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Cassava Cultivation (*Manihot esculenta*) in the Rimbun Glugur Land, Sampecita Village, Kutalimbaru District, Deli Serdang

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ABSTRACT

Cassava is one of the food crops widely cultivated by farmers in Glugur Rimbun, Sampecita Village. This study aims to compare cassava cultivation techniques, the influence of production factors (seedling area, labor and fertilizer) and to determine the feasibility of cassava farming in Glugur Rimbun land. Cassava plant cultivation is generally carried out traditionally and as is, without utilizing modern planting technology. Cassava plants are not cultivated with intensive care, both in terms of fertilization, watering, weeding or pests and diseases. The results of the study showed that cassava cultivation in Glugur Rimbun land, Sampecita Village, Kutalimbaru District was carried out conventionally. Cassava cultivation is carried out with a monoculture system starting from seed preparation, land processing, planting, fertilization and plant maintenance. Farmers have applied the correct cassava cultivation techniques, but cassava pest and disease control are not carried out by farmers. Feasibility analysis of cassava farming on 5 ha of land. Production costs incurred amounted to Rp. 98,000,000, - the total revenue was Rp. 146,281,250, - and the income was Rp. 48,281,250, -. The R/C value of 1.49. This shows that the cassava business on Glugur Rimbun land is feasible to cultivate.

Keywords: Cultivation Techniques, Cassava

INTRODUCTION

Cassava (*Manihot esculenta*) is a type of tuber or tree root plant, Euphorbiaceae family. Cassava is a tropical plant originating from South America, precisely in Brazil. After that, this plant spread throughout the world starting from Africa and entered Indonesia in the 18th century. It took a long time for cassava to spread to other areas, especially to the island of Java. It is estimated that cassava was first introduced in 1852 in East Java district (Utama & Rukismono, 2018).

In Indonesia, cassava is used as a staple food after rice and corn. In addition to being food, cassava can be processed in order to increase the variety of product utilization. Cassava plants can be used from the tubers to the top of the leaves, so they are a favorite multifunctional plant for the public. As a source of family consumption, cassava is usually eaten directly after being boiled or fried, or processed into other types of food. Cassava can grow in almost all areas and is one of the staple crops besides rice and corn. Cassava is one of the carbohydrate tuber plants that has a high starch content. In addition, cassava has a great ability to grow and adapt to global climate change, land fertility degradation, and other environmental changes. This commodity has the potential to be developed as a source

of food, feed, and industrial raw materials and derivative products (Fitriani, *et al* 2019).

Cassava productivity can be increased through good cultivation, use of superior varieties and control of pests and diseases. Cassava varieties are generally distinguished based on morphology including leaves, stems, tuber color, number of tubers and leaf shape. The average productivity of cassava tubers in Indonesia is 22.9 tons/ha with an average productivity range by province between 10.5-39.2 tons ha-1 (BPS 2016).

Cassava is one of the important food crop commodities and has great potential. Because in addition to being a non-rice food source, it can also be used for various things, especially for industrial raw materials and exports, as well as intermediate products, so it has the potential to be developed along with the increasing development of the industrial sector. Almost all parts of cassava can be used for various purposes. The leaves and tubers can be processed into various foods, both as main foods and snacks. The tubers can be processed into liquid sugar (high fructose) and animal feed, as well as for fuel called bioethanol. Cassava tubers and leaves can also be used as animal feed. The stems are not only useful for seeds, but can also be used as firewood when dry. The cassava starch exporting countries are Thailand, Vietnam, Laos and Brazil. Indonesia is in tenth place with an export value of USD 7.9 million in 2022. Meanwhile, the largest importer is China with an import value of USD 2.2 billion.

Based on production data for the last five years up to 2022, there are seven cassava center provinces in Indonesia. Lampung is the main center of cassava production in Indonesia for the 2018-2022 period. In 2022, cassava production in Lampung Province reached 39.74% of Indonesia's total cassava production or 5.95 million tons. The next provinces are Central Java, East Java and West Java with contributions of 16.58%; 9.58% and 6.91% respectively. Other central provinces are North Sumatra, DI Yogyakarta, and East Nusa Tenggara which contribute less than 6%. While the remaining 12.71% of Indonesia's cassava production in 2022 was contributed by other provinces not mentioned above (Mas'ud and Sri, 2023). Along with the development of technology and the times, food needs are very difficult to meet

Along with the development of technology and the times, food needs are very difficult to meet because of the decreasing land area. In Indonesia, the cassava harvest area in 2019 was 1,184,696 ha, while in 2020 it decreased to 1,065,752 ha (BPS, 2020). Common problems in cassava cultivation are low productivity and income. Low productivity is caused by the failure to implement cassava cultivation technology properly, such as fertilization with both inorganic and organic fertilizers.

In addition to the limited use of superior varieties, low productivity is also caused by the failure to implement cassava cultivation technology properly, such as fertilization. Fertilization is an act of providing additional nutrients to the soil, either directly or indirectly, so that it can provide nutrients for plants. Fertilization is an important thing that is given to plants so that plants can grow and develop properly. Plant growth and development are greatly influenced by the availability of nutrients in the soil (Irvan, 2013).

Environmental conditions will affect plant growth and production. If the environment meets the growing requirements, the plants will be able to grow and produce optimally, and vice versa. In addition to the environment, genetic factors carried by the ancestors also have a direct influence on growth because it is not only good traits that are inherited by superior ancestors. Therefore, the implementation of intensive farming needs to be carried out so that cassava plants can interact well in any environmental conditions.

Cassava is considered a plant that is easy to adapt and grows in several tropical agricultural climates that do not require a

certain climate for growth. In addition, cassava is considered a plant that thins the soil, because it is wasteful in taking nutrients and is unable to protect the soil from rainwater and makes cassava land susceptible to erosion (Salim, 2011).

In general, cassava is divided into two groups, namely the sweet type (for consumption) and the bitter type (for industrial raw materials). Cassava planted in Kutalimbaru District is mostly sweet cassava, which is also called consumption cassava. Sweet cassava is cassava that can be consumed after being processed with a low HCN content of 0.04% or 40 mg HCN/kg cassava (Yuningsih, 2009). Several varieties of sweet cassava in Kutalimbaru District include white cassava and butter cassava. Farmers generally use these varieties at a harvest age of 7-9 months for food processing in the form of chips, opak, kelanting, and tape.

Common obstacles that occur in cassava cultivation are low productivity and income. According to Prihandana (2007), low productivity is caused by (1) farmers not using new superior varieties (2) suboptimal seed quality because they are stored for 2-3 months, (3) recommended fertilizer doses have not been applied, (4) harvests are not on time because farmers plant simultaneously at the beginning of the rainy season, (5) less than optimal promotion and dissemination and (6) low farmer interest due to price fluctuations.

Cassava cultivation is generally carried out traditionally and as needed, without utilizing modern planting technology (Fauzana *et al.*, 2021). Cassava plants are not cultivated with intensive care, either in terms of fertilization, watering, weeding or pests and diseases (Mawaddah *et al.*, 2018). Usually, farmers do not control cassava plants, especially pest and disease control, and are generally left alone. In cultivation techniques, one of the factors that affects cassava production is plant maintenance and control of plant-disturbing organisms in the form of pests, plant diseases and weeds. The cassava pests in the field are red mites (*Tetranychus urticae* Koch). Yield reduction due to this pest attack can reach 20 to 53%, even up to 95%. Mealybugs can reduce cassava production by approximately 68-88% (Ramadhan *et al*., 2021). There are 3 species of mealybugs that have long been found in Indonesia, namely *Paracoccus marginatus*, *Pseudococcus sp* and *Ferrisia virgata*. Cassava mealybug attacks can reduce cassava production by up to 90%. Typical indications caused by mealybugs are curly leaves and shoots that shrink to resemble flowers or are called buchy (Santoso and Astuti, 2019). Other pests on cassava plants are uret (*Xylenthropus sp*) with symptoms of attack caused by plants dying at a young age, because the roots, stems and tubers are damaged. This study aims to compare cassava cultivation techniques applied by farmers in the Glugur Rimbun land, Sampecita Village, Kutalimbaru District, Deli Serdang Regency and compare them with relevant related literature in order to increase knowledge and ability.

LITERATURE REVIEW

Cassava plants are arranged in the following systematics (Steenis *et al.*, 2003): Kingdom: Plantae, Division: Spermatophyta, Class: Dicotyledonae, Order: Euphorbiales, Family: Euphorbiaceae, Species *Manihot esculenta* Crantz. Cassava is a plant that requires certain climate requirements. Cassava plants require temperatures between 18^0C - 35^0C. At temperatures below 10oC, cassava plant growth will be inhibited. The humidity required by cassava is 65% (Suharno *et al.*, 1999). However, to produce maximum cassava plants require certain conditions, namely in tropical lowlands, with an altitude of 150 meters above sea level (asl), with an average temperature of between 25^0C - 27^oC, but some varieties can grow at altitudes above 1,500 mdpl (Sundari, 2010). This plant grows optimally at an altitude of between 10 - 700 mdpl.

Cassava plants can grow well if rainfall is sufficient, but this plant can also grow in

low rainfall (<500 mm), or high rainfall (5000 mm). The optimum rainfall for cassava ranges from 760 - 1015 mm per year. Too high rainfall can cause fungal and bacterial attacks on the stems, leaves and tubers if drainage is poor. Suitable soil is soil that has a crumbly structure, is loose, not clayey and not porous, besides it is rich in nutrients. Suitable soil types are alluvial, latosol, red yellow podzolic, grumosol and andosol. Meanwhile, the pH required is between 4.5 - 8 and the ideal pH is 5.8. The rainfall required is between 1,500 - 2,500 mm / year. Optimal air humidity for plants is between 60% - 65%. Minimum air temperature is 10 ºC. The need for sunlight is around 10 hours per day and lives without shade (Effendi, 2002).

MATERIALS & METHODS

The research was conducted for 4 months from July to October 2024. This research was conducted on the Glugur Rimbun land with an area of 5 hectares in Sampecita Village, Kutalimbaru District. The location of this research was determined by purposive sampling (intentionally), based on the consideration that the village is a cassava producer. In addition, the selected land has a strategic location for research. Strategic in the sense that in that location there are many farmers who do cassava farming. The research material is cassava plants (Manihot esculenta) which are food crops that are widely cultivated. This commodity has the potential to be developed as a source of food, feed, and industrial raw materials and derivative products.

The method used in data collection activities was direct observation in the field and interviews and direct field observations on 5 ha of land in Glugur Rimbun, Sampecita Village, Kutalimbaru District, Deli Serdang Regency. The data obtained was strengthened or compared with literature studies through literature or related sources that were relevant to the topic of discussion. The resource farmers were cassava farmers on the Glugur Rimbun land in Sampecita Village. The implementation of the research in the initial stage was to conduct a field survey to find out the conditions that occurred in the field, then continued with the data collection and data analysis stages. The research method used is the case study method, namely the researcher who directly looks into the field, because the case study is a method that explains research on a particular object, or a phenomenon found in a place that is not necessarily the same as other areas. This method will involve in-depth and comprehensive research on the research object

STATISTICAL ANALYSIS

Data collection techniques are the most strategic research stages, and the main objective of this study is to collect and obtain data to obtain clear data that can be considered. The data collected in this study consists of primary data and secondary data. Primary data is data obtained from direct interviews with respondents through a list of questions (questionnaires) that have been prepared in advance.

Primary data obtained in this study is a survey method, namely observation (direct observation) on cassava planting land and from direct interviews with cassava farmers as research respondents using a questionnaire that has been prepared in advance. An interview is a conversation with a specific purpose and objective carried out by two or more parties, namely the interviewer (interviewe) who asks questions based on the questionnaire and the interviewer (interviewee) who provides answers to the questions asked. The type of interview technique used is a systematic interview technique, namely an interview that leads to guidelines that have been formulated based on the needs of data collection in the study.

Through this interview stage, in general the author wants to explore data on cultivation techniques, production data, income and feasibility. Secondary data were obtained from literature studies and other libraries, such as the North Sumatra Central Statistics

Agency, the North Sumatra Agriculture Service, the Deli Serdang Agriculture Service, research results, journals, literature and other related agencies related to this research. The documentation used here is in the form of photos, images, and data on cassava farming activities in the Glugur Rimbun land. With this, to strengthen the data from the research results that have been carried out during the field.

The technical analysis of the data used in this study includes quantitative analysis. Data obtained from direct observations in the field by interviewing cassava farmers using questions (questionnaires) in accordance with the objectives of the study to find out how cultivation techniques, production cost analysis, income and feasibility of cassava farmers in the Glugur Rimbun land. To identify cassava production problems, it is analyzed by looking at the amount of production costs using a simple analysis to find the total cost using the formula:

Total Cost Analysis of Cassava Farming Production Costs TC = TFC + TVC

Description:
TC = Total Cost of Cassava Farming
FC = Fixed Cost of Cassava Farming (Rp)
VC = Variable Cost of Cassava Farming (Rp)

Analysis of Farming Revenue TR = P x Q

Description:
TR: total revenue (Kg)
P: price (Rp)
Q: number of products sold / Quantity (Rp)

To identify cassava farming revenue, it can be calculated with a simple analysis finding cassava farming revenue using the formula:

I = TR-TC
Description:
I: cassava farming revenue (Rp)
TR: Total cassava farming revenue (Rp)
TC: Total cassava farming costs (Rp)

To identify the feasibility of cassava farming, it is analyzed using the R/C (revenue-cost ratio) criteria with the formula:

R/C Ratio Approach Analysis R/C ratio = TR/TC

Description:
R/C: Return Cost Ratio
TR: Total Farming Revenue (Rp)
C: Total Farming Cost (Rp)

Test criteria:
1) If R/C Ratio > 1, it is feasible to be operated and profitable
2) If R/C Ratio < 1, it is not feasible to be operated and not profitable
3) If R/C Ratio = 1, the business breaks even (no profit and no loss)

RESULT

Glugur Rimbun Land is one of the villages in Kutalimbaru District, Deli Serdang Regency, where most of the population works as farmers. One of the plants that thrives in this area is cassava, besides oil palm, corn, sweet potatoes and others. In general, cassava is a type of plant that can grow wild without the need for special maintenance. Cassava cultivation in Glugur Rimbun land uses 5 ha of land which is land owned by Universitas Pembangunan Panca Budi Medan which is managed by partner CV. Kreasi Lutvi.

In cassava cultivation activities, there are quite a few obstacles in its implementation, both in terms of cultivation techniques and post-harvest aspects. In general, farmers have mastered good and correct cassava cultivation techniques, but in the use of fertilizer doses and pest and disease control, there is still a lack of knowledge of correct cassava cultivation techniques.

Cassava cultivation starts from seed preparation, land processing, planting, fertilization and plant maintenance. The type of cassava cultivated in the Glugur Rimbun land is the butter cassava type which is planted to meet the raw material

needs of the cassava processing factory into opak, a type of snack in the form of cassava chips. This type of butter tuber is yellow and has a soft texture.

The planting material used by farmers is vegetative propagation. The material is obtained from plants that have been planted previously so that they are not purchased from other parties. To get good plant growth, cuttings must be selected from healthy plants, the diameter of the cuttings is between 2-3 cm and the age is uniform. The stem cuttings used are old cassava stems or at least 12 months after planting. The stem is cut from the base to the tip of the stem in the middle. The cultivation technique by farmers in the Glugur Rimbun land is in accordance with the cassava cultivation guidelines, because the middle part of the stem has the best growth power.

Saleh *et al.* (2016) stated that cuttings from the tip of the stem are not good, because their germination power is lower, they have a highwater content and dry out quickly. The stem can be used as cuttings if the storage period is less than 30 days after harvest. Good storage of cuttings is by positioning the stem upright, stored under shade. Cassava stems are cut to a size of 20-25 cm per piece. with a minimum of 10 bud eyes. When cutting the cuttings, try not to peel off the bark so that it does not dry out easily and the growth rate is good.

In the Glugur land, cassava is planted as a monoculture with a land area of 5 hectares with a planting distance of 1 m x 0.8 m with 12,500 plants/ha. The distance between beds is made 50 cm. The best time to plant cassava for dry land is at the beginning of the rainy season, because during active vegetative growth (the first 3-4 months) cassava needs water. For further growth, cassava does not need too much water. Cassava is a plant that is capable of high production, but also quickly drains the soil. To get high yields, a fairly high addition of nutrients is required.

Basic fertilization is done by providing organic fertilizer in the form of goat manure with a dose of 2 tons/ha so that 10 tons of manure are needed for 5 ha of land. According to research by Amanullah *et al.* (2007), the use of 10 tons/ha of manure can increase tuber yields up to 10 tons/ha. Cassava produces large biomass, meaning that cassava also requires large nutrient intake. Each ton of cassava tubers absorbs around 4.2–6.5 kg N, 1.6–4.1 kg P2O5 and 6.0–7.6 kg K2O (Wargiono *et al.* 2006)

Cassava planting in Glugur Rimbun land by making ridges on each row of plants. Planting begins by setting a planting distance of around 1 m × 0.8m, then stem cuttings are planted by sticking one third of them into the soil. The way to stick the cuttings is with the position of the stem being stuck at an angle, with the hope of producing more tubers. Stems that are planted straight or at an angle of 60o compared to the horizontal position are no different, the horizontal position will produce few shoots, and shallow roots that make the plant easy to fall (Saleh *et al.* 2016). Basically, cassava cultivation does not require intensive care like corn, vegetables or other plants. After planting, periodic maintenance is carried out in the form of fertilization, pruning, hilling, and weeding. The fertilizer used is 200 kg Urea + 100 kg KCl + 100 kg SP-36 / ha which is done in stages. The first stage of fertilization is given at the age of 1 month with a dose of 100 kg Urea + 50 kg KCL + 100 kg SP36 / ha, while the rest is given in the second stage, namely at the age of 3 months.

Planting is done no later than one week after planting on cuttings that do not grow. At the beginning of cassava growth, there is a strong competition with weeds, which is called the critical period. During this critical period, cassava plants must be free from weeds for around 5-10 weeks after planting.

According to Wargiono *et.al* (2006), if weed control is not carried out during this critical period, productivity can drop by up to 75% compared to weed-free conditions. Weed control is carried out in 2 stages, namely at the age of 4-5 weeks after planting and 8 weeks after planting. Given the use of a fairly large land area of 5 hectares, weed

control is carried out using the herbicide Roundup brand.

Pruning of shoots or shoot shoots is carried out when the plants are 4-5 weeks old after planting and leaving a maximum of 2 shoots per plant. Pruning aims to balance the growth of the crown and tubers, if there are more than 2 shoots, it can cause the leaves to grow too densely, resulting in less than optimal tuber growth. Hilling is done to loosen the soil. Hilling is done at the age of 2-4 months (De Silva, 2007). At this age, cassava plants begin to form tubers, so loose soil texture is needed for the development of the tubers. Pest and disease control in the Glugur Rimbun land is not carried out because farmers consider that pest and disease attacks on leaves do not have a major impact on cassava productivity. Insect pests found in the Glugur Rimbun land, Sampecita Village, Kutalimbaru District are as follows: Mealybug Phenacoccus sp. is a pest that sucks the liquid from leaves and stems of plants. The presence of poison carried by the saliva of the pest will cause symptoms of stunting in the growing point area, the internodes become short, new leaves that have just grown become small and shriveled. Mealybugs are pests of cassava plants in the dry season, because in the dry season environmental conditions greatly help increase the bedbug population. Conversely, in the rainy season the intensity of the attack will decrease. Air temperature greatly affects the biological development of mealybugs.

Figure 1. Symptoms Of Mealybug Infestation On Yam Leaves And Stems

Another pest found in Glugur Rimbun land is the red mite pest (*Tetranychus urticae* Koch). Wounds caused by red mite attacks cause spots on the leaves and the leaves turn brown. Although the wounds caused by individual red mites are very small, if the attack is caused by hundreds or thousands of red mites it can cause thousands of wounds, thus significantly reducing the plant's ability to photosynthesize. In severe attacks, the middle and lower leaves will fall off, then the attack leads to the top where the shoots shrink in size and many white webs are found covering the leaves in the upper third of the plant, and at this stage it can cause the plant to die. In severely attacked plants, the tubers produced are generally small and will directly affect the quantity of plant yields.

Figure 2. Mite Pest (*Tetranichus urticae*) Symptoms Of Mite Infestation On Cassava Leaves

The types of weeds found in the Glugur Rimbun cassava fields consist of 3 types of weeds, namely broadleaf weeds, grasses and teki-tekian, which consist of 10 types of weeds from 5 families consisting of weeds included in the broadleaf weed group, there are 5 species, namely *Asystasia gangeticum, Amaranthus spinosus, Ageratum conyzoides, Chromolaena odorata, Mimosa pudica*. Other types of weeds found are grass weeds, namely *Axonopus compressus Eleusin indica, Ottochloa nodosa, Cynodon dactilon, Paspalum conjugatum*. Weeds are one of the important factors that can affect agricultural production and productivity. Weeds are strong competitors for plants in the use of growing facilities such as nutrients, water and light.

DISCUSSION

Cassava plants are harvested when they are 10 months old. The condition of the tubers at that age is usually at the stage of perfect maturity, not hard, and not bitter. Harvesting is done by pulling the tubers, namely pulling the stem near the base, then the middle upper part is discarded to facilitate the harvesting process. Harvesting is usually not done all at once to avoid damage to the tubers after harvesting. Cassava tubers that are harvested fresh will quickly deteriorate or experience physiological deterioration, even in storage conditions they can only last for 1-2 weeks after harvest. Tubers that are harvested late up to 12 months or more will be hard, slightly bitter, and less tasty when eaten.

The cassava harvest is taken directly to the opak factory according to needs. Every day farmers can harvest around 60 tons. The harvest process lasts for 2 weeks according to the needs of cassava in the opak factory. Based on observations, cassava cultivation in a way to meet the needs of the opak factory is very promising because the need for cassava raw materials for cassava processing factories such as chips, opak, and tapioca factories is quite high in Deli Serdang Regency. In running a cassava farming business, cassava farmers in the research area can harvest their production once a year. Farmers' income can be determined by subtracting the income obtained from the total costs incurred during the cassava production process. Meanwhile, income is the multiplication of cassava production by the selling price of cassava. Below is the average income and income of cassava farming per farmer and per hectare per planting period in Glugur Rimbun, Sampecita Village, Kutalimbaru District.

The income from cassava cultivation business is the result of the multiplication of the amount (quantity) of cassava production sold (kg), multiplied by the selling price (Rp/kg). The price of cassava received by farmers is the contract price agreed upon by the management of the opak factory with farmers before carrying out cassava farming.

Table 1. Average Amount of Production and Income from Cassava Farming Business on 5 ha of Glugur Rimbun Land in Sampecita Village

Description	Quantity	
Total production (kg)		117,025.00
Price per kg	Rp	1,250.00
Total revenue	Rp	146,281,250.00

Source: primary data analysis 2024 2024

The average production volume of cassava farming in Glugur Rimbun land, Sampecita Village, Kutalimbaru District during one production period reached 117,025 kg. The production volume was obtained from a cassava cultivation area of 5 hectares. The total income was Rp. 146,281,250, this value was obtained by multiplying the amount of cassava production sold by the contract price of Rp. 1250/kg.

The cassava farming income received by farmers is the difference between the total income and the total production costs incurred. The total production costs of the cassava farming system consist of fixed costs and variable costs. The income value received by farmers comes from the total income minus the total costs.

Table 2. Cassava Farming Income in one planting season period in Glugur Rimbun land, Sampecita Village, Kutalimbaru District

Description	Quantity	
Total Revenue	Rp	146,281,250.00
Production Cost	Rp	98,000,000.00
Revenue	Rp	48,281,250.00

Source: primary data analysis 2024

The size of the cassava farming business income with a partnership system is very much determined by the size of the income. Table 4 shows that the income from cassava farming per production period is Rp. 48,281,250.00, this value is obtained from the total income of Rp. 146,281,250.00 minus the total costs incurred during one cassava farming period of Rp. 98,000,000.00.

Revenue Cost Ratio, or known as R/C, is the comparison (ratio) between income and the total cost of cassava farming activities with a partnership system. The R/C value can be used as one of the parameters to determine whether cassava farming is feasible to run or not.

Table 3. R/C Value Of Cassava Farming In The Glugur Rimbun Land, Sampecita Village, Kutalimbaru District

Decription	Quantity	
Total Revenue	Rp	146,281,250.00
Production Cost	Rp	98,000,000.00
R/C		1.49

Source: primary data analysis 2024

The R/C value of 1.49 indicates that the cassava business in the Glugur Rimbun land is feasible to be developed, because the value is >1. This value implies that every Rp.1 of costs incurred will generate revenue of Rp.1.49. It can be seen from the calculation results above that the R/C value of 1.49> 1 means that the cassava farming business in Glugur Rimbun, Sampecita Village, Kutalimbaru District, Deli Serdang Regency is feasible to be developed.

CONCLUSION

Cassava cultivation in the Glugur Rimbun land, Sampecita Village, Kutalimbaru District is carried out conventionally. Cassava cultivation is carried out with a monoculture system starting from seed preparation, land processing, planting, fertilization and plant maintenance. Fertilization is carried out by providing organic fertilizer before planting and chemical fertilizer with two stages of application. Weeding is carried out during the critical period and when the plants are 8 weeks old. No pest and disease control is carried out on cassava plants. Cassava is harvested when the plants are 10 months old. Analysis of the feasibility of cassava farming on 5 ha of land. The production costs incurred were Rp 98,000,000, -, the total income was Rp 146,281,250, - and the income was Rp. 48,281,250, -. The R/C value was 1.49. This shows that the cassava business on the Glugur Rimbun land is feasible to be run.

Declaration by Authors

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