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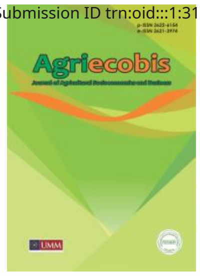

Research Article

Feasibility Analysis of Large Red Chili (Capsicum Annum L.) Farming in Tawangargo, Karangploso, Malang, Indonesia, Across Wet and Dry Seasons

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ABSTRACT

This study investigates the financial feasibility of large red chili (*Capsicum annum L.*) farming during both the rainy and dry seasons in Tawangargo, Karangploso, Malang, Indonesia. Many farmers in this region do not thoroughly evaluate the costs and revenues associated with their farming practices, leading to uncertainty regarding the financial feasibility of large red chili farming. The primary aim of this research is to assess the financial feasibility of such farming practices across seasons and to compare their financial viability. The research employs the analysis of the Revenue-to-Cost (R/C) ratio and a paired sample t-test to evaluate the financial feasibility of large red chili farming. Our findings reveal that large red chili farming in both rainy and dry seasons is financially feasible. The R/C ratio for the rainy season is 2.12, and for the dry season, it is 1.51, both of which exceed the critical threshold of 1, indicating the financial feasibility of farming and developing large red chili in this region. The results of the Paired Sample Test demonstrate significant differences in the financial feasibility of large red chili farming between the rainy and dry seasons in Tawangargo, Karangploso, Malang, Indonesia. The average of income per-hectare for large red chili farming is IDR 101,573,764 during the rainy season and IDR 45,393,331 during the dry season.

INTRODUCTION

The large red chili (*Capsicum annum L.*) commodity presents significant potential due to its high market value (Usman et al., 2021). East Java, one of Indonesia's leading provinces in large red chili production, contributed approximately 101.7 thousand tons to the total production in 2018. Prominent large red chili cultivation regions encompass Malang, Banyuwangi, Kediri, and Tuban. Among these, Malang stands out as a substantial contributor, yielding 21.75 thousand tons of large red chili (Badan Pusat Statistik Jawa Timur, 2018). In the pursuit of assessing the feasibility of large red chili farming, feasibility analysis serves as a pivotal approach to determine the financial sustainability of this agricultural enterprise. This process involves the establishment of various parameters and criteria to gauge the business's feasibility. A farming operation is deemed feasible if it generates profits that effectively cover all expenses incurred throughout the farming cycle (Ratnawati et al., 2019).

There is a notable lack of detailed cost analysis and income assessment among many large red chili farmers, making it challenging to determine the profitability of their cultivation endeavours. Moreover, a substantial number of business actors, particularly farmers, have not conducted a comprehensive assessment of the R/C (Revenue-to-Cost) ratio for their farming enterprises, hindering their ability to ascertain the feasibility of their farming operations. Betty & Wijaya (2020), Nurhafsah et al (2021), have proposed that a comparative evaluation between large red chili farming during the rainy and dry seasons is warranted. This evaluation focuses on the R/C ratio, where farming during the dry season appears to offer more favourable prospects. This is primarily attributed to higher production yields and reduced costs resulting from limited pesticide and labour utilization. In contrast, suboptimal harvests in the rainy season adversely affect its financial feasibility.

In accordance with research findings by Usman et al (2021), multiple factors such as farmer age, land area, average selling price, total production, and production costs exert a substantial impact on the profitability of large red chili farming in Blitar. Specifically, the average selling price and total production factors exhibit a positive and significant influence on the profitability of large red chili farming, while the production cost factor exerts a negative and considerable impact on profitability. Conversely, farmer age and land area demonstrate no statistically significant influence on the profitability of large red chili farming in Blitar. Notably, among these factors, the total production level exerts the most profound influence on the profitability of large red chili farming in Blitar.

In their study, Eman et al (2022) conducted a comparative analysis of income and the financial feasibility of cultivating curly red chili and cayenne pepper in Taraitak Raya, Langowan Utara, Minahasa. The findings of this research reveal distinguishable disparities in the average income generated by the two crops, with curly red chili exhibiting higher returns when juxtaposed with cayenne pepper. Furthermore, it is noteworthy that the R/C (Revenue-to-Cost) Ratio values for both curly red chili and cayenne pepper farming are equivalent and exceed the critical threshold of 1, thereby affirming the financial feasibility of both agricultural endeavors.

Gufron et al (2021) conducted an analysis that compared the cost structures between organic and inorganic rice farming, alongside an income comparison. The findings from this study indicate that the income derived from organic rice farming surpasses that of inorganic rice farming. Specifically, the average R/C (Revenue-to-Cost) ratio for organic rice farming stands at 2.4, while for inorganic rice farming, it is 1.7. This disparity underscores the superior profitability and efficiency of organic rice farming when assessed within an single growing season. Moreover, the results of the difference test highlight a statistically significant variance in income between organic and inorganic rice farming.

According to Anam et al (2020), the assessment of the R/C (Revenue-to-Cost) ratio is applied to the cultivation of both curly chili and cayenne pepper breeding. This evaluation seeks to elucidate the comparison of income levels and R/C ratios between these two farming practices. The results demonstrate that the R/C value for curly chili breeding stands at 2.23, while the R/C value for cayenne pepper breeding is 2.29. Notably, the comparison of the R/C ratios for chili breeding farming indicates no significant difference between the R/C values of curly chili and cayenne pepper breeding.

Leksono et al (2018) conducted a comparative analysis of income between organic and inorganic rice farming in Seputih Banyak, Central Lampung. The findings revealed that, in nominal terms, the income derived from organic rice farming was significantly higher (IDR 29,631,144.00 with an R/C ratio of 1.45) compared to the income from inorganic rice farming (IDR 19,115,370.00 with an R/C ratio of 1.79).

This study's novelty, in comparison to prior research, lies in its utilization of an independent sample t-test analysis to assess the feasibility of large red chili farming during both the rainy and dry seasons. The research objectives encompass the examination of the financial feasibility of large red chili farming in Tawangargo, Karangploso, Malang, Indonesia, during the rainy and dry seasons, as well as the comparative analysis of the financial feasibility of large red chili farming in this area during both seasons.

METHOD

The research methodology employs a census sampling approach, where the entire population of large red chili farmers engaged in cultivation during both the rainy and dry seasons in Tawangargo, Karangploso, Malang, Indonesia, serves as the study's sample. Data collection involves direct observation to gather information pertinent to the research, and structured interviews are conducted to obtain primary data from farmers through questionnaires. The research employs a quantitative methodology, focusing on the analysis of large red chili farming data during both rainy and dry seasons. Quantitative descriptive analyses encompass cost analysis, income analysis, and the application of a paired sample t-test. Income analysis involves calculating the difference between total income and total costs, which includes both variable and fixed costs. The computation of the R/C (Revenue-to-Cost) ratio is a pivotal component to evaluate the financial status of large red chili farming. The indicators for the R/C ratio are as follows:

- R/C ratio > 1: Large red chili farming is deemed feasible or profitable.
- R/C ratio < 1: Large red chili farming is considered unfeasible or unprofitable.
- R/C ratio = 1: Large red chili farming operates at a break-even point, where profit and loss are balanced.

RESULTS AND DISCUSSION

In this study, variable costs associated with large red chili cultivation during both the rainy and dry seasons in Tawangargo, Karangploso, Malang, Indonesia, encompass labour, seeds, fertilizers, and pesticides.

Table 1. Average variable costs for large red chili farming per hectare per season, differentiating between the rainy and dry seasons.

No	Description	Rainy Season Planting Average Amount (IDR)	Dry Season Planting Average Amount (IDR)
1	Labor:		
	- Land Processing and Seeding	4,729,778	4,729,778
	- Planting	2,870,078	2,870,078
	- Fertilization	2,579,969	2,579,969
	- Weeding	1,966,386	1,966,386
	- Pest/Disease Control	3,889,689	2,451,589
	- Watering	8,000	630,000
	- Harvesting	7,203,519	7,203,519
2	Seed	4,016,667	4,004,000
3	Fertilizer	17,531,833	18,414,333
4	Pesticides	24,848,411	21,351,222
	Total Variable Cost (IDR)	**69,644,331**	**66,200,875**

Source: Primary data processed, 2023

The variable costs associated with large red chili production in Tawangargo, Karangploso, Malang, Indonesia, during both the rainy and dry seasons encompass labour, seeds, fertilizers, and pesticides. As shown in Table 1, it is evident that the variable costs during the rainy season exceed those in the dry season. This disparity can be attributed to the higher expenses incurred for pest and disease control, primarily due to increased susceptibility to diseases in the rainy season.

Parining dan Dewi (2018) affirm that the higher cost of large red chili farming during the rainy season is primarily attributed to the heightened incidence of diseases, pests, and weeds during this period. Conversely, maintenance is notably more straightforward during the dry season, resulting in relatively lower expenses. Hamidah (2016) further emphasizes that effective fertilization practices can help mitigate the risk of attacks, along with proper harvest and post-harvest handling techniques.

The success of large red chili production significantly hinges on the quality of the seeds employed. The superior attributes of these seeds, including production volume, resistance to pests and diseases, and adaptability to varying climatic conditions, have been articulated by Ardian et al (2017). Furthermore, it is important to note that differences in fertilization practices, the cost of fertilizer application, and labor usage exist between farmers employing organic fertilizers and those who do not. These distinctions inevitably lead to variations in production and costs.

Fixed Costs of Large Red Chili Farming in the Rainy and Dry Season

In this study, the fixed costs associated with large red chili production during both the rainy and dry seasons in Tawangargo, Karangploso, Malang, Indonesia, encompass land tax, land rent, and equipment depreciation.

Table 2. Average Fixed Costs of Large Red Chili Farming Per Hectare Per Season in the Rainy and Dry Season.

No	Description	Rainy Season Amount (IDR)	Dry Season Amount (IDR)
1	Land tax	463,889	463.889
2	Land rent	10,483,333	10,483.333
3	Equipment depreciation	10,115,238	10,115,238
	Total	**21,062,461**	**21,062,461**

Source: Primary data processed, 2023

The fixed costs associated with large red chili production in both the rainy and dry seasons exhibit no significant differences. The variance primarily emerges from the land preparation processes, where land tax, land rent, and equipment depreciation remain consistent across both seasons. However, the methods employed in land preparation differ in accordance with the specific growing season. In this study, the respondents cultivated large red chili on the same land, regardless of whether it was during the rainy or dry season, which accounts for the absence of differences in fixed costs.

Dara & Irada (2022) emphasize the critical importance of cost information for profit-oriented businesses. The absence of a detailed cost breakdown leaves businesses without a benchmark to gauge whether their income surpasses their incurred expenses. Consequently, a lack of such vital information hampers the ability to determine the profitability of the business in question, which is essential for its development and sustainability.

Total Cost of Large Red Chili Farming in the Rainy and Dry Seasons

In this study, the total costs of the dry and rainy seasons in Tawangargo, Karangploso, Malang, Indonesia were used during the farming process.

Tabel 3. Average Total Cost of Large Red Chili Farming Per Hectare for Both the Rainy and Dry Seasons.

No	Description	Rainy Season Average Amount (IDR)	Dry Season Average Amount (IDR)
1	Fixed Cost	21,062,461	21,062,461
2	Variable Cost	69,644,331	66,200,875
	Total Cost	**90,706,791**	**87,263,336**

Source: Primary data processed, 2023

This table delineates the comprehensive costs, encompassing both variable and fixed costs, associated with large red chili production per hectare during both the rainy and dry seasons. The total cost per hectare amounted to IDR 21,062,461, indicating no variation in fixed costs between the two seasons. However, a distinction arises in the variable costs per hectare in rainy and dry season large red chili farming in Tawangargo, Karangploso, Malang, Indonesia. Specifically, variable costs amount to IDR 69,644,331 for the rainy season and IDR 66,200,875 for the dry season. This discrepancy reflects the disparities in variable costs between the two seasons, with the average total cost per hectare being greater in the rainy season (IDR 90,706,791) compared to the dry season (IDR 87,263,336). This variance is predominantly attributed to differences in variable costs, such as a higher utilization of pesticides during the rainy season.

Revenue

Revenue, in this context, signifies the income acquired by farmers from the sale of large red chilies generated during both the rainy and dry seasons, encompassing the aspects of production and pricing.

Table 4. Average Revenue of Large Red Chili Farming Per Hectare for Both the Rainy and Dry Seasons.

No	Description	Production Average (Kg)	Price Average (IDR)	Revenue Average (IDR)
1	Planting in the rainy season	8,901	21,717	192,280,556
2	Planting in the dry season	10,861	12,250	132,656,667

Source: Primary data processed, 2023

The average revenue per hectare for large red chili farmers during the rainy season amounts to IDR 192,280,556, while in the dry season, it is IDR 132,656,667. This discrepancy between the two seasons can be attributed to variations in production levels and selling prices. During the rainy season, production tends to be lower, yet the selling price is notably higher, resulting in a substantial price differential. This significant price disparity is primarily a consequence of fluctuations in the availability of large red chilies within the market. During the simultaneous harvest, typically in the dry season, the market is flooded with large red chilies, resulting in lower prices due to oversupply. In contrast, during the rainy season, the market experiences limited availability of large red chilies, but the demand remains high, thus leading to increased prices. These findings align with the research of Betty & Wijaya (2020), highlighting the influence of market availability on pricing dynamics. Furthermore, Chuzaimah et al (2023) elaborate on the greater appeal of large red chili farming during the rainy season. This preference can be attributed to the significantly higher prices achieved during this period compared to the dry season, which substantially impacts farmers' income. The high prices are driven by

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a combination of limited supply and strong demand, adhering to economic principles that dictate price increases when demand outstrips supply. Nurul et al (2021) also acknowledge the presence of risks in farming, particularly within the production process. Factors such as weather conditions, pests, and plant diseases can lead to production risks. Additionally, price fluctuations introduce price risk, impacting farmers' income due to uncertain or fluctuating selling prices.

Income

Income is derived by deducting the total production costs from the revenue of large red chili in both the rainy and dry seasons.

Table 5. Average Income Per Hectare for Large Red Chili Farming during Both the Rainy and Dry Seasons.

No	Description	Rainy Season Average Amount (IDR)	Dry Season Average Amount (IDR)
1	Revenue	192,280,556	132,656,667
2	Total Cost	90,706,791	87,263,336
3	Income	101,573,764	45,393,331
4	R/C Ratio	2.12	1.51

Source: Primary data processed, 2023

Based on the data in the table, large red chili farmers planting in the rainy season generate an average income of IDR 101,573,764 per hectare. This income is computed by subtracting the average total cost from the average revenue during the rainy season. In contrast, during the dry season, the income is IDR 45,393,331, indicating a notable disparity between the two seasons, with higher income during the rainy season. The discrepancy in income can be attributed to the pricing dynamics of large red chili. In the dry season, the price of large red chili tends to be lower compared to the rainy season. Consequently, farmers earn less during the dry season, despite higher production. It is noteworthy that even though there is a considerable difference in income between the dry and rainy seasons, large red chili farming in the dry season remains economically viable. This phenomenon in the dry season can be partially attributed to the relatively high productivity of large red chili, leading to overproduction. Multiple regions in Bali province engage in large red chili production, contributing to a risk of declining prices during the dry season harvest, as noted by Parining dan Dewi (2018). Furthermore, research by Istiyanti et al (2015) emphasizes the seasonal dependency of chili production and pricing. In the rainy season, fewer farmers venture into chili cultivation due to higher risks, resulting in elevated market prices. Conversely, during the dry season, the market is flooded with chili produce, causing prices to decline.

Feasibility of Farming (R/C Ratio)

In a broader context, the profitability of a business is contingent on whether the revenue surpasses the associated costs (Assegaf, 2019). This analytical approach aims to assess the viability and potential for development of a given business. The R/C ratio serves as a key determinant of profitability, assessing whether farming in either the rainy or dry season is lucrative, unprofitable, or simply breaking even. Referring to the data presented in the table above, the R/C ratio for the rainy season is 2.12, indicating that for every 1 rupiah invested during this season, a revenue of IDR 2.12 is generated. Similarly, the R/C ratio for the dry season is 1.51. Therefore, the R/C ratio demonstrates that large red chili farming in both the rainy and dry seasons is financially viable. However, a comparative evaluation reveals the rainy season to be more promising, given its higher income compared to the dry season, despite relatively consistent total and variable costs incurred throughout both seasons. In a corroborative study by Betty & Wijaya (2020), an examination of the viability of large red chili farming in different seasons aimed to discern any disparities in feasibility. The results indicate variations in the viability of large red chili farming between the dry and rainy seasons. Specifically, the R/C ratio for the dry season was 1.977, while for the rainy season it was 1.789. Although both seasons demonstrate feasibility, a comparative analysis suggests that the dry season may present a more favorable scenario for cultivation.

Paired Sample t-test

The hypothesis was evaluated through a paired sample t-test analysis, preceded by a scrutiny of research data to ensure adherence to the prerequisites for this analysis, including the normality test.

The normality test is conducted as a prerequisite for the Paired Sample t-test analysis, serving to ascertain the distribution of the data as either normal or abnormal. (Tarumasely, 2020).

Table 6. Normality Test

Description	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Rainy	.106	30	.200*	.933	30	.058
Dry	.127	30	.200*	.956	30	.240

Source: Primary data processed, 2023

The results of the normality test, as indicated by the Kolmogorov-Smirnov test, reveal that both the rainy season (with a significance value of 0.200) and the dry season (also with a significance value of 0.200) exhibit normal distribution. Consequently, the significance values for both seasons surpass the threshold of 0.05, affirming the normality of the data, in accordance with the Kolmogorov-Smirnov criteria:

- When the significance value (sig value) > 0.05, the data is considered normal.
- When the significance value (sig value) < 0.05, the data is deemed non-normal.

Hypostases

The hypotheses tested in this study are:

$H0$ = There is no significant difference between the feasibility of large red chili farming in the rainy and dry seasons.

$H1$ = There is a significant difference between the feasibility of large red chili farming in the rainy and dry seasons.

To test these hypotheses, we present the results of the paired sample t-test, including paired sample statistics, paired sample correlation, and paired sample tests (two-tailed significance) in the following table:

Table 7. Paired Samples Statistics

Description		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Rainy	208.13	30	64.693	11.811
	Dry	150.93	30	39.376	7.189

Source: Primary data processed, 2023

The test results indicate that the average value for the rainy season is 2.1600, while the average value for the dry season is 1.5400. Therefore, the average value for the rainy season is higher than that of the dry season. This suggests that the feasibility of farming during the rainy season is greater than in the dry season. This difference is evident in the income generated from large red chili farming, which is higher during the rainy season, despite the relatively similar average costs incurred.

The greater feasibility of large red chili farming during the rainy season compared to the dry season can be attributed to the pricing dynamics. During the rainy season, the price of large red chili peppers tends to be higher due to limited market availability and increased demand, leading to higher prices. Conversely, the dry season witnesses an abundance of large red chili production from various suppliers, causing prices to decrease compared to the rainy season. However, it's essential to note that the R/C ratio values indicate that large red chili farming is equally viable during both seasons in Tawangargo, Karangploso, Malang, Indonesia. This is in line with the findings of Betty & Wijaya (2020), who observed differences in prices driven by market availability during rainy and dry seasons. During the simultaneous harvest, typically in the dry season, an oversupply of large red chilies and limited demand results in lower prices. In contrast, the rainy season experiences high demand and limited supply, leading to higher prices for large red chilies. Royun Nuha et al (2023) also noted that fluctuations in production and prices during different seasons can impact farming income. Moreover, different seasons affect the allocation of production factors, influencing the cost structure of farming. Specifically, the cultivation of large red chili, which is prone to diseases during the rainy season, leads to higher pesticide expenses for farmers.

Table 8. Paired Samples Correlations

Description		N	Correlation	Sig.
Pair 1	Rainy & Dry	30	.714	.000

Source: Primary data processed, 2023

The results of the paired sample correlations test reveal a significance value of 0.000, indicating that the large red chili farming business in Tawangargo, Karangploso, Malang, Indonesia, demonstrates a significant relationship between the rainy and dry seasons. The significance value is less than 0.01, underscoring the strength of this relationship.

Table 9. Paired Samples Test

Description		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Rainy - Dry	57.200	45.781	8.358	40.105	74.295	6.843	29	.000

Source: Primary data processed, 2023

The outcomes of the t-test, as evidenced in the Paired Sample Test, indicate a significance value of 0.000, which is less than 0.05. This implies that there exists a disparity in the feasibility of farming between the rainy and dry seasons. This conclusion aligns with the established decision rule:

- When the probability value (two-tailed significance) is greater than 0.05, H0 is accepted, signifying no difference.
- Conversely, when the probability value (two-tailed significance) is less than 0.05, H1 is accepted, signifying a difference.

The examination of hypotheses in this study reveals disparities in the viability of large red chili farming between the rainy and dry seasons in Tawangargo, Karangploso, Malang, Indonesia. This variation in viability can be attributed to the greater average income during the rainy season compared to the dry season, despite relatively similar total costs. The reduction in income during the dry season can be traced to lower red chili prices in contrast to the rainy season. Even though dry season production exceeds that of the rainy season, the reduced prices contribute to diminished dry season earnings. Notably, the average expenses incurred by large red chili commodity farmers in Tawangargo, Karangploso, exhibit minimal differences between the two seasons. Furthermore, disparities in production could be attributed to additional inputs, such as manure and soil liming, applied before planting, consistent with findings from Nurhafsah et al (2021), which emphasize the role of manure in influencing chili weight and production. Supplementing manure increases nutrient availability for plants, fostering robust growth and yield. Inorganic pesticides are also widely employed by farmers, as underscored in research of Usman et al (2021), aiming to prevent crop failures.

The elevated prices of large red chili during the rainy season can be attributed to the heightened risks associated with this season, leading to reduced production and consequently, increased market prices when compared to the dry season. This trend aligns with the findings of Betty & Wijaya (2020), which note that while dry season yields tend to be higher, the rainy season commands higher prices. This price disparity is primarily driven by the abundance of chilies during simultaneous harvests in the dry season, causing prices to plummet due to low demand. Conversely, the rainy season sees a limited market supply against a surge in demand, resulting in elevated prices for large red chilies. Parining & Dewi, (2018) concur, emphasizing that not only are the average prices greater during the rainy season, but the associated farming costs are also higher. These elevated costs are a direct result of the heightened susceptibility of red chili plants to diseases, pests, and weeds in the rainy season. In contrast, the dry season presents more favourable conditions, leading to relatively lower expenses. Research of Zahroh (2022) corroborates these observations, attributing lower production in the rainy season to pest and disease attacks, which lead to crop damage and a subsequent reduction in large red chili yields. It's essential to acknowledge that each season, be it rainy or dry, poses distinct risks and challenges for farmers to contend with.

Anggela et al (2019) have expounded on the influence of weather conditions on large red chili farming. During the rainy season, excessive waterlogging and high humidity create an environment conducive to accelerated pest and disease development. Particularly, extended periods of heavy rainfall can expose farmers to the risk of crop failure due to flooding. Conversely, the dry season brings aridity that inhibits plant growth, leading to suboptimal crop conditions. This, in turn, translates to reduced income for farmers during the rainy season, owing to the fluctuating selling prices and varying production costs, along with disparities in land tenure among farmers. Adhiana (2021) has also pointed out that suboptimal utilization of production facilities, including inadequate technology adoption, the use of non-preferred seeds, and subpar application of both inorganic and organic fertilizers, contributes to low productivity among large red chili farmers. Furthermore, productivity levels in large red chili farming are subject to seasonal variations, soil fertility dynamics, and recurring pest infestations, such as leaf curl disease, which afflict most of these farmers.

38 The profitability of large red chili farming is notably higher during the rainy season compared to the dry season, primarily due to the elevated farm-level selling prices. The dry season witnesses a surge in large red chili production, causing prices to decline. This scenario underscores an inverse relationship between 1 production volume and price, indicating that increased production leads to price reduction. The distinction in the feasibility of large red chili farming between these seasons mirrors the local context. Many farmers opt for rainy season cultivation due to comparable costs in both seasons, with the rainy season reaping higher incomes. Anwarudin et al (2015) elucidated that rainy season chili production remains consistently low as rice cultivation dominates most fields. On dry land, farmers are hesitant to plant chilies due to the high risk of crop failure, substantial production costs, particularly for pesticides, and lower productivity compared to the dry season. Another deterrent for year-round large red chili farming is the increasingly challenging irrigation conditions, heightening the risk of crop failure during the dry season. Ramadhani et al (2022) attributed the meager production to a combination of factors, including farming technology, farmer readiness and knowledge, resource provisions, capital constraints, and farmers' predictive abilities. Planning large red chili cultivation is contingent on rain patterns as they directly influence water availability, a vital component for robust plant growth. Inadequate or excessive watering can disrupt fertilization and render plants susceptible to pests. Rain serves as the primary source of irrigation, necessitating an understanding of forthcoming rainfall conditions to inform effective cultivation planning (Imtiyaz et al, 2017).

Large red chili production and pricing are profoundly influenced by seasonal fluctuations. During the rainy season, a limited number of farmers engage in large red chili cultivation due to the elevated associated risks, resulting in relatively high market prices for the produce. Conversely, the dry season witnesses a surge in large red chili cultivation as many farmers participate, causing market prices to decrease

CONCLUSION

1 The Feasibility Analysis of Large Red Chili Farming in Tawangargo, Karangploso, Malang, Indonesia, yields the following conclusions: Large red chili farming is financially viable, with revenues consistently 5 exceeding total costs. Profitable outcomes are consistently achieved, with rare instances of losses recorded in 1 both the rainy and dry seasons. Distinct differences in the feasibility of large red chili farming exist between the rainy season (from months 10 to 3) and the dry season (from months 4 to 9) in Tawangargo. In the rainy 1 season, the average income per hectare per season is IDR 101,573,764, whereas in the dry season, it stands at IDR 45,393,331.

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