



Research Article

Farmer's Share Analysis of Manohara Sweet Potatoes Marketing Channel

Eggy Millenia^a, Rika Hariance^{a*}, Yusri Usman^a

^a Study Program of Agribusiness, Faculty of Agriculture, Universitas Andalas, Padang, Indonesia

ARTICLE INFORMATION

Article history:

Received 07 September 2023

Revised 16 October 2023

Accepted 19 November 2023

Available online 01 December 2023

Keywords:

farmer's share, marketing efficiency, Manohara sweet potatoes

Correspondence:

E-mail: rikahariance@agr.unand.ac.id

ABSTRACT

The farmer's share is used to assess the marketing efficiency received by farmers as the leading actors in farming. This study aimed to analyze the value obtained by farmers in the marketing chain of Manohara sweet potatoes. The study was conducted in Nagari Koto Tinggi, Baso District, Agam Regency, using a survey method, and the research respondents were 30 purposively selected farmers, collectors, and retailers determined by the snowball sampling method. The data was taken using an interview guide, which was then analyzed descriptively and quantitatively. The results showed three marketing channels for Manohara sweet potato in Nagari Koto Tinggi, Baso District, Agam Regency. The largest farmer's share received by farmers is in the first marketing channel at 100%, the second highest share is in the second marketing channel at 51.6%, and the lowest is in the third marketing channel at 26.11%. The first was a direct marketing channel between farmers and the potato stick agroindustry. However, the number of agroindustries is still small; thus, to increase the value of the farmer's share, increasing the number and scale of the sweet potato agroindustry is the right solution for farmers to sell their crops to the agroindustry directly, and to achieve the welfare of farmers to overcome poverty at the agricultural level.

@2023

1. INTRODUCTION

Food crops are one of the strategic sub-sectors of agricultural commodities (Aly & Borik, 2023). Food crops are all types of plants that can produce carbohydrates and proteins as resources for humans (Aly et al., 2023; Borman et al., 2022; Profeta & Hamm, 2019). In practice, there are several superior food crops, including cereal (rice and corn), legume plants (peanuts, soybeans, and green beans), root crops (cassava and sweet potatoes), sago and taro (Aditika et al., 2022; Bosse et al., 2021; Licea-Dominguez et al., 2023).

Sweet potatoes are one of the food crops included as an alternative to food security (Aly & Borik, 2023; Mohanraj & Sivasankar, 2014). Some types of sweet potatoes, like Manohara sweet potatoes, purple sweet potatoes, Cilembu sweet potatoes, honey sweet potatoes, carrot sweet potatoes, Cangkung sweet potatoes, and many other sweet potatoes, grow and develop throughout Indonesia. Manohara sweet potatoes are sweet potatoes that have white, large, and long tubers with a smooth tuber skin and have a lower moisture content than other sweet potatoes, so it is suitable to use by the processing industry to be used as fried foods, baking ingredients, sauces, sweet potato sticks, and various other processed foods (Licea-Dominguez et al., 2023; Rosero et al., 2022).

According to the data from the Central Statistics Agency of West Sumatra (BPS, 2021), Agam Regency is one of the districts with the highest number of sweet potato production, which is 20,279.69 tons, with the largest production center being in Baso District, especially in Nagari Koto Tinggi. Manohara sweet potatoes are a superior commodity cultivated by sweet potato business farmers in Nagari Koto Tinggi. This is because Manohara sweet potatoes have a shorter harvest life than other varieties, for only 3-4 months. As for other varieties, such as honey potatoes and carrot potatoes, it takes 6-7 months to harvest. In addition, the yield of Manohara sweet potatoes is not much different from other varieties, with a yield range of 35 tons/ha. Farmers grow these sweet potatoes to be traded and profit from the trade.

As one of the commercial agricultural commodities, the marketing of sweet potatoes will significantly determine the success and sustainability of the potato farming business cultivated by farmers (Licea-Dominguez et al., 2023). This marketing process needs to be observed because it will affect the welfare of farmers through the income that will be received from the selling price of their agricultural products (Zhong et al., 2015). For farmers to get maximum profits, the marketing carried out should be efficient marketing, where the marketing costs incurred are as minimal as possible and can provide fair remuneration to every marketing institution involved. This marketing cost is usually charged to consumers through the purchase price, so that in channels with high marketing costs, it will cause a significant price difference at the farmer level with the price paid by consumers, reducing the value of the farmer's share (Busch & Spiller, 2016).

Farmer's share is one of the analytical indicators that can be used to see the marketing efficiency received by farmers as the leading actors of farming. Define the farmer's share as the percentage of the price that the farmer receives of the consumer's price (Kohls & Uhl, 2002). The higher the farmer's share value, the more efficient the marketing activities. If the value of a farmer's share is $\geq 40\%$, marketing can be said to be efficient, and if the value of a farmer's share is $\leq 40\%$, then marketing is said to be inefficient (Downey & Erickson, 1992).

From the results of the pre-survey, it is known that three marketing channels occur in the marketing of Manohara sweet potatoes in Nagari Koto Tinggi, Baso District, during the Harvest period of July-August 2021, namely: 1)

Farmers to consumers, 2) Farmers to collecting merchants and then to consumers, and 3) Farmers to collecting merchants to retailers and then to consumers. From the above description, it can be seen that each Manohara sweet potato marketing channel involves several different marketing institutions. This causes the marketing function carried out in each marketing channel to vary, and the costs incurred in marketing are also different (Lenou Nkoudjo et al., 2020). The prices received by sweet potato farmers are also different in each channel. The more marketing institutions are involved, the more each institution carries out marketing functions, and the more marketing costs will increase. The difference in prices received by farmers and those paid by consumers is also greater, which can affect the share farmers will receive (Dawe & Maltoglou, 2014; Wohlgenant, 2001).

The price received by farmers is erratic. At the time of the bumper harvest, the price received by farmers will be lower. The production of Manohara sweet potatoes, sold by farmers directly to consumers, is sold for IDR 3,000/kg for large sizes and IDR 1,000/kg for small sizes. In comparison, sweet potatoes sold to collectors are priced at IDR 1,500/kg for large sizes and IDR 600/kg for small sizes. The sweet potatoes that have collector has received can later be sold directly to consumers or sold again to retailers for IDR 3,000/kg for large sizes and IDR 1,000/kg for small sizes, which will be forwarded by retailers to be sold to end consumers for IDR 6,000/kg for large sizes and IDR 3,300/kg for small sizes. From this price exposure, it can be seen that the marketing margin is relatively high, which is formed between the price received by farmers and the price paid by the final consumer, IDR 4,500 for large sizes and IDR 2,700 for small sizes.

The high marketing margin and price fluctuations in the marketing of Manohara sweet potatoes indicate that problems occur in the marketing of Manohara sweet potatoes. Marketing margin has a negative relationship with a farmer's share, which means that a high margin will impact a low farmer's share, so this low farmer's share indicates that a high marketing margin results in farmers making low profits (Lenou Nkoudjo et al., 2020). Therefore, it is necessary to research the analysis of the farmer's share of Manohara sweet potatoes to see which channel is the most efficient marketing channel that has the highest share, so that it can optimize the marketing of Manohara sweet potatoes and assist farmers in making decisions when marketing their sweet potato products in the future.

Based on the background and formulation of the problems described above, this study aims to analyze the value received by farmers in the Manohara sweet potato marketing chain in Nagari Koto Tinggi, Baso District,

Agam Regency. This research is expected to fill in the findings related to the amount of value farmers receive in the sweet potato marketing chain. This will align with efforts to increase welfare at the farm level to achieve sustainable development goals by eliminating poverty through increasing community welfare.

2. METHOD

This research was conducted in Nagari Koto Tinggi, Baso District, Agam Regency. The research site was chosen deliberately, considering that the highest sweet potato production in Agam Regency is located in Baso District, and the most significant area that cultivates sweet potatoes in Baso District is in Nagari Koto Tinggi. The survey method was used in this study. The survey method is carried out by interviewing farmers and collecting data from merchants and retailers marketing Manohara sweet potatoes in Nagari Koto Tinggi, Baso District, Agam Regency. This study's primary and secondary data are primary and secondary. Primary data is used for farmers' share analysis, and the secondary data is used to complete the discussion.

The respondents to the study were 30 farmers who were chosen purposively. The criteria determined are sweet potato farmers who cultivate Manohara varieties in Nagari Koto Tinggi with a growing season period in March-April 2021 and harvest in July-August 2021, representing farmers whose land is remote and near highways/markets, and representing farmers who have small and large farming scales. Due to the absence of exact data on the total number of farmers working on Manohara sweet potatoes in Nagari Koto Tinggi, the sample of 30 farmers is the feasible sample size in this study (Sugiyono, 2011). A sample trader is taken based on their involvement in the marketing channels of Manohara sweet potatoes, ranging from farmers to end consumers. The number of traders who were made informants was the number of traders involved in marketing sweet potatoes from sample farmers. This trader sampling is carried out by snowball sampling, which identifies, selects, and takes samples in one network or continuous chain of relationships (Sugiyono, 2020).

To analyze the farmer's share of marketing, the variables that need to be observed are Manohara sweet potatoes selling price by farmers at each marketing institution (IDR/Kg) and harga paid by the end consumer (IDR/Kg) and to analyze the marketing efficiency of manohara sweet potatoes then what needs to be observed is total costs incurred by marketing agencies in distributing manohara sweet potatoes (IDR/Kg) and prices paid by consumers (IDR/Kg). The data were analyzed using quantitative analysis with formulas as follows (Downey & Erickson, 1992)

$$Fs = (Pf/Pk) \times 100\%$$

Where:

Fs=Part received by farmers

Pf = Price to farmers (Rp/Kg)

Pk= Price to consumers (Rp/Kg)

3. RESULTS AND DISCUSSION

3.1. Overview of Research Areas

Baso Subdistrict is one of the 16 sub-districts in Agam Regency, West Sumatra. This district is located at the foot of Mount Merapi, with a choppy and hilly area and a steep slope. The district is located at an altitude of 500 to 1,000 meters above sea level. Climatic conditions average temperatures of 19-22°C with an average wind speed of 20 km / h and rainfall of 3,500-4,000 mm/year. Based on the requirements for growing sweet potatoes, the conditions of the Baso District area are already qualified for sweet potatoes to develop in this region. The requirements for growing sweet potatoes are in areas with a temperature of 21-27 °C (BPP, 2021), optimal rainfall of 750-1,500 mm/year, and an altitude of up to 1,000 m above sea level (ILO, 2012). However, Baso Subdistrict is not yet an ideal area for sweet potato cultivation because the rainfall in this district is higher than the ideal requirement for sweet potato growth.

Baso Subdistrict is divided into 6 Nagari: Nagari Koto Tinggi, Nagari Tabek Panjang, Nagari Padang Tarok, Nagari Simarasok, Nagari Koto Baru III Jorong, and Nagari Salo. The land in this area is used for various community interests, one of which is for agricultural purposes. Farmers use agricultural land for paddy fields, plantations, forests, and ponds. The land is planted with various superior commodities in the Baso area, which can later contribute to the welfare of farmers. The commodities cultivated by these farmers include paddy, sweet potatoes, corn, taro, chili, tomatoes, eggplant, leeks, shallots, and mustard greens (BPP, 2021).

One of the largest Nagari in the Baso District is Koto Tinggi. This Nagari has a total population of 8,427 inhabitants, consisting of 4,180 males and 4,247 women, with the majority of their jobs as farmers. Farmers in Koto Tinggi Nagari cultivate their land with a crop rotation planting pattern by rotating or planting more than one crop type simultaneously. During the rainy season, farmers will work on paddy rice, and then after harvesting, it will be replaced by planting sweet potatoes. Farmers must cultivate Paddy rice and sweet potatoes, the Nagari superior commodities. Many farmers choose to work on

sweet potatoes as their crop rotation because it is not as tricky as cultivating horticultural crops, such as chilies and radishes, which can be a planting option for farmers. From 2018 until now, most sweet potato varieties planted have been the Manohara variant. Manohara sweet potatoes have a short harvest period of only four months. Sweet potatoes can already be harvested at 3 to 3.5 months. In addition, this Manohara sweet potato is large and can produce more.

3.2. History of Sweet Potato Manohara

West Java is the area where Manohara sweet potatoes first grew and developed. From the information recorded, Manohara sweet potatoes have been cultivated in tourist villages in Cibuntu, Kuningan Regency, West Java, since 2012 (Detik, 2012). Manohara sweet potato seeds are local seeds obtained from the surrounding community. On 14 May 2018, Manohara sweet potatoes were officially registered as one of the local sweet potato varieties requested by the Acting Regent of Kuningan, Dede Sembada, under the Manohara sweet potato variety. (PVTTP, 2018).

In Koto Tinggi, Manohara sweet potato was introduced in 2016, brought by the Bungo Katelo Farmers Group chairman, Mr. Syahril. He obtained seeds from Manohara sweet potatoes from neighboring areas, namely Koto Marapak, Biaro, and Ampek Angkek District, which his son brought from Bandung, West Java. The sweet potato is superpowered and can be harvested in only three months. The result of the production of Manohara has white and smooth textured tuber skin, and the size of the tuber is large, so it is called Manohara sweet potato.

The Manohara sweet potatoes in Nagari Koto Tinggi was only planted by Mr. Syahril himself in 2016, then after it was proven that this sweet potatoes had a fast harvest period and had excellent yam quality only in the following year members of the Bungo Katelo Farmer Group also started to plant these Manohara sweet potatoes, and in 2018 until now, the seeds of Manohara sweet potatoes have begun to spread widely cultivated by the people in every jorong in Nagari Koto Tinggi.

3.3. Farmer Identity

The identity of the sample farmer is all things related to the farmer in terms of marketing Manohara sweet potatoes. Many factors can influence farmers' activities in making decisions when marketing their agricultural products, such as the age of the farmer, the level of education, farming experience, the number of family dependents, the area of land, the status of land ownership, and the location of the land. An overview of the farmer identity of this sample can be seen in Table 1.

Table 1 shows that Manohara sweet potato farmers in Nagari Koto Tinggi are dominated by farmers over 55 years old, which means that many farmers are no longer productive in their Manohara sweet potato business (Sita, 2015). With the increase in age, the decrease in energy in farming causes suboptimal farming activities and can cause production results to decrease and reduce farmers' income (Sumo et al., 2022; Zhou et al., 2022).

Table 1. Farmers' Identity who cultivate Manohara sweet potatoes for the July 2021 Harvest Period in Nagari Koto Tinggi, Baso District.

No.	Information	Number (people)	Percentage (%)
1.	Farmer Age (years)		
a.	< 15	-	-
b.	15 – 55	13	43.34
c.	> 55	17	56.67
2.	Education Level		
a.	Elementary School	22	73.34
b.	JHS	2	6.67
c.	SHS	5	16.67
d.	Bachelor	1	3.34
3.	Experience in Farming Ubi Manohara (years)		
a.	1 – 2	13	43.34
b.	3 – 4	16	53.34
c.	5	1	3.34
4.	Number of Dependents (persons)		
a.	< 1	2	6.67
b.	1-3	24	80
c.	4-6	4	13.34
5.	Land Area (ha)		
a.	< 0.1	13	43.34
b.	0,1 – 0,2	16	53.34
c.	> 0.2	1	3.34
6.	Land Ownership Status		
a.	Own	23	76.67
b.	Revenue Share	7	23.34
7.	Location of Land from Highway		
a.	Near	23	76.67
b.	Far	7	23.34
8.	Distance of Land to Market (km)		
a.	1-2	5	16.67
b.	3-4	21	70
c.	5-6	4	13.34

The level of education of farmers can be concluded that most Manohara sweet potato farmers in Nagari Koto Tinggi have a low level of education, which is only equivalent to the elementary level. This is one of the factors causing farmers to find it difficult to use technology (Islam et al., 2023) in their marketing activities, where most farmers in Nagari Koto Tinggi cannot use Android phones, so they cannot sell their Manohara sweet potatoes through online media. In addition, a low level of education makes it difficult for Manohara sweet potato farmers in Nagari

Koto Tinggi to access market information related to the marketing of their sweet potato products.

Experience in farming can be an indicator of the success rate of farming carried out by farmers. The length or absence of farming experience can affect the ability of farmers to process, care for, and market their products. The longer the experience of trying to farm, the more experience the farmer has. Table 1 shows that most farmers have worked on the Manohara variant of sweet potatoes for the last 3-4 years and are exceptionally experienced in working on and marketing Manohara sweet potatoes.

The number of dependents will affect the family economy because the more dependents, the more the family will increase, so farmers tend to be more active in trying to farm to meet their household needs. Based on Table 1, it can be said that Manohara sweet potato farmers in Nagari Koto Tinggi are dominated by families who have dependents of 1 to 3 people, which makes farmers more enthusiastic and persistent in working and marketing their Manohara sweet potato products for the fulfillment of their household needs.

The area of agricultural land will affect the scale of the business, and the scale of the business can later affect the efficiency of an agricultural business (Soekartawi, 2003). It can also be said that the more land cultivated, the greater the production will affect the marketing costs incurred (Soekartawi, 2003). Based on Table 1, it can be concluded that all Manohara sweet potato farmers in Nagari Koto Tinggi have small-scale land, which causes the production results obtained to be also small, and the marketing costs incurred are also small.

The land ownership status of sample farmers working on Manohara sweet potatoes in Nagari Koto Tinggi is divided into 2: owned and profit-sharing. Farmers who own their land are entitled to obtain all the proceeds from the sale of their production. As profit sharing, the cultivator farmer is only entitled to half of the revenue earned, and the other half is given to the landowner (Yan et al., 2021). Most Manohara sweet potato farmers in Nagari Koto Tinggi work their sweet potatoes on their land, where the farmers can enjoy all proceeds from the sale of the produce.

The location of the land can affect the marketing costs that Manohara's sweet potatoes incur. The location of the sweet potato land far from the access road will increase the cost of transportation, which will increase the marketing costs. The majority of Manohara sweet potato farmers in Nagari Koto Tinggi have land not far from the highway access. Hence, the cost of transporting harvested sweet potatoes is not too high.

The distance of farmers' land to the market can also affect the marketing costs incurred (Yan et al., 2021). If farmers sell their products to the market, then farmers whose land is far from the market will incur more transportation costs, and sometimes farmers who have land close to the market have their marketing channels, and vice versa. In the case of marketing to farmers of this sample, on average, the entire farmer's land is quite close to the market.

3.4. Trader Identity

Sample traders are directly attached to sample farmers in the marketing activities of Manohara sweet potatoes in Nagari Koto Tinggi. Sample traders were obtained from sample farmers who cultivated Manohara sweet potatoes. From the study results, two sample traders were involved in marketing Manohara sweet potatoes in Nagari Koto Tinggi: the collectors and the inter-regional traders. The sample traders in this study were seven people, consisting of 5 collecting traders at the Nagari level and two inter-regional traders (Dumai and Duri) who were also retailers.

Table 2. Trader Identity of Manohara Sweet Potato Marketing Activity in Nagari Koto Tinggi, Baso District

No.	Information	Number (people)	Percentage (%)
1.	Age (years)		
	a. 15-55	7	100
	b. > 55	-	-
2.	Education		
	a. Elementary School	3	42,8
	b. Junior High School	3	42,8
	c. Senior High School	1	14,28
3.	Trading Experience (years)		
	a. 1 – 10	2	28,57
	b. > 15	5	71,42
4.	Number of Dependents (persons)		
	a. 1 – 3	5	71,42
	b. 4 – 6	2	28,57
	c. > 6	-	-
5.	Sources of Capital		
	a. Alone	7	100
	b. Loan	-	-

From Table 2, it can be known that all traders are at a productive age. This can be seen from the number of sample traders who are at a productive age of 100 percent. So, it can be concluded that all sample traders have work abilities that are still in optimal conditions.

The level of education is one of the critical factors in seeing the ability of traders to make decisions on every activity of the Manohara sweet potato business system. In terms of education level, it was found that sample traders had

varying levels of education. Sample traders who have elementary and middle school education levels of 43 percent each, namely three people each, and sample traders with a high school education level have the smallest percentage of 40 percent, one person.

Based on trading experience, most sample traders already have quite a long trading experience. It can be seen in Table 2 that 71.42% of traders have been trading for more than ten years. Trading experience will influence traders' awareness because traders with sufficient experience will be better at marketing. The number of dependents is one factor that influences traders in developing their business. The greater the number of dependents, in general, traders will be motivated to be more active in trying to meet the living needs of their families or dependents. The majority of sample traders have several dependents, as many as 1-3 people, with a percentage of 72% as many as five traders. The remaining two traders have dependents, as many as 4-6 people, with a percentage of 28%. It can be concluded that most traders have dependents of 1 to 3 people who can make traders persistent in marketing Manohara sweet potatoes.

The source of capital can be obtained from loans, whether loans to financial institutions, loans to intermediaries, or loans to one's own family, and the source of capital can also be obtained from one's own capital. In this study, all sample traders used their capital to do business.

3.5. Channel, Marketing Costs, and Farmer's Share of Manohara Sweet Potatoes

From the results of the study, three marketing patterns of Manohara sweet potatoes in Nagari Koto Tinggi were obtained in the July-August 2021 harvest period:

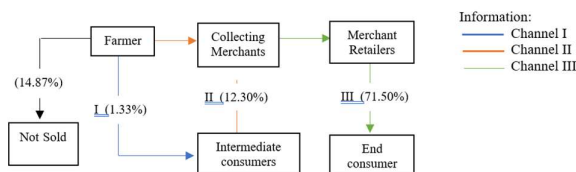


Figure 1. Marketing Channel Scheme of Manohara Sweet Potatoes from Nagari Koto High in July-August 2021.

Figure 1 shows that the third marketing channel dominates 71.50% of the marketing volume: farmers selling Manohara sweet potatoes to collectors and then to retailers outside the province to end consumers. The high percentage of sweet potatoes that pass through this channel is due to the significant demand for Manohara sweet potatoes from outside the area, especially for areas in Riau Province. As much as 12.30% of the mainboard sweet potatoes are distributed in the second channel, where

farmers sell their Manohara sweet potatoes to collectors, who are then sold to sauce factories. Then, as much as 1.33% was channeled directly through the first channel, from farmers to the sweet potato stick processing industry.

For the rest of the production, as many as 16,714 kg (14.87%) were not sold by farmers. According to the results of interviews with sample farmers, this is due to the decrease in consumer demand. Most of the production is sent to the Riau area. At the same time, during the harvest, namely July-August 2021, there was a Violation of Community Activity Restrictions, which caused traders between regions to find it challenging to enter the production area. In addition, many companies in the Riau area have laid off their employees, so consumers' purchasing power is reduced and demand decreases. Sweet potatoes cannot be sent out of the area.

In contrast, these Manohara sweet potatoes cannot be stored for a long time in the ground because the maximum harvest life is only six months; if more than that, the quality of the yams will be reduced and cannot be processed, so many sweet potatoes are wasted and not sold by farmers. These unsold sweet potatoes are used by farmers for household consumption, given to farmers for fish/cow feed, or left on the land to become organic fertilizer. In addition, sweet potatoes are also given to relatives, neighbors, and passers-by who want to buy them for consumption, and they will be given free of charge by farmers.

Those three Manohara sweet potato marketing channels incur different marketing costs, such as transportation, sorting, packaging, warehouse rental, electricity, and equipment depreciation.

Table 3. Cost, Marketing Margin, and Farmer's Share of Manohara Sweet Potatoes

Channels	Total Cost (Rp/Kg)	Farmer Selling Price (Rp/Kg)	Consumer Purchase Price (Rp/Kg)	Marketing Margin (Rp/Kg)	Farmer's Share (%)
I	364.89	3,000	3,000	0	100
II	384.25	1,550	3,000	1,450	51.6
III	1,068.9	1,567	6,000	4,433	26.11

In Table 3, it can be seen that there is no marketing margin in the first channel because farmers directly sell their sweet potatoes to the yam stick processing industry, so no other marketing agencies are involved. Then, in the second channel, the margin value obtained is IDR 1,450 / kg, smaller than the margin on the third channel, which is worth IDR 4,433 / kg. This is because, in the second channel, only one marketing institution is involved, namely

the collecting merchant. Hence, the costs incurred on the second channel are also less than those on the third channel. In addition, the price consumers pay on the second channel is smaller than the price on the third channel, resulting in a small marketing margin for the second channel.

The Farmer's share determines the percentage of profit the farmer receives from marketing activities. Based on Table 3, it can be seen that the most significant value of the farmer's share is in the first channel, worth 100%, meaning that farmers receive the entire price paid by consumers because consumers directly buy *Manohara* sweet potatoes from farmers without any intermediary traders involved. While the smallest farmer's share value is found in the third channel, which is 26.11%, this is due to the high costs incurred by marketing agencies on this channel, namely by inter-regional traders due to the distance of the *Manohara* sweet potato transportation location, namely to the Duri and Dumai areas, which causes traders' desire to get greater profits. From the research results above, it can be concluded that the most considerable farmer's share value in Nagari Koto Tinggi is in the channel involving the least marketing institutions, namely in the first channel, where farmers receive all prices paid by consumers.

Analysis of marketing of agricultural products aims to see the activities and performance of the marketing chain from primary producers (farmers) to final consumers. (Asmarantaka et al., 2017). The farmer's share is used to assess the marketing efficiency received by farmers as the leading actors in farming. (B, 2021; Busch & Spiller, 2016; Yunita & Noviar, n.d.). The results of this study show that the value received by farmers will be greater if they can sell their crops directly to the industry. Meanwhile, sales made to meet household consumption needs through intermediary traders only contributed a farmer's share value of 26.11%. So it is hoped that farmers can directly sell to the processing industry. This is in line with the results of research conducted that found a direct relationship between group businesses and the supply chain in agricultural businesses, especially in primary horticultural and food products.

However, the number of industries that process sweet potatoes that accommodate sweet potato production from West Sumatra is only one agroindustry in the Duri Region, Riau Province. So, to fulfill this goal, several agroindustries that process sweet potatoes into snacks are needed, which will encourage an increase in the production and quantity of *Manohara* sweet potatoes. The growth of the agroindustry can be done by encouraging farmers in groups to form joint businesses that process sweet potatoes into snacks.

4. CONCLUSIONS

4.1. Conclusions

Based on the results of research that has been carried out on the marketing of *Manohara* sweet potatoes in Nagari Koto Tinggi, Baso District, Agam Regency, it can be concluded that the marketing channels formed in the marketing activities of *Manohara* sweet potatoes are three channels. Based on the farmer's share analysis, the most considerable farmer's share value is found in the first channel, which is worth 100%. The results of this study show that the value received by farmers will be greater if they can sell their crops directly to the industry. Meanwhile, sales made to meet household consumption needs through intermediary traders only contributed a farmer's share value of 26.11%. So farmers can make direct sales to the processing industry, but the agroindustry is the only industry in Duri Riau Regency.

4.2. Recommendation

Based on the results of research that has been carried out, suggestions that can be given to farmers should market their *Manohara* sweet potatoes on the first channel, which is to sell the sweet potatoes directly to the processing industry, because, judging from the farmer's share value and the level of marketing efficiency, the first channel is more efficient than other channels. To increase the value of the farmer's share received by farmers, increasing the number and the scale of the sweet potato agroindustry is the right solution, so farmers can directly sell the harvest to the processing industry.

ACKNOWLEDGMENT

Thank you to the Research and Community Service Institute of Universitas Andalas for facilitating the process of writing articles. In addition, thanks to the Department of Social Economics and the Faculty of Agriculture for the opportunity to conduct the research.

REFERENCES

- Aditika, K., B., S., S., & Kumar, P. (2022). Taro (*Colocasia esculenta*): Zero-wastage, orphan food crop for food and nutritional security. *South African Journal of Botany*, 145, 157–169. <https://doi.org/https://doi.org/10.1016/j.sajb.2021.08.014>
- Aly, A. A., & Borik, Z. M. (2023). Chapter 1 - Food crops, growth, and productivity as an important focus for sustainable agriculture. In P. Guleria, V. Kumar, & B. Mo (Eds.), *Plant Small RNA in Food Crops* (pp. 3–23). Academic Press. <https://doi.org/https://doi.org/10.1016/B978-0-323-91722-3.00002-6>
- Asmarantaka, R. W., Atmakusuma, J., Muflikh, Y. N., & Rosiana, N. (2017). Konsep Pemasaran Agribisnis :

- Pendekatan Ekonomi dan Manajemen. *Jurnal Agribisnis Indonesia*, 5(2), 151–172.
- Borman, G. D., de Boef, W. S., Dirks, F., Gonzalez, Y. S., Subedi, A., Thijssen, M. H., Jacobs, J., Schrader, T., Boyd, S., ten Hove, H. J., van der Maden, E., Koomen, I., Assibey-Yeboah, S., Moussa, C., Uzamukunda, A., Daburon, A., Ndambi, A., van Vugt, S., Guijt, J., ... van Berkum, S. (2022). Putting food systems thinking into practice: Integrating agricultural sectors into a multi-level analytical framework. *Global Food Security*, 32. <https://doi.org/10.1016/j.gfs.2021.100591>
- Bosse, M. A., Silva, M. B. da, Oliveira, N. G. R. M. de, Araujo, M. A. de, Rodrigues, C., Azevedo, J. P. de, & Reis, A. R. dos. (2021). Physiological impact of flavonoids on nodulation and ureide metabolism in legume plants. *Plant Physiology and Biochemistry*, 166, 512–521. <https://doi.org/https://doi.org/10.1016/j.plaphy.2021.06.007>
- BPS. (2021). *Sumatera Barat dalam Angka*.
- Busch, G., & Spiller, A. (2016). Farmer share and fair distribution in food chains from a consumer's perspective. *Journal of Economic Psychology*, 55, 149–158. <https://doi.org/https://doi.org/10.1016/j.joep.2016.03.007>
- Dawe, D., & Maltsoğlu, I. (2014). Marketing margins and the welfare analysis of food price shocks. *Food Policy*, 46, 50–55. <https://doi.org/https://doi.org/10.1016/j.foodpol.2013.12.010>
- Downey, W. D., & Erickson, S. P. (1992). *Manajemen Agribisnis*. Erlangga.
- Islam, S., Mitra, S., & Khan, M. A. (2023). Technical and cost efficiency of pond fish farms: Do young, educated farmers bring changes? *Journal of Agriculture and Food Research*, 12. <https://doi.org/10.1016/j.jafr.2023.100581>
- Kohl's, R. L., & Uhl, J. N. (2002). *Marketing of Agricultural Products* (9th ed.). Prentice-Hall Inc.
- Lenou Nkouedjo, L., Mathe, S., Fon, D. E., Geitzenauer, M., & Awah Manga, A. (2020). Cocoa marketing chain in developing countries: How do formal-informal linkages ensure its sustainability in Cameroon? *Geoforum*, 117, 61–70. <https://doi.org/https://doi.org/10.1016/j.geoforum.2020.09.005>
- Licea-Dominguez, S., Estevez-Rioja, A., Hernández-Lozano, L. C., Alvarado-Ponce, G. E., Asemota, H., González-Cordova, A. F., González-Aguilar, G. A., & Domínguez-Soberanes, J. (2023). Market orientation and cuisine innovation as a driven sensory methodology to develop a sweet potato snack as an added-value food product. *International Journal of Gastronomy and Food Science*, 32, 100750. <https://doi.org/https://doi.org/10.1016/j.ijgfs.2023.100750>
- Mohanraj, R., & Sivasankar, S. (2014). Sweet potato (*Ipomoea batatas* [L.] Lam) - A valuable medicinal food: A review. In *Journal of Medicinal Food* (Vol. 17, Issue 7, pp. 733–741). Mary Ann Liebert Inc. <https://doi.org/10.1089/jmf.2013.2818>
- Profeta, A., & Hamm, U. (2019). Do consumers care about local feedstuffs in local food? Results from a German consumer study. *NJAS - Wageningen Journal of Life Sciences*, 88(January), 21–30. <https://doi.org/10.1016/j.njas.2018.12.003>
- Rosero, A., Pastrana, I., Martínez, R., Perez, J.-L., Espitia, L., Araujo, H., Belalcazar, J., Granda, L., Jaramillo, A., & Gallego-Castillo, S. (2022). Nutritional value and consumer perception of biofortified sweet potato varieties. *Annals of Agricultural Sciences*, 67(1), 79–89.
- Sita, K. (2015). Socio-economic characteristics and their effect on tea farming management behavior of tea smallholders in West Java Province. *Jurnal Penelitian Teh Dan Kian*, 18(2), 169–180.
- Soekartawi. (2003). *Agribisnis Teori dan Aplikasinya* (Ketujuh). PT. Raja Grafindo Persada.
- Sugiyono. (2020). *Metode Penelitian Kuantitatif dan Kualitatif* (Sutopo, Ed.; Satu). Alfabeta.
- Sumo, T. V., Ritho, C., & Irungu, P. (2022). Effect of farmer socio-economic characteristics on extension services demand and its intensity of use in post-conflict Liberia. *Heliyon*, 8(12). <https://doi.org/10.1016/j.heliyon.2022.e12268>
- Wohlgenant, M. K. (2001). Chapter 16 Marketing margins: Empirical analysis. In *Handbook of Agricultural Economics* (Vol. 1, pp. 933–970). Elsevier. [https://doi.org/https://doi.org/10.1016/S1574-0072\(01\)10024-1](https://doi.org/https://doi.org/10.1016/S1574-0072(01)10024-1)
- Yan, J., Yang, Y., & Xia, F. (2021). Subjective land ownership and the endowment effect in land markets: A case study of China's farmland “three rights separation” reform. *Land Use Policy*, 101, 105137. <https://doi.org/https://doi.org/10.1016/j.landusepol.2020.105137>
- Zhong, B., Yang, F., & Chen, Y.-L. (2015). Information empowers the vegetable supply chain: A study of information needs and sharing strategies among farmers and vendors. *Computers and Electronics in Agriculture*, 117, 81–90. <https://doi.org/https://doi.org/10.1016/j.compag.2015.07.009>
- Zhou, H., Chen, Y., Liu, Y., Wang, Q., & Liang, Y. (2022). Farmers' adaptation to heavy metal pollution in farmland in mining areas: The effects of farmers' perceptions, knowledge, and characteristics. *Journal of Cleaner Production*, 365, 132678.