



PROSPECTS OF LOCAL FOOD AGRIBUSINESS DEVELOPMENT KUMBILI (BLACK POTATO) *Solanum rotundifolius* AS ALTERNATIVE FOOD IN PANDEGLANG REGENCY

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ABSTRACT

Black potato plant or kumbili as a local commodity in Pandeglang Regency has a carbohydrate content that is not inferior to rice so that it can be used as a type of local food that can be developed as an alternative food. Kumbili is an alternative carbohydrate source that has a high potential to be developed as well as a medicinal plant. The purpose of this study was to examine the mechanism of each agribusiness subsystem and the prospects for developing kumbili farming as an alternative food in terms of farming analysis. This type of research is survey research, collecting data through interviews using questionnaires. Processing techniques and data analysis using the calculation of production costs, revenues and revenues, break-even point and R/C ratio. The results of the analysis show that the agribusiness subsystem consists of 5 subsystems, including the procurement of production facilities subsystem consisting of seeds, agricultural equipment, fertilizers and pesticides. The BEP production volume that must be obtained to reach the breakeven point is 1.472 kg. kumbili farming is profitable and feasible to develop because it has an R/C ratio value greater than one, namely 3.16. Total costs incurred Rp. 8,881,209, the total revenue received is Rp. 28,123,333 total income Rp. 19,242,124. BEP revenue is obtained by farmers so as not to experience a loss of Rp. 809,018.53 BEP selling price Rp. 1.884 per kilogram,. The BEP production volume that must be obtained to reach the breakeven point is 1.472 kg.

Keywords: Local Food, Kumbili, Prospects, Agribusiness Subsystem.

ABSTRACT

Local food is a food commodity that is related to community culture whose existence is easily obtained and developed to become the characteristics of an area in accordance with local potential and wisdom. Black potato plant or kumbili as a local commodity in Pandeglang Regency has a carbohydrate content that is not inferior to rice so that it can be used as a type of local food that can be developed as an alternative food. Kumbili is an alternative carbohydrate source that has a high potential to be developed as well as a medicinal plant. The purpose of this study was to examine the mechanism of each agribusiness subsystem and the prospects for developing kumbili farming as an alternative food in terms of farming analysis. This type of research is survey research, collecting data through interviews using questionnaires. Processing techniques and data analysis using the calculation of production costs, revenues and revenues, break-even point and R/C ratio. The results of the analysis show that the agribusiness subsystem consists of 5 subsystems, including the procurement of production facilities subsystem consisting of seeds, agricultural equipment, fertilizers and pesticides. The production subsystem in the form of farming cultivation processes includes seed preparation, land management, planting, maintenance, harvesting and post-harvesting. The post-harvest processing subsystem has not worked yet because there is no special treatment given to the post-harvest process. The marketing subsystem consists of marketing agencies and channels. The supporting subsystem consists of farmer groups and agricultural extension workers, but there are no cooperative institutions or banks as financial institutions that help farmers with capital. Kumbili as an alternative food has good prospects in terms of income, kumbili farming is profitable and feasible to develop because it has an R/C ratio value greater than one, namely 3.16. Total costs incurred Rp. 8,881,209, the total revenue received is Rp. 28,123,333 total income Rp. 19,242,124. BEP revenue is obtained by farmers so as not to experience a loss of Rp. 809,018.53 BEP selling price Rp. 1.884 per kilogram,. The BEP production volume that must be obtained to reach the breakeven point is 1.472 kg. kumbili farming is profitable and feasible to develop because it has an R/C ratio value greater than one, namely 3.16. Total costs incurred Rp. 8,881,209, the total revenue received is Rp. 28,123,333 total income Rp. 19,242,124. BEP revenue is obtained by farmers so as not to experience a loss of Rp. 809,018.53 BEP selling price Rp. 1.884 per kilogram,. The BEP production volume that must be obtained to reach the breakeven point is 1.472 kg. kumbili farming is profitable and feasible to develop because it has an R/C ratio value greater than one, namely 3.16. Total costs incurred Rp. 8,881,209, the total revenue received is Rp. 28,123,333 total income Rp. 19,242,124. BEP revenue is obtained by farmers so as not to experience a loss of Rp. 809,018.53 BEP selling price Rp. 1.884 per kilogram,. The BEP production volume that must be obtained to reach the breakeven point is 1.472 kg.

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1. INTRODUCTION

Agribusiness is an agricultural business system that is intact starting from the sub-system of supplying factors of production such as land, labor, capital consisting of production facilities and agricultural equipment as well as skills, plant cultivation sub-system, processing sub-system (agro-industry), marketing sub-system, sub-system infrastructure, and development subsystem, Karmini (2020). The main view of agribusiness is working on the food sector chain from upstream and downstream production processes, so agribusiness is an economic perspective for food supply businesses.

The food crops sub-sector is a strategic and attractive commodity in relation to the issue of increasing production and guaranteeing its availability. The need for food will continue to increase in line with the increasing population in Indonesia. Listyani, (2014) said that the Indonesian people's rice consumption rate of 130 kg/capita/year is a high figure compared to the world's rice consumption level, which averages

only 60 kg/capita/year. Food diversification is an effort to create sustainable food security so that it needs to be accompanied by efforts to diversify domestic raw material food in the context of diversifying the types of carbohydrate-producing foods as well as vegetables. A variety of local foods such as corn, tubers and sago have broad prospects to be developed as substitutes for rice and to be processed into prestigious foods. The increase in demand for rice is feared to encourage the government to adopt a policy of continuing to import.

Local food is food consumed by local people according to local potential and wisdom. Local food products are closely related to the culture of the community so that their presence is easy to obtain and developed to become a regional characteristic (S Widiati, LI Azkia, 2023). Rice has become the staple food of the community, local food commodities such as tubers and corn have the role of being a staple food to replace rice, (Yani, Rawiniwati, 2021). Root crops are rarely used as staple food. Various types of tubers in Indonesia, including

sweet potatoes, cassava, gadung, gambili, tales, uwi, plain potatoes, and black potatoes. Potato plants can be selected to be developed as alternative food producers (Jumadi & Suhaili, 2020).

Black potato (*Solanum rotundifolium*) or its local designation is kumbili is a type of potato plant that can grow well in the lowlands which has very good potential as an alternative food source and one type of tuber commodity that has not yet been explored. -utilize optimally (Waskito, 2016). Black potato tubers per 100 g contain 76% water, 21% carbohydrates, 1.4% protein, 0.7% fiber, 0.2% fat and 0.1% ash and are also rich in vitamins and minerals (Ardani, et al., 2017). These ingredients make the kumbili plant one of the ingredients that has the potential to diversify food products, besides that kumbili is also efficacious for healing stomach ulcers, has the potential as a natural anti-oxidant, and anti-proliferative (anti-cancer cell multiplication) triterpenic acid group (Nugraheni, et al., 2016).

Efforts to develop kumbili agribusiness in Pandeglang Regency

are expected to provide multiple benefits, both to the community, government and related parties (stakeholders) through the role of the agribusiness system. Based on the background above, the problems in this study can be identified as follows:

1. How does the working mechanism of each kumbili agribusiness subsystem in Pandeglang Regency?
2. What are the prospects for developing kumbili farming as an alternative food in terms of the analysis of kumbili farming in Pandeglang Regency?

2. METHODE

Type, Location And Time Of Research

The research conducted was a type of survey research, namely a research method that took a sample from a population using a questionnaire as an aid in data collection using a quantitative descriptive method (Singarimbun and Effendi, 2015). This research was conducted in Menes District, Pandeglang Regency, Banten Province. The selection of this location was carried out deliberately or purposively with the consideration that this area is one of the kumbili

commodity centers and has the potential for kumbili agri-business development. The time of this research was carried out from February 2023 to April 2023.

Data And Research Instruments

This study uses primary data and secondary data. Primary data, namely data from interviews with informants using questionnaires directly. Secondary data was obtained based on the results of literature studies and other data related to this research, namely data obtained from related institutions and literature in this study such as data on the potential of the Pandeglang Regency area, institutional data on farmer groups, the Central Bureau of Statistics (BPS), literal books, journals and data sourced from electronic articles relevant to research.

The research instrument used questionnaires to respondents through interviews, in this case the researchers used in-depth interviews.

Method Of Collecting Data

Data collection methods used in research include:

1. In-depth interviews

In-depth interviews in the form of semi-structured interviews, according to Sugiyono (2011) are freer in their implementation than structured interviews.

The purpose of this type of interview is to find problems more openly face-to-face, where the parties invited to the interview are asked for opinions. The researcher uses the help of interview guides to facilitate and focus the questions to be asked. Interview guidelines will be discussed after conducting an analysis of architectural collective memory. The questionnaire made in this study was to gather information and characteristics of the kumbili farmers and the problems that exist in the field.

2. Documentation

The documentation method is a method of collecting data in the form of writing, pictures or monumental works of a person. This method is in the form of information that comes from important records both from institutions or organizations and from individuals (Arikunto, 2012). The use of this method is a data collection technique by studying documented data and strengthening the information obtained from observations and interviews.

3. Literature study

Literature study is a method of collecting data by tracing written sources that have been made before such as books, literature, previous studies and journals related to research.

Population and Sample

The population is a generalization area consisting of objects/subjects that have certain qualities and characteristics determined by researchers to be studied and then conclusions drawn (Sugiyono, 2011). The population in this study are farmers in the Menes District, there are four sub-districts that carry out kumbili farming activities including Sindangkarya, Menes, Ka-nanga and Cigandeng Villages.

The sample can be defined as a member of the population selected using a certain procedure so that it represents the population (Martono, 2015). The sampling technique used in this study was carried out by census. According to Arikunto (2012: 104) if the total population is less than 100 people, then the total sample is taken as a whole, but if the population is greater than 100 people, then 10 to 15% or 20 to 25 can be taken. % of the total population. Based on this research, because the total population of kumbili farmers is not greater than 100 respondents, the authors take 100% of the population of kumbili farmers, namely as many as 30 respondents.

DATA PROCESSING

The data processing and analysis technique used in this research is descriptive analysis with a quantitative approach. Examine each sub-system of kumbili agribusiness descriptively from the results of interviews based on questionnaires and analyze farming in the kumbili cultivation process in the form of calculating production costs to calculate expenses incurred by farmers. Kumbili business analysis includes calculations of costs, revenues, revenues, break-even points and R/C ratios (Karmini, 2020)

1. Variable costs and fixed costs.

Cost is not fixed (Variable Cost)

Variable costs are costs that change according to the level of production. The total variable cost formula is:

$$TVC = \sum(P_{xxi})$$

information:

TVC = total variable cost/total variable Cost

Px = price of variable factors of production

xi = number of variable factors of production

Fixed Costs

Fixed costs are fixed costs incurred by producers regardless of the number of products produced. The fixed cost formula is:

$$TFC = k$$

information:

TFC = Total fixed costs/total fixed cost;

k = constant.

2. Receipt and Income

Revenue is the proceeds from the sale of certain production results to other parties. The formula for calculating acceptance is:

$$TR = Y \cdot Hy$$

TR = Total revenue (Total Revenue)

Y = Amount of Production produced
(Kg)

Hy = Product Selling Price (Rp/Kg)

Income is the total amount of money that will be received by a person or household during a certain period of time. Thus the income is formulated as follows:

$$\pi = TR - TC$$

Information :

π = Income

TR = Total Revenue

TC = Total Cost (total cost)

3. Break Even Point (BEP)

Break Even Point (BEP) is the function of BEP analysis, among others, to find out when a business does not make a profit and also does not experience a loss (return on capital). The breakeven point formula is:

$$\text{Revenue BEP} = \frac{\text{fixed cost}}{1 - \frac{\text{variable costs}}{\text{Sales results}}}$$

$$\text{BEP selling price} = \frac{\text{total production costs}}{\text{total production}}$$

$$\text{BEP volume} = \frac{\text{Total production costs}}{\text{Selling price}}$$

4. R/C ratio

The feasibility level of farming can be determined based on the value of the R/C ratio. A business activity is considered feasible if the value of the R/C ratio is > 1. This can happen because the higher the R/C of a business, the level of profit that will be obtained by a business will also be higher. This analysis looks at the comparison between income and expenses. The goal is to find out if the farming is feasible or not. The formula for the R/C ratio is:

$$\text{R/C ratio} = \text{TR/TC}$$

TR = Total Revenues

TC = Total cost

3. RESULTS

The agribusiness subsystem is part of the agribusiness system where it is a unit that directly or indirectly influences a biological production process (Karmini, 2020). The mechanism of the Kumbili

agribusiness subsystem in Menes District, Pandeglang Regency consists of the procurement of production facilities subsystem, production subsystem, post-harvest processing subsystem, marketing subsystem and supporting institution subsystem.

Production Facility Procurement Subsystem

Production facilities in kumbili farming consist of seeds, agricultural tools, fertilizers and pesticides, these production facilities are used to support the farming activities. The kumbili agribusiness system in the study area shows that the tools used in processing the land are hoes, handsprayer, buckets and gunny sacks. Hoes are used to loosen the land and make beds. A hand sprayer is used if the fertilizers and pesticides are liquid to be sprayed on the plants. Buckets are used for the fertilization process, sacks are used to store crops. The materials used in farming kumbili are seeds, fertilizers and pesticides. Farmers use organic fertilizers in the form of manure and also use inorganic fertilizers in the form of NPK, TSP/SP36. Pesticides are used by farmers to control pests that attack plants. Farmers only use a small amount of pesticides for one planting, which is 6 ml or the equivalent of one

bottle cap, then mixed with 15ℓ of water. Pesticides used by farmers usually use Ronsha type pesticides used by farmers to control pests and diseases.

Production Subsystem

The production process subsystem is a cultivation process that converts inputs into primary products. The production subsystem in the form of kumbili farming includes the activities of preparing seeds, land management, planting, maintenance and harvesting. The following is the process of cultivating kumbili farming.

1. Nursery

The tuber seeds come from tubers previously produced, the selected seeds are tubers of good quality and good quality, without defects, and of superior variety. After selecting the seeds, they are then stored in a dry place in the air. Storage of seeds stored in baskets for 1 month in August to September then sown until they sprout in early September. The seedbed time is 4 months, from September to December. When the nursery was given the NPK fertilizer stimulant, the fertilizer was only given once when the shoots were growing. Kumbili plant propagation can be done using stem cuttings 10 to 15 cm long.

2. Soil processing

Soil preparation was carried out twice, namely first tilling with buffalo to a depth of 20 to 30 cm, then resting for two weeks in order to improve soil aeration and find a place to grow in accordance with the conditions for growing kumbili plants. The second tillage can be done using a hoe to clear the grass or weeds that are on the surface of the soil. The land is processed until loose and given manure to increase soil fertility. After the soil is processed, the beds are made with a distance between beds of 80-100 cm and a distance between plants of 50-60 cm, while the height of the beds is 40 cm in the rainy season and 30 cm in the dry season.

3. Planting

Planting was carried out in months 1 and two, namely in January and February. The seeds that have sprouted are then planted in the plots that have been made. Before planting seeds or seedlings, make holes 5 cm deep. When planting kumbili stems, make sure that the stem points upwards, in one planting hole plant 4 kumbili seedling stems. One planting hole for each stem. Give a distance of 25 cm so that the kumbili has plenty of room to grow. The closer the seeds are, the smaller the tubers will

grow. It is recommended that the distance be wider so that the bulbs grow bigger. Cover the hole with soil so that the hole is neatly covered. Water the land after the seeds have been planted.

4. Maintenance

Farmers take care of the seeds that have been planted using fertilizer so that they grow fertile. After the seeds are planted, they are left alone for up to 25 days, then they are given follow-up fertilizer, namely TSP or SP36 for rooting and stimulating tuber growth. Urea to accelerate plant growth and increase crop production but with the right dose given at the age of the plant. Urea fertilizer is given after 21 to 25 days after planting, the application is given a distance of 10 cm from the plant stem. NPK fertilizer has a function to help plant growth so that it develops optimally given at the age of 1 month of planting. Fertilizer application can be done twice, during the second and third months of the planting season. Farmers also control pests and diseases that can attack plants by spraying pesticides on plants that are attacked by pests or not attacked by pests to anticipate plants that are not attacked by pests so that these plants are not attacked by pests.

5. Harvest

Kumbili is ready for harvest if it has been planted for 6 months, marked by the appearance of white to purple kumbili flowers and the leaves have begun to fall and turn yellow. The way to harvest is to carefully dismantle the kumbili plant beds, after that take the kumbili tubers by pulling them out and separating them from the stems and leaves and placing them on the surface of the ground so that they are exposed to the sun.

6. Post-harvest

Post-harvest handling has been carried out well by farmers, including applying cleaning, sorting and packaging. The aim is to facilitate distribution and protect products from mechanical and physiological damage and facilitate transportation to market.

Marketing Subsystem

The Marketing Subsystem is an activity to expedite the marketing of agricultural commodities both in fresh and processed form in the domestic and international markets (Fauzi, 2016). The selling price of kumbili at the farmer level is Rp. 2000 up to Rp. 7,000 according to the class or size of the kumbili itself. But usually farmers sell kumbili at a price of Rp. 5,000 up to Rp. 6,000. The means of transportation used to transport kumbili

usually use a pickup truck. Marketing institutions that play a role in the distribution of kumbili are middlemen, collectors and retailers.

Middlemen as a marketing agency have a positive role because they can help kumbili farmers in selling on a large scale in a short time. The traders, both collectors, retailers and traders in the market, already have a network with the middlemen to buy kumbili from the middlemen, because the middlemen are able to transport and manage their own harvesting to transportation.

Collector traders in carrying out kumbili marketing activities buy kumbili from farmers and go directly to the kumbili land in Menes District, Pandeglang Regency. Collector traders transport kumbili from Menes District, Pandeglang Regency using pick-up cars which will then be resold and deliver them directly to the next sales place.

Retailers buy directly from farmers and sell directly to final consumers. Retailers transport kumbili from Menes District, Pandeglang Regency using carts if the distance is close, using motorized vehicles or pick-up cars.

Based on the results of the analysis of kumbili marketing patterns, the most commonly found in research locations is

sales through middlemen, according to farmers, this method of selling is carried out by most kumbili farmers because it is easier and more practical. Farmers do not need to incur additional costs to carry out the transportation process. Farmers will immediately receive cash from buyers. Furthermore, the kumbili from the middlemen is sold to collectors.

Supporting Institution Subsystem

Supporting service institution subsystems are all types of activities that function to support and serve and develop the activities of the upstream subsystem, farming subsystem, agro-industry subsystem, and marketing subsystem. The supporting institutions in this research were farmer groups and agricultural extension workers. Farmer groups as agricultural institutions have an important role in solving problems together, besides that the function of farmer groups is also as the distribution of agricultural production facilities and information technology which is facilitated by agricultural extension workers including market information. Fostering farmer groups plays a role in increasing the knowledge, attitudes and skills of farmers. Farmers also get other benefits from the existence of counseling executors

from BPP (Agricultural Extension Center) Menes Farmers get knowledge about how to plant good seeds, choose good fertilizers, good fertilization methods such as using fertilizers from organic materials, and how to market the results their harvests, apart from that agricultural extension agents also provide learning to farmers so that farmers know the latest information in the world of agriculture. The role of agricultural extension workers also leads the community in efforts to develop the role of farmer groups so that they can develop even more.

Kumbili Farming Analysis

Judging from the farming analysis, kumbili as an alternative local food has good prospects, apart from the compound content in the kumbili tuber, in terms of income, kumbili farming is profitable and feasible because it has an R/C ratio value greater than one with a value of 3.16. . The total costs incurred Rp. 8,881,209, the total income earned by farmers is Rp. 28,123,333 in one planting season, the total income of kumbili farmers in Menes District, Pandeglang Regency, is Rp. 19,242,124. BEP income obtained by farmers so as not to experience a loss of Rp. 809018.53. The selling price that must be set by farmers so that kumbili farming

reaches a breakeven point or BEP is Rp. 1,884 per kilogram. The volume or amount of production that must be obtained to break even if production reaches 1,472 kg in one growing season.

4. CONCLUSION

Based on the results of the analysis and discussion of the research, several conclusions can be drawn as follows:

1. The kumbili agribusiness subsystem consists of 5 subsystems including the subsystem for procuring production facilities consisting of seeds, agricultural equipment, fertilizers and pesticides. The production subsystem in the form of kumbili farming processes includes the activities of preparing seeds, land management, planting, harvest maintenance up to post-harvest. The post-harvest processing subsystem for kumbili in Menes District has not yet been implemented, no special treatment has been given to the post-harvest process. The kumbili marketing subsystem consists of marketing agencies and channels. Marketing agencies that play a role in the distribution of kumbili are middlemen, collectors and retailers. The supporting subsystems are farmer groups and agricultural extension workers who are able to increase the

knowledge, attitudes and skills of farmers, but there are no cooperative institutions or banks as financial institutions that assist farmers in capitalizing their farming activities.

2. Kumbili as an alternative food has prospects for development, both in terms of compound content and in terms of farm income. Based on the results of the analysis, it shows that kumbili farming is profitable and feasible to develop because it has an R/C ratio value greater than one with a value of 3.16. Total costs incurred Rp. 8,881,209, the total income earned by farmers is Rp. 28,123,333 in one growing season. The total income of kumbili farmers in Menes District, Pandeglang Regency is Rp. 19,242,124. BEP revenue obtained by farmers so as not to experience a loss of Rp. 809018.53. The minimum selling price that must be set by farmers so that kumbili farming reaches a breakeven point or BEP is Rp. 1,884 per kilogram. The volume or minimum amount of production that must be obtained to break even in one growing season if production reaches 1,472 kg.

Based on the results of the research that has been done, suggestions that can

be put forward from the results of this study include:

1. Regency/City Governments need to work together and synergize with each other to develop the potential of food crop commodities owned by each region in order to maintain and increase superior commodities, develop and socialize tuber food crop commodities such as kumbili as a commodity the mode of substitute food crops from grain food crop commodities so that the growth of the competitiveness of non-grain commodities can be further increased.
2. Farmers can process kumbili produce into processed products that have a high selling value, so that they can increase farmers' income apart from farming activities, family food security will also be maintained.
3. further research needs to be carried out as a material consideration to further deepen further research regarding the prospects for developing kumbili as local food.

Reference

- Ardani, P.D., Suminarti, N.E, dan Nugroho, A. 2017 Respon Tanaman Kentang Hitam (*Solenostemon Rotundifolius*) pada Berbagai Jumlah dan Frekuensi Pemberian Air. <https://biotropika.ub.ac.id/index.php/biotropika/article/download/418/278>.
- Arikunto, suharsimi. 2012. *Prosedur Penelitian Suatu Pendekatan Praktik*. Jakarta: PT Rineka cipta.
- Karmini. 2020. *Dasar-Dasar Agribisnis*. Mulawarman University Press. Samarinda
- Listyani, 2014. *BPPT Dorong Pemanfaatan Sagu Sebagai Sumber Pangan Nasional*. <http://www.bppt.go.id/index.php/teknologi-agroindustri-danbioteknologi/1941-bppt-dorong-dorong-pemanfaatan-sagusebagai-sumber-pangan-nasional>.
- Martono, N. 2015. *Metode Penelitian Sosial*. Jakarta: PT Rajagrafindo Persada
- Nugraheni, M. *et all*. 2016. Pengaruh Konsumsi *Crackers* Kentang Hitam (*Coleus Tuberosus*) Kaya *Resistant Starch* Tipe 3 Terhadap Profil Lipida Tikus Yang Menderita Hiperkolesterolemia <http://staffnew.uny.ac.id/upload/132300107/penelitian/Jurnal%20saintek%20April%202016>

- Singarimbun, M., soffian Effendi. 2015. Metode Penelitian Survei. Jakarta : Penerbit PT Pustaka LP3ES
- Sugiyono. 2011. Metode Penelitian Kuantitatif Kualitatif dan R&D. Alfabeta
- Waskito, K. G. (2016). Karakterisasi, Sebaran, Dan Permasalahan Tanaman Umbi-Umbian Di Empat Wilayah Kabupaten Malang Sebagai Pangan Alternatif Pengganti Beras (Doctoral dissertation, University of Muhammadiyah Malang).
- Widiati, S. and Azkia, L. I. (2023) “Strategi Pengembangan Usaha Dan Peran Sertifikasi Halal Produk Pangan Lokal UMKM Dalam Menunjang Ketahanan Pangan Tingkat Rumah Tangga”, *Sebatik*, 27(1). doi: <https://doi.org/10.46984/sebatik.v27i1.2275>
- Yani, A dan Rawiniwati, Y 2021. Potensi Pangan Lokal Berbasis Talas Beneng Dan Prospek Pengembangannya. <http://repository.unas.ac.id/4355/1/Laporan%20Penelitian%20Kompetitif%20talas%20beneng%20%282021%29.pdf>.
- Jumadi., R., dan Sahili. 2020. Pertumbuhan Kentang Hitam (*Coleus Tuberosum*) Varietas Lokal Dari Stek Pada Berbagai Media Tanam. <http://journal.umg.ac.id/index.php/tropicrops/article/view/1830>.