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Analysis of Amed Salt Farming Income in Purwa Kerhti Village, Abang District, Karangasem Regency, Bali

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Abstract

This study aims to determine (1) To find out the analysis of amed salt farming in PurwaKerthi Village, Abang District, Karangasem Regency, Bali Province in 2020 (2) To find out the marketing system of amed salt Bali area in PurwaKerthi Village, Abang District, Karangasem Regency, Bali Province in 2020. This research was conducted from March to July 2021. The data collection technique used the snowball sampling method with primary and secondary data. The sample used in the study consisted of 29 respondents. The data analysis method in this research is quantitative and qualitative data analysis. The results of the 2020 research in one season show that the total income of Amed Salt farming is Rp 748,182,000 with an average farmer income of Rp 31,174,250, the R/C ratio is 4 which means that the farm is profitable and the profitability of 3.09% indicates that it deserves to be developed. The marketing institutions involved in marketing the Bali area are the MPIG Garam Amed Cooperative (a producer as well as a wholesaler) and retailers. There are two marketing channels that are efficient, channel I produces a farmer's share of 100%, marketing margin and marketing agency of 0. Channel II produces a farmer's share *of* 61%, marketing margin and marketing agency Rp 22,125 and 39%. Based on the results of this study, it is hoped that the PurwaKerthi Village will pay more attention to the existence of Amed Salt and expand its marketing reach to national and international levels.
Keywords: amed salt, analysis income, marketing

A. Introduction

Salt farming is an agricultural activity that operates and combines various factors of production on the coast using the main input in the form of sea water, in order to obtain optimal and sustainable results. Components of salt content have an important role for the human body, so it is necessary to consume salt of about 5-15 grams or 3 kg per year for each individual. The need for salt in Indonesia in 2020 is 4.5 million tons for consumption and industrial salt needs, while the national prediction is only 1.2 million tons. The shortage of national salt needs is what triggers the import of salt.

According to Farasonalia (2020), the fact that the price of salt on the island of Java is Rp 200-Rp 400/kg due to the prolonged dry season and imports of salt has resulted in large losses for salt farmers due to abundant salt production but not selling well in the market and less than optimal marketing. One of the salt-producing areas is Br Dinas Lebah, PurwaKerthi Village, Abang District, Karangasem Regency, Bali Province, which

registered Geographical Indications (IG) on December 23, 2015. The resulting product is known as "Amed Salt," and it is made up of two kinds of salt: Amed Salt (coarse salt) and Amed Salt Flower (fleur de sel).

Amed Salt Farming is a process or activity of farmers in managing, operating and combining various production factors such as land, labor, capital, sea water and others to produce quality salt with Geographical Indications and optimal income for salt farmers. Amed Salt farming is carried out based on three stages, including the stage of preparing tools and materials, the cultivation stage and the post-harvest stage. The price of Amed Salt is Rp 35,000/kg. The target market is visiting tourists, places to eat, hotels, villa and organic shop in the Bali area.

Based on the facts that occurred in Indonesia, it shows that there is a gap. The discrepancy of this phenomenon aroused the attention of the authors to conduct research in PurwaKerthi Village, Abang District, Karangasem Regency, Bali Province with the result of salt cultivation which was named "Garam Amed" to determine the amount of salt farmers' income, costs incurred by farmers, farming efficiency, including profit rate and r/c ratio, marketing channels that occur, marketing institutions involved, farmer share and margin share from each marketing agency in one salt production season in 2020.

B. Methodology

This research was conducted in PurwaKerthi Village, Abang District, Karangasem Regency, Bali Province. Data collection was carried out from March to July 2021. The sampling technique used was *snowball sampling*, consisting of 24 salt farmers and 5 marketing institutions. The data sources for this research are primary data, namely the results of interviews and secondary data, namely supporting data from related agencies. The research variables in this study, namely the one-season farming income variable in 2020 and the marketing system for amed salt farming in the Bali region, were analyzed quantitatively and qualitatively. The following formula is used to find out the amount of Amed Salt farming income in PurwaKerthi Village, Abang District, Karangasem Regency, Bali Province.

$$TR = P \times Q \quad \text{.....(1)}$$

$$TC = TFC + TVC \quad \text{.....(2)}$$

$$\Pi = TR - TC \quad \text{.....(3)}$$

According to Soekartawi (1987), the method used to determine the efficiency of farming is with the formula:

$$\frac{R}{C} Ratio = \frac{Total\ Revenue}{Total\ Cost} \quad \text{.....(4)}$$

$$Profitabilitas = \frac{\Pi}{TC}\ X\ 100\% \quad \text{.....(5)}$$

Keterangan :
Π= Income (Rp/year)
TR = Total Revenue/Receipt(Rp/year)
TC = Total Cost (Rp/year)
P = Price (Rp)
Q = Quantity (Kg)
TFC = Total Fixed Cost(Rp/year)
TVC = Total Variable Cost (Rp/year)

Criteria R/C Ratio is more than one profitable, equal to one break-even condition and less than one loss. Profitability criteria (profit rate), if it is greater than the inflation rate (*inflation rate*) then farming is feasible to continue. If it is less than that, then farming is not feasible to continue.

To find out the marketing system of Amed Salt farming in the Bali region in 2020, including the pattern of marketing channels, it was analyzed using qualitative methods, while quantitatively, namely marketing margins, marketing institution margins, *farmer share*, marketing institution margin share, the following formula was used.

$$MP = \text{Pr} - Pf \quad \text{.....(6)}$$

$$\text{Mji} = \text{Psi} - \text{Pbi} \quad \text{.....(7)}$$

$$SPf = \frac{Pf}{Pr} \; X \; 100\% \quad \text{.....(8)}$$

$$\text{Sm} = \frac{\text{Psi} - \text{Pbi}}{Pr} \text{ x } 100\% \quad \text{.....(9)}$$

Where :

MP = Marketing Margin (rupiah/kg)
Pr = Price at consumer level (rupiah/kg)
Pf = Farmer's price (rupiah/kg)
Mji = Margin of marketing agency (rupiah/kg)
Psi = Selling price of marketing agency (rupiah/kg)
Pbi = The purchase price of a marketing agency (rupiah/kg)
SPf = Share price at farmer level (rupiah/kg)
Sm = Share price at marketing agency level (rupiah/kg)

C. Findings and Discussion

Amed Salt Farming is located in Br. Dinas Lebah, I KetutNatih Street, PurwaKerthi Village, Abang District, Karangasem Regency, Bali Province. Amed salt has been around since 1578 masehi, Amed Salt farmers are organized into MPIG (Society for the Protection of Geographical Indications) inaugurated by the Karangasem Regent on March 19, 2015 and has been registered as a Geographical Indication by the Ministry of Law and Human Rights under No. ID G 000000038 since December 23, 2015. The MPIG Garam Amed Cooperative was formed on July 31, 2018 in the form of a production cooperative with Amed Salt (Coarse Salt) and Amed Salt Flowers (fleur de sel) products.

1. Overview of Amed Salt Farming

Farming produces two types of products, namely salt and salt flowers. One year only has one season, namely August to November with a harvest frequency of twenty-three times in 2020. An area of 0.48 ha is produced through several stages of preparing tools and materials, making salt (cultivating) and post-harvest.

Preparation of production tools and materials includes sea water (main ingredient), soil extract, tinjungan filtering, pesasahan (salting plots), tinjungan (filtration equipment), penyusuan (reserving filtered water), palungan (coconut stalks to dry the filtered sea water), sibuh, bucket, pengerikan, gangan (basket), bangkrak, shovel, water pump, hoe, sickle, and strainer, scale and vacuum machine. The total palungan used is 2,640 units.

Amed Salt Cultivation is carried out from August to the end of November, combining all the tools and materials that have been prepared to produce clean water (sea water) that has been filtered and is ready to be dried in the sun to produce salt crystals and salt flower crystals. The flower salt crystals are smaller and finer than the Amed Salt, making up only about 10% of the Amed Salt. The harvesting process is carried out every four days, harvesting is carried out only during the day when the sun is hot, the salt crystals that float on the surface of the water are dried in a manger while the harvested Amed Salt crystals are found at the bottom of the manger.

Post-harvest begins with depositing salt and wet salt flowers at the Amed Garam production house (warehouse), then drying them all day using a tray placed in a plastic house. The dried salt and salt flowers are then sorted, packaged and stored according to the right SOP so that the quality of the salt is maintained. Promotion and distribution of Amed Salt and Amed Salt Flower products are carried out periodically according to consumer demand.

2. Amed Salt Farming Income Analysis

2.1 Revenueof Amed Salt Farming

Production of Salt in 2020 is 22.000 kg and Amed Salt Flowers is 2.200 kg. The selling price of Amed Salt is Rp. 35.000/kg and Amed Salt Flower Rp. 100.000/kg. Amed Salt and Amed Salt Flower Farming receipt is Rp. 990.000.000/season in 2020. The acceptance of the results of this study is in line with Nelson Bana (2021) that revenue is obtained from the production (kg) multiplied by the selling price (rupiah), such as peas commodity of Rp. 36.550.000/season.

2.2 Total Cost of Amed Salt Farming

The total cost of Amed Salt farming is the total amount of production costs incurred within one season of 2020, which is four months.

Table 1. Total Cost of Farm Salt Amed

No	Description	Total (Rp/season)
1	Fixed Cost	215.600.000
2	Variable Cost	26.218.000
	Total Cost	241.818.000

Source : Primary Data Processed, 2021

Based on Table 1, the total cost of farmers practicing farming in Salt AmedPurwaKerthi Village, which is Rp. 241.818.000/season in 2020 for four months from August to November. The fixed cost of Garam Amed farming consists of financial costs (interest on loans and payments on buildings and equipment) and depreciation costs of agricultural tools. Variable costs include labor costs, filtration costs, plastic sack costs, gas pump costs, and Amed Salt packaging costs.

2.3 Amed Salt Farming Income

According to Widyantara (2018), farmers who manage costs as low as possible assisted by technology will earn high incomes.

Table 2. Amed Salt Farming Income

No	Description	Amount (Rp/season)
1	Farming Revenue	990.000.000
2	Farming Cost	241.818.000
	Farming Income	748.182.000

Source: Primary Data Processed, 2021

This study obtained the results of the Amed Salt farming season 2020 income of Rp. 748.182.000/season for four months. The average income of Amed Salt farmers is Rp. 31.174.250/season in 2020. The total farm income is divided into two parts, namely income received directly in the form of cash to each farmer amounting to Rp. 264.000.000 (35%) purchased by cooperatives in the form of wet salt and indirect income (non-cash) in the form of savings in MPIG Garam Amed Cooperative amounting to Rp. 484.182.000 (65%). This income distribution is in line with Agustia et al., (2017) which states that agricultural cooperatives as social institutions seek to increase their role in providing services to members, especially in purchasing agricultural products such as Gayo coffee in Aceh Province, with a higher price of Rp. 35.482/kg and more.

2.4 Efficiency of Amed Salt Farming

Efficiency is measured using the R/C ratio and profitability. The R/C ratio of Amed Salt farming is four, meaning that Amed Salt farming is profitable because the R/C ratio value is greater than one. The profitability (profit rate) of amed salt farming is 3.09% compared to Denpasar City inflation of 0.55% indicating that Amed salt farming is feasible to develop because the profit rate > inflation rate, in line with previous research, named Arida et al., (2018) regarding salt farming in Tanah Anoe Village of 1.37, meaning that more than one means that it is feasible to be developed.

3. Amed Salt Marketing System Analysis Bali Region

3.1 Marketing Channel Pattern

Results showed marketing channels Salt Amed in Bali in 2020.

1) Farmer's⇔ Cooperative (Wholesalers) – Consumer (wholesale).
2) Farmer's ⇔Cooperative (Wholesalers) – Retailers - Consumen (retail).

Farmers are members of the MPIG Garam Amed Cooperative as producers, wholesalers and retailers. Market only through cooperatives. At present, marketing channel one sells 515 kg of Amed Salt directly to wholesale consumers at a price of Rp. 35.000/kg including coffee shops, hotels and bakeries in the Bali area. The second marketing channel sells 384 kg at a price of Rp. 35.000/kg to retailers in the Bali area before it goes to consumers. The results of this study are in line with Munara (2020) that agricultural cooperatives have an important role in the economy, one of which is simplifying the trading system (marketing channels) in order to stabilize the price of agricultural products so that they can increase the income of their members, the role of the cooperative is at an index score of 65.63 % means it has a large role according to the respondent's assessment.

3.2 Marketing Margin, Farmer's Share dan Margin Share of Marketing Institutions

The marketing system in this study discusses the marketing margin, farmer's share and margin share of Amed Garam marketing institutions in the Bali region in 2020. The marketing institutions involved are the MPIG Garam Amed Cooperative as producers, wholesalers and retailers as well as retailers outside the cooperative. The results showed that the share received by farmers in channel I was 100% and channel II was 61%, meaning more than 40% so that both marketing channels were considered efficient (Downey and Ericson (1992) in Mega (2020)).

Table 3. Marketing of Amed Salt Farming in Bali Region

Marketing Channels	Farmer's Price(Cooperative) (Rp/kg)	Consumer Price (Rp/kg)	*Farmer's Share* (%)	Marketing Margin (Rp/kg)	Margin Share of Marketing Agency (%)
I	35.000	35.000	100%	0	0
II	35.000	57.125	61%	22.125	39%

Source: Primary Data Processed, 2021

According to Khaswarina (2019), marketing is considered efficient if a marketing channel has a low marketing margin value and has a high *farmer's share*. The most efficient marketing is achieved by the marketing channel with a marketing margin of 0 and a *farmer's share of* 100%. The results of this study are in line with the results of Erika's (2017), which states that the marketing channel II for salt in Pamekasan Regency is efficient with a farmer's share of 57.14% and a marketing margin of 42.86% lower than other marketing channels.

D. Conclusion

The total income of Amed Salt farming is Rp. 748.182.000/season, average farmer's income is Rp. 31.174.250/season divided into two types, namely the total cash income (wet salt) and non-cash (dry salt) which is greater than the costs incurred. The R/C ratio is 4 and the profitability is 3.09%, therefore it can be said that the farming is profitable and possible to develop.

The marketing of Amed Salt only through MPIG Garam Amed cooperative, produces two efficient marketing channels because the percentage is above 40%, the farmer's share in both channels is 100% and 61% respectively, the marketing margin is Rp 0 and Rp. 22.125/kg, the margin share of marketing institutions is 0% and 39%.

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