

Analysis of Mango Farming in Critical Land in Denanyar Village, Jombang

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ABSTRACT

This study aims to determine: 1) the characteristics of mango farmers on critical land in Desa Denanyar Jombang 2) the feasibility of mango farming in the critical land of Denanyar Village in terms of R/C ratio. The method used is a simple random sample. A total sample of 30 domestic actors Homemade mango. The results of the analysis show that: 1) Mango farming carried out mango farmers are not the main source of income. Usatan actors consisting of various ages and occupations use the yard as an additional source of income. 2) The amount of R/C in mango farming in Deanayar Village, Jombang District, Jombang Regency is 4.26. For every expense of Rp. 1.00, the mango farmers will receive an income of Rp. 4.26 so that they get a profit of Rp. 3.26. With Thus, mango farming in the critical land of Denanyar Village is profitable to cultivate.

Keywords: *Farming, Mango, Critical Land, Feasibility, R/C Ratio.*

INTRODUCTION

Indonesia is known as an agricultural country. Agriculture is one of the main sectors that play a role in the welfare of the Indonesian population. The agricultural sector is one of the most prioritized in supporting the national economy. The agricultural sector is also able to reduce the amount of poverty in Indonesia, development in the agricultural sector is directly or indirectly related to efforts to improve welfare, especially in rural areas where the population still depends on the agricultural sector (Faizah *et al.*, 2022). Horticulture is one of the fields of agriculture which is sufficient to include fruit, vegetable and flower crops, horticultural farming, especially fruits in Indonesia, is still seen as a simple side business that is only planted in the yard or narrow area, the application of cultivation techniques, and simple post-harvest handling (Qomariyah *et al.*, 2022). Market demand for fruit from both local and export markets has certain quality standards, so that it affects a sustainable fruit supply (Arifin *et al.*, 1997).

Mango fruit itself is widely planted by the community, both on a small and large scale so that in Indonesia there are centers of mango production. Mango production centers in Indonesia are East Java, Central Java, West Java, South Sulawesi and West Nusa Tenggara. The Central Statistics Agency noted that mango production in East Java reached 1.29 million tons, Central Java followed with mango production of 481.9 thousand tons. Then, mango production in West Nusa Tenggara was recorded at 140.2 thousand tons. Meanwhile, South Sulawesi is able to produce 115.4 thousand tons of mango (BPS, 2020).

In the development of national mango production, several technical, social and economic problems were found. The production carried out by farmers has control over the sustainability of mango farming. Because through the use of production factors that have reached an efficient level, ketoka production reaches an optimum level which means that mango production or cultivation has achieved optimal results so as to provide optimal benefits for mango farmers. Many factors affect business, one of which is weather conditions, lack of capital, lack of technological mastery, and less than optimal land conditions (Almuhaesimi, 2012)

Although Jombang Regency is one of the regencies in East Java which is known as a rice barn, but Jombang Regency is also a contributor to mango crop commodities in critical land. Although mango fruit also thrives in areas outside Jombang, in Jombang Regency one sector that has the potential to increase people's income is Horticulture with mango plant products. Because almost every sub-district in Jombang produces mangoes. One of them is Jombang Sub-district which contributes in producing mango on a small scale even though it grows on critical land where a lot of conversion of agricultural land. Based on the description above, it is necessary to conduct research on "Analysis of Mango Farming in Critical Land in Denanyar Village, Jombang".

METHOD

- **Time and Location Study**

Study this held During three month start April to _ with June 2022 in districts Jombang, Java East. Regency Jombang of course no wrong one city producer mango biggest. Lots region in Jombang that produces fruit mango though in scale small . Selected as location study that is in Village Denanyar sub-district Jombang which is wrong one contributor production plant mango in land critical scale home .

- **Method Data Retrieval**

Study use method survey and Interview for got primary data collected of 30 perpetrators _ usatani taken mango _ by random (random sampling) with tools to use questions (questionnaires) that have been prepared more first .

- **Technique Data Analysis**

Data in analysis with use method quantitative , whereas _ for count big level income and appropriateness could in count use formula seb aga following , analysis cost , analysis reception , analysis income , analysis Business feasibility , namely R/C ratio with yield 1) $R/C = 1 = \text{Eligible} / \text{Debt}$. 2) $R/C = 1 = \text{Break - even effort} / \text{no worth}$. 2) $R/C < 1 = \text{No Worth} / \text{Loss}$.

RESULT AND DISCUSSION

Village Denanyar this located not enough more than 1km direction west from center city where still have land enough farming _ wide . However walking time many functional shift land and pollution soil make condition soil critical . Even though thereby The results of the feasibility analysis (R/C – Ratio) show that mango farming Village Denanyar Jombang feasible and the result is 4.26 valid because more of 1.

Result

- **Identity of Mango Farmers**

- **Age**

Workers who are still young usually have a high level of productivity, when compared to workers who are of old age because their physical strength is weak and the top in carrying out activities (Aprilyanti, 2017). The age of mango farming actors in Denanyar Village can be seen in table.

Table 1. Age of Mango Farmers in Denanyar Village

| Number | Age (years) | Total (person) | Percentage% |
|--------|-------------|----------------|-------------|
| 1 | 31-40 | 3 | 10 |
| 2 | 41-50 | 3 | 10 |
| 3 | 51-60 | 11 | 37 |
| 4 | 61-70 | 9 | 30 |
| 5 | 70-80 | 4 | 13 |
| Amount | | 30 | 100 |

Source: 2022 Research Results

- **Level of Education of Mango Farmers**

Education also affects a person's mindset in the decision-making process in an action, especially to acquire and apply increasingly technological knowledge. modern technology to increase the productivity of mango plants owned. Expected to be higher a person's level of education, then the ability to absorb knowledge of technology getting better (Wahyuni 2012 *in* Hasa, 2018). The level of education is obtained through the education level of the last mango farmer. Judging from the formal education that has been passed, it can be seen that the grouping of education levels of mango farmers in Denanyar Village can be seen in table 2:

Table 2. Education Level of Mango Farmers in Denanyar Village

| Number | Level of education | Total (person) | Percentage% |
|--------|--------------------|----------------|-------------|
| 1 | Elementary School | 5 | 13 |
| 2 | Junior High School | 10 | 33 |

| Number | Level of education | Total (person) | Percentage% |
|--------|--------------------|----------------|-------------|
| 3 | High School | 11 | 37 |
| 4 | Beachelor Degree | 4 | 17 |
| Amount | | 30 | 100 |

Source: 2022 Research Results

○ **Work of Mango Farmers in Denanyar Village**

Work is an activity carried out by a person in fulfilling his life needs.

The Indonesian population works in many types of jobs and variations (BPS, 2020). Likewise, mango farming actors in Denanyar Village who have a variety of main jobs as a source of income, can be seen in Table 3:

Table 3. Main Jobs of Mango Farmers in Denanyar Village

| Number | Works | Total (person) | Percentage% |
|--------|---------------|----------------|-------------|
| 1 | Businessman | 13 | 50 |
| 2 | Civil Servant | 8 | 27 |
| 3 | Employee | 2 | 8 |
| 4 | Housewife | 7 | 15 |
| Amount | | 30 | 100 |

Source: 2022 Research Results

In Table 3 it can be seen that the majority of respondents have a main job other than using the yard of the house as farming land. Types of work with the highest percentage of 50% are entrepreneurs as many as 13 people, followed by a percentage of 27% namely civil servants consisting of teachers, as police, 8 people, TNI who then are the still percentage active or retired of 15% as are many housewives as many as 7 people, and the smallest percentage of 8% is 2 people self-employed. From the variety of jobs, it can be said that the current farming is a side job to increase income.

● **Critical Land in Denayar Village**

Land that is not in accordance with its use and capabilities can undergo a process of physical, chemical, or biological damage which ultimately endangers the hydrological, orological, agricultural production, settlements, and socio-economic life of the environmental area (Critical Land Symposium, 1975). Denanyar Village has a fairly large agricultural land, but over time a lot of agricultural land in the village has been converted. Various kinds of land use conversion as housing, shops, to the manufacture of fish ponds. So that in the end the rice fields in Denanyar Village began to be filled with residents. Denanyar Village is also adjacent to the TPA (Final Disposal Site) which is located in Sumber Winong Hamlet, where the TPA is also one of the sources that affect land which results in soil pollution. In addition to land conversion, waste can be said to be a major contributor to soil damage. There are still many people who are not responsible for throwing garbage in the rice fields where there is a lot of plastic waste that is difficult to decompose by the soil.

● **Production Cost Analysis**

Production costs are costs incurred starting from the process at the time of processing raw materials to become finished goods (Mulyadi, 2015). Mango farming production costs are costs incurred by mango farming actors include variable costs and fixed costs.

○ Variable Cost Analysis

Variable *costs* are costs whose total amount is not fixed and can change according to the volume of business that follows conditions (Mulyadi 2015:13). Variable costs in home-scale mango farming include the cost of seeds, fertilizers, medicines, and labor. The use of good seeds also affects the number of seeds that will grow and the amount of production will be high. The type of mango grown in Denanyar Village is mostly Gadung type, the mango farmers buy it at a price of around Rp. 20,000, - up to Rp. 30.000,- per tree. In one yard the respondent has 1 to 6 mango trees, the cost of fertilization also varies greatly from the use of chemical fertilizers and also manure obtained from livestock waste owned by mango farmers. The average variable cost of farming for one season can be seen in Table 4:

Table 4. Average variable costs of mango farming in Denanyar Village

| Number | Description | Value (Rp) |
|--------|-------------|------------|
| 1 | Mango Seeds | 28.833 |
| 2 | Fertilizer | 56.067 |
| 3 | Pesticide | 0 |
| 4 | Labor | 0 |
| Amount | | 84900 |

Source: 2022 Research Results

From Table 4, it can be seen that the average variable cost of farming mango in Denanyar Village is Rp. 84.900,-. the value of medicines and labor is empty because this is a home-scale farming where agricultural actors use the yard of the house as agricultural land, so many of the respondents are unfamiliar with mango tree cultivation. Wherethey still use the conventional system and are usually done alone in their spare time.

o Fixed Cost Analysis

Fixed costs or *fixed costs* are costs whose total amount is fixed and does not change in a certain production volume (Mulyadi, 2015). The fixed cost in mango farming is the depreciation of the tools used during the cultivation and maintenance of mango trees. In the research area, most of the land used for mango farming is privately owned, using the yard of the house for agricultural land as a source of additional income. For fixed costs incurred by usatani actors in Denanyar Village, it can be seen in Table 2:

Table 5. Average Fixed Cost of Mango Farming in Denanyar Village

| Number | Description | Value (Rp) |
|--------|-------------|------------|
| 1. | Tool srhink | |
| | -Sickle | 5.000 |
| | -Sprayer | 1.587 |
| 2. | Land lease | 0 |
| Amount | | 6.587 |

Source: 2022 Research Results

From Table 5, it can be seen that the fixed costs of mango farming include depreciation costs in the form of sickles and sprayers. With an average value of Rp. 6,587,- in one season. Fixed costs are not affected by changes in activity to a certain extent. This cost will still come out even if the farmer does not use it at all or even when the farmeruses it repeatedly.

• Total Cost Analysis

Total costs are the costs used to carry out the business which is calculated by adding up fixed costs with variablecosts (Munauwarah, 2016). The average total cost is presented in Table 6 below:

Table 6. Average Total Cost of Mango Farming in Denanyar Village

| Number | Description | Value (Rp) |
|--------|---------------|------------|
| 1. | Variable cost | 84.900 |
| 2. | Fuxed cost | 6.587 |
| Amount | | 91.487 |

Source: 2022 Research Results

From Table 6 it is known that the average total cost required for the implementation of mango farming during the season is Rp. 91,487,-. If you look at the comparison between variable costs and fixed costs, it turns out that the largest costs are variable costs, the total average variable costs during the season is Rp. 84,900,-. Meanwhile, the average fixedcost is only Rp. 6,587,-. This total cost is the result of fixed costs and variable (variable) costs (Soekartawi, 2016).

• Revenue Analysis

Revenue is all income obtained from production for a period which is calculated from the sales value according tothe price at that time (Suratiah *in* Kiki, 2018). The revenue obtained by mango farming actors in Deanyar Village, Jombang District can be seen in table 7:

Table 7. Average Revenue of Mango Farmers in Denanyar Village

| | Production | Revenue (Rp) |
|---------|------------|--------------|
| Amount | Tress 58 | 11.700.000 |
| Average | | 390.000 |

Source: 2022 Research Results

In the study area, the selling price of mangoes is calculated per tree, usually purchased by middlemen with prices starting from Rp. 150.000,- up to Rp. 300,000,- . the high and low prices depend on the fruit yields on each tree, the denser the fruit, the higher the purchase price. From the data analysis, the average revenue is Rp. 390,000,- obtained from 58 mango trees.

• **Income Analysis**

Income is the difference between receipts and total costs incurred, income is the net result received by a person or company in the form of rupiah (Puji Yunarti, 2019). The size of an income that will be received is influenced by the size of the total revenue and the total costs used during the process of implementing the farming. The average income of mangofarming actors in Denanyar Village can be seen in table 8:

Table 8. Average Income of Mango Farmers in Denanyar Village

| Number | Description | Value (Rp) |
|--------|-------------|------------|
| 1 | Revenue | 390.000 |
| 2 | Total Cost | 91.487 |
| Amount | | 298.513 |

Source: 2022 Research Results

From Table 8 it is known that the average income earned in one season is Rp. 298,513, -, different income is influenced by the results of sales and also expenses that have been spent. Seen from the table, total costs at the time of production tend to be small when compared to revenues. So that the income of mango farming actors from the difference between revenues and total costs is quite high.

• **Feasibility Analysis of Farming (R/C)**

R/C is the ratio between total revenue and all costs used during production to harvest. The larger the R/C ratio can also provide greater benefits to the farming actors (Soekartawi, 2016). The calculation with the analysis of income with costs (R/C) can be seen as follows:

$$R: \frac{390.000}{91.487} = 4,26$$

Based on the results of the analysis of the above calculations, the feasibility level of mango farming in Denanyar Village, Jombang District, was 4.26. From the results of the R/C Ratio, it is feasible to work. This can be seen from the comparison of total income with total costs that are greater than one, which has a figure of 4.26 1. This means that for every expenditure of Rp. 1.00, mango farmers will receive an income of Rp. 4.26 with a net profit. amounting to Rp. 3.26.

DISCUSSION

Farming mango in Village Denanyar scale small limited land _ so that calculation only until on the R/C ratio . The amount of R/C on farming mango in Village Deanyar Subdistrict Jombang Regency Jombang is of 4.26 . Every expenditure cost as big as IDR 1.00 then perpetrator usatani mango will get reception as big as IDR 4.26 so get profit as big as IDR 3.26. With thereby farming mango in Village Denanyar profitable for worked out . Use formula in research entitled _ title Analysis Appropriateness farming Paddy Organic in Village With Subdistrict With Regency Jombang . If in details total average profit MT I Rp . 6,721,631, while the total average MT II is Rp . 1,980,059 in time one year . With analysis feasibility (R/C –Ratio) shows that farming paddy organic in Village With Subdistrict With worthy for worked out . This thing could seen from total income comparison with total cost yag more big from one , which is 1.374 1 (Latif , 2021).

CONCLUSION

Based on the results and discussions that have been carried out, it can be concluded that mangofarming carried out by mango farmers in Denanyar Village, Jombang is not the main source of income. Residents of various ages and occupations use their yards as an additional source of income. Mango farming is run on a small scale and is traditional. Lack of knowledge about mango cultivation has resulted in sub-optimal production. However, the amount of R/C in mango farming in Deanayar Village, Jombang District, Jombang Regency is 4.26. For every expense of Rp. 1.00, the mango farmers will receive an income of Rp. 4.26 so that they get a profit of Rp. 3.26. Thus, mango farming in Denanyar Village is profitable to cultivate.

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