

**FEEDING MANAGEMENT IN MANUFACTURES**  
**VANAME SHRIMP (*Litopenaeus vannamei*) AT THE CENTER FOR THE DEVELOPMENT OF SEA AND**  
**BACKGROUND CULTIVATION, LAMU VILLAGE, TILAMUTA DISTRICT, BOALEMO REGENCY**

Fernandy M. Djailani <sup>\*1</sup>, Arfiani Rizki Paramata<sup>2</sup>, Lis M Yapanto<sup>2</sup>, Mulis<sup>3</sup>, Sutianto Pratma Suherman<sup>3</sup>

<sup>1</sup>Department of Fishery Products Technology, Faculty of Fisheries and Marine Affairs, State University of Gorontalo

<sup>2</sup>Department of Aquatic Resources Management, Faculty of Fisheries and Marine Affairs, State University of Gorontalo

<sup>3</sup>Department of Aquaculture, Faculty of Fisheries and Marine Affairs, State University of Gorontalo

*Correspondence author: Fernandy M. Djailani*

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Feed is a very important factor in vannamei 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. The research was carried out for 45 days starting from April 18 to June 06, 2021. The Field Work Practice was carried out at the UPTD of the Marine and Brackish Cultivation Fisheries Center, Lamu Village, Tilamuta District, Boalemo Regency. Primary data is the process of direct interviews with the division of shrimp ponds, participating in activities while in ponds, and taking documentation to complete the data obtained. The initial feeding dose given is 0.5 kg for 8.000 fry. After the shrimp is more than 30 days old or after sampling the shrimp, the addition of feed based on the weight of the shrimp is controlled by using anco checks. The cause of the feed not running out can be due to disturbances in water quality, shrimp disease, shrimp are in a state of moulting and feed content that is not in accordance with the nutritional needs of shrimp

*Keywords: Vanname shrimp, management, Lamu village, Gorontalo Provinsi Province*

## INTRODUCTION

According to the KBBI (2018) in Harry Pratama Ramadhan (2020) a pond is a bund that has a function to hold water, a pond that is usually found on the edge/coast of the sea that is given for various kinds of cultivation activities, namely the cultivation of fish, shrimp, and fish. others are usually managed by individuals or small and medium-sized companies. One of the pond cultivation that has potential and profitable business opportunities is shrimp ponds, there are many types of shrimp that are cultivated in the form of ponds in Indonesia, one of which is vaname shrimp (Harry Pratama Ramadhan 2020). Shrimp is one of the export commodities from the fisheries sub-sector that has high economic value. One type of shrimp that is in high demand both at home and abroad, namely vaname shrimp (*Litopenaeus vannamei*).

Vannamei shrimp (*Litopenaeus vannamei*) is a national superior commodity that has a high economic value seen from the production of vaname shrimp in 2017 reaching 555,183 tons (KKP, 2018). This shrimp has advantages for cultivation activities in intensive ponds because it has tolerance to various kinds of salinity and disease, has fast growth, and is able to survive in high densities (Khanjani et al 2016). Vannamei shrimp is a fishery commodity that has high economic value. The productivity of this commodity can reach more than 13,600 kg/ha with ever-increasing demand among the community (Muhammad Ghufon et al 2018). Therefore, so that the productivity of vaname shrimp does not decrease, it is necessary to pay attention to the management of feeding on the enlargement of the vaname shrimp.

Feed is a very important factor in vannamei 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 (Miftachul Ulumiah et al 2020).

The size and amount of feed given must be done carefully and precisely so that the shrimp do not experience underfeeding or overfeeding. The amount of feed must be adjusted to the total shrimp biomass, but when the price of feed needs rises due to the impact of the weakening of the rupiah exchange rate, the resulting production costs will also increase (Miftachul Ulumiah et al 2020).

## IMPLEMENTATION METHOD

The research was carried out for 45 days starting from April 18 to June 06, 2021. The Field Work Practice was carried out at the UPTD of the Marine and Brackish Cultivation Fisheries Center, Lamu Village, Tilamuta District, Boalemo Regency.

Primary data is the process of direct interviews with the division of shrimp ponds, participating in activities while in ponds, and taking documentation to complete the data obtained from the results of feeding activities to shrimp.

Secondary data is data that comes from literature or a second source that plays a role in providing information, the data collected is such as annual reports, supporting books and the results of discussions with field supervisors.

The feed given to shrimp during the rearing process is shrimpfeed SI01, this is due to the relatively small size of the shrimp's mouth opening. Shrimp feed is given in different doses every day, until harvest. Then the feed for anco also differs according to the daily feeding. At the beginning of the first month, given feed according to the shrimp sampling method which aims to determine the dose of shrimp feed. The amount of initial feeding was 30 kg for 1-10 days, 91 kg for 11-25 days, and 139 kg for 26-40 days.

After that, in the following month the feeding was adjusted to the shrimp biomass and controlled using the anco check score indicator, where at the age of 41-55 with a feed weight of 182 Kg, and at the age of 56-70 it increased to 242 Kg, after that it entered the cycle. The last is 70-85 days the weight of the feed becomes 250 Kg. Additional feed applications are also applied to vaname shrimp rearing. The supplementary feed in question includes vitamin C, omega protein, and probiotics as well as garlic, where the administration of drugs and vitamins to shrimp can guarantee and help the growth process of shrimp, especially in their appetite, because shrimp's appetite can be categorized as one of survival. shrimp until it's time to harvest. Sampling was carried out once a week which aims to determine the average weight and biomass of white vaname shrimp so that the amount for daily feed on white vaname shrimp can be determined. In addition, the sampling results can also be used to monitor the weight growth rate of vaname shrimp.

## RESULTS AND DISCUSSION

### Feeding Management

Feed management is one of the keys to success in vaname shrimp farming business activities. This is because approximately 70% of all operational costs are from feed. According to Cruz (1996) in Rasyidan (2016) explains that feed is the most important input in increasing aquaculture production and profits. Success or failure depends on feeding. Feed quality is generally considered the responsibility of the feed producer which is influenced by factors outside the installation such as handling, storage and use of feed. The quality of feed must be considered, for example in water its stability or resistance in high water for more than 2 hours and does not break down quickly, good shrimp feed smells fishy, fresh and can attract shrimp's appetite. The shrimp feed must be submerged in water because it has eaten at the bottom of the water. There are several things that need to be considered in the management of feeding on vanamei shrimp enlargement, including the type of feed, the nutritional content in the feed, feeding techniques, feeding doses, feeding schedules and feed storage.

### 3.3 Types of Vaname Shrimp (*Litopenaeus vannamei*) Feed

According to Jory (1995) in Wayan et al (2010) provide shrimp feed criteria for intensive ponds that the feed must have complete nutritional content, new production, free from mycotoxins and pesticides, the fat does not have a rancid smell, its stability in water must be in accordance with the feed program or the frequency of feeding used to have good power. attractiveness and delicacy, the size of the feed according to the size and development of the shrimp.

Like the artificial feed used by the UPTD, the Marine and Brackish Cultivation Fisheries Center (BPBLP) consists of several types and brands, in this case because every time there is a change in size and it is adjusted to the body size of vaname shrimp. The feed used is *shrimp feed* S1-01, S1-02, S1-03. Types of shrimp feed

**Table 3.** Shrimp Feed Nutrient Composition

Code	Protein (% min.)	Fat (% min.)	Fiber (% max.)	Ash (% max.)	Moisture (% max.)
SI-00	30	6	3.5	13	11
SI-01	30	6	3.5	13	11
SI-02S	30	6	3.5	13	11
SI-02	30	6	3.5	13	11
SI-02SP	30	6	3.5	13	11
SI-02P	30	6	3.5	13	11
SI-03	30	6	3.5	13	11

### 3.4 Frequency and Timing of Feeding

According to Kordi (2010) *in* Ramadhan (2016) explains that a very important factor in feeding that must be considered is the dose, time, and response of shrimp.

Feeding time was carried out 4 times a day, namely at 07.00, 11.00, 15.00, 21.00. As the age of the shrimp increases, the amount of feed given is also increasing.

**Table 4.** Feeding Schedule

Age of Shrimp	O'clock	Feed Name	Amount of Feed (Kg)	Dianco Dosage (Grams)
1 – 10 Days	07.00 AM 11.00 AM 15.00 PM 21.00 PM	S1 01	30 Kg	30 Grams
11–25 Days	07.00 AM 11.00 AM 15.00 PM 21.00 PM	S1 02	91 Kg	60 Grams
26 – 40Days	07.00 AM 11.00 AM 15.00 PM 21.00 PM	S1 02	139 kg	70 Grams
41 – 55 Days	07.00 AM 11.00 AM 15.00 PM 21.00 PM	S1 03	182 Kg	120 Grams
56 – 70 Days	07.00 AM 11.00 AM 15.00 PM 21.00 PM	S1 03	242 Kg	200 Gram
70 – 85 Days	07.00 AM 11.00 AM 15.00 PM 21.00 PM	S1 03	250 Kg	200 Gram

### 3.5 Ways of feeding

Feeding is done by spreading it evenly throughout the edge of the pond or shrimp living area. In the middle of the pond is a place where dirt or mud gathers, this is due to the rotation of the water that occurs due to the water current caused by the rotation of the mill on the pond plot, so that it can create currents that carry mud and leftover feed gathered in the middle of the plot. Shrimp habitat in pond plots is usually on the edge of the plot not in the middle, this is because the center of the bottom is dirty so that the shrimp do not want to gather in the middle of the plot.

### 3.1 Conclusion

Based on the results obtained from the Field Work Practice conducted in Balai BPBLP Lamu Village, Tilamuta District, Boalemo Regency, in feeding activities, it can be concluded that feed management includes feeding which is carried out by spreading evenly throughout the edge of the pond or shrimp living area. The initial feeding dose given was 0.5 kg for 8,000 fry. After the shrimp is more than 30 days old or after sampling the shrimp, the addition of feed based on the weight of the shrimp is controlled by using anco checks. The cause of the feed not running out can be due to disturbances in water quality, diseased shrimp, the shrimp are in a moulting state and the feed content is not in accordance with the nutritional needs of the shrimp.

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