

**ANALYSIS OF FEED USE BY VANAME SHRIMP (*Litopenaeus vannamei*)
CULTIVATION GROUP IN SRIMINOSARI VILLAGE, LABUHAN MARINGGAI
DISTRICT, EAST LAMPUNG**

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ABSTRACT

Vaname shrimp cultivation usually requires a large cost for the operational process. Of course, this will be difficult for individuals or small farmers who have limited capital. So that with the group, it is estimated that these obstacles can be minimized. The purpose of this study was to analyze the use of feed by the "Maju Prima" Vaname Shrimp Cultivator Group in Labuhan Maringgai District, East Lampung Regency. The research method used is descriptive qualitative with data collected in the form of primary data and secondary data from in-depth interviews. While the data analysis used is interactive data analysis. The results of this study indicate that the use of feed by the "Maju Prima" group has decreased due to a decrease in production every year. This is influenced by several factors, both internal and external. This decrease in production results will certainly reduce the income of members of the "Maju Prima" group. Moreover, vaname shrimp cultivation is the main job for most members of the group. Seeing these results, our recommendation that can be given is the need for an active role of the government in fostering the "Maju Prima" group so that they have better production results in the future.

Key Words : Feed, "Maju Prima" group, vaname shrimp cultivation

1. INTRODUCTION

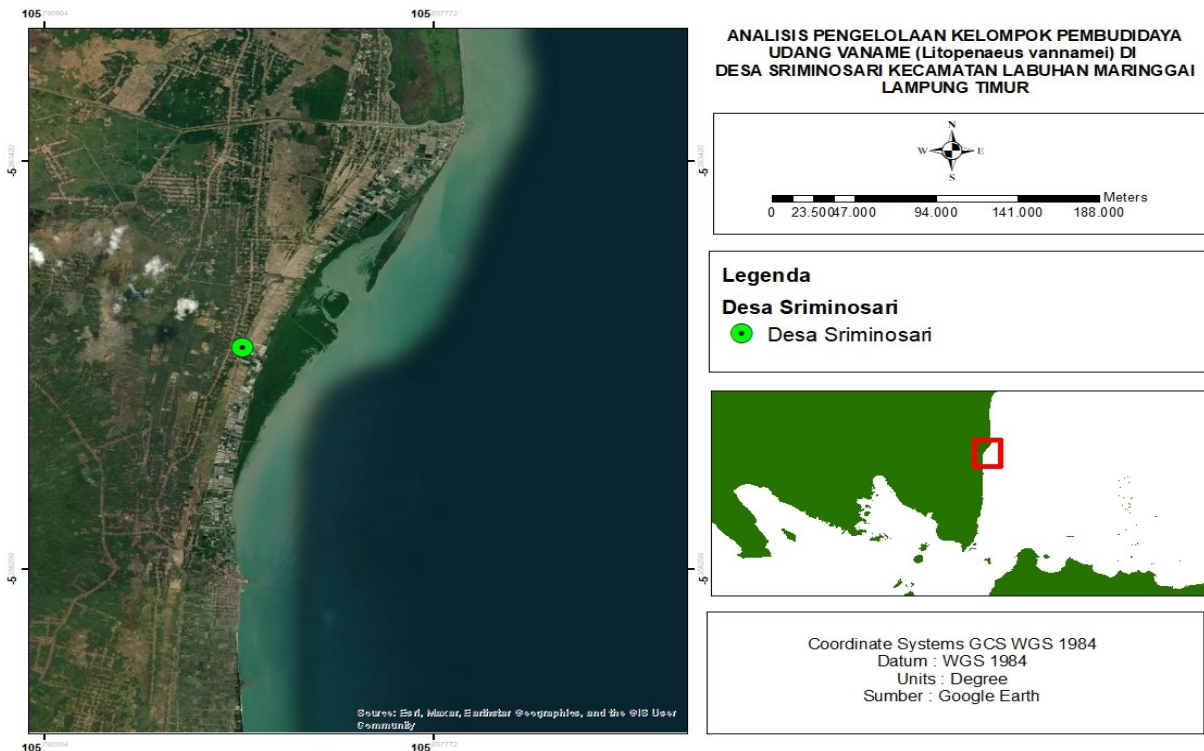
The management of the Lampung coastal area that is currently being carried out is the cultivation of Vaname shrimp. This is because Vaname shrimp has a high economic value and is an export commodity. Vaname shrimp cultivation is mostly done by individuals, but the results are still not as expected. It is estimated that with the group the results can be more effective and the results are greater. There are also many groups that have been created but have not seen their effectiveness in group management so that aquatic resources have not yet produced the desired welfare. According to Slamet (2001), the group approach is seen as more efficient and can be a medium for the learning and interaction process of the farmers, so that it is hoped that there will be changes in farmer behavior towards better or quality.

Vaname shrimp cultivation usually requires a large amount of money. Of course, this will be difficult for individuals or small farmers who have limited capital. So that with the group, it is estimated that these obstacles can be minimized. One group of Vaname shrimp cultivators in Labuhan Maringgai District is the Maju Prima Group.

Feed is a very important factor in Vaname shrimp culture because it absorbs 60-70% of the total operational costs. Provision of appropriate feed will stimulate the growth and development of Vaname shrimp optimally so that its productivity can be increased. Provision of artificial feed in the form of pellets can be started from the time the fry are stocked until the shrimp are ready to harvest (Ulumiah, M., et al., 2020). The purpose of this study was to determine the amount of feed used for the "Maju Prima" Vaname shrimp cultivator group in Sriminosari Village, Labuhan Maringgai District, East Lampung Regency.

2. RESEARCH METHOD

This research was conducted in Sriminosari Village, Labuhan Maringgai District, East Lampung Regency, Lampung (Figure 1). This research activity was started in July 2022 by starting with the observation of the research site.



The group studied was the "Maju Prima" Vaname Shrimp Fulfill group. This group consists of one group leader (as a coach) and 30 group members. The prime forward group is a group that stands independently without assistance from the government.

The research design used in this study used descriptive qualitative research methods. Qualitative descriptive method is used as a research procedure that produces descriptive data, namely the data collected in the form of words, pictures and not numbers. Thus, this research report contains excerpts of data in presenting the report, where the data comes from interviews, field notes, photos and other documents (Moelong,2007).

The research informant selection technique used purposive sampling technique. According to Sugiyono (2008), purposive sampling is the informants that the researcher determines, namely people who according to the researcher have the information needed in this study, because in their daily life they deal with the problems being studied. and several members of the group, the head of the comparison group, the Village Head and Village Secretary, the Marine and Fisheries Service of South Lampung Regency and stakeholders from the private sector (aquaculture technicians, sales of feed and medicine). The data analysis technique used is interactive data analysis. According to Hubberman

and Miles (1992) there are 3 main things in interactive data analysis, namely data reduction, data presentation and verification.

3. RESULTS AND DISCUSSION

3.1 General description

Sriminosari Village is a village in Labuhan Maringgai District, East Lampung Regency with an area of 1,250 Ha. To the north, Sriminosari Village is bordered by Srigading Village, to the south by Labuhan Maringgai Village and to the west by Way Bandar Sriminosari Village. The east side of Sriminosari Village is directly adjacent to the Java Sea.

Sriminosari village was opened in 1952 by the transmigration group BRN (National Reconstruction Bureau), but in 1957 it was abandoned by the transmigration and continued by transmigration BP. II Lodaya. But in 1959 the transmigration Sriminosari died. So that around 1960 the remaining transmigration participants lived in number of 36 families, located in the area now called Dusun 1. Then in 1966 based on the permission of the head of state, local transmigration groups led by Mr. Madmud Nawawi from Serang Banten were included.

The total population of Sriminosari village is 6,771 people consisting of 3,445 male residents, 3,326 female residents and 2,167 households are inhabited. The average population of Sriminosari Village has a livelihood as Farmers, Fishermen, Farm Workers, Civil Servants (PNS) and entrepreneurs.

Since 2010 East Lampung Regency has been designated as a Minapolitan Area by the Decree of the Minister of Maritime Affairs and Fisheries No: KEP.32/MEN/2010 CONCERNING DETERMINATION OF THE MINAPOLITAN AREA. One of the sub-districts in East Lampung which is a fishery area is Labuhan Maringgai District.

Labuhan Maringgai sub-district has been designated as a Minapolitan area with the Regent's Decree number: B.324/04/SK/2010, where fisheries as an economic driver are supported by cross-sectoral sectors so that it becomes an area that grows and develops and is sustainable. Sriminosari Village is part of Labuhan Maringgai District which is included as a minapolitan area because Sriminosari Village is geographically located on the east coast of Lampung. With this condition, many people take advantage of it by opening Vaname shrimp ponds, both individually and in groups.

3.2 Use of Vaname Shrimp Feed in the Advanced Prima Group

The Vaname shrimp feed used by the Maju Prima Group is PV Prima feed and SGH feed. PV Prima feed has a protein content of 35%-38% while SGH feed has a protein content of 32%. (Table 2). The feed with the protein content was in accordance with the quality requirements of the vannamei shrimp feed, the Indonesian national standard, where the protein content of the vannamei shrimp feed was 28% - 32%. (SNI 7546, 2019).

Table 1. Nutrition content of PV Prima shrimp feed

No	Variable	Unit	Quality Requirements		
			Starter	Grower	Finisher
1	Moist (Max)	%	12	12	12
2	Protein (Min)	%	32	30	28
3	Fat (Min)	%	6	6	5
4	Fiber (Max)	%	4	4	5
5	Ash (Max)	%	15	15	15
6	Water Stability (After 90 minute) (Min)	%	90	90	90
7	Nitrogen (max)	%	0,15	0,15	0,15
8	Diameter	mm	(<1,6)	2	(>20)

Artificial feed already contains nutrients according to shrimp needs. Nutrients in shrimp feed contain protein, fat, carbohydrates, vitamins, minerals, and essential amino acids. Good nutrition will produce benefits for shrimp to support its growth. Protein is the largest component. The presentation of nutrients in feed can also be divided into three groups based on the time of administration, namely starter, grower, and finisher.

The frequency of feeding carried out by the "Maju Prima" group was 4 to 6 times a day, namely in the morning, afternoon, evening and night. Adequate feeding was adjusted to the shrimp biomass obtained from the sampling results. According to Kordi (2007) feeding is done every 6 times / day with an interval of 4 hours. Feeding post larvae of Vaname Shrimp was carried out at 00.00, 04.00, 08.00, 12.00, 16.00, and 20.00. The feed given must be in accordance with the age and mouth opening of the shrimp.

The following is the amount of feed used by the Maju Prima Group in the last 4 years:

Table 2. Quality requirements for Vaname shrimp feed (SNI 7546, 2019).

Tahun	2019	2020	2021	2022
Tonage	70,923	61,281	52,269	30,203

The table above shows that the highest use of feed occurred in 2019, while the lowest use of feed occurred in 2022. Factors for the decline in the use of shrimp feed for the Maju Prima Group include internal factors and external factors. Internal factors are influenced by the decline in shrimp production due to constraints in cultivation such as disease attacks. The disease that is currently an obstacle for Vaname shrimp farmers in East Lampung is AHPND disease.

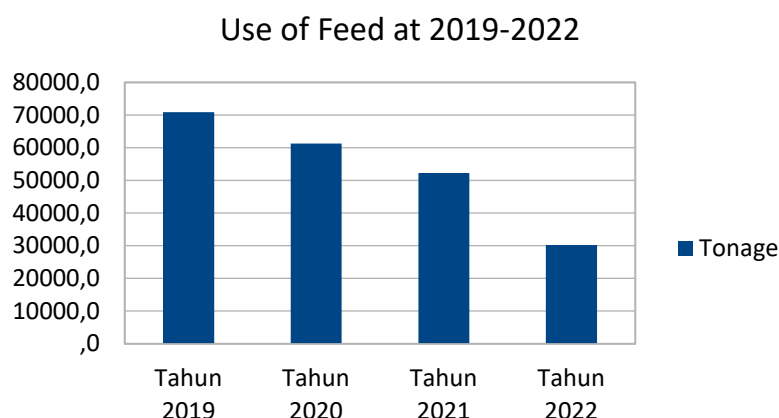


Figure 1. Use of Vaname shrimp feed

AHPND (Acute Hepatopancreate Necrosis Disease) is a disease caused by infection with the *Vibrio parahaemolyticus* (Vp AHPND) bacteria which is capable of producing toxins and causing death in shrimp with mortality reaching 100%. Death from AHPND occurred at the age of less than 40 days after being stocked in ponds. The disease first appeared in China in 2009 and is known as the covert mortality disease. The target organs that cause AHPND are digestive organs, namely: Hepatopancreas, Intestines and Stomach. Clinical symptoms that appear in shrimp infected with AHPND are as follows; Hepatopancreas pale and shrunken, intestines and stomach empty (no food) and body color is pale and yellowish.

While the external factor is the world economic turmoil. Starting from the COVID-19 virus attack in 2019, the world economy became unstable and volatile. Moreover, many countries have imposed

lockdowns in their territories so that the activities of many citizens are limited which results in reduced shrimp consumption. Apart from that, the world crisis was exacerbated by the war between Russia and Ukraine which caused an economic crisis. According to Permana H.S (2022), the Russian invasion of Ukraine certainly disrupted the global economy for a long time plus the consequences of the COVID-19 pandemic.

4. CONCLUSION

The use of Vaname shrimp feed in the "Maju Prima" group was highest in 2019 at 70.923 kg and the lowest in 2022 at 30.203 kg. The decrease in the use of shrimp feed was influenced by internal factors, namely the low survival rate due to disease attacks which resulted in a decrease in shrimp production and external factors, namely the decline in demand due to the global crisis. Support from the government is very much needed to overcome the decline in national shrimp production, namely in the form of subsidizing feed prices for small farmers so that they can withstand disease attacks and global crises.

REFERENCE

- Dahuri, R. and Y. Rais. 2001 "*Pengelolaan Sumberdaya Wilayah Pesisir dan Lautan Secara Terpadu*". pp: 11
- Sucipto and D. Adiwijaya. 2019. "*Konsep Budidaya Tambak Berkelanjutan*" Balai Besar Perikanan Budidaya Air Payau Jepara. Jepara.
- Evi, Yuliati, 2009. "*Analisis Strategi Pengembangan Usaha Pembenihan Udang Vaname (Litopenaeus vannamei), Kasus Pada PT Suri Tani Pemuka, Kabupaten Serang, Provinsi Banten*". Bogor.
- Haliman, R.W and S. D. Adijaya. 2008. Udang Vannamei. Penebar Swadaya. Jakarta. pp:19–22
- Kordi, M. G. H and B. T. Andi. 2009. Pengelolaan Kualitas Air dalam Budidaya Perairan. PT Rineka Cipta. Jakarta.
- Muluk, C and C. Bailey. 1994. Social and Environmental Impact of Coastal Aquaculture in Indonesia. Dalam C, Bailey., S, Jentoft., and P, Sinclair (Eds.). Aquaculture Development Social Dimensions of an Emerging Industry (pp: 193–209). Westview Press. Colorado.
- SNI 01-7246–2006. Produksi Udang Vaname (*Litopennaeus Vannamei*) di Tambak dengan Teknologi Intensif. Badan Standarisasi Nasional. Jakarta
- SNI 7549 – 2009. Persyaratan Mutu Pakan Udang Vaname. Badan Standarisasi Nasional. Jakarta