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ANALYSIS OF THE ADDED VALUE OF SEAWEED INTO SEAWEED SNACK PRODUCTS AND ITS MARKETING IN THE HOME INDUSTRY "ULVA-Q KA-RAPYAK", PANGANDARAN, WEST JAVA-INDONESIA

Junianto[1], Rollin Devasa[2], Ainun Nahar[2], Silmi Biladyah Azzahra[2], Fadilatul Mukaromah[2], Grinsya Brylian Krisya-wensya[2], Ristisah[2], and Alan Romansah[2]

1) Staff lecturers of the Perikanan_ department of Padjadjaran University
2) Students of Fisheries Study Program, PSDKU-Pangandaran – Padjadjaran University

KeyWords
Add Value, Competitors, Hayami Method, Home Industry, Innovation, Market Segmentation, Promotion, Rice Flour.

ABSTRACT

One of the leading fishery commodities in Pangadaran, West Java-Indonesia is seaweed. This research aims to 1) analyze the added value of seaweed processed into seaweed snack products and 2) analyze the marketing strategy of seaweed snacks by Ulva-Q SMEs. The research method used is the case study method. This research was conducted *in the home industry of* ULVA-Q SMEs, Kalipucang Pangandaran. The selection of the location was carried out deliberately (*purposive sampling)* with the consideration of Karapyak as a seaweed producer. This research was conducted in September 2022. Data are obtained by direct observation of the place of the processing unit and interviews with business owners and their workers. The data were analyzed descriptively and calculated by the Hayami method. Based on research that has been carried out, it shows that the added value produced in the processing of seaweed snacks is IDR 890,630 / production with an added value ratio of 60%. Once production requires fresh seaweed of 8 kg. The market segmentation of Ulva Q grass snack products is geographical and demographic segmentation. The competitors of Ulva Q grass snack products consist of rival competitors and substitutions.

INTRODUCTION

Seaweed is one of Indonesia's fishery commodities that has high economic value. According to Hikmah and Fatonny (2022), Indonesia exported 159.59 thousand tons of seaweed with a value of USD 177.99 million in 2021. One of the seaweed-producing areas in Indonesia is Pangandaran Regency.

Seaweed is used as a superior commodity to be developed in Regency because it has high economic value and is classified as the easiest and cheapest business (Sarah et al. 2020). The seaweed agro-industry must continue to be developed to increase added value, increase the income and welfare of seaweed farmers and increase local indigenous income. According to Kotler (2005), the seaweed agro-industry can be a promising business opportunity if it is processed and managed properly starting from the procurement of raw materials, and processing to marketing aspects.

Seaweed has a content of carbohydrates (sugar or vegetable gum), proteins, a little fat, and ash which are mostly compounds of sodium and potassium salts (Sarah et al. 2020). Seaweed can be processed directly or processed into intermediate products such as agar-agar, keraginan, and align. Processed seaweed products have an important role in increasing the human body's crude fiber intake.

One of the agro-industries seaweed found in Kabupaten Pangandaran is UKM Ulva-Q. The location of his business is located in Bagolo Kolot Hamlet, Bagolo Village, Kalipucang District, Pangandaran Regency. ULVA-Q SMEs are Small and Medium Enterprises that produce a variety of processed seaweed in the form of seaweed snacks with various flavors. Seaweed snack products produced by ULVA-Q SMEs have been marketed around the Pangandaran area and also in other areas.

Its value-added analysis needs to be carried out and its marketing strategy also needs to be studied. Added value results from the

difference in the value of products obtained from a certain golfing process minus the value sacrificed, namely the costs incurred during the process (Fauziah et al. 2021). This research aims to 1) analyze the added value of seaweed processed into seaweed snack products and 2) analyze the marketing strategy of seaweed snacks by Ulva-Q SMEs.

RESEARCH METHODS

The research method used is the case study method. This research was conducted *in the home industry of* ULVA-Q SMEs, Kalipucang Pangandaran. The selection of the location was carried out intentionally (*purposive sampling)* with the consideration of Karapyak as a producer of seaweed. This research was conducted in September 2022. Data are obtained by direct observation of the place of the processing unit and interviews with business owners and their workers. The data were analyzed descriptively and calculated by the method of Hayami et al (1987).

RESULTS AND DISCUSSION

Overview of Seaweed Snack Products

The seaweed snack produced by home industry "Ulva Q" is made from *Ulva lactuca*-type grass*.* This type of seaweed grows a lot around the coast of the Karapyak area, not far from the location of the home industry processing unit "Ulva Q". According to Handayi (2016), the classification of *Ulva lactuta* i.e., kingdom: *Plantae*, phylum: *Chlorophyta*, class: *Ulvophyceae*, order: *Ulvales*, family: *Ulvaceae*, genus: *Ulva*, species: *Ulva lactuca.* Its habitat is in the seawater on corals and under tidal flows and its morphology is in the form of thin and sprawling thallus like a sword consisting of 2 layers of cells. *Ulva lactuca* is up to 100 cm long and bright apple green, and has the form of *strap-shaped blades* with smooth but wavy edges. Good salinitation for the growth of *Ulva lactuca* is 29-31.5%, lives in the temperature range of 28-31^{o} C and grows well at a pH of 7.5-9.

According to Costaa et al (2018), *Ulva lactuca* contains (per 100 grams of net weight): water 18.7%, protein, 15-26%, fat 0.1-0.7%, carbohydrates 46-51%, fiber 2-5%, and ash 16-23%, and also contains vitamins B1, B2, B12, C, and E. *Ulva lactuca* has also been shown to have antioxidant characteristics that help lower serum total cholesterol levels, LDL cholesterol, and triglycerides, all of which are significant risk factors for coronary disease.

Seaweed Snack Production Process

The main raw material for *Ulva lactuca* seaweed is taken from Karapyak Beach, Pangandaran, or can come from other regions such as Kupang and Indramayu. The tools and materials used in the process of processing seaweed snacks are found in Table 1.

Table 1. Tools and Ingredients in the Manufacture of Grass Snacks in Home Industry "Ulva Q"

Tool	Material
Basket	Seaweed
Washbasin	Rice flour
Wok	Oil
Spatula	Salt
Strainer	Flavoring
Stove	Coriander
Spinner machine	Garlic
Scales	Balado Powder

The procedure for making seaweed snacks is carried out in several stages, namely as follows:

1. Fresh seaweed is dried in the sun for 6 hours.
2. After drying the seaweed is washed and cleaned of dirt and shells that are still attached.
3. The cleaned seaweed is then boiled at 90^{o}C for 10 minutes after cooling.
4. Make the dough by pouring rice flour into a basin.
5. Add spices such as salt, coriander, fine garlic, and flavoring according to the dosage add enough water and then stir until well mixed.
6. Seaweed that has been cleaned and boiled is then put into the dough until everything is greased.
7. Then fry it in hot oil by inserting it one by one or per strand so that the shape of the seaweed remains intact.
8. After looking a little dry, the seaweed is removed for a while, then the frying is done again so that it cooks evenly and is more crispy.
9. After frying 2 times the seaweed is removed and drained.
10. Furthermore, drying is carried out using a spinner to reduce oil content.
11. Seaweed is given balado powder for several flavors.
12. Put it in the package and weigh it with a weight of 65 gr.

Calculation of added value of Seaweed Snacks

The basis for calculating the value in this research is one production process. Once the production process has obtained an output of

8 kg with a selling price or income of Rp 1,476,923 per production. The raw baka of grass needed in one production is as much as 8 kg for Rp. 200,000. Other input costs are Rp. 386. 292. Other inputs consist of rice flour, salt, flavoring, garlic, and coriander. Analysis of the added value of seaweed is processed into snacks as shown in Table 2.

Table 2. Value Added Analysis with Hayami Method

No.	Variable	Formula	Value
	Input Output and Haraga Values		
1	Output (Kg/Production)	1	8
2	Input (Kg/Production)	2	8
3	Labor (HKP)	3	2.9
4	Conversion Factors	4 = 1/2	1
5	Labor Coefficient	5 = 3/2	0.4
6	Output Price (Rp/Kg)	6	1476923
7	Average Wage (Rp/HKP)	7	260000
	Added Value and Profit		
8	Raw Material Price (Rp/production)	8	250000
9	Other Input Value (Rp/production)	9	386292
10	Output Value (Rp/Kg)	10 = 4 x 6	14769233
11	a. Added Value (Rp/Kg)	11a = 10 - 8- 9	890631
	b. Value Added Ratio (%)	11b = (11a/10) x 100%	60%
12	a. Labor Reward (Rp/Kg)	12a = 5 x 7	94250
	b. Labor Ratio (%)	12b = (12a/11a) x 100%	11%
13	a. Profit (Rp/Kg)	13a = 11a-12a	796381
	b. Profit Rate (%)	13b = (13a/10) x 100%	0.5392
	Reply to Production Factors		
14	Margin (Rp/Kg)	14 = 10 – 8	1276923
	a. Labor Income (%)	14a = (12a/14) x 100%	7%
	b. Other Input Donations (%)	14b = (9/14) x 100%	30%
	c. Processing Advantages (%)	14c = (13a/14) x 100%	62%

Based on Table 2, the added value of seaweed is processed into snack products of Rp 890,631 per production. The ratio of the value added is 60%. According to Darmawan et al., (2018) about value added analysis, if the added value obtained by industry is more than 50%, the added value is said to be large and vice versa, if the added value obtained is less than 50% then the added value is said to be small. Based on this statement, the added value generated in the seaweed snack business by the home industry "Ulva Q" is quite large because it is more than 50%.

The labor reward for each production is obtained in the amount of Rp 94,250. The share of labor is obtained 7%. Business profit as a net added value is IDR 796,381 with a profit rate of 62%.

Basically to increase the added value of any product by increasing the output price and streamlining the input price. The condition that must be met is that the resulting product must be of high quality following the wishes of the market or consumers. One way to make the product marketed as desired by the market is by promotion, The content of the promotion is to convey the benefits of the product and build connections, for example, creating attractive and relevant content on various platforms, beautifying the packaging but pay attention to the input price, collaborate with the right influencers, hold a lucky draw, highlight the advantages and content of the benefits of the product, improve the quality and tools of the product materials, innovate and increase product prices. If the product becomes better, it can increase the output value according to its feasibility.

Market Segmentation

Market segmentation is the grouping of markets into homogeneous groups of consumers, where each group can be selected as a targeted market for marketing a product. The market segmentation of Ulva-Q is based on geographical segmentation. Ulva-Q's industrial products are marketed from urban to rural areas. The product targets sales to different regions. The owner of Ulva-Q stated that this product is not only marketed domestically, even this product has reached Singapore at bazaar events. Then through demographic segmentation, processed seaweed products are marketed to all circles of society, both children and adults. So this

product is marketed to everyone regardless of the level of the economy.

Competitors

Competitors of seaweed snack products "Ulva Q" identified 2 types, namely rival competitors and substitutions. Rival competitors are defined as product competitors consisting of competitors who have the same type of product. Meanwhile, substitution competitors are competitors with different products but can meet the same needs. The rival of the Ulva Q seaweed snack in the same segment, namely the Pangandaran area, there are as many as 5 grass snack products. This rival product is produced by a home industry in the Karapyak area, Pangandaran. Meanwhile, there are quite a lot of competitors for the substitution of seaweed snacks consisting of well-known brands such as Mama Suka and Tao Kae Noi (outside brands). However, the basis of competition for seaweed snack products is product differentiation and *cost advantage*. This is because the "seaweed snack" produced by Ulva Q is designed as a product that is different from existing products where this product is made by mixing tapioca flour and then directly frying using oil and the product is still in the form of leaves. Meanwhile, existing seaweed snack products such as nori or seaweed that have been crushed / smooth are used as sheets. In addition, the basis of competition used in marketing "seaweed snack" products is *the cost advantage* because it is at a lower price compared to pre-existing seaweed snack products.
Ulva Q has weaknesses in its marketing that is not optimal and the product's durability time is only short (3 months). So far, no way has been found to make this product more durable, making it difficult to achieve large-scale sales that require a long process. As for other products, it can reach more than 3 months. In addition, there is also a shortage of modern tools that can speed up the production process of "seaweed snacks" such as seaweed dryers.

Conclusion

Based on research that has been carried out, it shows that the added value produced in the processing of seaweed snacks is IDR 890,630 / production with an added value ratio of 60%. Once production requires fresh seaweed of 8 kg. The market segmentation of Ulva Q grass snack products is geographical and demographic segmentation. The competitors of Ulva Q grass snack products consist of rival competitors and substitutions.

Suggestion

Some of the suggestions recommended are based on the results of research, namely improving the quality of product material tools, making innovations, especially in packaging design, and intensifying promotion.

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