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RESEARCH ARTICLE

QUALITY PROFILE AND ECONOMICS ANALISIS OF DRIED SMOKED *JULUNG* IN BANGGOI VILAGE, DISTRICT OF EASTERN SERAM, MALUCAS

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ABSTRACT

The objective of the research was to study quality profile of dried smoked julung and economics social of dried smoked julung processor, in Banggoi Village, District of Eastern Seram. Research method applied was descriptive by using field survey, followed by procsimate and microbiology analisis to get the quality information of julung dried smoked. In order to get the economics feasibility, it was used revenue cost ratio analysis. The revenue cost ratio analysis indicated the number of 1,27, it was mean that this business is feasible to develop in the future. The quality of dried smoked julung was indicated good based on the procsimate and microbiology analysis. The rate of procsimate value was stay at the range allowed by SNI (Standar National Indonesia). Nevertheless, the handling due to processed fish performance should be considered.

INTRODUCTION

Based on the data, up to 75 % fish processing is conducted traditionally. The profile of small scale household enterprises is shown by the low quality, quantity, and also the commercial value (**Martasuganda, 2003**). Another characteristics of the traditional fish processing technology are the low skill of the processors, usually their skills is acquired hereditary, the sanitation and hygiene levels are low, according to the surrounding circumstances. It is no clean water available; the capital is low, the product usually was marketed in the local market (**Directorate General of Capture Fisheries, 2001**). According to the FAO terminology (Heruwati, 2002), a traditional fish processing, or "traditional cured" is a product that processed in a simple way and commonly performed on an household scale. The types of processing technology are dried, cured, boiled, and fermented. **Winarno (1986)** stated, the main factor influenced the quality of processed fish during storage is water content. The lower the moisture content lead to the slower growth of microorganisms and vice versa. One of indicators determining whether the food fit or unfit for consumption is the present of microorganisms both qualitative and quantitative (**Fatmawati, 1992**). The purpose of the research is to study the technological and socio-economic profile of dried smoked *julung* called *julung asar* came from Banggoi Village, East Seram District, Malucas, Indonesia.

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MATERIALS AND METHODS

The interpretation of data used qualitative descriptive analysis on the socio-techno-economic conditions of fish processors in East Seram District. The qualitative descriptive analysis method was focused on the investigation of the meaning of human life, including the way of people expressed their understanding through language, voice, image, and social rituals (**Daymon *et al*., 2002**).

Analysis approach

Several approaches and analysis was done to answer the research objectives of socio-techno-economic of fish processor:

Analysis of Profit and Loss

An Analysis of profit / loss aims to determine the amount of profit or loss of business managed. A profitable business will have revenues greater than the value of the total expenditure (**Effendi and Oktariza, 2006**).

Advantages = Revenue - (Total Fixed Costs + Total Variable Costs)

Business Analysis of Dried Smoked *Julung*

To analyze the feasibility of a business uses R / C tools analysis. This analysis is the result of the total revenues divided

by the total of fixed costs and total of variable costs. This analysis aims to calculate the rate of profit, return on investment and break-even point of a business. This analysis can also determine the feasibility of a business, in which an otherwise decent effort when R / C> 1. The higher the value of R / C, the higher the rate of profit of a business (**Effendi and Oktariza, 2006**).

Quality Analysis of Dried smoked *julung*

Analysis of the Dried smoked *julung* quality was based on the proximate test procedures by **AOAC (1989)**. Food safety observations was performed by microbiological testing on TPC, Escherichia coli and Salmonella.

RESULTS AND DISCUSSION

Socio-Economic Profile of Dried smoked *julung* Processing Society in East Seram District

Dried smoked *julung* (*neba*) is a kind of famous fish processing business in East Seram district. Dried smoked julung processing business is the most profitable business, and its raw materials are very abundant during the fishing season. The respondent in this study was the community of dried smoked julung processor Bangoi village, district East Seram. The age of dried smoked julung processor is in the range of productive age, which ranges between 19-40 years. Based on the business experience the average age of business has over 10 years. Generally, dried smoked julung processors in the village Bangoi were women/housewives. The level of public education of the fish processor in Bangoi village, East Seram District can be seen in Figure 1.

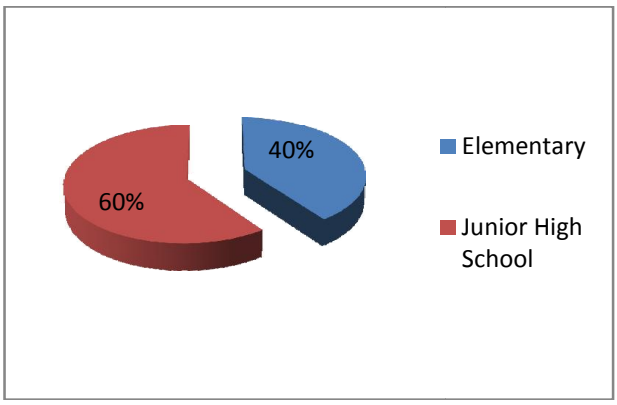

Figure 1. The Level of dried smoked *julung* processor education in the Banggoi village, East Seram District

Most small fish processors (60%) were graduated from junior high school and the other (40%) were graduated from elementary school.

Business Profile Dried Smoked *Julung* Processing in East Seram District

Dried smoked *julung* processing business in the Banggoi village has been carried out since decades ago. This business is carried out hereditary and become an individual or family home industry. Besides dried smoked *julung* processing, they also have a business on artificial fishing ground (*bagan*) as a place to catch *julung* during the fishing season. Dried smoked *julung* was produced only on fishing season from April until August. *Julung* catches from the artificial fishing ground were smoked directly by traditional curing furnace. Dried smoked *julung* resulted from the smoked technique was stored in sacks and ready to be distributed and marketed. Dried smoked *julung* can be kept for months. In producing dried smoked *julung*, the processors were usually assisted by members of their own family. Total production ranges between 500 - 1000 head per day, or about 45 kg per day. Dried Smoked *Julung* price at the producer was Rp. 10.000, - / *waya* (1 *waya* consist of 20 head dried smoked julung; or equal to 0.5 kg of dried smoked *julung*), so the price of 1 kg of dried smoked *julung* was Rp. 20.000, -. The average dried smoked *julung* production was 75 waya / day or 37 kg per day. The materials used for processing of dried smoked *julung* were coconut oil, sea water, fish, and coconut shell. While the tools used were knife, bucket / pan, processing furnace, clamp /awl, cool box and bag.

Distribution and Marketing of Dried Smoked Julung in East Seram District

Raw materials of dried smoked julung in the village Banggoi were obtained from free or artificial fishing ground which couch by fishermen or their own husbands. Marketing and distributing of dried smoked *julung* were not too complicated where the consumers usually come directly to the fish processing place. Dried smoked *julung* also distributed to some other place like Namlea, Ambon, and Bitung (North Sulawesi). The marketing channels of dried smoked julung in the village Banggoi follows the distribution pattern as shown in Figure 2.

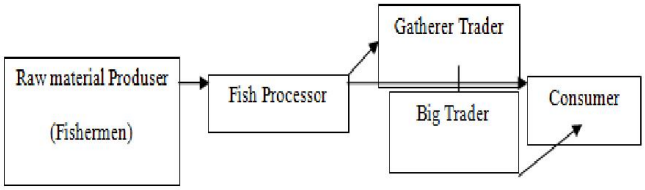

Figure 2. Scheme of Dried Smoked Julung Marketing

Component Cost of Dried Smoked *Julung* in Banggoi Village East Seram District

Components of fixed costs and variable costs incurred by dried smoked *julung* processors in the village of Banggoi can be seen in Table 1.

Table 1. Fixed Cost of Dried Smoked Julung

No.	Cost type	Sum (Rp)
1.	Depreciation cost	-
2.	Maintenance cost	-
3.	Administrative Costs	
	Taxes / levies	1.000
Total		1.000

Table 2. Biaya Variabel *(Variable Cost)* Ikan Julung Asap Kering

No.	Cost type	Sum (Rp)
1.	Cooking oil	30.000
2.	Plastic bag	25.000
3.	Cigarettes	50.000
4.	Fuel	200.000
5	Coconut shell	200.000
6.	Meal	50.000
7.	Transportation	25.000
Total		580.000

The total cost of dried smoked *julung* was calculated based on the fixed costs and variable costs incurred by processors of smoked fish. The following table presents the total costs of dried smoked *julung* of Banggoi village, East Seram district.

Table 3. Total cost of dried smoked *julung* processing

No.	Fix Cost (Rp)	Variable cost (Rp)	Total cost/day (Rp) (2)+(3)	Total cost/month (Rp) (4)*26	Total cost/year (Rp) (5)*12
(1)	(2)	(3)	(4)	(5)	(6)
1.	1000	580.000	581.000	15.106.000	181.272.000

Total Revenue of dried smoked *julung*

Total revenue is the sale price multiplied by the number of dried smoked julung per day / month / year. Based on the analysis, the total revenues is Rp. 740,000, - / day, Rp. 19.24 million, - / month and USD. 230 880 000, - / year. Details of total revenue can be seen in Table 4.

Table 4. Total revenue of dried smoked *julung*

No.	Price (Rp)	Total of production/day (Kg)	Total revenue Per day (Rp) (2)*(3)	Total revenue Per month (Rp) (4)*26	Total revenue Per year (Rp) (5)*12
(1)	(2)	(3)	(4)	(5)	(6)
1	20.000,-	37	740.000	19.240.000	230.880.000

Profit and Loss Analysis of dried smoked *julung*

Based on the revenue analysis, the profit of the dried smoked *julung* in Banggoi village, East Seram District, per day was Rp. 159.000, -; per month Rp. 4.134 million, and per year Rp. 49.608 million.

Table 5. Revenue analysis of the dried smoked *julung*

Total revenue (Rp)	Total cost (Rp.)	Total profit/ day (Rp.) (1)-(2)	Total profit/ month (Rp.) (3)*26	Total profit/ year (Rp) (4)*12
(1)	(2)	(3)	(4)	(5)
740.000,-	581.000	159.000,-	4.134.000,-	49.608.000

Revenue cost ratio analysis of dried smoked *julung*

Based on the revenue cost ratio analysis, the dried smoked julung have a good opportunity to develop because the R/C was 1.27 and it was more than 1.

$$R/C = \frac{\text{Total Return}}{\text{Total Cost}}$$

$$= \frac{\text{Rp230.880.000,}-}{\text{Rp.181.272.000}-}$$

The Quality of Dried Smoked *Julung*

In general, the quality of dried smoked *julung* in the boundaries of traditional standards of quality demanded by the ISO, but the appearance is still need improvements. The problem arises during distribution and marketing is the handling of these processed products cause it vulnerable to changes in quality. Handling should be done with pay attention to the principles of sanitation and hygiene. The overall quality of dried smoked julung of East Seram Table 6.

Table 6. Proximate of Dried Smoked Julung

Processing Type	Water content (%)	Ash Content (%)	Protein Content (%)	Fat Content (%)	TPC (CFU/gr)
Dried smoked *julung*	14,30	8,35	56,1	9,35	$2,9\ 10^2$

Conclusion

Generally, the traditional fish processing was carried out by fishermen independently in household-scale enterprises. Sanitation and hygiene was not practiced in a good way. Packaging and the technological innovation has not been a serious concern. Processing method was practiced hereditary, and raw materials depend on the season and natural conditions. The results showed the potential of dried smoked *julung* in East Seram District is very abundant. Analysis of revenue cost ratio was 1.27 indicates that the dried smoked julung processing in the village Banggoi feasible to develop. Generally, the quality of dried smoked julung has a good quality fulfill ISO standard faced of nutritional elements. However, the appearance of the product has not inadequate yet, as no good postharvest handling.

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