FEASIBILITY ANALYSIS OF CIHERANG VARIETY SUPERIOR RICE FARMING IN PARIGI VILLAGE, BAKARANGAN DISTRICT, TAPIN REGENCY

Hana Nurhakimah Ikram¹ · Ana Zuraida¹ · Arief Hidayatullah¹

Received: 28 February 2023 | Accepted: 17 April 2023 | Published online: 30 April 2023
UPT Publication and Journal Management Uniska-JST 2023

Abstract This study aims to analyze the superior rice farming of the Ciherang variety including the costs, revenues, income, profits, and feasibility of the Ciherang variety superior rice farming in Parigi Village, Bakarangan District, Tapin Regency. This research was conducted in May 2022. The data was collected in the form of primary data and secondary data using the Census sampling method. Analysis of the data used is a qualitative analysis that is processed descriptively and a financial analysis to calculate the cost, revenue, income, profit, and feasibility of Ciherang rice farming. The results showed that the average production was 4.337.5kg/farmer. The average total cost is Rp 11.931.789/farmer, the average revenue is Rp 18.056.250/farmer, the average income is Rp 9.227.469/farmer, and the average profit received by farmers is Rp 6.124.461. The ratio R/C value is 1,53. Thus, the superior rice farming of the Ciherang variety in Parigi Village, Bakarangan District, Tapin Regency is feasible to cultivate.

Keywords: Business Analysis · Superior Rice · Ciherang

Introduction
Indonesia is an agricultural country where the majority of the population works in agriculture. Agriculture plays a very important role in fulfilling basic needs and supporting the economic welfare of the Indonesian population. Business in the agricultural sector is divided into 5 sub-sectors, namely the sub-sectors of food crops, plantations, forestry, fisheries, and animal husbandry. One of the commodities produced by the sub-sector of food crops is rice which is one of the agricultural products which is the main staple food of the Indonesian population.

Tapin Regency is one of the districts in South Kalimantan Province where some of the people cultivate rice crops and rice fields. Tapin Regency has a rice harvesting area of 88,820 ha in 2021 with production reaching 410,274 tons (BPS, 2021). One of the sub-districts in Tapin Regency that produces rice is Bakarangan District with an area of 6,747 ha of paddy rice harvesting area with a production of 34,570 tons.

Parigi Village is one of the other 12 villages in Bakarangan District, where the majority of people work as rice farmers. In 2021, there was 200 ha of paddy fields, including local and
superior varieties, one of which was variety 2 Ciherang. The production of rice varieties in Parigi Village is the highest in Bakarangan District and is one of the suppliers of superior rice or Ciherang in the Tapin Regency area (BPP Bakarangan, 2021).

According to Toto (2018), Ciherang rice is a superior rice variety derived from IR64. In addition to having high yield potential, the shape of the grain is slender, long clean yellow, and fluffy rice texture. This is what makes the Ciherang variety attractive to farmers and consumers. In addition to high yield potential and good taste, Ciherang rice also has resistance to several pests and diseases. This factor makes Ciherang rice the main choice of farmers and the number one variety planted by farmers in Indonesia, including people in Parigi Village, Bakarangan District, Tapin Regency.

Ciherang rice which has become rice has a fairly high selling price, which ranges from Rp.10,000 – Rp.11,000/Kg. Apart from taste, Ciherang rice is in great demand, especially by residents and its surroundings. On the other hand, Ciherang rice farmers never calculate how much profit they receive each planting season. Whether or not the farming activities they have done so far are feasible because they only aim for their consumption, it is just that sometimes they sell the rest of the harvest.

This study aims to analyze the farming business of superior rice varieties of Ciherang by knowing the technical cultivation, the number of costs, revenues, income, profits, and feasibility as well as what problems are faced by farmers of superior rice varieties of Ciherang in Parigi Village, Bakarangan District, Tapin Regency.

Data Types and Sources
This research includes quantitative and qualitative data. Data sources collected include primary data and secondary data. Primary data were obtained through site observations and direct interviews with 16 respondent farmers using a questionnaire that had been prepared. While secondary data is obtained from various related research reports or related agencies.

Sampling
The population of farmers who try to farm superior rice of the Ciherang variety in Parigi Village, Bakarangan District, Tapin Regency is 16 people. The sample was taken from 100% of the total farming population. This study uses a census method where if the population is less than 100 people, then the number of samples is taken as a whole, but if the population is more than 100 people then 10-15% or 20-25% of the total population can be taken (Arikunto, 2012).

Material and Methods
Time and Location
This research was carried out for one month in May 2022 in Parigi Village, Bakarangan District, Tapin Regency, South Kalimantan.

Data Analysis
Descriptive analysis is carried out to answer the first and third research objectives. Descriptive analysis in the form of an understanding or description of the technical cultivation of superior rice varieties of Ciherang and the problems faced by farmers by making observations and interviews directly at the research site. While financial analysis is carried out to answer the second goal by collecting data including costs, production amounts, prices, revenues, income, profits, and business feasibility in the Ciherang variety superior rice farming business. The components calculated in the financial analysis are shown as follows:

1. The total cost used is divided into two: explicit costs and implicit costs. It can be formulated as follows:
   \[ TC = TCE + TC_I \]
   Information:
   \[ TC \]: Total cost
   \[ TCE \]: Total explicit cost
   \[ TC_I \]: Total implicit cost
Depreciation calculation based on the straight-line method (Kasim, 2004) is presented in the formula as follows:

\[ P = \frac{Nb - Ns}{Up} \]

Information:
P : Depreciation value (Rp)
Nb : Value or purchase price of the tool (Rp)
Ns : Economic residual value or price (Rp)
Up : Economical life

2. Revenue is the multiplication between the amount of production produced and the selling price of the product. Total revenue in farming is obtained from physical production multiplied by the production price (Suratiyah, 2009). Mathematically, the revenue can be written as follows:

\[ TR_y = Y \cdot P_y \]

Information:
TRy : Total revenue in one farm period
Y : Output or output
Py : Price

3. Income is derived from the overall revenue earned minus all explicit costs incurred during the production process (Kasim, 2004). It can be in the formula kan as follows:

\[ I = TR - TC_E \]

Information:
I : Income
TR : Total receipts
TC_E : Total explicit cost

4. Profit is an activity that reduces some of the costs incurred with the sales results obtained. If the sales results obtained are reduced by these costs, the value is positive, then a profit is obtained (Sukirno, 2012). It can be formulated as follows:

\[ \pi = TR - TC \]

Information:
\( \pi \) : Profit
TR : Revenue
TC : Total cost

5. Business Feasibility Level using R/C ratio, obtained from the comparison between revenue and cost. An R/C ratio value greater than 1 indicates that the effort made by the industry or company is worth working towards. The high value of the R/C ratio is due to the production obtained and the price which greatly affects the revenue (Soekartawi, 2002). It can be calculated by the formulation:

\[ \frac{TR}{TC} \]

Information:
TR: Revenue
TC: Total cost

- a. If the R/C ratio >1 then Ciherang rice farming is worth working on,
- b. If the R/C ratio <1 of Ciherang rice farming is not feasible,
- c. If the R/C ratio = 1, then the Ciherang Rice farming business experiences a Break Even Point (BEP) condition of not getting a profit and not experiencing a loss/breakeven (Soekartawi, 2006).

Results and Discussion

Technical Cultivation of Ciherang Rice

The technical cultivation of superior rice varieties of Ciherang carried out by farmers in Parigi Village, Bakarangan District includes seed preparation, seedbeds, planting, maintenance, harvesting, and post-harvest (Fig. 1).
Preparing the seeds used for:
- Rice seeds are ready to be
- Soil preparation in two
- For personal consumption,
- Land fertilization is done
- The seeding area for 1
- The first stage is carried out
- Harvesting is done in a
- Then the seeds are ripened
- Fertilization: Done when the
- Weeding/Spraying: Done in
- The age of the seeds used is
- Farmers sell their crops in
- Planting is usually done in
- The fertilizer requirement
- The seeds are soaked for 24
- Started by spraying. For
- Soil preparation in two
- The first stage is carried out
- While the second stage is
- Stitching: Generally done at
- Table 1. Explicit and Implicit Costs and Total Cost of Farm

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Average total (IDR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Explicit Charges:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average fertilizer costs</td>
<td>789.531</td>
</tr>
<tr>
<td></td>
<td>Average cost of medicines</td>
<td>193.531</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6,486.875</td>
</tr>
<tr>
<td></td>
<td>Implicit Charges:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average seed cost</td>
<td>231.094</td>
</tr>
<tr>
<td></td>
<td>Average TKDK cost</td>
<td>631.250</td>
</tr>
<tr>
<td></td>
<td>Average land rental costs</td>
<td>518.115</td>
</tr>
<tr>
<td></td>
<td>Capital interest (6%)</td>
<td>309.1396</td>
</tr>
<tr>
<td>2.</td>
<td>Total Cost:</td>
<td>11,726.646</td>
</tr>
<tr>
<td></td>
<td>Explicit Costs</td>
<td>8,635.250</td>
</tr>
<tr>
<td></td>
<td>Implicit Costs</td>
<td>3,091.396</td>
</tr>
</tbody>
</table>

Financial Analysis
Cost

The cost of farming superior rice of the Ciherang variety in Parigi Village, Bakaran District, Tapin Regency consists of explicit costs and implicit costs. The average explicit cost per farmer is IDR 8,635,250/season, including the cost of fertilizers, medicines, depreciation of equipment, and costs. While the average implicit cost/farmer is IDR 3,091,396/season, which includes seed costs, land rent, labor costs in the family, and capital interest. A capital interest is derived from the number of explicit costs multiplied by 6%. The total cost consists of the average explicit cost/farmer and the average implicit cost/farmer which is Rp 11,726,646/season. Details of costs can be seen in the following table.

Revenue

Rice farming revenue is the amount of production multiplied by the price. The price received by farmers is the price of collectors who come to buy farmers’ rice products. The results of research from Ciherang rice farming in Parigi Village showed that the average season period/farmer was 4,337.5 kg with an average price/farmer of IDR 4,500/kg. So the revenue in one time average production/farmer is Rp 18,056,250/season.
Income
Income is the difference between farm revenue and explicit total costs incurred. The average explicit cost per farmer is IDR 8,635,250/season, and the average revenue per farmer is IDR 18,056,250/season. After the average revenue minus the average explicit cost, the total income of Ciherang rice farming in Parigi Village is obtained with an average income per farmer of Rp 9,421,000 / season.

Profit
The profit of Ciherang rice farming is obtained from the difference between revenue and total costs. The average total cost per farmer is IDR 11,726,646/season, and the average revenue per farmer is IDR 18,056,250/season, so after the average total revenue per farmer is minus the average total cost per farmer, the average profit per farmer is IDR 6,329,604/season.

Feasibility Rate
The feasibility level of Ciherang rice farming can be determined using R/C ratio (Revenue and Cost Ratio) analysis which is a comparison between revenue and total cost. The average revenue/farmer obtained is IDR 18,056,250/season, and the average total cost/farmer is IDR 11,726,646/season, after the average revenue divided by the average total cost can be obtained an average R/C ratio of 1.53. This situation shows that every rupiah spent will result in a revenue of Rp 1.53. Thus, the superior rice farming business of the Ciherang variety in Parigi Village, Bakarangan District, Tapin Regency is worth trying. More details can be seen in the following table.

Table 2. Details of Cost Analysis of Superior Rice Farming Ciherang Variety

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Number of units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Cost: (Rp/Season)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explicit average</td>
<td>8,635,250</td>
</tr>
<tr>
<td></td>
<td>Implicit average</td>
<td>3,091,396</td>
</tr>
<tr>
<td></td>
<td>Average total cost</td>
<td>11,726,646</td>
</tr>
<tr>
<td>2.</td>
<td>Average acceptance ( IDR )</td>
<td>18,056,250</td>
</tr>
<tr>
<td>3.</td>
<td>Average income (Rp)</td>
<td>9,421,000</td>
</tr>
<tr>
<td>4.</td>
<td>Average profit (Rp)</td>
<td>6,329,604</td>
</tr>
<tr>
<td>5.</td>
<td>RCR</td>
<td>1.53</td>
</tr>
</tbody>
</table>

Problems found
The results of research and information from respondent farmers in Parigi Village, Bakarangan District, Tapin Regency that became a problem were pest attacks such as rats, walang sangit (Leptcorisa oratorius), green leafhoppers, stem borers, leafworms and leaf spot diseases that made farmers need chemical drugs to overcome them. However, pest and disease attacks here are still a normal stage in trying to farm. Another problem is also the influence of chemical drugs given will cause environmental pollution and reduce soil fertility and can increase acid levels in the soil.

Conclusion
Based on the results of research on superior rice farming of the Ciherang variety in Parigi Village, Bakarangan District, Tapin Regency, it can be concluded that the cultivation of superior rice of the Ciherang variety carried out by farmers in Parigi Village, Bakarangan District, among others, includes seed preparation, seedbeds, tillage, planting, maintenance, harvesting and post-harvest with a feasibility level of Ciherang rice farming R/C ratio of 1.53.

References


Balai Penyuluhan Pertanian Kecamatan Bakarangan, 2021

