

The Impact of Growing Salo 2 Chili On The Economy of Farmers' Households in Rice Fields (Case Study of Benteng Village, Patampanua District, Pinrang Regency)

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Abstract

The demand in both the domestic and international markets for chili commodities in the future is expected to increase along with the rising population and income levels, which can impact the income of chili farming and ultimately affect household income. This research aims to analyze the impact of planting bird's eye chili on the rice field bunds on the household income of farmers. This study employs a quantitative method to understand whether and how the additional income from bird's eye chili can enhance the total income of farmers' households. The results of this study indicate that planting bird's eye chili can provide an additional source of income for farmers, thereby increasing their total income. The research results show that the average profit received by chili farming on the rice field embankments is Rp. 1,080,000 per year. Based on the business feasibility calculations, the R/C ratio obtained is 3.9. It can be concluded that chili farming in the rice fields of Benteng Village, Patampanua District, Pinrang Regency is feasible for development.

Keywords: Chili farmers, Diversification, Income



INTRODUCTION

Agriculture plays a crucial role in Indonesia's economy, as evidenced by its contribution to gross domestic product (GDP), job creation, provision of consumption materials, reduction of poverty rates, and as a source of foreign exchange for the country. The role of the agricultural sector in development in Indonesia is beyond doubt; the main priority of development is placed on economic growth, with a focus on the agricultural sector. According (Irmayani et al., 2024) agricultural development is directed towards increasing agricultural production to meet food needs and domestic industrial requirements, boosting exports, enhancing farmers' income, expanding job opportunities, and promoting equitable income distribution (Soekartawi, 2013). The development of horticultural products is one aspect of agricultural development. Plants that are included in horticultural plants are vegetables, fruits, ornamental plants, and medicinal plants. The functions of horticultural plants, besides being a source of food, also have other functions. Simply put, these other functions can be divided into four: as a food provider, economic function, health function, and socio-cultural function. One of the horticultural products that is being developed and is expected to support the agricultural sector as a pillar of the economy is vegetable crops (Bahar, 2012).

According (Irmayani.,2022) that one of the horticultural plants is chili pepper. The demand in both the domestic and international markets for chili commodities in the future is expected to increase along with the rising population and income levels. In line with trade liberalization, which brings implications of increasingly intense market competition, there is a need to enhance efficiency to optimize chili production (Sunu dan Wartoyo, 2009). Various obstacles faced by chili farmers in Benteng Village can affect the income from chili farming, which ultimately impacts household income. Agricultural production is highly dependent on nature as its main resource, which makes the income generated unstable. In the development of chili farming and the income earned by farmers, several factors significantly influence the outcomes, including land, weather, capital, and knowledge about the business (Irmayani et al., 2018). Pinrang Regency is one of the largest rice granaries, but there are several farmers in Pinrang, particularly in the Patampanua district, who plant chili peppers on the edges of their rice fields or on vacant land around their fields to supplement their household income. One type of chili that is cultivated is the local variety known as chili salo 2. Therefore, it is necessary to identify the impact of planting chili rawit salo 2 on the economic conditions of farmers' households.



LITERATURE REVIEW

FARMING: The science of farming is the process of determining and coordinating the use of agricultural production factors to achieve maximum income or profit. (Suratiyah, 2006). According to Handoko (2013), for farming to be considered successful, it generally must meet the following minimum requirements:

1. Farming must be able to generate enough income to finance all the necessary tools.
2. Farming must be able to produce income that can be used to pay the interest on the capital used in the farming operation.
3. Farming should be able to cover the wages of labor, including the family members of the farmer, in a proper manner.

Agriculture is the activity of cultivating crops by allocating resources such as land, labor, capital, and water to generate income to meet living needs. This is as expressed by Soekartawi (2002) that farming is the science that studies how an individual allocates available resources efficiently to achieve high profits at a certain time. It is said to be effective when farmers or producers can allocate their available resources as best as possible, and it is considered efficient when the utilization of those resources produces an output that exceeds the input. (input).

Bird's eye chili (*Capsicum annum* L.) is the most widely cultivated species because it was the first chili species discovered by Columbus and introduced to the whole world. The bird's eye chili plant is an upright shrub with a height of 1-2.5 meters and is an annual or perennial plant. Bird's eye chili is cultivated because it has high economic value. The benefits of bird's eye chili include being a stimulant, increasing appetite or having a stomachic effect, acting as a diuretic or diaphoretic, serving as a skin irritant, and being used as a topical ointment (Irmayani et al., 2015). To meet daily needs, chili is used as a raw material in the food and pharmaceutical industries. The chili business involves many farmers; this endeavor can serve as an alternative for community empowerment to increase income, improve the living standards of local farmers, attract capital or investment from other regions, and create business opportunities. On a macro scale, the chili business generates significant foreign exchange for the country and revenue for the local government, supporting the development of agribusiness. (Arief, 2009). Bird's eye chili plants can be grown in rice fields, dry land, coastal areas, mountains, and even in narrow spaces, such as backyards, and still produce optimally. Bird's eye chili plants can



grow in lowlands to mountainous areas. Bird's eye chili plants can also grow and adapt well to various types of soil, ranging from sandy soil to clay. Generally, the best soil for cultivating bird's eye chili is sandy loam or light soil that is rich in organic matter and nutrients. The characteristic of bird's eye chili plants that they do not recognize seasons is one of the reasons why farmers favor cultivating them. Bird's eye chili plants can thrive well without being dependent on the seasons. However, planting bird's eye chili during the rainy season is riskier compared to the dry season because these plants are not resistant to heavy rain that occurs continuously. Waterlogging in planting areas can lead to leaf drop and root diseases. Meanwhile, high humidity increases the spread and development of plant diseases. (Syukur, 2013 dalam Taufik 2015).

In general, a farmer is defined as a person who works in the agricultural sector and whose income primarily comes from agriculture. In statistical terms, a person who works in the agricultural sector for at least one hour a week can be referred to as a farmer. In addition, people who live in rural areas and psychologically identify as farmers are often referred to as farmers. As a result, the number of farmers has become very large. This is one of the causes of low productivity in the agricultural sector, as the number of farmers is a dividing factor in measuring productivity. (Wahyudin, 2005). In Indonesia, most farmers are smallholders whose agricultural output primarily meets their family's subsistence needs, so they are more appropriately referred to as "peasants." They prioritize the motto "safety first." Poverty is synonymous with small farmers, whose characteristics include: owning land of less than 0.5 hectares, having low education, weak capital, and being less responsive to new innovations.

Households are the smallest unit within the broader social structure. A household is an individual or a group of people who occupy part or all of a physical building, and usually live together and share meals from one kitchen. Sharing a kitchen means managing daily needs together as one. A household consists of members, and household members are all the people who usually reside in a household, whether they are present at the time of the census or temporarily absent. Generally, a household consists of a mother, father, and children. In relation to the Indonesian economy, households as the smallest units in society play a significant role. Sukirno explains that the actors in economic activities are divided into three groups: households, businesses, and the government. Each of these groups plays a very different role in the economy.



METHODOLOGY

The type of research used in this study is quantitative descriptive research. Aimed at analyzing data obtained from rice farmers who cultivate chili on the rice field embankments. According to (Suratiah, 2015), to calculate production costs and revenue, a nominal approach is used without considering the time value of money; instead, current prices are applied, allowing for a direct calculation of total expenditures and total receipts within a single production period. The research location is in the Benteng village, Pinrang Regency. The population used in this study is a full population of 30 individuals, consisting of rice farmers who grow bird's eye chili on the rice field embankments in Benteng village, Patampanua District, Pinrang Regency.

RESULTS AND DISCUSSION

Fixed costs are expenses that do not change regardless of the quantity of goods used in the production process; the costs incurred remain constant. Fixed costs are expenses that do not affect production and continue to be incurred whether the output is large or small. A hoe is used in planting bird's eye chili to dig, loosen the soil, and prepare planting holes for the chili seedlings, a machete is used to clear bushes, grass, or wild plants in the area, and a spray tank is used to apply pesticides and fungicides to protect the chili plants from pests and diseases. The average fixed costs incurred by chili farmers are as follows:

Table 1. Average of Fixed Cost of Farmer in one year harvest

Description	Value (RP)	Shrinkage
Hoe	23.000	4.000
Machete	70.000	7.000
Spray	500.000	62.500
Total	593.000	73.000

In Table 1, it can be seen that the largest average fixed cost incurred by chili farmers is the cost of the spray tank amounting to Rp. 62,500, while the smallest fixed cost is for the hoe at Rp. 4,000. Thus, the total fixed costs incurred by chili farmers in one month amount to Rp. 73,000.



Variable Costs

Variable costs are expenses that fluctuate proportionally with agricultural activities; the more variables that are utilized, the greater the variable costs incurred. The seeds used are Salo 2 seeds, the fertilizers used are urea, liquid NPK, Bio MKP, and KCL. The pesticide used is organic pesticide.

Table 2. Average Variable Costs of Chili Farmers in One Month of the Planting Season Production Costs Total Costs

Production Cost (Rupiah)	Total Cost (Rupiah)
Seed	30.000
Fertilizer	
Urea	20.000
NPK liquid	40.000
MKP liquid	48.000
KCL	24.000
Pesticide :	
Organic Pestisida	38.000
Totally	200.000

Based on Table 2, it can be seen that the total average variable costs incurred by chili farmers in one year amount to IDR 200,000.

Total Cost

The total production cost is the overall amount of expenses incurred in the production process. Here is the data regarding the total production cost of chili farmers:

Table 3 Total Production Cost of Chili Farmers in One Year of Planting Season

No	Kind of Cost	Amount (Rp)
1	Fixed Cost	73.500
2	Variabel Cost	200.000
	Total	273.500



Based on Table 3, it can be seen that the total production costs incurred by chili farmers in one year amount to Rp. 273,500.

Revenue

Revenue is the result obtained from the sale of goods or services within a specific period. The total revenue is the total amount received from the cultivation of bird's eye chili, which is the total production multiplied by the selling price of the chili.

Table 4 Average Income of Chili Farmers in One Year

Harga (Rp)	Production Quantity (Kg)	Income (Rp)
30.000	36	1.080.000

Based on the calculations in Table 4, it can be seen that the average chili production in one year in the research area yields 3 kg per month or 36 kg per year, with an average selling price of Rp.30,000 per kg, resulting in a total income for chili farmers of Rp.1,080,000 in one year.

Income Analysis

Farm income is the total revenue minus the total costs incurred in a business. The average profit obtained by farmers in Benteng Village, Patampanua District, Pinrang Regency can be calculated using the formula : $\pi = TR - TC$ (π = Profit, TR = Total Revenue, TC = Total Cost)

Table 5 Average Income of Chili Farmers in One Year

Number	Description	
1	Production Cost	273.500
2	Revenue	1.080.000
Total Income (Rp)		806.600

Based on Table 5, it can be seen that the average income of chili farmers in the research area is Rp. 806,600 per year.



Feasibility Analysis

The Revenue Cost Ratio is a feasibility analysis test that compares total revenue with total costs incurred. The criterion used in this analysis is that if the R/C value is greater than 1, then the business is considered profitable and viable, as the revenue exceeds the costs incurred, and vice versa. The calculation of the revenue to cost ratio (R/C) can be seen as follows:

$$\begin{aligned} R/C &= (\text{Total Revenue}) / (\text{Total Cost}) \\ &= 1,080,000 / 273,000 \\ &= 3.9 \end{aligned}$$

The R/C ratio is the comparison between total revenue and total costs. The total revenue received by chili farmers is Rp. 1,080,000, while the total costs incurred amount to Rp. 273,000. Thus, the R/C ratio obtained is 3.9.

Since the R/C ratio is greater than 1, chili farming is considered feasible and profitable. However, if the R/C ratio is less than 1, chili farming is deemed unfeasible due to losses (Irmayani et al., 2020). Therefore, the feasibility of chili farming depends on the R/C ratio derived from the comparison between total revenue and total production costs. Farmers need to conduct this analysis to ensure that their farming efforts can yield the expected profits. From the calculations, the R/C ratio for chili farming on the rice field embankment is 3.9. This value indicates that chili farming on the rice field embankment is feasible for development.

CONCLUSION

The results of this study indicate that this venture is profitable, with a total profit of Rp. 1,080,000 per year. With a calculated R/C ratio of 3.9, it can be concluded that chili farming on the rice field embankments in Benteng Village, Patampanua District, Pinrang Regency is feasible for development.

Recommendation

This farming venture can provide additional income for farmers aside from the main harvest (example rice). By diversifying crops, such as planting bird's eye chili on the rice field bunds, farmers can maximize the use of available land without disturbing the main crops, while also reducing the risk of dependence on a single type of commodity.



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