Agribusiness Journal

INCOME ANALYSIS OF CURLY CHILI FARMING *(CAPSICUM ANNUUML)* IN THE RAINY AND DRY SEASONS (CASE STUDY: PT. INTIDAYA AGROLESTARI, BOGOR)

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DOI : 0.15408/aj.v14i2.28156

Abstract

PT Intidaya Agrolestari is a company engaged in the agricultural business. One type of business is the curly chili farming business which is a type of business that has just been carried out and is in the development stage. The constraints and constraints of seasonal factors in the production of curly chilies greatly affect the amount of output or harvest produced so it greatly affects the income of the farming business. The greater the output or harvest produced, the greater the income received.

The objectives of this study are knowing the cost of farming curly red chili in the rainy and dry seasons. Knowing the income of the curly red chili farming business in the rainy season. Knowing the feasibility of farming curly red chili in the rainy and dry seasons by using the R/C ratio, B/C ratio, and Break Event Point (BEP).

The results of this study show that the total cost of farming curly chili in the rainy season with a land area of 1 Ha, namely Rp. 128,574,400, is greater when compared to the total cost of farming curly chili in the dry season with a land area of 1 Ha, namely Rp. 117,691,400, -. The total income of curly chili farming in the rainy season with a land area of 1 Ha is Rp. 28,425,875, -greater than the income of curly chili farming in the dry season with a land area of 1 Ha which suffered a loss of Rp. 77,691,400. Analysis of the Income Level of curly chili farming in the rainy season with a land area of 1 Ha in terms of R/C ratio, B/C ratio, and BEP can be said to be feasible to continue. Because it obtained an R/C ratio value of more than 1, which is 1.22 B/C ratio of more than 0, which is 0.22, and has produced a total production of 5,627.25 kg, with a selling price of Rp. 27,900, each of which has passed the production BEP value of 4,608 kg and the BEP price value of Rp. 22,849. Meanwhile, the Income Level Analysis of curly chili farming in the dry season with a land area of 1 ha as seen from the R/C ratio, B/C ratio, and BEP can be said to be unfit. Because it obtained an R/C ratio of less than 1, namely 0.34, a B/C ratio of less than 0, which is -0.66, and has produced a total production of 1000 kg, with a selling price of Rp. 20,000, each of which does not exceed the limit of the production BEP value of 5,885 kg and the BEP price value of Rp. 58,846.

Keywords: Income, Farming, Curly Chili, PT. Intidaya Agrolestari, Rainy Season, Dry Season

INTRODUCTION

One of the potential horticultural commodities to be developed is the commodity of red chili, especially big red chili, and curly red chili. Some important

reasons for the development of red chili commodities are (1) high economic value commodities *(High Economic Value Commodity),* (2) national and regional superior commodities, and (3) occupying an important position in the food menu, although it is needed in small quantities (4 kg/capita/year) but every time the day consumed by almost the entire population of Indonesia, (4) the turmoil in the price of red chili commodities has a real influence on inflation, (5) has a variety of market objectives, both for traditional markets, modern markets (supermarkets), and processing industries (Saptana et al, 2012: 1).The constraints on the productivity of chili peppers are strongly influenced by seasonal factors, so there are quite sharp price fluctuations. In general, chili cultivation is mostly carried out by farmers in the dry season *(on-season)*.

Pt. PT. Intidaya Agrolestari (INAGRO) is an agribusiness company located in JL. Raya Jampang Karihkil Km 7, Cibeuteung Udik Village, Ciseeng District, Bogor Regency. PT. A company that has a garden covering an area of 76 Ha is used as a center for horticultural production, quality seeds, fisheries, and biological fertilizers. One of the horticultural crops produced is curly peppers. This curly chili farming business is a type of business that has just been carried out and is in the development stage. The land used for the cultivation of curly chili covers an area of 2 ha which is produced in the rainy and dry seasons.

The cultivation of curly peppers is strongly influenced by seasonal factors. The rainy and dry seasons have a noticeable influence and become obstacles in the production process of curly chili peppers. The obstacle is that in the rainy season many curly chili plants are affected by disease attacks such as fusarium and anthracnose, and the loss of flowers and fruits, while in the dry season they experience drought so that the plants become small and wither. The mooring of seasonal factors in the production of curly chilies above largely determines the amount of output or harvest produced. The amount of output or harvest produced greatly affects the income of the farming business, the greater the output or harvest produced, the greater the income received. Therefore, to determine the financial feasibility of curly chili farming, it is necessary to analyze the income of curly chili farming in the rainy and dry seasons of PT. Agroletarian Resources.

Based on the above problems, this study aims to (1) How many the cost of farming curly red chili in the rainy and dry seasons? (2) What is the income of the curly red chili farming business in the rainy and dry seasons? and (3) What is the feasibility of farming curly red chili in the rainy and dry seasons judging from the R/C ratio, B/C ratio, and *Break Event Point* (BEP)?

RESEARCH METHODS

Research Location and Time

This research was conducted at PT. Intidaya Agrolestari which is located at Jl. Raya Jampang Karihkil Km 7, Cibeuteung Udik Village, Ciseeng District, Bogor Regency, West Java Province. The selection of the research site was carried out deliberately *(Purposive).* The study was conducted in August- September 2018.

Data Types and Sources

The types of data used in this study are primary and secondary data. Primary data in the form of data on fixed costs, variable costs, investment costs, chili production data, chili price data sales data obtained from field reviews and interviews. Secondary

data was obtained through the study of literature.

Data Analysis

Farm Income Analysis

The calculation can be written as follows:

P = TR – TC

Description:

Π = Curly Chili Farming Income (Rp)

TR = Total Revenue of Curly Chili Farming (Rp)

TC = Total Cost of Curly Chili Farming (Rp)

R/C Ratio Analysis

$$\text{R/C ratio} = \frac{\text{Total Revenue of Curly Chili Farming}}{\text{Total Production Cost of Curly Chili Peppers}}$$

If:

R/C Ratio > 1 = profitable farming R/C

Ratio < 1 = farm loss

R/C Ratio= 1 = break-even farming effort

Benefit and Cost Ratio (B/C Ratio) Analysis

$$\text{B/C ratio} = \frac{\text{Total Profit of Curly Chili Farming}}{\text{Total Production Cost of Curly Chili Peppers}}$$

Break Event Point (BEP) Analysis

$$\text{BEP (Production)} = \frac{\text{Total Cost of Curly Chili Farming}}{\text{Selling Price of Curly Chili Peppers}}$$

$$\text{BEP (Selling Price)} = \frac{\text{Total Cost of Curly Chili Farming}}{\text{Total Production of Curly Chili peppers}}$$

RESULTS AND DISCUSSION

Curly Chili Farming Costs at PT. INAGRO

From the investment components above, the total investment costs incurred are RP52,150,000. The largest investment cost is the building cost of Rp 30,000,000 (57.53%), and the smallest investment cost is the bucket cost and mulch opportunity of Rp 150,000(0.29%). The fixed cost of farming curly chili in the rainy season is the same as the curly chili farming business in the dry season, which is Rp. 10,355,000. The total non-fixed cost of farming curly chili in the rainy season is Rp. 118,219,400, - greater than the total cost of farming curly chili in the dry season, which is Rp. 107,336,400, -

Table 1. Total Cost of Dry Chili Farming in PT. INAGRO (1 Ha)

No	Cost Component	Rainy season	Dry season
1	Total *Fixed Cost*	RP10,355,000	RP10,355,000

2	TotalBiayaTidakTetap *(Variable Cost)*	Rp118.219.400	Rp107.336.400
Total Cost		RP128,574,400	RP117,691,400

Source: Data Process

Based on table 1, it is seen that the total cost of farming curly chili in the rainy season is Rp. 128,574,400, - greater than the total cost of farming curly chili in the dry season, which is Rp. 117,691,400, -. This is because the total population of curly chili plants in the rainy season is more, namely 17,000 trees while in the dry season it is 12,000 trees.

When compared to previous studies on the analysis of curly chili income (Nining 2011, Rozfaulina 2000, and Nizam 2000) which is Rp. 59,673,680/ha, RP. 30,870,023/ha, and Rp. 25,014,991/ha. The total cost of farming curly chili in PT. INAGRO is much higher, this is due to the labor costs in PT. INAGRO is larger than previous studies which were below Rp. 25,000/hok, the tools used by previous studies are also still simple.

Acceptance of Curly Chili Farming at PT INAGRO

The yield of curly chili in the rainy season with a land area of one hectare is 5,627.25 Kg, while the yield of curly chili in dry season with a land area of one hectare is 2,000 Kg. The selling price of curly chili plants in the rainy season averages Rp. 27,900, while in the dry season the average per kg is Rp. 20,000. Rain is Rp. 157,000,275, -greater when compared to the receipt of curly chili farming in the dry season, which is Rp. 40,000,000. This is because the total population of curly chili plants in the rainy season is more, namely 17,000 trees while in the dry season it is 12,000 trees. When compared to the national chili productivity in 2015, it was 7.49 tons per Ha. PT. INAGRO experienced various obstacles and obstacles that affected chili yields, namely in the curly chili farming business in the rainy season, there was a stormy wind that caused many chili trees to fall and many plants to be affected by anthracnose so that production decreased by about 30%.

Table 2. Curly Chili Farming Income at PT. INAGRO 1 Ha in 2018

Description	Rainy season	Dry season
Reception (A)	Rp 157,000,275	Rp 40,000,000
Total Cost (B)	Rp 128,574,400	Rp 117,691,400
Total Revenue (A-B)	Rp 28,425,875	Rp. (77.691.400)

Source: Primary Data (processed), 2018

The income of the curly chili farming business based on Table 2 above can be seen that the total income of the curly chili farming business in the rainy season is Rp. 28,425,875, - and the income of the curly chili farming business in the dry season is a loss of Rp. 77,691,400.

Feasibility Analysis of Curly Chili Farming in PT. INAGRO

This research is to analyze of the feasibility of curly chili farming in PT. Intidaya Agrolestari (INAGRO) uses three ways, namely R/C Ratio, B/C Ratio, and *Break Event Point* (BEP).

Curly chili farming in the rainy season is feasible because the R/C ratio value

is more than 1, which is 1.22, which indicates that every Rp. 1,000,000 for the total farming costs incurred, the curly chili farming business in the rainy season provides a receipt of Rp. 1,220,000. While the farming of curly chili in the dry season is not feasible because the R/C ratio value is less than 1, which is 0.34, which indicates that every Rp. 1,000,000 for the total cost of farming incurred, then the curly chili farming business in the rainy season provides an acceptance of Rp. 340,000, or suffered a loss of Rp. 660,000.

The curly chili farming business in the rainy season is feasible because the B/C ratio value is more than 0.22, which indicates that if the capital spent is Rp. 1,000,000, then the owner of the curly chili farming business in the rainy season gets a profit or income of Rp. 220,000. Meanwhile, the curly chili farming business in the dry season is not feasible because the B/C value ratio is less than 0, namely -0.66, which indicates that if the capital spent is Rp. 1,000,000, then the owner of a curly chili farming business in the rainy season gets a loss of Rp. 660,000.

Analysis of break-even point (BEP) breakeven point of production in addition to being expressed in kilograms, is also expressed in rupiah units. BEP calculation has two ways, namely production BEP and price BEP. The Production BEP analysis is the result of the division between the total cost of farming curly chilies in the rainy and dry seasons issued by PT. INAGRO with the prevailing selling price of curly chili at that time. The BEP of curly chili farming in the rainy and dry seasons is presented in Table 3 below.

Table 3. BEP Production Obtained by Curly Chili Farming Business at PT. INAGRO With an Area Of 1 Ha In 2018

No	Description	Rainy season	Dry season
1	Total Farm Costs (Rp.)	128.574.400	117.691.400
2	Selling Price (Rp/Kg)	27.900	20.000
PRODUCTION BEP (Kg)		4.608	5.885

Source: Primary Data (processed), 2018

Based on Table 3, shows that the BEP yield production that must be produced by curly chili farming during the rainy season is 4,608 kg. This means that if the curly chili farming business in the rainy season wants to benefit the production produces more than 4,608 kg. If it is less than 4,608 kg, the business of farming curly chili in the rainy season will suffer losses. Meanwhile, the BEP production that must be produced by curly chili farming in the dry season is 5,885 kg. This means that if the curly chili farming business in the rainy season wants to be profitable, it must produce more than 5,885 kg, if it is less than 5,885 kg, the curly chili farming business in the dry season will suffer losses.

So, from the BEP calculation, production states that the farming of curly chili in the rainy season is declared feasible and profitable because the production yield is higher than 4,608 kg, which is 5,627.25 kg, while the curly chili farming business in the season the drought was declared unfit and a loss because the production yield was lower than 5,885 kg, which was 2,000 kg. This is because the chili production process in the dry season experiences various obstacles and obstacles that affect chili yields, namely the level of productivity of curly chili plants has decreased which is caused by drought so that the plant withers and the fruit becomes small.

The BEP Price Analysis is the result of the division between the total cost of

farming curly chili in the rainy and dry seasons issued by PT. INAGRO with the total production or the amount of harvest produced. An overview of the BEP analysis of curly chili farming production in the rainy and dry seasons is presented in Table 4 below.

Table 4. BEP Price Obtained by Curly Chili Farming Business at PT. INAGRO 1 Ha 2018

No	Description	Rainy season	Dry season
1	Total Farm Costs (Rp.)	128.574.400	117.691.400
2	Total Production (Kg)	5.627,25	2.000
BEP Price (Rp/Kg)		22.849	58.846

Source: Primary Data (processed), 2018

Based on table 4, shows that the BEP results of the price that must be sold by curly chili farming businesses in the rainy season are Rp. 22,849/Kg, this means that if the curly chili farming business in the rainy season wants to be profitable, it must be able to sell curly chili at a price of more than Rp. 22,849 / Kg, if it is less than 22,849/Kg, then the curly chili farming business in the rainy season will suffer losses. Meanwhile, the bep results of the price that must be sold by curly chili farming businesses in the dry season are Rp. 58,846 / Kg. Meaning that if the curly chili farming business in the rainy season wants to be profitable, it must sell chili at a price of more than Rp. 58,846/Kg, if it is less than Rp. 58,846/Kg then the curly chili farming business in the dry season will experience losses

So, from the BEP calculation, the price states that the curly chili farming business in the rainy season is declared feasible and profitable because the selling price is higher than Rp. 22,849/Kg, which is Rp. 27,900/Kg, while the curly chili farming business in the dry season is declared unfit and a loss because the selling price is lower than Rp. 58,846/Kg, which is Rp. 20,000/Kg.

CONCLUSIONS AND SUGGESTIONS

The conclusion obtained from this study is that the cost of farming curly chili in the rainy season with a land area of 1 ha, namely Rp. 128,574,400, - greater when compared to the total cost of farming curly chili in the dry season with a land area of 1ha, which is Rp. 117,691,400, -. The total income or profit of curly chili farming in the rainy season with a land area of 1 ha is Rp. 28,425,875, - greater than the income of curly chili farming in the dry season with a land area of 1 ha that suffered a loss of Rp. 77,691,400. Analysis of the income level of curly chili farming in the rainy season with a land area of 1 ha in terms of R/C ratio, B/C ratio, and BEP can be said to be worth continuing. Because it obtained an R/C ratio of more than 1, which is 1.22 B/C ratio of more than 0, which is 0.22, and has produced a total production of 5,627.25 kg, with a selling price of Rp. 27,900, each of which has passed the production BEP value of 4,608 kg and the BEP Price value of Rp. 22,849. while the analysis of the income level of curly chili farming in the dry season with a land area of 1 ha in terms of R/C ratio, B/C ratio, and BEP can be said to be unfit. Because it obtained an R/C ratio of less than 1, which is 0.34, A B/C ratio of less than 0 which is -0.66, and has produced a total production of 1000 kg, with a selling price of Rp. 20,000, each of which does not exceed the production BEP value limit of 5,885 kg and the BEP price

value of Rp. 58,846.

The arrangements given are related to the farming of curly chilies in the rainy season to carry out intensive pest and disease control to get maximum yields. PT. Intidaya Agrolestari in carrying out its curly chili farming business in the dry season is recommended that watering be given in sufficient quantities so that the plant does not dry out.

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