

## Analysiss Added Value Of Wood Yam As A Raw Material For Cassava Chips In Karanganyar Regency (Case In KUB Wanita Tani Makmur)

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Article Info	ABSTRACT
<b>Corresponding Author:</b> Name : <b>Oxy Valentina</b> E-mail: oxyvalentina17@gmail.com	<p>The agricultural sector in the perspective of agribusiness with its role in the national economy provides several things that show advantages that can be considered. These advantages include added value in agro-industry. The cassava chips business at KUB Wanita Tani Makmur is one of the businesses in Karanganyar Regency which is managed simply with the use of limited technology. This study aims to determine the profit, efficiency and added value of processing cassava into cassava chips in Karanganyar Regency. . The basic research method used is descriptive method. The location of the research was determined purposively, namely KUB Wanita Tani Makmur Karanganyar Regency on the grounds that the members of KUB Wanita Tani Makmur in processing cassava are different, namely soaking cassava that has been half-cooked. The type of data used is primary data and secondary data with observation, interview and recording techniques. The data analysis method used is business analysis to determine the magnitude of the efficiency gain and added value. The results showed that the profit received from the business of processing cassava into cassava chips in one production process for members of KUB Wanita Tani Makmur from raw cassava to cassava chips totaled Rp. 10,375.61. Meanwhile, in KUB Wanita Tani Makmur, the profit received from cassava chips until they are cooked (cassava chips) is Rp. 1,610,418.99. The business efficiency of processing raw cassava to - finished cassava chips in Karanganyar Regency for members of KUB Wanita Tani Makmur is 1.11. Meanwhile, the efficiency of processing cassava chips until they are cooked at KUB Wanita Tani Makmur is 1.68. Processing of raw cassava into -finished cassava chips carried out by members of KUB Wanita Tani Makmur gave a gross added value of Rp. 52,043.74, net added value of Rp. 50,558.25, value added per raw material of Rp. 979.55/kg and added value per raw material. labor amounting to Rp 3,097.84/JKO.</p> <p><b>Keywords:</b>                      cassava chips. cassava</p>

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### INTRODUCTION

The agricultural sector has a very large role in the country's economic growth, especially countries with an agrarian pattern such as Indonesia[1]. Economic development focuses on agriculture and agriculture-based industry or so-called agro-industry[2]. In the agribusiness system, agroindustry is one of the subsystems that together with other subsystems form agribusiness[3], [4].

The agricultural sector in the perspective of agribusiness with its role in the national economy provides several things that show advantages that can be considered. These advantages include added value in agro-industry, for example by preserving agricultural products into

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processed products that are more durable and ready for consumption[5]. Given the non-durable nature of agricultural products, the role of agro-industry is very necessary[6], [7]. Cassava is a food crop that has many advantages. For example, when food reserves (grains) are in short supply, cassava can still be relied on as a source of substitute material because cassava is a plant that is resistant to water shortages, so it can still be produced on critical lands and the method of planting cassava is easy. The purpose of processing cassava itself is to increase the durability of cassava so that it is suitable for consumption and utilize cassava in order to obtain a high selling value in the market.[8], [9]. Karanganyar Regency, especially the Delingan Village, produces more cassava than others, in detail the harvested area and cassava production in Karanganyar District can be seen in Table 1.

**Table 1.** The Harvested Area And Cassava Production In Karanganyar District

No	Ward	Harvest Area (Ha)	Production (Kg)
1	pass	-	-
2	Bolong	4	66,000
3	Jantihajo	3	45,300
4	Tegalgede	3	46,200
5	Jungke	-	-
6	guess	-	-
7	Karanganyar	-	-
8	Bejen	4	64,800
9	Popongan	-	-
10	Gayamdopo	7	114,800
11	Delingan	96	1,603,200
12	Gedong	79	1,303,500
Amount		196	3,243,800

Table 1. shows that the production of cassava in the Delingan Village, Karanganyar District of 1,603,200 kg is the most compared to the others. Apart from Delingan, cassava production in Gedong is 1,303,500 kg and in Gayamdopo it is 114,800 kg. The abundance of cassava production at the time of the main harvest causes the price of cassava in the market to be low. The price of cassava at harvest time is Rp. 500, 00/ Kg. On a normal day, the price of cassava can reach Rp. 750.00/ Kg. This causes most farmers to feel disadvantaged.

One of the industries currently being developed in Karanganyar Regency is the cassava processing industry as a raw material for making cassava chips, which is a business managed by the Women Farmers' Joint Business Group (KUB) in Delingan Village, Karanganyar District, Karanganyar Regency. The Women Tani Makmur Joint Business Group (KUB) was established in 1990 which initially consisted of 3 (three) people, after receiving funding from P2WKSS the business group grew and now consists of 20 (twenty) people and products from KUB Wanita Tani Makmur only cassava chips.

## METHOD

The method used in this research is descriptive method, namely research based on solving actual problems that exist in the present. The data are first compiled, explained, then analyzed. This method is often used but as an analytical method.

The research location advertisement was carried out purposively, namely the sampling was done intentionally for certain reasons which was adjusted to the research objectives. This research was conducted at KUB Wanita Tani Makmur, Karanganyar Regency with the reason that the members of KUB Wanita Tani Makmur in processing cassava is different, namely soaking cassava that has been half cooked, so that the taste of cassava chips is like gadhung.

Responden in this study are all members who are members of KUB Wanita Tani Makmur who process raw cassava into -finished cassava chips and KUB Wanita Tani Makmur itself who processes -finished cassava chips until they are cooked.

Primary data is data that is collected and obtained directly from cassava producers and related parties using a list of questions that have been prepared previously. Data obtained from relevant agencies (BPS, Department of Agriculture, Department of Industry and Trade, and other relevant agencies) from various print media and online media apart from various books and literature related to this research.

#### Technik Data Retrieval

1. MeInterview method, which is a method of collecting data by conducting extensive and in-depth interviews with sample respondents using a list of prepared questions (questionnaires).
2. MeObservation method, which is a method of collecting data by making direct observations with the object to be studied so that a clear picture is obtained of the object to be studied.
3. MeRecording method, which is a method of collecting data by recording data from all sources related to research.

## RESULTS AND DISCUSSION

### CharacterRespondent's istik

#### KUB Prosperous Farmer Woman

The purpose of KUB Wanita Tani Makmur itself is to help market the products produced and to improve the welfare of its members because later this KUB Wanita Tani Makmur will be developed again into a cooperative with a legal entity. The marketing objectives carried out from members of KUB Wanita Tani Makmur to KUB Wanita Tani Makmur itself are:

- a. Can increase the sales volume of cassava chips produced.
- b. Marketer which is done more efficiently.
- c. Can improve bargaining position.
- d. Expands market access so that the marketing is not only in the cities of Surakarta, Karanganyar and Sragen only.
- e. Planning management will be better.

The activities carried out by KUB Wanita Tani Makmur are holding a meeting every month on the 5th and providing guidance from the relevant agencies. The profit mechanism at KUB Wanita Tani Makmur is the distribution of SHU (Savings for Business Results) every year and also if members of KUB Wanita Tani Makmur who want to use the brand from KUB Wanita Tani Makmur, namely "DHENOK" and sell it themselves, 10% of the proceeds from the sale will be taken to be given to KUB Wanita Tani Makmur.

MYB Women Tani Makmur during the production process in addition to using labor from members, they also use one (1) additional manpower from outside to help carry out the frying process, while for the packaging of KUB Wanita Tani Makmur they do it themselves. In addition, KUB Wanita Tani Makmur also helps members to market cassava chips, because almost all members of KUB Wanita Tani Makmur do not have their own brand.

#### Prosperous Farmer Woman KUB Member

Characteristics of respondents are conditions that describe the general condition and background of the respondents being studied in relation to their influence on activities and special characteristics that distinguish them from other respondents. The development of the business of processing cassava into cassava chips is influenced by several parties such as members of KUB Wanita Tani Makmur, KUB Wanita Tani Makmur, consumers, government and society itself. Members of KUB Wanita Tani Makmur are people who process cassava into cassava chips which go through stages from peeling to -finished cassava chips. The results of research conducted on the business of processing cassava into cassava chips in Karanganyar Regency obtained the characteristics of members of KUB Wanita Tani Makmur as follows:

**Tabel 2.** Identity of KUB Women Tani Makmur Members from the Business of Processing Raw Cassava into Cassava Chips So in Karanganyar Regency in 2009.

No	Description	Average per respondent
1	Age of respondent (years)	43
2	Length of education (years)	9
3	Number of family members (person)	4
4	Number of family members involved in production (person)	3
5	Length of work(years)	12

Tabel 2. shows that the average age of members of KUB Wanita Tani Makmur from processing raw cassava into cassava chips in Karanganyar Regency is 43 years, which means that they are still of productive age so that their business performance is still quite good, with an average The length of education is 9 years or equivalent to junior high school, but not all members of KUB Wanita Tani Makmur are from junior high school graduates, because there are members of KUB Wanita Tani Makmur who come from elementary school graduates and some even have no education at all. The level of education will affect the pattern of thinking in improving the business owned, so that decision making can really be accounted for.

Totalh family members in KUB Wanita Tani Makmur are an average of 4 people, with an average of 3 family members who are active in production activities, namely father, mother and one child. However, from 3 family members who are active in production activities, there is also 1 member who is really active, namely the housewife from each family, where the cassava chips business activity was formed by housewives which has been carried out since 1990 until now, with an average length of business that is 12 years.

The reasons given by members of KUB Wanita Tani Makmur related to cultivating cassava chips are different, namely more profitable, an inherited business, experience or indeed there is no other job. The reasons can be seen in Table 3. below:

**Tabel 3.** Reasons for Seeking Prosperous Women Farmers KUB Members from Raw Cassava Processing Business into cassava chips So in Karanganyar Regency in 2009.

No	Description	Number of people)	Percentage (%)
1	More profitable	15	94
2	Legacy business	-	-
3	No other work	1	6
4	Experience	-	-
	Amount	16	100

Tabel 3. shows that most of the reasons for the members of KUB Wanita Tani Makmur in running the cassava chips business are more profitable because in one production process the average profit is IDR 9,125.61 with an average revenue of IDR 101,953.13 and the total cost amounting to Rp. 92,827,52 which is as many as 15 people or 94 percent. The reason for not having another job is 1 person or 6 percent. Meanwhile, for reasons as a legacy business and as an experience, it does not exist at all because it is a business that has only been known since 1990.

The status of this cassava chip business on average is as a main job although there is also a side job. Because at the beginning of this KUB development, it was intended for housewives to have activities and generate money to improve the household economy. However, most of these cassava chips businesses do not have official permission from the Health Office. The business status and licensing of the Health Office in the cassava chips business can be seen in Table 4. below:

**Tabel 4.** Business Status and Licensing of the Health Office from Cassava Processing Business into Cassava Chips in Karanganyar Regency in 2009.

No	Business status	Number of people)	Percentage (%)
1	Business status		
	a. Main worker	12	75
	b. Side job	4	25
	Amount	16	100
2	Health department license		
	a. Already have a permit	1	6
	b. Don't have a permit yet	15	94
	Amount	16	100
3	Trademark		
	a. Have a trademark	1	6
	b. Don't have a trademark yet	15	94
	Amount	16	100

Tabel 4. shows that the business status of cassava chips is mostly a main job, as many as 12 people are working or 75 percent. As for the business status as a side job, only 4 people with a percentage of 25 percent. The cassava chips business, which is only a side job, is because the average respondent has a main job that is a source of income, either as factory or private workers.

The status of licensing from the Health Office for cassava chip products in Karanganyar Regency is still not all of them, namely only 1 has received a permit of 6 percent, the rest have not taken care of a permit from the Health Office. However, even though they do not have a permit from the Health Service, the producers still maintain the feasibility and quality of the cassava chips being marketed. So that it can provide security from the cassava chip products produced to consumers.

Tabel 4. For trademarks, 15 people or 94 percent still do not have a trademark because respondents think that it is difficult to administer a license for a product. Nevertheless, there is 1 respondent or 6 percent who already own or use a trademark. The trademark is DHENOK where the trademark belongs to KUB Wanita Tani Makmur.

#### Analysis of Cassava Chips Business Revenue

The income of the business of processing cassava into cassava chips is calculated from the amount of production produced multiplied by the price. The revenue from the business of processing cassava into cassava chips can be seen in Table 5. below:

**Tabel 5.** Acceptance of Cassava Processing Business into Cassava Chips in Karanganyar Regency during a One-Time Production Process in August 2009.

No	Information	Physical	Unit price	Amount (RP)
<b>Member</b>				
	Cassava (raw -1/2 finished)	13.59 kg	Rp. 7,500	101,953
	<b>Total Receipt</b>			<b>101,953</b>
<b>Prosperous Farmer Woman KUB</b>				
	Packaging (1/2 finished – cooked)			
1	100 gr	450 units	Rp. 2,500	1.125.000
2	200 gr	325 units	Rp. 4,500	1,462,500
3	250 gr	250 units	Rp. 5,500	1.375.000
	<b>Total Receipt</b>			<b>3,962,500</b>

Tabel 5. shows the acceptance of cassava processing business during one production process. In one production process each member consumes an average of 53.13 kg of raw cassava

then from 53.13 kg of raw cassava after the production process the average yields 13.59 kg of finished cassava chips which are then sold to KUB Wanita Tani Prosperous with a price per kg of IDR 7,500. The raw material for -finished cassava chips received by KUB Wanita Tani Makmur is an average of 217.5 kg which will later be processed for frying and packaging. Members may market themselves but at a standardized price. Of the 16 members of KUB Wanita Tani Makmur, on average, they deposit raw materials to KUB Wanita Tani Makmur in the form of -finished cassava chips.

The average income of members of KUB Wanita Tani Makmur is Rp. 101,953.13 with an average production volume of 13.59 kg/member at a price of Rp. 7,500.00 per kg. The number of finished cassava chips received by KUB was 217.5 kg from 16 members which was then fried with 1 kg of finished cassava chips to produce 0.8 kg of ripe cassava chips and experienced a shrinkage of 0.2 kg, so for 217.5 kg of finished cassava chips produced 174 kg of ripe cassava chips and the resulting shrinkage was 43.5 kg, then from 174 kg of ripe cassava chips were packaged, so that the acceptance of the Women Tani Makmur Joint Business Group (KUB) in Karanganyar Regency for one production amounting to Rp. 3,962,500. Packaging of 100 grams at a price of Rp. 2,500, 00/unit of Rp. 1,125,000, 00 packs of 200 gr at a price of Rp. 4,500.00/unit of Rp. 1,462,500.00 and a pack of 250 gr at a price of Rp. 5,500.00/unit of Rp. 1,375.000,00. The packaging carried out resulted in crumbs or commonly called *rencengan* as much as 1.5 kg, so that the total number of cooked cassava chips packaged was 172.5 kg.

### Analysis of Cassava Chips Business Profits

The profit received from the business of processing cassava into cassava chips in one production process is the result of the calculation of the difference between revenue and total cost. The calculation of the profit of processing cassava into cassava chips can be seen in Table 6. below:

**Tabel 6.** Benefits of Processing Cassava into Cassava Chips in Karanganyar Regency during One Production Process in August 2009.

No	Description	Amount
<b>Member</b>		
1	Total revenue (Rp)	101,953.13
2	Total Cost (Rp)	91577.52
	<b>Profit</b>	<b>10,357,61</b>
<b>MYB Prosperous Farmer Woman</b>		
1	Total revenue (Rp)	3,962,500.00
2	Total cost (Rp)	2,352,081.01
	<b>Profit</b>	<b>1,610,418.99</b>

Tabel 6. shows that the profit of the business of processing raw cassava into cassava chips so that during one production process the members of KUB Wanita Tani Makmur with an average revenue of Rp. 101,953.13 and a total cost of Rp. 91,577.52 so that a profit of Rp. 10,375.61. The profit of processing cassava chips into cooked cassava chips during one production process at KUB Wanita Tani Makmur is Rp. 1,610,418.99 with revenues of Rp. 3,962,500.00 and total costs of Rp. 2,352,081.01. The benefits obtained by members are smaller than in KUB Wanita Tani Makmur because the total costs incurred are quite large. While the benefits of KUB Wanita Tani Makmur are greater than the benefits of members, although the costs incurred are quite large, the increase in revenue is also greater than the members so that KUB Wanita Tani Makmur has greater profits. The big difference in profits between members and KUB Wanita Tani Makmur is because KUB Wanita Tani Makmur can manipulate the selling price of the cassava chips produced, while members of KUB Wanita Tani Makmur can't play with the price because members of KUB Wanita Tani Makmur sell cassava chips to consumers. KUB Women Farmers Prosperous. The profits received by KUB Wanita Tani Makmur will later be used for the development of KUB Wanita Tani Makmur into a cooperative which aims to improve the welfare of its members. The

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### Business Efficiency Analysis of Cassava Chips

EfficiencyThe business of processing cassava into cassava chips is carried out using an analysis of the R/C Ratio calculation, namely by comparing the revenue with the total cost. The calculation of the efficiency analysis can be seen in Table 7. below:

**Tabel 7.** Business Efficiency in Processing Cassava into Cassava Chips in Karanganyar Regency during One Production Process in August 2009.

No	Description	Amount
<b>Member</b>		
1	Total Revenue (Rp)	101,953.13
2	Total cost (Rp)	91577.52
	<b>Efficiency (R/C)</b>	<b>1.11</b>
<b>MYB Prosperous Farmer Woman</b>		
1	Total Revenue (Rp)	3,962,500.00
2	Total Cost (Rp)	2,352,081.01
	<b>Efficiency (R/C)</b>	<b>1.68</b>

Tabel 7. shows that the business efficiency of processing raw cassava into -finished cassava chips in Karanganyar Regency for KUB members with revenues of Rp. 101,953.13 and total costs of Rp. 91,577.52 so that the R/C ratio value is 1.11. This means that the business of processing raw cassava into cassava chips so that the members of KUB Wanita Tani Makmur in Karanganyar Regency show that it is efficient, while the KUB Wanita Tani prosper has also been efficient with revenues of Rp. 3,962,500.00 and a total cost of Rp. 2.352.081.01 so that the value of R/C ratio is 1.68. This means that for every Rp. 100.00 the total cost incurred will result in an income of Rp. 168.00.

The value of the R/C ratio at KUB Wanita Tani Makmur 1.68 means that for every Rp. 100 of the costs incurred in the initial business activity of processing cassava chips into ripe cassava chips, the revenue is 1.68 of the costs incurred. For example, at the beginning of the business activity of processing cassava chips into ripe cassava chips, it costs Rp. 100,000.00, so KUB Wanita Tani Makmur will receive an income of Rp. 168,000.00. The greater the R/C ratio, the greater the revenue that will be obtained. Likewise for the R/C ratio of members of KUB Wanita Tani Makmur.

### Analysis of the Added Value of Cassava Chips Raw Material

Analysis of the added value of the business of processing cassava into cassava chips was carried out to determine the amount of value added to the raw materials used in producing cassava chips. The calculation of the value added analysis of cassava into cassava chips can be seen in Table 22 below:

**Tabel 8.** Analysis of Added Value of Cassava into Cassava Chips in Karanganyar Regency during One Time Production in August 2009.

No	Description	Amount
<b>Member</b>		
1	Final Product Value (Rp)	101,953,13
2	feea Raw Materials (Rp)	37,500.00
3	totalh Raw Material (Kg)	53.13
4	feea Auxiliary Material (Rp)	7,409.39
5	feea Between (Rp)	49,909.39
6	Depreciation Value (Rp)	1,485.49
7	Gross value added (Rp)	52,043.74
8	Net value added (Rp)	50,558.25
9	Value added per raw material (Rp/Kg)	979.55
10	Value added per worker (Rp/JKO)	3,097.84
<b>MYB Prosperous Farmer Woman</b>		
1	Final Product Value (Rp)	3,962,500.00
2	feea Raw Materials (Rp)	1,631,250.00
3	totalh Raw Material (Kg)	217,5
4	feea Auxiliary Material (Rp)	615,500.00
5	feea Between (Rp)	2,271,750,00
6	Depreciation Value (Rp)	4,288.55
7	Gross value added (Rp)	1,690,750.00
8	Net value added (Rp)	1,686,461.45
9	Value added per raw material (Rp/Kg)	7,773.56
10	Value added per worker (Rp/JKO)	37,572.22

Table 8 shows the value added analysis which includes gross added value, net added value, added value per raw material and added value per worker from members of KUB Wanita Tani Makmur and KUB Wanita Tani Makmur itself.

### CONCLUSION

The profit received by members of KUB Wanita Tani Makmur from raw cassava to cassava chips made in one production process is Rp. 10,375.61. Meanwhile, in KUB Wanita Tani Makmur, the profit received from cassava chips until they are cooked (cassava chips) is Rp. 1,610,418.99. The business efficiency of processing raw cassava into finished cassava chips in Karanganyar Regency for members of KUB Wanita Tani Makmur is 1.11. This means that the business of processing raw cassava into cassava chips, so the members of KUB Wanita Tani Makmur in Karanganyar Regency show that it is efficient. Meanwhile, in KUB Wanita Tani Makmur which shows that the efficiency of processing cassava chips into ripe (cassava chips) is 1.68. This means that the processing business of cassava chips to mature at KUB Wanita Tani Makmur in Karanganyar Regency is efficient. Processing of raw cassava into cassava chips so that KUB Wanita Tani Makmur members provide a gross added value of IDR 52,043.74, net added value of IDR 50,558.25, added value per raw material of IDR 979.55/kg and added value per worker. work amounting to Rp. 3,097.84/JKO. Meanwhile, the processing of cassava chips into ripeness at KUB Wanita Tani Makmur provides a gross added value of Rp. 1,690,750.00, net added value of Rp.1,686,461.45, value added per raw material of Rp. 7,773.56/kg and added value per worker. work amounting to Rp. 37,572.22/JKO.

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