

**FEASIBILITY ANALYSIS OF CORN FARMING WITH A PARTNERSHIP PATTERN IN PRINGGABAYA DISTRICT, EAST LOWBOK DISTRICT
(Case Study at PT. Dhanya Perbawa Pradhikasa)**

¹Ridwan, ^{2*}Muhsin, ³Zuhriatun Solihah
Universitas Islam Al-Azhar, Mataram, Indonesia
cienmuh05@gmail.com

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ABSTRACT

This research was carried out in Pringgabaya District, East Lombok Regency. This research aims to find out: (1). Model of partnership pattern between corn farmers and PT. DNYA Perbawa Pradhikasa, (2). Feasibility of corn farming with a partnership pattern with PT. DNYA Perbawa Pradhikasa, (3). The obstacles faced by corn farmers in Pringgabaya District, East Lombok Regency in partnering with PT. Donly Perbawa Pradhikasa.). Labuhan Lombok Village and North Pringgabaya Village were selected as research locations and this location was determined using a purposive sampling technique, using 30 respondents determined proportionally. Random sampling and data collection was carried out using direct interview techniques with respondents, using questionnaires that had been prepared and carried out in the month July 2023 To find out Total Production Costs (Total Cost) can be calculated using the formula $TC = FC + VC$, Total Revenue: (Total Revenue) with the formula $TR = P \times Q$, Income: $\pi = TR - TC$, meanwhile to find out the feasibility of corn farming you can calculated using Revenue Cost Ratio (RCR) analysis. The results of the research show that the average income from corn farming in Pringgabaya District, East Lombok Regency is IDR 10.894,928., per ha (MH 2021/2022), with an R/C Ratio value of 1.650. This means that corn farming in Pringgabaya District, East Lombok Regency using a Partnership Pattern is feasible to develop. Meanwhile, the problems faced in corn farming with a partnership pattern are: high fertilizer prices, pest and disease attacks, water content agreements, price suitability and capital adequacy.

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Corresponding Author:

Muhsin
Universitas Islam Al-Azhar, Mataram, Indonesia
Email: cienmuh05@gmail.com

INTRODUCTION

Corn is the main strategic commodity after rice and one of the main secondary crop commodities in Indonesia, especially for human consumption and animal feed needs. However, corn has several problems, such as limited cultivation land area and low farming technology. (Aldillah, 2017).

The development of corn commodities at the national level still experiences several obstacles, including: (1) There is still little use of hybrid corn seeds, (2) Scarcity of fertilizer, (3) Farmer institutions have not developed, (4) Harvest and post-harvest technology is inadequate, (5) Farmers' cultivated land is still small.

The West Nusa Tenggara (NTB) Provincial Government has designated corn as a superior regional development program, this is the right step because apart from having land potential, corn is a plant that is quite easy to cultivate, besides not requiring too much water, it is safe from pest and disease attacks. . What is no less important is that corn has a fairly large role in the national economy with the development of the food industry which is supported by cultivation technology and superior varieties (Aqil and Bunyamin, 2015).

In East Lombok Regency, the harvest area and corn production from 2016 to 2020 tend to fluctuate. The corn harvest area in 2016 was 28,714 Ha, Production 192,532 tons, then in 2020 the harvest area was 21,887 Ha, Production 140,013 tons, Productivity 6,420 Tons/Ha. If you take the average, the average harvest area is 24,765.6 Ha, Production 163,362.8 Tons, Productivity 6,587 Tons/Ha in a period of five years (East Lombok Regency Agricultural Service, 2020).

Pringgabaya District, as one of the 21 sub-districts in East Lombok Regency, has quite large potential for corn development. Based on data released by the East Lombok Regency Agriculture Service in 2021, the corn harvest area in Pringgabaya District is 5,941 hectares or 27.143% of the total corn harvest area in East Lombok Regency, which is 21,887 hectares.

METHOD

In this research, the case method was employed alongside survey techniques for data collection. These surveys aimed to gather factual information on various aspects such as social, economic, or political institutions from specific groups or regions. The primary tool for data collection was a questionnaire comprising a series of questions to be answered by respondents, as outlined by Nazir in 2017.

The study was conducted in the Pringgabaya District of East Lombok Regency, where the location was selected through Purposive Sampling. This selection was influenced by the partnership between PT. DNYA Perbawa Pradhikasa and corn farmers in the district. The research sample included all corn farmers in the Pringgabaya District who were involved in the 2021/2022 MH planting season and had a partnership with PT. Donly Perbawa Pradhikasa. Four villages in the district - Gunung Malang Village, Seruni Mumbul Village, Labuhan Lombok Village, and North Pringgabaya Village - had such partnerships. Among these, Labuhan Lombok Village and North Pringgabaya Village were chosen for the study, as they housed the largest number of farmers in partnership with PT. Donly Perbawa Pradhikasa. The study targeted 30 respondents, determined through Quota Sampling, with the specific respondents in each sample group selected using Proportional Random Sampling.

To analyze the income of farmers from corn farming, the study employed a cost and income analysis method as per Sapoetra (1985). This involved calculating Total Production Costs (TC), which included Fixed Costs (FC) and Variable Costs (VC), and Total Revenue (TR), determined by the product of Price (P) and Quantity (Q). The income (II) was calculated by subtracting Total Cost (TC) from Total Revenue (TR). Furthermore, the study assessed the viability of corn farming through the RC Ratio, which compares Total Revenue to Total Production Costs. An RC Ratio greater than 1 indicated that corn farming was profitable, less than 1 suggested it was not, and an RC Ratio of 1 signified a break-even point.

Lastly, to understand the challenges faced by corn farmers in partnership with PT. DNYA Perbawa Pradhikasa, the study involved collecting and descriptively analyzing existing problems encountered in the farming process.

RESULTS AND DISCUSSION

Corn Farmer Partnership Pattern with PT. Dhaya Perbawa Pradhikasa

The Partnership Pattern can generally be interpreted as a form of mutually beneficial cooperation between two or more parties to achieve common goals. The partnership pattern implemented between corn farmers in Pringgabaya District, East Lombok Regency and PT. Dhaya Perbawa Pradhikasa is a Sub Contract partnership pattern, this pattern is a partnership pattern between a business partner company and a group (farmers) of business partners who produce corn. The sub-contract pattern is characterized by an agreement on a joint contract which includes volume, price, quality and time.

Production cost

The production costs referred to in this research are the total costs incurred by the farming business during the production process in the farming business. (Zulfiana, et al). Production costs are all expenses required to produce products in one production period. Included in the costs of farming are the costs of production facilities that are used up (seedlings, fertilizers and medicines), land rental, depreciation costs for long-lasting production equipment (buildings, tools and utensils), labor costs and other costs. others (Soekartawi, 1995). Furthermore, according to Supardi (2000): costs are classified into fixed costs (Fixed Cost) and variable costs (Variable Cost) which can be explained as follows:

Fixed Costs

Fixed costs are costs that are regularly paid or incurred by farmers and their amount is not influenced by the level of output. Fixed costs include: land rental, equipment depreciation costs, land tax (Supardi, 2000). The average total fixed costs incurred by research respondents are presented in the following table

Table 1. Average Total Fixed Costs Incurred by Respondents in Corn Farming with Partnership Patterns at PT. DNYA Perbawa Pradhikasa in Planting Season (MH 2021/ 2022)

No.	Types of Fixed Costs	Total Cost (Rp)		Percentage (%)
		LLG	Ha	
1.	Land lease	1,853,333.33	2,000,000.00	95.31
2.	Land tax	23,308.33	25,152.88	1.19
3.	Tool Depreciation	68,625.00	74,055.76	3.50
Total Fixed Costs/MT		1,944,433.33	2,098,309.35	100

Source: Processed Primary Data.

Based on Table 1 above, it can be seen that the average total fixed costs incurred by respondents in corn farming with a partnership pattern at PT. Djust Perbawa Pradhikasa in the planting season (MH 2021/2022) is IDR. 1,944,433.33/area of cultivated land (LLG) or Rp. 2,098,309.35/hectare. The largest fixed cost component is land rent, which is equal to Rp. 1,853,333.33/LLG (95.51%) or Rp. 2,000,000.00/hectare. This is quite reasonable because most of the partner farmers are tenant farmers or not land-owning farmers.

Equipment depreciation costs are calculated by calculating: the acquisition value of the equipment is multiplied by 10% to obtain the residual value, the result of this multiplication is divided by the economic life of the equipment to obtain the annual depreciation value of the equipment. Next, the equipment depreciation value/year is divided by three, to get the equipment depreciation during one corn production period (four months/planting season).

Land tax is obtained by dividing the total land tax in one year by the frequency of farming carried out by farmers in one year. The usual frequency of farming carried out by farmers is three times (three seasons). In this research, the land tax taken/calculated is one planting season.

Land rent is a cost that must be incurred by farmers as a result of owning land management for one year. The land rent that is calculated is the land rent for one season or four months.

Variable Costs

Variable costs are costs incurred by entrepreneurs as a result of the use of variable production factors. so that the amount of this cost changes with changes in the number of goods produced in the short term (Supardi, 2000). The average total variable costs incurred by research respondents are presented in the following table:

Table 2. Average Total Variable Costs of Corn Farming Respondents with Partnership Patterns at PT. DNYA Perbawa Pradhikasa in Planting Season (MH 2021/2022)

No.	Types of Fixed Costs	Total Cost (Rp)		Percentage (%)
		LLG	Ha	
1.	Production Costs	4,160,100.00	4,489,316.55	30.60
2.	Labor costs	5,421,833.33	5,850,899.28	39.90
3.	Coaching Services	1,443,000.00	1,557,194.24	10.60
4.	Irrigation Costs	2,564,666.67	2,767,625.90	18.90

Amount	13,589,600.00	14,665,035.97	100
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Source: Processed Primary Data.

Based on the table above, it is known that the average total variable costs incurred by respondents in corn farming with a partnership pattern at PT. Djust Perbawa Pradhikasa in 2022 is IDR. 13,589,600.00/Area of Arable Land (LLG) and Rp. 14,665,035.97/hectare. Of the four types of variable costs incurred by respondents, labor costs are the largest component of variable costs incurred by respondents, namely IDR. 5,421,833.33/LLG or Rp. 5,850,899.28 / hectare. When expressed as a percentage, labor costs contribute 39.89% total variable costs incurred. The large labor costs incurred by respondents are due to the large number of farming activities that must be carried out in corn farming which in the end will require large amounts of labor. The activities referred to include: land preparation, planting, irrigation, fertilization, weeding and hilling, eradicating pests and diseases and harvesting. Labor is an important production factor and needs to be given sufficient attention in terms of quality and quantity (Soekartawi, 2003). From the tabulation results, data on the number of workers required for corn farming is 64.40 HKO/hectare or equivalent to 59.68 HKO/LLG.

Purwanto's research results, Hadayani and Muis (2015) conclude that labor has a very real (significant) effect on increasing corn production in Buol Regency with an average labor use of 47.60 HKO/Ha. Furthermore, Riyadi (2007) in his research concluded that the number of workers had a significant effect on increasing corn production in Wirosari District, Grobogan Regency with an average labor usage of 81.36 HKO/planting season. Meanwhile, Galingging (2020) concluded that the use of fertilizer and labor had a significant effect on corn production in Berau Regency. Meanwhile, the use of other production factors such as seeds and pesticides does not have a significant effect on corn production.

Total Production Costs

Total production costs are the sum of fixed costs and variable costs incurred during farming activities expressed in rupiah units (Suratiah, 2006). The average total production costs incurred by research respondents are presented in Table 3 below:

Table 3. Average Total Production Costs Incurred by Respondents in Corn Farming with Partnership Patterns at PT. DNYA Perbawa Pradhikasa in Planting Season (MH 2021/2022)

No.	Fee Type	Total Cost (Rp)		Percentage (%)
		LLG	Ha	
1.	Fixed cost	1,944,433	2,098,309	12.52
2.	Variable Costs	13,589,600	14,665,036	87.48
	Amount	15,534,033	16,763,345	100

Source: Processed Primary Data.

Based on Table 3, it is known that the total production costs incurred by respondents in corn farming with a partnership pattern at PT. Djust Perbawa Pradhikasa in 2022 is IDR.15,534,033,-/LLG or equivalent to Rp.16,763,345,-/hectare. The composition of variable costs is greater when compared to the fixed costs incurred by respondents with a comparison of 87.48% for variable costs and 12.52% for fixed costs. The high variable costs incurred by respondents are due to the large number of variable cost components that must be incurred by respondents. The variable cost components in question are: costs for purchasing seeds, fertilizer, pesticides (herbicides and insecticides), labor costs and other costs consisting of coaching, irrigation and harvest/transportation service costs. Meanwhile, the variable cost component is only limited to land rental costs, land tax and equipment depreciation.

Reception and Farming Income

Farming revenue is the multiplication of the amount of production produced by the production price received by farmers at harvest time. Meanwhile, farming income is the difference between revenue and the total costs incurred to produce a certain amount of output in a certain period (Kuheba, Dumais and Pangemanan, 2016). Furthermore, Sukirno (2002) provides a definition of total farming income (net income) as the difference between total income and total costs incurred in the production process, where all inputs owned by the family are calculated as production costs. The

average total income and farming income obtained by research respondents is presented in Table 4 below:

Table 4. Average Total Revenue and Farming Income Obtained by Respondents from Corn Farming with Partnership Patterns at PT. DNYA Perbawa Pradhikasa in Planting Season (MH 2021/2022)

No.	Description	Total Cost (Rp)	
		LLG	Ha
1.	Total Production (Kw)	93.20	100.58
2.	Production Price (Rp/Kw)	275,000.,	275,000.,
3.	Reception	25,630,000.,	27,659,500.,
4.	Total cost	15,534,033.,	16,763,345.,
5.	Income	10,095,967.,	10,894,928.,

Source: Processed Primary Data.

Paying attention to Table 4 above, it is known that the average total production obtained by respondent farmers is 93.20 Kw/Ha per unit land area (LLG) or equivalent to 100.58 Kw/Ha of the respondent's land. With a price of Rp.275,000/Kw, will be obtained total receipts of Rp. 25,630,000,-/LLG or equivalent to Rp.27,659,500,-/hectare. With a total cost of Rp. 15,534,033,-/LLG and Rp. 16,763,345,-/hectare, income of Rp. 10,095,967,-/LLG or equivalent to Rp. 10,894,928,-/hectare.

RC Ratio value

To find out whether the farming carried out by farmers makes a profit, loss or breaks even, Return Cost Ratio (RCR) analysis is used, namely by comparing income with costs incurred during one planting season (Milfitra, 2016). The RC Ratio values for corn farming with partnership patterns obtained by research respondents are presented in Table 5 below:

Table 5. R/C Ratio Value of Corn Farming with Partnership Pattern at PT. DNYA Perbawa Pradhikasa in Planting Season (MH 2021/2022)

No.	Description	Total Cost (Rp)	
		LLG	Ha
1.	Reception	25,630,000	27,659,500
2.	Total cost	15,534,033	16,763,345
3.	RC Ratio	1,650	1,650

Source: Processed Primary Data.

Based on the table above, it can be seen that the RC Ratio value of corn farming with a partnership pattern at PT. Djust Perbawa Pradhikasa in 2022 is 1,650/LLG or 1,650/Ha. This value means every Rp. 1,- invested capital will provide income of Rp. 1,650,-. Or in other words every Rp. 1,- invested capital will provide a profit of Rp. 0.650.

Constraints

In carrying out their farming activities, farmers often encounter problems and obstacles. Based on the results of interviews with respondent farmers, the obstacles faced by respondent farmers can be identified as presented in the following table:

Table 6. Obstacles Faced by Respondents in Corn Farming with Partnership Patterns at PT. DNYA Perbawa Pradhikasa in Planting Season (MH 2021/2022)

No.	Constraint Type	Number of Farmers (People)	Percentage (%)
1.	Fertilizer Prices	30	100.00
2.	Pests and Diseases	25	83.33
3.	Water Content Agreement	20	66.66
4.	Price Match	15	50.00
5.	Working Capital Adequacy	10	33.33

Source: Processed Primary Data.

CONCLUSION

The partnership between corn farmers in Pringgabaya District, East Lombok Regency, and PT. DNYA Perbawa Pradhikasa, characterized by a sub-contract model, demonstrates a mutually beneficial relationship. In this model, agreements on volume, price, quality, and timing are collectively established, ensuring a structured and reliable partnership. The success of this collaboration is evidenced by the RC Ratio value of 1.650, which signifies that for every Rp. 1 invested, there is a return of Rp. 1,650, highlighting the financial viability and profitability of this venture. However, the partnership faces challenges, including high fertilizer costs, pest and disease attacks, issues with water content agreements, price compatibility, and sufficient capital. To address these, it's recommended that PT. DNYA Perbawa Pradhikasa broadens the scope of working capital provided to include various farming-related needs and eliminates the coaching service fee charged to farmers. Moreover, a formal agreement on purchase prices in the memorandum of understanding is suggested to ensure price certainty for the farmers. On the farmers' side, efficient use of working capital to boost production and income, along with the formation of a collective savings group, could alleviate capital shortages and strengthen their financial resilience. This holistic approach aims to enhance the partnership's effectiveness, ensuring sustained growth and prosperity for both the company and the corn farmers.

REFERENCES

- Aldillah, Rizma, 2017. Strategi Pengembangan Agribisnis Jagung di Indonesia. Analisis Kebijakan Pertanian, Vol. 15 No. 1, Juni 2017. Jakarta.
- Aqil, M dan Bunyamin Z., 2015. Sistem Produksi Jagung di Provinsi Nusa Tenggara Barat. Prosiding Seminar Nasional Serelia Mataram.
- Azzakiry, MMH, I Wayan Suadnya, Dian Lestari Miharja, 2019. Implementasi Pola Kemitraan PT. Bisi Internasional, Tbk dengan Petani Penangkar Benih Hortikultura di Kecamatan Pringgabaya Kabupaten Lombok Tengah. Agroteksos Volume 29 Nomor 1 April 2019. Mataram.
- Dinas Pertanian Kabupaten Lombok Timur, 2022. Rekapitulasi Data Perkembangan Komoditi Tanaman Jagung di Kecamatan Pringgabaya Tahun 2017-2021. Selong.
- Herdianssyah, 2015. *Metodologi Penelitian Kualitatif*. Jakarta : Salemba Humanika.
- Herdiana, H., Muhsin, M., & Mappanganro, N. (2023). Iptek Pemberdayaan Masyarakat Disabilitas Melalui Usaha Kebun Anggur. *Lambung Inovasi: Jurnal Pengabdian kepada Masyarakat*, 8(1), 11-17.
- Hadayani, M.J., 2015. Kemitraan Usaha. Konsepsi dan Strategi. PT. Penebar Swadaya. Jakarta.
- Nazir, M., 2017. Metode Penelitian. Penerbit Ghalia Indonesia. Bogor.
- R. Neni Iriany, M. Yasin H.G., dan Andi Takdir M., 2007. Jagung : Teknik Produksi dan Pengembangan. Asal, sejarah, Evolusi dan Taksonomi Tanaman Jagung. Badan Penelitian dan Pengembangan Pertanian. Pusat Penelitian dan Pengembangan Tanaman Pangan. Jakarta.
- Soekartawi, 2006. Petani Jagung NTB Hasilkan Jagung rendah Aflatoksin. Internet. Diakses dari : <https://tabloidsinartani.com/detail/indeks/pangan/13945-Petani-NTB-Hasilkan-Jagung-Rendah-Aflatoksin>.
- Sumardjo, Jaka Sulaksana dan Wahyu Aris Darmono. 2004. Teori dan Praktek Kemitraan Agribisnis. Penebar Swadaya. Depok.
- Zulfiana, I., Muhsin, M., & Mappanganro, N. (2023). Perbandingan Pendapatan Usahatani Kangkung Varietas Nona Dengan Usahatani Kangkung Varietas Aini Di Kecamatan Narmada Kabupaten Lombok Barat. *Teknosains: Media Informasi Sains Dan Teknologi*, 17(1), 60-66.