 Facilitate the breeder and supply of shrimp aquaculture on the importance of organic Facilitation of export promotion for organic shrimp 	40	 FGD among professional organizations to create a unified vision, mission and technical follow the steps in the production of organic shrimp Increase promotion of organic shrimp meal Provision of subsidies in the form of additional selling price of organic shrimp to cold storage Provide easy document and export procedures 	48	4
		 Incentives for developers of shrimp farming organic systems De-regulation of the organic shrimp exports as a strategic product 	30 60		28 62	6 1
			50		42	5
Improving the quality of the supply of organic shrimp	100	 Encourage hatchery seed organic produce Strengthen the anti antibiotics 	50	 Providing subsidies seed sales price of organic Tightening up the circulation 	49	3

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			50	of harmful active ingredients to pharmacies and drug stores	51	2
Improving the quality of the broodstock through the sanitary water	10	 Strengthen legal action to discharge waste into public waters Strengthen oversight of waste disposal into public waters 	5	 Socialization to strengthen the understanding of law enforcement Providing incentives for reporting any malpractice waste disposal 	2 8	8
						7

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CONCLUSION

Strategies division raked through the implementation of shrimp farming organic systems ISO 65 (IFOAM) following priority actions are:

- 1. Strengthen their bargaining position in the international market through the supply of shrimp shrimp exports were stable throughout the year
- 2. Improving the quality of the supply of organic shrimp, shrimp farming organic means must be developed to generate good quality shrimp and highly competitive in the international market
- 3. Improving the quality of broodstock shrimp through the application of marine sanitation program in Indonesia.

REFERENCES

- [1] Anonymous, 2010. *Official Control Traceability (OCT) Code*. The Basic Supporting of Assuring Official Safety Control Program and Supplier Approval Program. East Java Fisheries Quality and Safety Assurance System. Laboratory Quality Testing Center of Fishery. Surabaya.
- [2] Anonymous, 2008. Department of Marine Fisheries National Shrimp Production Runway. Department of Marine Fisheries. Jakarta.
- [3] Bachi, Rainer. 2009. *Improving Aquaculture Practices in Smallholder Shrimp Farming*. A Training Manual. SIPPO Swiss Import Promotion Programme. IMO, Institute for Marketecology. Swiss.
- [4] Bavornlak Khamnamtong, Sirawut Klinbunga, and Piamsak Menasveta; 2005. Species Identification of Five Penaeid Shrimps Using PCR-RFLP and SSCP Analyses of 16S Ribosomal DNA. Journal of Biochemistry and Molecular Biology, Vol. 38, No. 4, July 2005, pp. 491-499. Faculty of Science, Chulalongkorn University, Bangkok, 10330, Thailand.
- [5] Bengtsson J., Antshrom J., and Weibull A.C. (2005). *The Effects of Organics Agriculture on Biodiversity and Abundance: a Meta Analysis*. Journal Applied Ecology 42. Departement of Ecology and Crop Production Science. Uppsala. Sweden.
- [6] Faber, Scoot (2006). *Demand for Organic Food Growing Faster Than Domestic Supply*. Chesapeake Bay Journal, March vol 6 no 1. Available at: <u>http://www.bayjournal.com/article.cfm?article=2760</u>.
- [7] Kosim (2003) Organic Tiger Shrimp Culture Project in Sidoarjo. CV. Ali Ridho Group.Sidoarjo.
- [8] Kosim, H.M.; Elin Arlyni, Ady Sukma (2007). *Traceability Application Handbook for Process Black Tiger Shrimp and Vannamei Shrimp*. CV. Ali Ridho Fees Through Group Process in PT. Glimpses of the Eastern Star-Napier. Sidoarjo.
- [9] Lampkin, N.H., (1999). Organic Farming in the European Union: Overview, Policies and Perspective. Proceedings of a Joint EU and Austrian Conference 27 – 28 May. Baden/Vienna: Avalon Foundation and Eurotech Management. University of Wales. UK.
- [10] M.K. Abu Hena, S.M. Sharifuzzaman, O. Hishamuddin, K. Misri and F. Abdullah, 2001. Pond Health Management of Black Tiger Shrimp <u>Penaeus monodon</u> (Fabricius) Using Bacterial Products. pp. 469-476. In Bondad-Reantaso, M.G., Mohan, C.V., Crumlish,

_Published by European Centre for Research Training and Development UK (www.eajournals.org)

M. and Subasinghe, R.P. (eds.). Diseases in Asian Aquaculture VI. Fish Health Section, Asian Fisheries Society, Manila, Philippines

- [11] Moran, Dominic (2002). *Market Creation for Biodiversity: The Role of Organic Farming in the EU and US*. Paris: Organisation for Economic Cooperation and Development. Available at: <u>http://www.olis.oecd.org</u>.
- [12] Nirmala, K., E. Yuniar and T. Budiardi, 2005. *Productivity and Basic Chemical Parameters Tiger Shrimp Pond Farming Penaeus monodon Fab. Aged 1 and 3 years*. Indonesian Aquaculture Journal, 4 (1): 5-11 (2005).
- [13] Nurdjana, Made L., (2008). Featured Shrimp Fishery Exports. Voice Updates. Jakarta.
- [14] Padel S. (2001). Conversion to Organic Farming. The Economics of Organic Farming: An International Perspective. Institute of Rural Studies. University of Wales. UK.
- [15] Paul J., (2007). *China's Organic Revolution*. Journal of Organics Systems 2007 2(1) 1 11. School of Geography & Environmental Studies, University of Tasmania, Australia.
- [16] Soedrijanto, Angky. (2009). Official Control Traceability Implementation in the Context of Performance Enhancement Tiger Shrimp Exports of Organic Systems in Sidoarjo: Case Studies CV. Ali Ridho. Thesis. Masters Program in Agribusiness Management-UPN Veteran East Java. Surabaya.
- [17] Vass, M., K. Hruska, M. Franek (2008). Nitrofuran antibiotics: a review on the application, prohibition and residual analysis. Veterinarni Medicina, 53, 2008 (9): 469– 500 Veterinary Research Institute, Brno, Czech Republic.