BUSINESS ANALYSIS OF PULUT URI CORN WITH ORGANIC CULTURE IN MUTING OF MERAUKE

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ABSTRACT

The research objectives achieved in this study were estimating the level of income and feasibility of pulut uri organic farming in the District of Muting in Merauke Regency. The type of research used is descriptive analytical research using basic data from the results of previous studies, namely experimental research in organic cultivation of uri corn. The basic data obtained is the data of organic uri corn on the treatment of 0 tons / ha, 5 tons / ha, and 10 tons / ha of organic fertilizer. In this study, identification of production, income and business feasibility costs will be carried out using basic selling prices at the merchant level and at the end of the consumer level. The data were analyzed by revenue, income / profit and feasibility analysis of uri corn pulp. The results of the study concluded that with the selling price of R. 3,000 / kg in the yield of pulverized corn, farmers would not get a large profit with a feasibility rate of <1, which means that at that price level the farmers would lose. Whereas with the selling price of Rp. 10,000 / kg of farmer's income will be greater with the feasibility level > 1 which means that farmers will get profits or in other words pulut organic corn farming can be developed in Merauke Regency.

Keywords: pulut uri corn, organic, farming feasibility

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1. INTRODUCTION

Organic agriculture is the answer to the green revolution that was adopted in the 1960s which caused reduced soil fertility and environmental damage due to uncontrolled use of chemical fertilizers and pesticides. Modern organic agriculture is defined as an agricultural cultivation system that relies on natural ingredients without using synthetic chemicals. The management of organic farming is based on the principles of health, ecology, justice and protection. The principle of health in organic agriculture is that agricultural activities must pay attention to the preservation and improvement of the health of land, plants, animals, earth and humans as a whole because all these components are interconnected and inseparable.

Organic agriculture is a holistic farming system that supports and accelerates biodiversity, biological cycles and soil biological activities. Certification of organic products produced, storage, processing, post-harvest and marketing must be in accordance with standards set by standardization bodies (IFOAM, 2008).

The sustainability of organic agriculture cannot be separated from the economic dimension, other than the environmental dimension and the social dimension. Organic farming is not only limited to eliminating the use of synthetic inputs, but also the sustainable use of natural resources, the production of healthy food and saving energy. The economic aspect can be sustainable if the agricultural production is sufficient and provides sufficient income for farmers. However, economic motivation often becomes the steering wheel that drives the direction of the development of organic agriculture. Awareness of the dangers posed by the use of synthetic chemicals in agriculture makes organic agriculture attract attention both at the producer and consumer level.

Environmentally friendly healthy lifestyles have become a new trend to leave old lifestyles that use non-natural chemicals, such as fertilizers, synthetic chemical pesticides and growth hormones in agricultural production. This healthy lifestyle has institutionalized internationally which requires guarantee that agricultural products must be safe food attributes, high nutritional attributes and eco-labeling attributes. These healthy and nutritious foods can be produced using organic farming methods (Mangkoedihardjo and April, 2012; Mangkoedihardjo and Triastuti, 2011; Yanti, 2005).

Merauke is one of the districts in Papua province determined to develop organic agriculture. At present, according to the head of the Merauke Regency Agricultural Crop Service, it has set a target of developing 800 hectares of organic agriculture which is still focused on organic rice production. The development of rice production using the organic farming system by the local government of Merauke Regency is focused on villages or districts dominated by indigenous Papuans. Efforts made by local governments aim to improve local food security, indigenous Papuans in Merauke have a livelihood to mix or maintain their lives by utilizing natural resources by exploiting forest products in the form of plants and animals. Alam still provides abundant food resources, but along with the demands of development that utilizes community-owned forest land used for the construction of oil palm plantations. Transferring land functions causes a reduction in food sources for indigenous Papuans, so there must be a real effort by the government to provide food for those with organic systems. Organic farming is one solution because indigenous Papuans are used to using nature as a food source and are not accustomed to consuming or producing their own food by cultivating it.

In 2015, the research team of the Agribusiness Department and the Papuan AIAT conducted an assessment of the application of organic fertilizers to the production of food crops, one of which was corn. Corn cultivated uses an organic farming system where 100 percent of the fertilizer used is organic fertilizer based on livestock manure and rice milling.
waste rice husks. The results of Untari’s study, et.al. (2015) showed that the production of uri pulses using organic fertilizers using 3 fertilizer dosages was without doses of 0 tons / ha, 5 tons / ha, and 10 tons / ha. From the treatment, it shows the yield of 2.46 tons / ha (without fertilizer), 4.36 tons / ha (5 tons / ha of fertilizer / organic), and 5.80 tons / ha (10 tons / ha of organic fertilizer). However, from the results of these studies, no farm analysis has been conducted to determine the contribution to the family economy of indigenous Papuans in order to encourage increased family welfare in addition to increasing family food security. Based on this, a further study was carried out from the results of a study conducted by Untari, et al. (2015). The purpose of this study was the estimation of income and feasibility of pulut uri organic farming in Muting District of Muting, Merauke Regency.

2. METHODS

2.1. Type and Location of Research

The type of research used is descriptive analytical research. Where the data from the experimental research on pulut uri corn organic cultivation were filmed in the Muting District Village of Merauke Regency, the factors of production used in the development of uri corn pulp organic cultivation were identified. The results of the identification of production factor costs in the farming analysis are the analysis of the costs, revenues, and profits of uri's organic corn farming. In the income analysis using basic data from previous research conducted by Untari, et.al., 2015, the data on the production of organic uri corn by using doses of 0 tons / ha, 5 tons / ha, and 10 tons / ha. Besides that, it uses the basic data of the selling price at the merchant level, which is Rp. 3,100 / kg and Rp. 10,000 / kg. Determination of selling prices is obtained based on market information when observations are made.

2.2. Data analysis technique

The data analysis method used to answer the research objectives was used to analyze the income of pulut uri corn farming in Muting Village of Muting Subdistrict, Merauke Regency, namely by using mathematical equations (Soekartawi, 2002) as follows:

\[
\pi = TR - TC
\]

\[
TR = P \times Q
\]

\[
TC = TFC - TVC
\]

where:
\[
\pi \quad = \text{Net Income for Corn Farming (Rp)}
\]
\[
TR \quad = \text{Total Revenue (Rp)}
\]
\[
TC \quad = \text{Total Cost (Rp)}
\]
\[
TFC \quad = \text{Total Fixed Cost (Rp)}
\]
\[
TVC \quad = \text{Total Variable Cost (Rp)}
\]
\[
P \quad = \text{Price per kg (Rp)}
\]
\[
Q \quad = \text{Number of products produced (kg)}
\]

While the feasibility analysis of farming uses a formula, namely as follows:
Analysis of Revenue Cost Ratio (R / C Ratio) is an analytical tool to see the relative benefits of a business in one year against the costs used in these activities. The criteria used in the analysis of R / C Ratio are as follows:

1. If the R / C Ratio > 1 business is said to be worthy of profit
2. If the R / C Ratio < 1 business is said to be inappropriate and not profitable
3. If the value of R / C Ratio = 1 business is said to break even (no profit and no loss)

Systematically formulated as follows: \[ \frac{R}{C} = \frac{\text{Total Revenue}}{(\text{Total Fixed Costs} + \text{Total Variable Costs})} \]

3. RESULTS AND DISCUSSION

The results of the study looked at the level of uripulut corn production with an organic farming system using treatment without organic fertilizer, 5 tons / ha, and 10 tons / ha carried out in 2015 which was 2.46 tons / ha (treatment without organic fertilizer), 4.36 tons / ha (treat 5 tons / ha of organic fertilizer), 5.8 tons / ha (treat 10 tons of organic fertilizer / ha). The treatment of different organic fertilizers in the organic cultivation trials carried out in the filming of the village gave a different influence on the yield of corn produced. While the highest production potential for corn uri is 7.14 tons / ha. If uripulut is planted in the dry season it will produce 6.2 tons / ha, if planted in the rainy season has a production potential of 6.04 tons / ha. The age of uripulut harvest is 85-88 days (balitsereal.litbang.pertanian, 2015)

Table 1. Analysis of Income of Organic Cultivation of Corn Pulp Uri Per Hectare in One Planting Season in Muting Village of Merauke

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Without fertilizer</td>
</tr>
<tr>
<td>I</td>
<td>Fixed Cost Average</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Land Tax</td>
<td>18.000</td>
</tr>
<tr>
<td></td>
<td>Rental Equipment</td>
<td>1,500,000</td>
</tr>
<tr>
<td></td>
<td>Total Fixed Cost a + b + c</td>
<td>1,518,000</td>
</tr>
<tr>
<td>II</td>
<td>Average Variable Costs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Labor costs</td>
<td>3,000,000</td>
</tr>
<tr>
<td></td>
<td>Seed costs (15 kg / ha x Rp. 25,000 / kg)</td>
<td>375,000</td>
</tr>
<tr>
<td></td>
<td>Pesticide Costs</td>
<td>300,000</td>
</tr>
<tr>
<td></td>
<td>Organic Fertilizer Costs (Rp)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total Variable Cost a + b + c + d</td>
<td>3,675,000</td>
</tr>
<tr>
<td>III</td>
<td>Total Cost I + II</td>
<td>5,193,000</td>
</tr>
<tr>
<td>IV</td>
<td>Production (kg / ha)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Price (IDR / kg) *</td>
<td>2,460</td>
</tr>
<tr>
<td></td>
<td>Receipt (Production x Price)</td>
<td>7,626,000</td>
</tr>
<tr>
<td></td>
<td>Price (IDR / kg) *</td>
<td>10,000</td>
</tr>
<tr>
<td></td>
<td>Receipt (Production x Price)</td>
<td>24,600,000</td>
</tr>
<tr>
<td>V</td>
<td>Income (Rp) (TR - TC) (IV-III) *</td>
<td>2,433,000</td>
</tr>
<tr>
<td></td>
<td>Income (Rp) (TR - TC) (IV-III) **</td>
<td>19,407,000</td>
</tr>
<tr>
<td>VI</td>
<td>Feasibility of Farming *</td>
<td>0.47</td>
</tr>
<tr>
<td></td>
<td>Feasibility of Farming **</td>
<td>4.74</td>
</tr>
</tbody>
</table>
Information:
* If corn is sold through traffickers both private and government (bulog)
** If corn is sold directly to end-level consumers

The sustainability of organic agriculture cannot be separated from the economic dimension, other than the environmental dimension and the social dimension. Organic farming is not only limited to eliminating the use of synthetic inputs, but also the sustainable use of natural resources, the production of healthy food and saving energy. Economic aspects can be sustainable if the agricultural production is able to meet the needs and provide sufficient income for farmers (Mayrowani, 2012). The results of the analysis of income and feasibility of pulut uri organic farming in the filming of villages in various treatments of organic fertilizer doses are presented in Table 1. that if the corn production is marketed through brokers or in this case the base price set by Bulog is IDR. 3,100 / kg and if corn is directly distributed or marketed to end-level consumers, the selling price can reach Rp. 10,000 / kg.

Traders in Merauke Regency generally buy corn at farmers with relatively low prices, namely the price range of Rp. 3,000 / kg up to Rp. 4,000 / kg. this is in accordance with the determination of the purchase value that has been set by bull which is Rp. 3,100 / kg. The results of previous studies indicate that with the potential of uri pulut production by using organic cultivation systems at various doses of fertilizer treatment will not have a positive impact on changes in the family economy. It is shown that there is Table 1. that the selling price of Rp. 3,100 / kg will only provide income or profits between 2.4 million and 3.3 million one time in the production period, so the results of farming feasibility show that the income for organic cultivation of uri corn will not be feasible because of low selling prices and production costs. high. Based on this, the role of the government must be increased, namely in terms of increasing the standard of selling corn value at the merchant level. This is done so as to provide motivation for farmers to produce or cultivate pulut corn which can be used as alternative food besides rice. In Merauke, in fact, currently farmers produce sweet corn instead of cob corn, this is because sweet corn is more promising than cultivating cob corn, which is still limited as animal feed.

The search results in the field that if corn is directly sold to end consumers the selling price is much higher than the selling price at the merchant. The selling price at the final consumer level is Rp. 10,000 / kg. The final consumers of corn in Merauke Regency are based on information from farmers, that is, farmers usually sell harvested corn to farmers who are used as chicken fodder and sold to industrial homes that produce marning. The results of farm analysis in Table 1., if the selling price of corn is Rp. 10,000 / kg will provide a much higher level of acceptance for farmers, namely between 19 million and 42 million per production period. Where the highest level of income in the treatment of organic fertilizer is 10 tons / ha with total revenues of Rp. 58,000,000 / planting period with a planting area of 1 ha. The results also show the feasibility level of uri pulurized farming can be said to be feasible because the value of R / C is more than 1 that is between 3 to 4. Which means if the pulses of uri corn are sold at Rp. 10,000 / kg it will be feasible to be developed or feasible to be cultivated and will bring benefits or give the impact of economic change to the local farmer family better.

Two different levels of selling price for organic corn, namely Rp. 3,000 / kg and Rp. 10,000 / kg can inform various parties, especially the community and local government, in this case the local government of Merauke Regency if it will develop corn commodities in the Merauke region. As explained above, with the purchase price in bulog at a price of Rp. 3,100
kg of farmers will get a relatively very low business profit ranging from 2.4 to 3.4 million rupiah per garden season or with a pulut harvest age of 88 days. Whereas if the selling price is Rp. 10,000 / kg of which corn is sold directly to end consumers will be more profitable and in terms of business feasibility the R / C ratio will be worth developing. The regional or central government must review the stipulation that the purchase price of bolug is only Rp. 3,100 / kg. the profit will be minimal at the farm level because the cost of producing farming in Merauke can be said to be expensive because all factor prices can be said to be expensive. Distance of Muting Kampung with goods distribution center or regency city is approximately 250 km with road access which is not always good because the road structure is easily damaged.

The local government program that sets corn commodity as the second seed commodity after rice must be supported by a balanced pricing policy that can provide positive changes to the economy of local farmers, especially the indigenous people of Papua, which can be targeted for corn development using the organic farming approach.

4. CONCLUSION

The study concluded that if the uri pulut corn farming developed in Merauke Regency would contribute different income / profits at the selling price level of Rp. 3,100 / kg and Rp. 10,000 / kg. The development of uri pulut corn will be feasible to be developed in Merauke Regency if the selling price is carried out at market prices or directly distributed to end consumers with a profit rate of 19 to 42 million per garden period with farming feasibility ie> 1 or business feasibility between 3-4 which means at a price level of Rp. 10,000 / kg, farmers will get a profit and will make a positive economic contribution to the economic improvement of the farmer's family, whereas if sold through brokers, the farmers' income level is very minimal and will not contribute to increasing the economic welfare of the corn farmer's family.

REFERENCES


