

## **MARGIN ANALYSIS AND MARKETING EFFICIENCY OF PATCHOULI OIL IN WONUA SANGIA VILLAGE LANDONO DISTRICT SOUTH KONAWA DISTRICT**

**Muhammad Aswan Tahyat<sup>1\*)</sup>, Rosmawaty<sup>2)</sup>, Yusran<sup>1)</sup>**

<sup>1</sup>Department of Agribusiness Faculty of Agriculture, Universitas Halu Oleo Kendari 93232

<sup>2</sup>Department Agricultural Extension Faculty of Agriculture, Universitas Halu Oleo Kendari 93232

\*Corresponding author: [muhammadaswan254.at@gmail.com](mailto:muhammadaswan254.at@gmail.com)

### **To cite this article:**

Tahyat, M., Rosmawaty, R., & Yusran, Y. (2022). Margin Analysis and Marketing Efficiency of Patchouli Oil in Wonua Sangia Village Landono District South Konawe District. *Buletin Penelitian Sosial Ekonomi Pertanian Fakultas Pertanian Universitas Haluoleo*, 24(1), 30 - 37. doi:<http://dx.doi.org/10.37149/bpsosek.v24i1.24195>

**Received:** March 06, 2022; **Accepted:** April 17, 2022; **Published:** April 25, 2022

### **ABSTRACT**

This research aims to analyze margins and efficiencies for each marketing agency. This research was conducted in Wonua Sangia Village, Landono District, South Konawe Regency. This study was conducted from June 2021 to March 2022. The objects in the study were patchouli farmers in Wonua Sangia village of Landono Subdistrict and patchouli oil marketing agencies. The sample in this study was done by purposive sampling method for patchouli farmers and Snowball Sampling for fishing institutions. Their search was analyzed using margin analysis and marketing efficiency. This study showed two patchouli oil marketing channels in Wonua Sangia Village, Landono Subdistrict. Marketing channels (I), Farmers, Middlemen, Collecting Merchants, Wholesalers, and Consumers. Then Marketing channels (II), Farmers, Collecting Merchants, Wholesalers, and Consumers. Marketing channel II has the highest Farmer's Share value of 81%, with a total marketing margin of IDR97.000/kg. It is indicated to have the best marketing efficiency of a channel, 80%, with a total marketing margin of IDR110.000/kg. Both marketing channels have been efficient because the farmer's share value obtained >50%.

**Keywords:** efficiency; margin; marketing channel; patchouli oil

### **INTRODUCTION**

The development of the plantation sub-sector as part of the development of the agricultural sector and the national product is one of the essential potentials in efforts to improve people's welfare. The strategic role of the plantation sub-sector in enhancing the national economy is illustrated through its contribution in various ways, one of which is as a contributor to Gross Domestic Product (GDP) (Directorate General of Plantations, 2019)

One of the commodities that have become a national priority is patchouli in the form of patchouli oil production. As a tropical country, Indonesia has a high potential for patchouli production. The patchouli plantation area in 2018 reached 21,351 hectares with a total output of around 2,100 tons of patchouli oil equivalent spread across 19 provinces, of which smallholders cultivated the entire region. In more detail, the area of patchouli plantations nationally in 2014-2018 tends to increase, exception 2015, it decreased by 2,088 hectares or around 11.2%. The total increase in the area of community patchouli plantations from 2014 to 2018 was 2.99% or an area of 637 hectares.

Southeast Sulawesi Province is one of the patchouli-producing provinces in Indonesia. One of the districts in Southeast Sulawesi province that cultivates patchouli is the South Konawe district. The area of patchouli plantations in South Konawe Regency is 1,227Ha, with a total production of 144 tons or 30% of Southeast Sulawesi's patchouli production in 2020 (Central Bureau of Statistics of South Konawe Regency, 2019)

One of the South Konawe Regencies cultivating patchouli plants is Wonua Sangia Village, Landono District. The population of Wonua Sangia Village in 2018 was 882 people (Central Bureau of Statistics of South Konawe Regency, 2019). The residents of Wonua Sangia Village have been

cultivating patchouli plants since 2010 until now. There are 50 heads of families who have produced patchouli as their livelihood until now.

Patchouli oil itself has many benefits in the cosmetic industry. This patchouli plant is a versatile herbaceous plant because it is widely used as raw material and a mixer in the perfume, pharmaceutical, cosmetic, soap, food, and beverage industries (Agustiar & Sa'adan, 2016).

The magnitude of the benefits of patchouli oil does not necessarily provide a good economic impact for patchouli oil farmers/producers. It is suspected that the problem faced by patchouli oil producers in Wonua Sangia Village is realizing an efficient patchouli oil marketing channel. It affects the high and low share of the price received by farmers. This is closely related to the marketing channel and the extensive marketing margin. In addition, the size of the claim received by the farmer (farmer's share) indicates whether a marketing channel is running efficiently or not. This is in line with the opinion of Arbi et al. (2018), which states that to increase efficiency, a study of the marketing system and the problems faced by each marketing actor in marketing activities is needed.

Furthermore, Kusuma (2017) states that marketing is said to be efficient if the percentage of the marketing margin is smaller than the percentage of the share received by retailers. Furthermore, Wanuh et al. (2019) stated that marketing is efficient if the marketing cost is lower than the product's value. The lower the marketing cost from the value of the product being marketed, the more efficient it is to carry out marketing.

Another study that focused on patchouli oil was conducted by Irayanti (2019), which analyzed the patchouli trade system in the view of Islamic economics using qualitative descriptive analysis. Further research on patchouli oil was carried out by Suyono & Purwastuti (2011), who researched to determine and evaluate the efficiency of patchouli marketing by using the Concentration Ratioindex analysis, coefficient of variation, and the Ravalli on market integration model. Furthermore, research focusing on patchouli was carried out by Djuwendah & Rachmawati (2008). This research focuses on marketing and analyses patchouli development strategies using SWOT analysis. Further research was conducted by Shinta & Ismail (2013). He researched market structure and behavior analysis to examine the patchouli market structure and patchouli market behavior using the Herfindahl Index analysis and Rosenbluth Index analysis.

Furthermore, Nurdin et al. (2017) conducted a study to analyze patchouli oil's marketing channels and efficiency, with the survey's results having one marketing channel. Furthermore, Aulia et al. (2018) researched marketing and analyzed the factors that shape patchouli oil supply chain management using AHP analysis. Further research was conducted by Ridhawati & Syafitri (2021) with research to design a marketing system for patchouli oil using the Unified Approach method.

Referring to the phenomena in the field, it shows that realizing an efficient patchouli oil marketing channel affects the high and low prices received by farmers. So the researcher aims to examine the margin analysis and marketing efficiency of patchouli oil in Wonua Sangia Village, Landono District, South Konawe Regency.

## **MATERIALS AND METHODS**

This research was conducted in Wonua Sangia Village, Landono District, South Konawe Regency. The research location was determined purposively with the consideration that at that location, there was a patchouli agro-industry that continuously produced high productivity and the number of farmers who made patchouli oil business as a source of income. The research was carried out from June 2021 to March 2022.

The data analysis of this research is descriptive and quantitative to determine marketing channels, margins, and marketing efficiency by calculating the level of marketing costs and profits at each marketing agency (Surni, 2015)

## **RESULTS AND DISCUSSION**

### **Characteristics of Respondents**

The characteristics of patchouli farmers and patchouli oil traders are age, education level, family responsibilities, farming experience, and land area. The study results showed that 86% of patchouli farmer respondents were between the ages of 15 and 54 years, while those with a non-productive period above 54 years were 14%. Meanwhile, the respondents of 100% of patchouli oil traders are in the productive age, which is between 15 and 54 years. This is to Putri & Setiawina (2013) opinion that the formative age ranges from 15 to 54 years, which is the ideal age for workers. As you age, your income will increase in the effective period, depending on your work type. A person's physical strength to carry out activities is closely related to age. When a person's age has

passed the productive period, his physical strength decreases so that productivity decreases and income also decreases. The farmer's age will significantly affect the physical ability and way of thinking in accepting innovations.

Table 1. Characteristics of patchouli farmer respondents in Wonua Sangia Village.

No	Characteristics	Farmer	Percentage (%)	Middleman	Collecting Merchant	Wholesalers
1	Age (Years)					
	0 – 14	43	86	-	-	-
	15 – 54	7	14	3	4	1
	Amount	50	100	3	4	1
2	Level of education					
	No School	-	-	-	-	-
	Finished Elementary School	7	14	-	-	-
	High School Graduate	9	18	-	-	-
	Finished High School	29	58	1	-	-
	Graduated S1	5	10	2	4	1
	Amount	50	100	3	4	1
3	Family Dependents (Persons)					
	1 – 3	16	32	-	-	-
	4 – 6	29	58	-	-	-
	>6	5	1	-	-	-
	Amount	50	100	-	-	-
4	Business Experience/trade (year)					
	< 5	11	22	2	-	-
	5 - 10	16	32	1	4	-
	>10	23	46	-	-	1
	Amount	50	100	3	4	1
5	Land Area (Ha)					
	<0.5	11	22	-	-	-
	0.5 - 2.0	39	78	-	-	-
	>2.0	-	-	-	-	-
	Amount	50	100	-	-	-

Source: Primary Data Processing Results, 2022

Nurkholis (2013) argues that education is a necessary process to get balance and perfection in the development of individuals and communities. The level of education is closely related to the mindset and can affect technology adoption. The education level of patchouli farmer respondents in Wonua Sangia Village showed that there were no farmer respondents who did not take education, 14% of farmer respondents who graduated from elementary school, 18% graduated from junior high school, 58% graduated from high school of the total patchouli farmer respondents. At the same time, those who have graduated from S1 are only 10%. This can indicate that the education level of farmer respondents in Wonua Sangia Village is classified as middle and upper.

Meanwhile, patchouli oil traders were dominated by highly educated respondents, which amounted to 87% of the total respondents. This shows that the level of education of patchouli oil traders is high. Education is a factor that has a significant influence on the respondent's mindset in running their business and in making decisions for marketing the patchouli oil that has been produced. In addition, education affects the absorption of innovations that can be applied in their business activities. This is in line with Saleh (2020) that the level of education can affect the behavior of farmers in absorbing information, especially those related to their farming. Higher education at a relatively young age will cause farmers to be more dynamic, think better, and be expected to be easier to accept and implement innovations. Furthermore, Yasa & Hadayani (2017) argues that the level of education impacts the way farmers think because education is a deliberate process to grow knowledge, skills, and attitudes to increase their standard of living.

The number of dependents of patchouli farming families in Wonua Sangia Village can be classified into three parts, namely minor family dependents (1-3 people) (32%) of the total patchouli farmer respondents. Then there are 58% who have medium family dependents (4-6 people), and only (10%) with significant family dependents (>6 people). This is the opinion of (2018), which says that the

number of family dependents can be grouped into three groups: minor family dependents of 1-3 people, medium family dependents of 4-6 people, and significant family dependents of more than six people. According to Hanum (2018), the more respondents have children and dependents, the more influential the time used by respondents to work. The effectiveness of this time helps increase the income of respondents.

Farming experience is an essential factor for farmers in developing their farming which is not obtained in school education. (2019) categorizes farming experience into three groups: moderately experienced if they are in their field of work for 5-10 years, while ten years and over are categorized as experienced, and less than five years is categorized as experienced. In Wonua Sangia Village, as much as 46% of patchouli farmers are in the experienced category in patchouli farming. Meanwhile, the moderately experienced type was 32%, and the less experienced class was 22%. This shows that patchouli farmers in Wonua Sangia Village have experience, so they do not experience difficulties in managing their farming. Furthermore, Desiana et al. (2017) suggest that a person's experience and knowledge, in general, will influence decision-making.

According to Hardin (2019), the arable land owned by farmers is related to the number of farming costs incurred and the number of workers involved. The area of arable land that farmers can cultivate will determine the amount of product produced. The wider the arable land the farmer owns, the more free the farmer is to manage the land for cultivation. Furthermore, according to Hardin (2019), the area of arable land is divided into 3, namely, <0.5Ha is narrow arable land, 0.5-2.0Ha is medium arable, and >2.0Ha is broadly arable. Some farmers have limited arable land (<0.5Ha) by 22%, while farmers have a medium land area (0.5-2.0Ha) by 78%. Meanwhile, none of the farmer respondents owns land with an area of >2.0Ha. The narrower the land owned, the less production is produced. This is in line with the opinion of Harini et al. (2019), with a limited area of production that is made so tiny that it is economically unable to meet the necessities of life.

### Marketing channel

The patchouli oil marketing channel in Wonua Sangia Village, Landono Subdistrict, involves marketing institutions to reach consumers. There are two marketing channels involved in marketing patchouli oil in Wonua Sangia Village, namely:

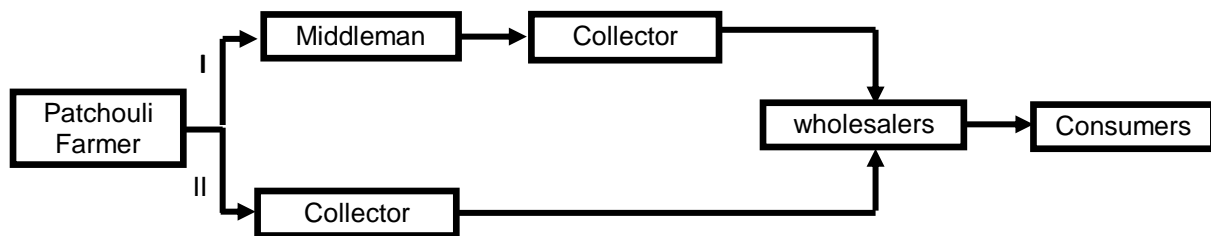


Figure1. Patchouli Oil Marketing Channel in Wonua Sangia Village, Landono District.

Marketing channels distribute products from producers to consumers, which requires marketing agencies. This is in line with Nurpajar et al. (2019), which state that the role of intermediary institutions is needed to convey products produced by producers to reach consumers.

A marketing channel, farmers sell patchouli oil to intermediaries in Wonua Sangia Village. 38% of the total farmer respondents sell their patchouli oil to intermediaries. Farmers and intermediaries have an excellent social relationship that allows farmers to sell patchouli oil to intermediaries even though the purchase price is relatively lower. Then the intermediaries resell the patchouli oil to the collectors. At this stage, the intermediaries bring patchouli oil to the collectors. Then the collectors sell patchouli oil to large traders in relatively large quantities. The last stage in the distribution of patchouli oil is wholesalers selling their patchouli oil products to consumers (industry), in line with research conducted by Jumiaty et al. (2013), which states that generally, traders who buy coconuts from farmers still have an emotional relationship, either friendship or family relationships, so farmers tend not to fix price for the coconut they produce.

In marketing channel II, patchouli farmers as producers of patchouli oil then sell their patchouli oil directly to collectors by bringing the patchouli oil to the collector's place. 62% of farmer respondents sell directly to traders. In this channel, farmers prefer to sell their patchouli oil to collectors because of the relatively large distillation yield and a higher price than the intermediaries' purchase price. In addition, direct payments made by collecting traders increasingly convince farmers to sell to managing traders. Then the collectors sell the patchouli oil to wholesalers. And ends with consumers (industry) using wholesalers selling patchouli oil products directly to consumers (industry).

This is different from the research conducted by Firdaus et al. (2018), which only has one marketing channel. Further analysis was performed by Nurfadila et al. (2021), which has four marketing channels.

### Marketing Cost and Margin

Marketing costs are costs incurred for marketing the products produced—these costs include packaging, transportation, and costs incurred in the marketing process. In line with Elisa et al. (2016), which state that marketing costs are costs incurred in moving goods from producers to final consumers, these expenditures are for purposes related to commodity sales.

Table 2. Costs, margins, and benefits of patchouli oil marketing in marketing channels and Wonua Sangia Village, Landono District, South Konawe Regency, 2021

No	Description	Marketing Channel I (IDR/kg)	Marketing Channel II (IDR/kg)
1	Farmer/Producer		
	a. Selling price	390.000	403.000
2	Middleman		
	a. Purchase price	390.000	-
	b. Selling price	407.000	-
	c. Margin	17.000	-
	d. Marketing Cost		-
	- Packaging	1.000	-
	- Transportation	400	-
	- Labor	800	-
	Total cost	2.200	-
	e. Profit	14.800	-
3	Collecting Merchant		
	a. Purchase price	407.000	403.000
	b. Selling price	420.000	420.000
	c. Margin	13.000	17.000
	d. Marketing Cost		
	- Packaging		1.000
	- Transportation		
	- Labor	400	1.000
	Total cost	400	2.000
	e. Profit	12.600	15.000
4	Wholesalers		
	a. Purchase price	420.000	420.000
	b. Selling price	500.000	500.000
	c. Margin	80.000	80.000
	d. Marketing Cost		
	- Packaging	1.272	1.272
	- Transportation	454	454
	- Labor	363	363
	Total cost	2.089	2.089
	e. Profit	77.911	77.911
	Total Margin (IDR/Kg)	110,000	97.000

Source: Primary Data Processing Results, 2022

Based on table 4, it can be seen that in the marketing channel, there are three traders involved in the marketing process of patchouli oil, namely intermediaries, collectors, and wholesalers. The buying price by intermediaries to farmers is IDR390.000/kg, with a selling price to collectors of IDR407.000/kg, so the margin obtained is IDR17.000/kg. Collecting traders sell to wholesalers for IDR420.00/kg, so the margin obtained is IDR13.000/kg. Inwholesalers, the selling price is IDR500.000/kg to consumers, so the margin obtained is IDR80.000/kg. Wholesalers, namely, get the highest profit. IDR77.911/kg. In contrast to marketing channels, collectors buy directly from farmers at a higher price of IDR403.000/kg and sell to wholesalers for IDR420.000/kg so that the margin obtained is IDR17.000/kg. Furthermore, wholesalers sell IDR500.000/kg, and the margin created is IDR80.000/kg.

The difference in the margin created is because each marketing agency involved wants maximum profit by reducing the marketing costs incurred. In line with the research of Dewi et al. (2021), one of the causes of high marketing margins is the marketing costs incurred by each marketing agency on each marketing channel wanting large profits to cover the expenses that have been incurred. Furthermore, according to Irianto & Widiyanti (2013), marketing profit is the difference between the price marketed by producers and the price given by consumers minus marketing costs. In addition, the difference in the purchase price that occurs between intermediaries and mediators does not affect the purchase price of wholesalers who set a purchase price of IDR420.000/kg. So that the margin created and the profits obtained by wholesalers are the same for marketing channels I and II. In contrast to Nurdin et al. (2017), the margin obtained is IDR30.000/kg in the marketing channel, so the price share at the farmer level is higher.

### Marketing Efficiency

The percentage share of the price received by patchouli farmers from the total price paid by consumers can be used to measure marketing efficiency. If the share of the price received by farmers is 50%, then the marketing channel is not efficient, and vice versa, if the percentage of the price received by farmers is >50%, then the marketing channel is efficient (Surni, 2015).

Table 3. Marketing efficiency of patchouli oil in marketing channels I and II in Wonua Sangia Village, Landonno District, South Konawe Regency, 2021

No	Description	Channe I (IDR/kg)	Channel II (IDR/kg)
1	Marketing Margin	110.000	90.000
2	Selling Price	500.000	500.000
	Farmer's Share	80%	81%
	Efficiency Criteria	Efficient	Efficient

Source: Primary Data Processing Results, 2022

Table five shows that the two marketing channels used have been efficient because the Farmer's Share value of the two marketing channels exceeds 50%. It has a Farmer's Share value (80%), while in marketing channel II it has a Farmer's Share value (81%). This value is part of the price received by farmers from the selling price to consumers. Among the two marketing channels, the most efficient and recommended in this study is marketing channel II because it has the highest Farmer's Share value of 81%. This is in line with the research results conducted by Hildayani et al . (2013), which showed that all The marketing channel has been efficient because the Farmer's Share value for the track is 83%, and channel II is 81%.

Furthermore, Wowiling et al. (2019) research shows that the three marketing channels have been efficient because the Farmer's Share value obtained is more than 50%, namely 93.90%,70%, and 58%. Incontrast, Bachtiar, et al.( 2021) conducted research that showed that one of the marketing channels was not efficient with the farmer's share value of 23.83%. Furthermore, Indrasari (2020) shows that one of the marketing channels is inefficient because the Farmer's Share value obtained is 39%.

### CONCLUSION

Margin and marketing efficiency of patchouli oil in Wonua Sangia Village. The percentage share of the price received by farmers/producers is 80% in the marketing channel, with a marketing margin of IDR110.000/kg, and in marketing channel II, the percentage share of the price received by farmers/producers by 81%, with a marketing margin of IDR97.000/kg. Both marketing channels have been efficient because the percentage share of the price received by farmers/producers is more than 50%.

### REFERENCE

- Agustiar, & Sa'adan, I. (2016). Analysis and Efficiency of Patchouli Oil Marketing in Kubu Village, Arongan Lambalek District, West Aceh Regency. *Journal of Farmers' Business*, 2 (1), 96-104.
- Arbi, M., Thirtawati, T., & Junaidi, Y. (2018). Channel analysis and efficiency level of semi-organic rice marketing in Rambutan District, Banyuasin Regency. *Journal of Socio-Economic Agriculture and Agribusiness*, 11 (1), 22-32. <https://doi.org/10.19184/jsep.v11i1.7151>

- Aulia, R., Sastra, H., & Huzni, S. (2018). Supply Chain Model Design for Patchouli Oil Industry in Aceh Jaya District. *Journal of Reaction Science and Technology*, 16 (2). <https://doi.org/10.30811/jstr.v16i2.1008>
- Bachtiar, R., Holik, A., & Widakdo, D. (2021). Analysis of Organic Dragon Fruit Marketing Channels in Jambewangi Village, Banyuwangi Regency. *Indonesian Journal of Agribusiness*, 9 (1), 23-28. <https://doi.org/10.29244/jai.2021.9.1.23-28>
- Central Bureau of Statistics of South Konawe Regency, (2019). Landono District in 2019 Figures. Central Bureau of Statistics of South Konawe Regency.
- Desiana, C., Rochdiani, D., & Pardani, C. (2017). Analysis of marketing channels for robusta coffee beans (a case in Kalijaya Village, Banjarsari District, Ciamis Regency). *Agroinfo Galuh Student Scientific Journal*, 3 (2), 162-173.
- Dewi, S., Antara, M., & Arisena, G. (2021). Clove Marketing in Filtering Village, Mendoyo District, Jembrana Regency, Bali, Indonesia. *Journal of Agriculture*, 4 (2), 246-259. <https://doi.org/10.37637/ab.v4i2.719>
- Djuwendah, E., & Rachmawati, E. (2008). Analysis of marketing and business development strategies for patchouli (*Pogostemon cablin* Benth) in Garut Regency. *Journal of Sociohumanities*, 10 (3), 31.
- Elisa, Hadayani, & Effendy. (2016). Marketing Analysis of Tomato Farming, Boyaoge Village, Tatanga District, Palu City. *Journal of Agricultural Sciences*, 23 (1), 77-85.
- Firdaus, H., Isyaturriyadhah, I., & Sepfera, MJJ (2018). Analysis of Patchouli Oil Marketing in Lembah Masurai District, Merangin Regency. 2 (1). <https://doi.org/10.36355/jas.v2i1.177>
- Hanum, N. (2018). The Effect of Income, Number of Dependents on Family and Education on Consumption Patterns of Fishermen's Households in Seuneubok Village, Rambong, East Aceh. *Journal of Ocean Economics*, 2 (1), 75-84.
- Hardin, H. (2019). Identity of Farmers Affecting Income for Paddy Rice Farming in Baubau City. *Journal of Agribusiness Media*, 3 (2), 121-144. <https://doi.org/10.35326/agribusiness.v3i2.493>
- Harini, R., Ariani, R., Supriyati, S., & Satriagasa, M. (2019). Analysis of agricultural land area on rice production in North Kalimantan. *Kawistara Journal*, 9 (1), 15-27. <https://doi.org/10.22146/kawistara.38755>
- Hildayani, R., RR, A., & Sulaeman, H. (2013). Rice Marketing Analysis in Sidondo I Village, Sigi Biromaru District, Sigi Regency. *Journal of Agrotechnology*, 1 (5), 485-492.
- Indrasari, Y. (2020). The efficiency of Community Coffee Marketing Distribution Channels in Gending Waluh Village, Sempol (Ijen) District, Bondowoso. *Journal of Marketing Management*, 14 (1), 44-50. <https://doi.org/10.9744/pasaran.14.1.44-50>
- Irayanti, I. (2019). Analysis of Patchouli Trading Channels to Support People's Economy in the View of Islamic Economics in Konawe Regency. *Journal of Islamic Economics and Business Studies*, 4 (1), 111-128. <https://doi.org/10.31332/lifalah.v4i1.1280>
- Irianto, H., & Widiyanti, E. (2013). Value chain analysis and marketing efficiency of ear mushroom agribusiness in Karanganyar Regency. *Journal of Socio-Economic Agriculture and Agribusiness*, 9 (2), 260-272.
- Jumiati, E., Darwanto, D., & Hartono, S. (2013). Analysis of marketing channels and marketing margins of deep coconut in the border area of East Kalimantan. *Journal of Agricultural and Forestry Sciences*, 12 (1), 1-10.
- Kusuma, H. (2017). Marketing Analysis of Strawberry Mushrooms Agrina Community Rooted Independent Institution (Lm3) in Tanjong Paya, Peusangan District. *Journal of Agricultural Science*, 1 (1), 210791.
- Nurdin, D., Iswandi, R., & Yusria, W. (2017). Analysis of Patchouli Oil Marketing from Karya Baru Village, North Poleang District, Bombana Regency. *Scientific Journal of Agribusiness*, 2 (1), 19-23.
- Nurfadila, Prihantini, C., Erni, E., & Samaria. (2021). Efficiency Analysis of Cashew Marketing Channels in Rakadua Village, Poleang Barat District, Bombana. *Journal of Agrimor*, 6 (3), 121-126. <https://doi.org/10.32938/ag.v6i3.1406>
- Nurkholis. (2013). Education to advance technology. *Journal of education*, 1 (1), 24-44. <https://doi.org/10.24090/jk.v1i1.530>
- Nurpajar, S., Rochdiani, D., & Isyanto, A. (2019). Analysis of Crystal Guava Marketing Channels (Case Study In Bangunsari Village, Pamarican District, Ciamis Regency). *Scientific Journal of Galuh Agroinfo Students*, 6 (2), 321-328. <https://doi.org/10.25157/jimag.v6i2.2473>
- Plantation, DJ (2019). Indonesian Plantation Statistics: Patchouli (Patchouli). Directorate General of Plantation.

- Purwanto, A., & Taftazani, B. (2018). The effect of the number of dependents on the economic welfare of the families of K3L workers at Padjadjaran University. *Journal of Social Work*, 1 (2), 33-43. <https://doi.org/10.24198/focus.v1i2.18255>
- Putri, A., & Setiawina, D. (2013). Effect of age, education, occupation on the income of poor households in the village of burdendem. *Journal of Development Economics*, Udayana University, 2 (4), 173-180.
- Ridhawati, E., & Syafitri, Y. (2021). Digitising Patchouli Oil Marketing System With Design Model Based on Unified Approach Method. *Journal of Science and Informatics*, 7 (1), 29-35. <https://doi.org/10.22216/jsi.v7i1.304>
- Saleh, L. (2020). Marketing Analysis of Rice Fields in Wawotobi District, Konawe Regency. *Journal of AgriScience*, 4 (2), 140-148. <https://doi.org/10.36355/jas.v4i2.425>
- Shinta, A., & Ismail, A. (2013). Analysis of Market Structure and Behavior in Patchouli. *Agricultural Socio-Economics Journal*, 12 (1), 45.
- Surni. (2015). *Marketing of Agricultural Products* (4, Ed.). Faculty of Agriculture, Halu Oleo University.
- Suyono, S., & Purwastuti, D. (2011). Marketing Efficiency of Patchouli (Pogostemon Cablin) in Banyumas Regency, Central Java Province. *Journal of Agrin*, 15 (2).
- Wanuh, E., Bano, M., & Un, P. (2019). Marketing Analysis Of Arabica Coffee In Papa Taki Primary Cooperation, Borani Village, Bajawa District, Ngada Regency. *Excellentia Bulletin*, 8 (1), 35-42.
- Wowiling, C., Pangemanan, L., & Dumais, J. (2019). Corn Marketing Analysis in Dimembe Village, Dimembe District, North Minahasa Regency. *Journal of Agri-Socioeconomics*, 14 (3), 305-314 <https://doi.org/10.35791/agrsosek.14.3.2018.223206>.
- Yasa, I., & Hadayani. (2017). Analysis of Production and Income of Rice Field Farming in Bonemarawa Village, Riopakava District, Donggala Regency. *Agrotechnical Journal: E-Jurnal of Agricultural Sciences*, 5 (1), 111-118.