

## **Price Fluctuations of Fresh Fruit Bunches of Oil Palm at the Loading Ramp in Janju Village, Tanah Grogot Subdistrict (Case Study Loading Ramp of Alam Tuah)**

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### **Abstract**

*The price of Fresh Fruit Bunches (FFB) of oil palm is the price given to farmers who sell their FFB to Palm Oil Processing Plants (POPP), middlemen, and loading ramps. Alam Tuah Loading Ramp is one of the marketing entities similar to middlemen. Alam Tuah Loading Ramp sets the price of oil palm FFB, and there is a phenomenon of price fluctuations. This study aims to address the phenomenon of price fluctuations at Alam Tuah Loading Ramp, specifically to determine the conformity of the prevailing FFB prices with those set by the government, the extent of price fluctuations, and the factors influencing the price determination of FFB at Alam Tuah Loading Ramp. The study was conducted at Alam Tuah Loading Ramp, Janju Tanah Grogot Village Subdistrict, from January to March 2024. This research is a qualitative descriptive study. Data and information were collected using questionnaires and interviews. The data were analyzed using coefficient of variation (CV) analysis to determine the extent of price fluctuations. The study reveals that the price of oil palm FFB at Alam Tuah Loading Ramp does not align with the government-set price and is lower than the government-determined price. The analysis results show that the price fluctuation of FFB at Alam Tuah Loading Ramp reached 35% in 2022, 11% in 2023, and 27% over the period from 2022 to 2023. There was a higher fluctuation in 2022 compared to 2023 at Alam Tuah Loading Ramp. The price of oil palm FFB at Alam Tuah Loading Ramp is determined based on the price of FFB at POPP CBSS, operational costs, and profit margins.*

**Keyword: Fluctuations, FFB Price, Loading Ramp, Oil Palm.**

## INTRODUCTION

Indonesia is a country that has the advantage of abundant resources, a tropical climate and throughout the year has a fairly even rainfall. This advantage is supported by Indonesia's geographical location, which is generally located in the equatorial region (Purwadi et al. 2018). (Purwadi et al. 2018). The wet climate in the tropics and lowlands along the equator is a microclimate condition needed by oil palm plants (Pahan 2012). (Pahan 2012).

One of Indonesia's leading commodities in the plantation sector is palm oil with vegetable oil products that have many advantages. These vegetable oils are crude palm oil, namely Crude Palm Oil (CPO) and palm kernel oil, namely Palm Kernal Oil (PKO). Palm oil has clearly become the locomotive of rural development, absorbing the most labor, driving Gross Domestic Product (GDP) growth and reducing poverty in Indonesia. Economically, it has brought Indonesian oil palm farmers into the middle class economic society. (PASPI Research Team 2018).

Price fluctuations in the palm oil commodity affect the price of CPO which then affects the price of Fresh Fruit Bunches (FFB). Fluctuations in FFB and CPO prices experience high fluctuations during the rainy season and dry season as well as policies and unilateral price determination by distributors or middlemen. (Bahari 2014).

East Kalimantan is an area with adequate land availability and good agro-climatic conditions in supporting the development of the plantation sector, especially in oil palm crops. (kaltimprov.go.id 2016). This condition is proven by the area of oil palm plantations in East Kalimantan in 2020 reaching 1,228,238 ha. The area of oil palm plantations in East Kutai is the largest at 459,593 ha and Balikpapan City has the smallest area at 36 ha. (Badan Pusat Statistik Provinsi Kalimantan, n.d.).

Paser Regency is an area with an oil palm plantation area of 183,575 ha. In 2020 Paser Regency has 17 palm oil FFB processing factories with a FFB processing capacity of 875 tons per hour-1 and used 823.93 tons per hour.-1 (East Kalimantan Provincial Plantation Office 2020).

Loading Ramp in determining prices is not directly influenced by government policy. Loading Ramp pricing is not influenced by government policy, but by the behavior of collectors in determining prices. Collectors set prices based on transportation costs, workers' wages, FFB quality, the location of the Loading Ramp from the mill, operational costs, and the profit the collector wants to make. (Hasriani, Romadhoni, and Mappatempo 2021).



Palm oil mills (PPKS) have special standards for accepting FFB from smallholders, so smallholders who are not partnered and do not have contracts and access will find it difficult to sell their crops to palm oil mills. In general, oil palm smallholders sell their harvest to Loading Ramp because the smallholders can get immediate payment in cash instead of having to wait if they sell directly to the mills and do not need special standards.

Alam Tuah Loading Ramp is one of the Loading Ramps in Tanah Grogot District in Paser Regency. The location of Alam Tuah Loading Ramp is precisely on Jl. Pelopor, Janju Village. Alam Tuah Loading Ramp receives or buys FFB from smallholders who are not partners with PPKS and the FFB received is ripe fruit. FFB that has been purchased will be sold to PPKS which is not far from the Alam Tuah Loading Ramp location. The price at Alam Tuah Loading Ramp tends to be lower than the price of FFB at PPKS. The price of FFB continues to change or fluctuate within a month, a week and even a day depending on the price offered by PPKS and the decisions made by the Loading Ramp business owner. There are 3 types of work activities that exist, namely, transport drivers, loaders and admin scales.

Based on the problems that occur, the researcher is interested in conducting research in the form of a thesis with the title "**Fluctuations in the Price of Fresh Palm Fruit Bunches at Loading Ramp Janju Village, Tanah Grogot District (Case Study of Alam Tuah Loading Ramp)**".

## METHOD

### Time and place of research

The research was conducted in January 2024 at Alam Tuah Loading Ramp. The research location is in Janju Village, Tanah Grogot District, Paser Regency, East Kalimantan Province.

### Data Collection Method

This research uses a case study approach to focus research on the phenomenon of fluctuations in the price of oil palm FFB at Alam Tuah Loading Ramp. The research data uses primary and secondary data and information. Data in the form of descriptions, explanations or direct answers about statements made by individuals with the first theory. the primary data source in this study is the owner of the Alam Tuah Loading Ramp business, in Janju Village, Tanah Grogot District. Primary data collection is carried out by field works research, namely by conducting observations and interviews with the Loading Ramp business manager using structured question tools. Secondary data was collected through library research from the Plantation Office, Ministry of Agriculture, Ministry of Trade, Central Bureau of Statistics, Alam Tuah Loading Ramp business documents and others. Time series data is the type of data to be



used in this research. The seasonal data pattern in this study focuses on looking at the value in monthly units of FFB prices from the Alam Tuah Loading Ramp price document.

## Sampling Method

The sampling method in this study used the Purposive Sampling method. The Purposive Sampling method was used in this study because the sampling was based on the consideration that the desired information was in accordance with the objectives. In this study, researchers wanted to find data that could support and represent research on fluctuations in the price of oil palm FFB and factors in determining the price of FFB at the Loading ramp, so the research sample was the owner of the Alam Tuah Loading Ramp business. The sample was 2 respondents, namely the business owner and the Alam Tuah Loading ramp business admin as informants.

## Data Analysis Method

### Fluctuation of FFB Price *Loading Ramp Alam Tuah*

The method of analyzing FFB price fluctuations at the Alam Tuan Loading Ramp uses descriptive analysis. Descriptive analysis aims to describe the phenomenon of FFB price fluctuations that occur at the Loading Ramp using the coefficient of variation (CV). The coefficient of variation (CV) is used to describe price fluctuations by comparing the standard deviation ( $s$ ) with the average value ( $\bar{x}$ ) and multiplied by one hundred which is expressed in percent (%). The results of data processing and analysis are described descriptively using graphs and tabulations to identify the magnitude of the CV value in the data. The greater the CV value, the higher the fluctuation and the lower the value, the lower the fluctuation. The following is the formula for calculating the coefficient of variation:

$$CV = \frac{s}{\bar{x}} \times 100\%$$

CV = Coefficient of Variation

$s$  = Standard Deviation

$\bar{x}$  = Average Value

$$s = \frac{\sqrt{\sum x_i - \bar{x}}}{n - 1}$$

$x$  = Data Value

$n$  = Amount of Data

The price stability indicator based on the Ministry of Trade's Strategic Plan 2009-2014 (2010) sets the target of reducing the coefficient of variation. The reduction target becomes the benchmark for price stability of a commodity. A price variation coefficient of 5-9% is the range



of price stability of a commodity, so that the CV value of more than 9% is said to be less stable. (Ministry of Trade 2014).

## **Difference between Alam Tuah Ramp Loading FFB Price and Government FFB Price**

The analysis method to determine the difference between the price of FFB Loading Ramp Alam Tuah and FFB set by the Government uses descriptive analysis with the analysis of the coefficient of variation (CV). Alam Tuah Loading Ramp FFB price data and Government FFB prices are described in graphs and tabulations. Government FFB price data that has been described in the form of graphs and tabulations is then compared so that differences or differences can be found from the two prices. The results of the comparison are interpreted to draw conclusions regarding the difference between the Alam Tuah Loading Ramp FFB price and the Government FFB price.

## **Pricing Factor**

Analysis of the pricing factors of Loading Ramp oil palm FFB using descriptive analysis. This descriptive analysis aims to explain how business owners set prices through the factors of PPKS FFB price benchmarks, operational costs and profits. Using primary data obtained by conducting interviews with business owners related to PPKS FFB price benchmarks, operational costs and profits.

## **RESULTS AND DISCUSSION**

### **Fresh Fruit Bunch (FFB) Prices**

FFB prices are significantly influenced by CPO prices while the amount of oil palm production, mills and CPO export volume do not have a significant influence on changes in FFB prices. (Mulyani 2021). FFB prices are also influenced by market forces and government policies in the formation process so that FFB prices tend to experience price fluctuations.



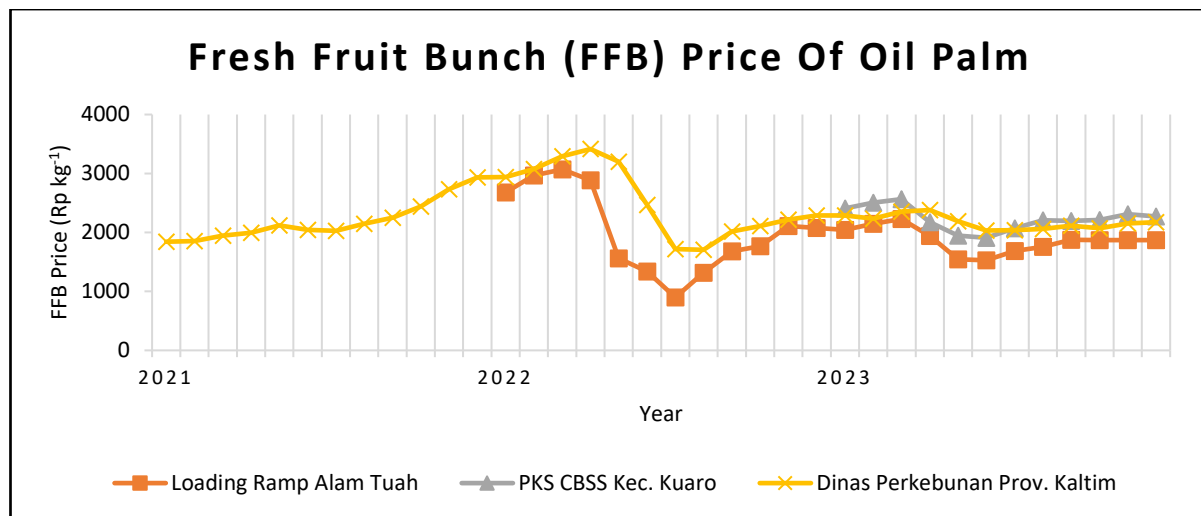


Figure 1. Price Chart of Fresh Fruit Bunches of Oil Palm at Alam Tuah Loading Ramp, PPKS CBSS Kec. Kuaro and Provincial Plantation Office. East Kalimantan

In the graph above, there are 3 price levels, the first is the price set by the East Kalimantan Plantation Office, the second is the price at the palm oil processing plant, namely PPKS Cahaya Bintang Sawit Sejati (CBSS) Kuaro District and the third is the price at Loading ramp Alam Tuah. In 2022 there was a high price spike, this occurred in the April period. In that period the price of FFB from the Plantation Office reached a price of IDR 3,414 kg<sup>-1</sup> and the price of FFB from Alam Tuah Loading Ramp reached IDR 2,883 kg<sup>-1</sup> with a difference between the two FFB prices of IDR 531. However, after that there was a drastic price drop to Rp 1,705 kg<sup>-1</sup> in the August period by the East Kalimantan Plantation Office. At the Loading Ramp the price drop reached Rp 898 kg<sup>-1</sup> in the July period. The difference between the two FFB prices amounted to Rp 807.

At the beginning of 2023, precisely in the March and April periods, there were the highest FFB prices in 2023 by the three agencies, companies and Loading Ramp. The price of FFB from the Plantation Office in the April period reached Rp 2,354 kg<sup>-1</sup>, the price of PPKS CBSS FFB in the March period reached Rp 2,564 kg<sup>-1</sup> and the price of Alam Tuah Loading Ramp reached Rp 2,231 kg<sup>-1</sup>. In the following period, prices slowly began to fall, which simultaneously occurred in the June period. At the Plantation Office, the FFB price fell to IDR 2,034 kg<sup>-1</sup>, PPKS CBSS fell to IDR 1,909 kg<sup>-1</sup> and Alam Tuah Loading Ramp fell to IDR 1,527 kg<sup>-1</sup>. After this decline, the FFB price slowly began to increase and stabilize. Throughout 2021 to 2023 the lowest price was in 2022 which occurred in the July period. In the July period of 2022, the price of FFB Loading ramp Alam Tuah was IDR 898 kg<sup>-1</sup> and the price of FFB from the East Kalimantan Plantation Office was IDR 1,720 kg<sup>-1</sup>. The magnitude of the difference contained in the lowest price for

the July period in 2022 amounted to IDR 821 between the East Kalimantan Plantation Office price and the Alam Tuah Loading ramp price.

### FFB Price Fluctuation Value

FFB price fluctuations are described using Coefficient of Variation (CoV) analysis. The Coefficient of Variation describes price fluctuations within a certain period of time (deviation from the average) with the aim of knowing the price stability of a commodity. The greater the CV value, the greater the conclusion that prices are unstable or that price fluctuations are relatively large. Prices in a city/province can be said to be stable if the coefficient of variation (CV) is in the range of 5-9%. (Ministry of Trade 2014). The coefficient of variation of FFB prices from the East Kalimantan Plantation Office, PPKS CBSS Kec. Kuaro and Loading Ramp Alam Tuah Kec. Tanah Grogot are presented in several tables below.

### East Kalimantan Provincial Plantation Service

FFB prices at the East Kalimantan Provincial Plantation Office are available from 2021 to 2023. Fluctuations in FFB prices at the East Kalimantan Provincial Plantation Office are described using data analysis of the coefficient of variation (CV) to determine the magnitude of fluctuations that occurred from 2021 to 2023. The coefficient of variation can be seen in table 1.

**Table 1. Description of Statistical Analysis Data for Coefficient of Variation, East Kalimantan Provincial Plantation Office, 2021-2023**

| Year      | Description of Statistical Data for the East Kalimantan Provincial Plantation Office, 2021-2023 |          |          |          |                |                              |
|-----------|-------------------------------------------------------------------------------------------------|----------|----------|----------|----------------|------------------------------|
|           | N                                                                                               | Minimum  | Maximum  | Mean     | Std. Deviation | coefficient of variation (%) |
| 2021      | 12                                                                                              | 1.845,17 | 2.932,06 | 2.194,11 | 343,20         | 15,64                        |
| 2022      | 12                                                                                              | 1.705,49 | 3.414,82 | 2.537,10 | 619,52         | 24,42                        |
| 2023      | 12                                                                                              | 2.034,84 | 2.380,14 | 2.174,04 | 120,27         | 5,53                         |
| 2021-2023 | 36                                                                                              | 1.705,49 | 3.414,81 | 2.301,74 | 436,74         | 18.97                        |

Source: Primary Data (processed), 2024

In Table 1 above, it can be seen that the coefficient of variation (CV) of the FFB price of the Provincial Plantation Office. Kaltim in 2021 reached a range of 15.64%. The price CV value

in 2022 reached the highest value of 24.42 and the lowest price CV occurred in 2023 with a range of 5.53%. In 2021 the CV value is higher than the range of 5-9% which is a reference that prices in a city can be said to be stable, so it can be concluded that in 2021 there were unstable fluctuations. In 2022 the CV value is higher than what happened in 2021, so it can be concluded that the fluctuations that occurred in 2022 were more unstable than in 2021. In 2023 the price fluctuations that occurred can be said to be stable because CV is in the range of 5-9%. From 2021 to 2023 the CV value of FFB prices at the Plantation Office of Prov. Kaltim is in the range of 18.97% on average. The CV value is greater than the range of CV values of 5-9%, so it can be concluded that throughout 2021 to 2023 the price fluctuations that occurred were unstable.

#### PPKS CBSS Kuaro Subdistrict

FFB price data at PPKS CBSS Kuaro District is available in 2023. Fluctuations in FFB prices at PPKS CBSS Kuaro District are described using the coefficient of variation (CV) data analysis to determine the magnitude of fluctuations that occurred in 2023. The coefficient of variation of PPKS CBSS Kuaro District in 2023 reached a range of 8.98%. The CV value is higher than the CV value that occurred in the same year at the Provincial Plantation Office, East Kalimantan. The CV value remains in a stable condition even though the value is greater than the CV value of the price at the Plantation Office of Prov. Kaltim, which is 8.98%, is still below 9%, which is the highest value of the CV range that is standardized by the Trade Office.

#### Alam Tuah Loading Ramp, Tanah Grogot Subdistrict

The price of FFB at Loadig Ramp Alam Tuah in Tanah Grogot sub-district is available from 2022 to 2023. Fluctuations in FFB prices at Loadig Ramp Alam Tuah, Tanah Grogot sub-district are described using the coefficient of Variation (CV) data analysis which aims to determine the amount of fluctuation that occurs from 2022 to 2023. The coefficient of variation can be seen in table 2.

**Table 2. Description of Statistical Data Analysis of Coefficient of Variation for Loading Ramp Alam Tuah, Tanah Grogot District 2022-2023**

| Year | Coefficient of Variation for Loading Ramp Alam Tuah, Tanah Grogot District 2022-2023 |         |          |          |                |                              |
|------|--------------------------------------------------------------------------------------|---------|----------|----------|----------------|------------------------------|
|      | N                                                                                    | Minimum | Maximum  | Mean     | Std. Deviation | coefficient of variation (%) |
| 2022 | 12                                                                                   | 898,86  | 3.069,64 | 2.029,16 | 725,78         | 35,77                        |

|           |    |          |          |          |        |       |
|-----------|----|----------|----------|----------|--------|-------|
| 2023      | 12 | 1.527,86 | 2.231,07 | 1.863,08 | 215,81 | 11,58 |
| 2022-2023 | 24 | 898,86   | 3.069,64 | 1.946,12 | 530,47 | 27,26 |

Source: Primary Data (processed), 2024

In Table 2 it can be seen that the value of the Coefficient of Variation (CV) of the price of FFB Loading Ramp Alam Tuah in 2022 is in the range of 35.77%, this value is higher than the value in the same year at the East Kalimantan Provincial Plantation Office. The CV value of FFB prices in 2023 is in the range of 11.58%, this value is also higher when compared to the CV value of FFB prices in the same year at the East Kalimantan Provincial Plantation Office and at PPKS CBSS Kuaro District. The CV value is greater when compared to the range of CV values of prices that can be said to be stable which is the standard of the Trade Office, so it can be concluded that in 2022 and 2023 price fluctuations are more unstable. Throughout 2022 to 2023 the CV value of the price of oil palm FFB at Loading Ramp Alam Tuah was in the range of 27.26%, so it can be concluded that throughout 2022 to 2023 the price fluctuations that occurred were unstable.

### FFB Price Coefficient of Variation in 2023

FFB prices at agencies and palm oil businesses each have data available in 2023. Fluctuations in FFB prices at agencies and palm oil businesses are described using the coefficient of variation (CV) data analysis which aims to determine the amount of fluctuation that occurs from 2022 to 2023. The coefficient of variation can be seen in Table 3.

**Table 3. Description of Statistical Data for Coefficient of Variation in TBS Prices for the Year 2023**

| Lembaga       | Description of Statistical Data for Coefficient of Variation in TBS Prices for the Year 2023 |          |          |          |                |                              |
|---------------|----------------------------------------------------------------------------------------------|----------|----------|----------|----------------|------------------------------|
|               | N                                                                                            | Minimum  | Maximum  | Mean     | Std. Deviation | Coefficient of Variation (%) |
| Disbun Kaltim | 12                                                                                           | 2.034,84 | 2.380,14 | 2.174,04 | 120,27         | 5,53                         |
| PPKS CBSS     | 12                                                                                           | 1.909,63 | 2.564,58 | 2.231,47 | 200,38         | 8,98                         |
| LR Alam Tuah  | 12                                                                                           | 1.527,86 | 2.231,07 | 1.863,08 | 215,81         | 11,58                        |

Source: Primary Data (processed), 2024



In table 3 above, it can be seen that the East Kalimantan Provincial Plantation Office has a smaller CV value compared to PPKS CBSS Kuaro District and Alam Tuah Loading Ramp. The CV value of the FFB price of the East Kalimantan Provincial Plantation Office is 5.58%. The CV value of the FFB price of the East Kalimantan Provincial Plantation Office when compared to PPKS CBSS Kuaro District and Alam Tuah Loading Ramp has a large enough difference. The difference is 3.45% with PPKS CBSS Kuaro sub-district and when with Loading Ramp Alam Tuah has a difference of 6.05%. The CV value of the Alam Tuah Loading Ramp FFB price is the largest value when compared to the CV value of FFB prices at the East Kalimantan Provincial Plantation Office and PPKS CBSS Kuaro District. The CV value of FFB prices at Alam Tuah Loading Ramp is 11.58% and the CV value is greater than the Ministry of Trade's strategic plan, so it can be concluded that fluctuations in FFB prices at Alam Tuah Loading Ramp are unstable. Fluctuations in FFB prices at the East Kalimantan Provincial Plantation Office and PPKS CBSS Kuaro District are stable. The CV value of FFB prices at the East Kalimantan Provincial Plantation Office and PPKS CBSS Kuaro District is 5.53% and 8.98% so it can be concluded that the fluctuations that occur are stable.

## Pricing Factors

### PPKS FFB Benchmark Price

PPKS FFB price is the price available at PPKS which is the center of decision making to determine the price to be applied to the Loading Ramp FFB price. Alam Tuah Loading Ramp has several places to sell FFB that have been purchased from smallholders and the main choice for selling FFB is PPKS Cahaya Bintang Sawit Sejati (CBSS) Kuaro District.

The price of TBS PPKS CBSS Kuaro District is the price used as the benchmark price for Loading Ramp Alam Tuah. Information about the price of PPKS CBSS Kuaro Sub-district FFB is obtained through the Whatsapp group and the FFB price information is informed at night. The price informed at night will apply the next day. Smallholders who sell FFB to the Loading Ramp will first contact the employee at the Loading ramp to ask about the price and after that the smallholders will sell their FFB. Some smallholders do not contact the employees working at the Loading Ramp to get information about the price of FFB and prefer to sell their harvest directly to the Loading Ramp.

## Operational Costs

The operational costs of the Alam Tuah Loading Ramp business consist of labor, transportation, fuel, and equipment costs. The labor of Loading Ramp Alam Tuah includes



drivers, loaders and cashiers. The transportation used in this business is dump trucks and motorbikes. The fuel included in the cost component is diesel used as fuel for dump trucks and gasoline used as fuel for motorbikes along with oil for each vehicle. The equipment used in supporting this business includes tojok, machete, shovel, artco, calculator, stationery, and weighing monitor. Other costs incurred by Loading Ramp Alam Tuah are land rent, PDAM, electricity tokens, stationery, fruit delivery letters (SPB), and employee consumption. Some of these costs are not always incurred every month. The operational cost components of Alam Tuah Loading Ramp are outlined in Table 4.

**Table 4. Components of Operational Costs and Profit Earned by Loading Ramp Alam Tuah**

| No                      | Components of Costs for Loading Ramp Alam Tuah<br>Tanah Grogot District |                            |                |
|-------------------------|-------------------------------------------------------------------------|----------------------------|----------------|
|                         | Operational Costs                                                       | Amount Rp kg <sup>-1</sup> | Percentage (%) |
| 1                       | Driver's Salary                                                         | 12,25                      | 7              |
| 2                       | Loader's Salary                                                         | 10,00                      | 5              |
| 3                       | Cashier's Salary                                                        | 8,21                       | 4              |
| 4                       | Transportation Costs to PPKS                                            | 90,00                      | 48             |
| 5                       | Fuel Costs for Transportation                                           | 39,46                      | 21             |
| 6                       | Unloading Costs                                                         | 10,00                      | 5              |
| 7                       | Travel Costs                                                            | 3,62                       | 2              |
| 8                       | Equipment Costs                                                         | 2,48                       | 1              |
| 9                       | Other Costs                                                             | 10,86                      | 6              |
| Total Operational Costs |                                                                         | 186,87                     | 100            |

Source: Primary Data (processed), 2024

Based on Table 4 above, it can be seen that the operational cost of transportation to PPKS is the largest and followed by transportation fuel afterwards. Transportation costs to PPKS amounted to Rp 90 kg<sup>-1</sup> with a percentage of 48% of all operational costs. The cost of transportation fuel is 21% of all operational costs which has a value of Rp 39.46 kg<sup>-1</sup> for every kilogram of palm oil sold. The smallest components of operating costs are equipment costs and travel costs. Equipment costs amounted to IDR 2.48 kg<sup>-1</sup> with a percentage of 1% of all operational costs. Travel costs are the smallest cost after equipment costs. Travel costs amounted to IDR 3.62 kg<sup>-1</sup> with a percentage of 2% of all operational cost components. The total operational costs incurred by the Alam Tuah Loading Ramp were IDR 186.87 kg<sup>-1</sup>. The

operational costs incurred will then be deducted from the difference in FFB prices at Alam Tuah Loading Ramp with PPKS which is the benchmark for setting FFB prices.

### Advantages

The Alam Tuah Loading ramp business profit is the difference between the PPKS FFB price and operational costs. The benchmark PPKS FFB price is PPKS Cahaya Bintang Sawit Sejati (CBSS) Kuaro District with a fixed difference that has been decided by the business owner through several considerations, so that a value of Rp 300 kg was found-1 . The fixed difference continues to be used even though there is a spike or drop in FFB prices at PPKS and remains at the same value. The price difference is then deducted from the operational costs of the business so that the profit that will be received by the Alam Tuah Loading Ramp business can be found. The operational cost components of the Alam Tuah Loading Ramp business can be seen in Table 5.

**Table 5. Description of Profit for Loading Ramp Alam Tuah**

| Description             | Profit for Loading Ramp Alam Tuah |
|-------------------------|-----------------------------------|
|                         | Rp kg <sup>-1</sup>               |
| Price Difference of TBS | 300,00                            |
| Operational Costs       | 186,87                            |
| Profit                  | 113,13                            |

Source: Primary Data (processed), 2024

Based on the description in table 5 above, it can be seen that the profit received by business owners is IDR 113.13 kg-1 . The profit is received every time the business owner sells FFB to PPKS. The profit received by business owners is smaller when compared to the operational costs incurred by business owners to run their businesses. The difference between profit and operational costs amounted to Rp 73.74.

### Fresh Fruit Bunch (FFB) Prices

East Kalimantan's economy was initially based on non-renewable resources, including timber and mining, oil and gas. The Logging Era occurred from 1970 to 1990 which left a lot of damage to the land and the contribution of mining, oil and gas in the GRDP economy which was decreasing from year to year (PASPI. 2017).



Since 2000, East Kalimantan has experienced a transformation from a non-renewable natural resource base to renewable or sustainable natural resources with oil palm plantations covering about 4 percent of East Kalimantan's land area (PASPI. 2017). The area of oil palm plantations continues to increase from 23 thousand hectares in 1990 to 1.228 million hectares in 2020 with the main centers of oil palm plantations are in the districts of East Kutai, Kutai Kartanegara, Paser, West Kutai and Berau (Badan Pusat Statistik Provinsi Kalimantan, 2018).

The share of smallholder palm oil increased to 30 percent in 2016 with the export value of palm oil and its derivatives to USD 1.07 billion. The share of palm oil exports continues to increase and gradually replaces East Kalimantan's oil and gas exports. This positive growth encourages the development of new growth centers such as sub-district cities in palm oil center districts. The growth of each sub-district city drives SMEs in the fields of trade, services, agriculture and others. Through corporate social responsibility (CSR) programs of oil palm plantation companies such as education and training, construction of facilities and infrastructure and others, the community can be empowered to become good human resources (PASPI. 2017).

The increase in the area of oil palm plantations in East Kalimantan can have an influence on FFB production. All forms of sacrifices made to plants with the aim of maintaining growth and producing well are production factors. Factors that affect production are grouped into 2 namely biological factors and socio-economic factors (Soekartawi, 2003).

FFB production in East Kalimantan in 2020 was able to reach 2,144,089 tons year-1 with FFB production in Paser Regency as much as 652,351 tons year-1 (Badan Pusat Statistik, 2024). Paser Regency's FFB production was able to contribute as much as 30% of all FFB production in East Kalimantan and became the second district with the most production after East Kutai Regency. Loading Ramp Alam Tuah in 2023 was able to receive FFB from smallholder plantations as much as 3,002 tons year-1, when compared to the total FFB production of Paser Regency in 2020 Loading Ramp Alam Tuah was able to contribute 0.4%.

The FFB price is closely related to the CPO price because the FFB price refers to the CPO price. The price of FFB will fluctuate if there is a high enough demand from consumers for CPO so that the price of FFB will increase and vice versa. Pricing of FFB is done by the company and the government. Price setting by the government plays a role in providing protection to smallholders. The price of FFB received by smallholders is a price dominated by companies, so the price set by the government will be different from the prices found in companies and middlemen. based on the results of previous research, international CPO prices have a positive and significant effect on the development of oil palm FFB prices in Aceh Province and together





with land area, total production and CPO export volume also have a significant effect on the development of FFB prices (Yulianti, 2023). Based on the results of previous research, what has a significant effect on the price of FFB in Jambi Province is the price of local CPO oil, while the amount of FFB production, the number of factories and export volume have no significant effect on FFB prices in Jambi Province (Mulyani, 2021).

The results of this study illustrate that the price of FFB Loading Ramp Alam Tuah with the East Kalimantan Provincial Plantation Office and PPKS Cahaya Bintang Sawit Sejati (CBSS) Kuaro District have different prices. The price of FFB at PPKS CBSS had reached a higher price than the price found in the Plantation Office. The period when the PPKS price was higher than the Plantation Office occurred twice in 2023, namely in the period January to March and August to December. The Alam Tuah Loading Ramp FFB price is always a smaller price compared to the prices in the Plantation Office and PPKS CBSS. The highest difference between the Alam Tuah Loading Ramp FFB price and the Plantation Office occurred in the May 2022 period with a difference of IDR 1,640 kg-1 and the lowest occurred in the February 2023 period with a difference of IDR 90 kg-1. The highest difference between the price of TBS Loading Ramp Alam Tuah and PPKS CBSS occurred in the August 2023 period with a difference of IDR 452 kg-1 and the lowest difference occurred in the April 2023 period with a difference of IDR 238 kg-1.

## Fluctuation of Fresh Fruit Bunch (FFB) Prices

Price fluctuations are the rise and fall of the price of a good and or service caused by unstable supply and demand. The lower the price of a good and or service, the greater the demand for that good and vice versa is the law of demand. The higher the price of goods and / or services, the higher the level of supply of goods and / or services will be high and vice versa is the law of supply.

The causes of price fluctuations are changes in the factors that drive the national economy. Some of the factors that cause price fluctuations include government policy, international trade, demand and supply, structural changes in the national economy, and expectations and speculation on future expectations. Some of the above factors can cause price fluctuations if changes occur (Yulianti, 2023). 33 29 38

Fluctuations in FFB prices occur due to some of the same factors as above, but more specifically the causes of fluctuations are no different from the factors that are the basis for setting FFB prices. FFB price setting is influenced by international CPO prices, demand for palm oil, total production, and government policies.





The results of this study describe the price fluctuations that occurred in Alam Tuah Loading Ramp from 2022 to 2023. This study also explains the price set by the government through the East Kalimantan Provincial Plantation Office and the prevailing price at PPKS CBSS. The price that applies at PPKS CBSS is the price that is the benchmark for Alam Tuah Loading Ramp to determine prices.

Fluctuations in FFB prices from each institution are described using the coefficient of variation (CV) analysis. Through the value of the CV analysis results, it can answer how fluctuations occur. The greater the CV value, the higher the fluctuation and the lower the value, the lower the fluctuation. The CV value will be compared with the price stability indicator based on the Ministry of Trade's Strategic Plan. The coefficient of price variation of 5-9% is the range of price stability of a commodity, so that the CV value of more than 9% is said to be less stable (Ministry of Trade. 2014).

Based on the results of the study, the coefficient of variation in the price of oil palm FFB at the East Kalimantan Provincial Plantation Office shows stable price fluctuations that occur in 2023 with a CV value of 5%, but in 2021 and 2022 price fluctuations that occur are unstable with CV values of 15% and 24%. Overall in 2021 to 2023 the price fluctuations that occurred in the FFB price at the Plantation Office were unstable with a CV value of 18% price fluctuation. Based on the research results, the coefficient of variation in the price of oil palm FFB at PPKS CBSS Kec. Kuaro shows stable price fluctuations in 2023 with a CV value of 8%.

The results showed that price fluctuations that occurred at Alam Tuah Loading Ramp were more volatile when compared to prices at the Provincial Plantation Office. Kaltim and PPKS CBSS. The fluctuation value from the CV analysis results shows that the fluctuations that occurred in 2022 reached 35% and in 2023 reached 11%. Based on the value of these fluctuations, it can be concluded that the fluctuations that occur are unstable and not in accordance with the Ministry of Trade's strategic plan. In 2022 to 2023 the price fluctuations that occurred at Loading Ramp Alam Tuah reached 27% based on the CV value of these price fluctuations it can be concluded that the price fluctuations that occurred were unstable.

The cause of price instability in 2022 is the influence of market law. In 2022, CPO export destination countries experienced a decrease in demand for CPO and other derivative products. This decline caused domestic CPO stocks to increase so that the supply of CPO to market demand decreased and resulted in a decline in CPO prices. The impact of the El Nino climate in 2022 also affected the production of oil palm plantations so that production decreased. (Palm Oil Plantation Fund Management Agency 2023). The market law and the climate impact of El



Nino resulted in large price fluctuations in CPO prices and then affected the FFB prices received by smallholders.

The results showed that in 2023 the fluctuations that occurred at the East Kalimantan Provincial Plantation Office and PPKS CBSS Kuaro District were smaller and more stable when compared to Loading Ramp Alam Tuah. The CV value of FFB prices at the East Kalimantan Provincial Plantation Office is 5.53% and PPKS CBSS is 8.89% where the CV value is in accordance with the Ministry of Trade's Strategic Plan for price stability, so that fluctuations that occur can be said to be stable in 2023.

Based on previous research, price fluctuations in rubber commodities have an impact on the economic sector of basic food trade, vegetables, and automotive (two-wheeled vehicles) which tend to fluctuate and unemployment is increasing (Raudah. 2018). Based on the results of the research, the unstable condition of FFB price fluctuations in Loading Ramp Alam Tuah can have an influence on the village economy and increase the number of unemployed.

## **Factors Affecting FFB Pricing at Alam Tuah Loading Ramp**

The price of oil palm FFB is formed from various factors that influence the formation of the price of oil palm FFB. Factors that influence the formation of these prices include CPO prices, CPO yields, government policies and market forces. Based on the results of previous research, the determination of the price of oil palm FFB at the Loading Ramp is influenced by several existing factors. Factors that influence the pricing of FFB at Loading Ramp include PPKS FFB prices, operational costs, and profits (Prastya, A., et al 2018).

PPKS FFB price is the price available at PPKS which is the center of decision making to determine the price to be applied to the Loading Ramp FFB price. Alam Tuah Loading Ramp has several places to sell FFB that have been purchased from smallholders and the main choice for selling FFB is PPKS Cahaya Bintang Sawit Sejati (CBSS) Kuaro District. The price of FFB from PPKS CBSS Kuaro District is the price used as the benchmark price for Loading Ramp Alam Tuah. Information about the price of PPKS CBSS Kuaro District FFB is obtained through the Whatsapp group and the FFB price information is informed at night. The price informed at night will apply the next day. Smallholders who sell FFB to the Loading Ramp will first contact the employee at the Loading ramp to ask about the price and after that the smallholders will sell their FFB. Some smallholders do not contact the employees working at the Loading Ramp to get information about the price of FFB and prefer to sell their harvest directly to the Loading Ramp.

Operating costs are the main business costs incurred in addition to the cost of goods sold. Business operating costs consist of selling costs, administrative and general costs. Costs



are all economic sacrifices made to produce goods and services. Expenses are the acquisition of assets consumed or services used in obtaining income. Expenses are grouped into expenses contained in the implementation of business activities (expenses) and losses (loss) (Syahlevy, D. 2018).

The costs incurred in running its operations, including employee salaries, administrative costs, maintenance, and other costs, are known as operating costs (Kasmir. 2016). Operating costs are divided into two parts: selling or distribution or marketing costs and general and administrative costs. Selling or distribution or marketing costs are costs directly related to operations that support the sale of products until consumers get them. General and administrative costs are costs related to office administrative affairs and general operations (Hery. 2018).

The operational costs of the Alam Tuah Loading Ramp business consist of labor, transportation, fuel, equipment and other costs. Other costs incurred by Loading Ramp Alam Tuah are land rent, PDAM, electricity tokens, stationery, fruit delivery letters (SPB), and employee consumption.

The Alam Tuah Loading ramp business profit is the difference between the PPKS FFB price and operational costs. The benchmark PPKS FFB price is PPKS Cahaya Bintang Sawit Sejati (CBSS) Kuaro District with a fixed difference that has been decided by the business owner through several considerations, so that a value of Rp 300 kg was found-1 . The fixed difference continues to be used even though there is a spike or drop in FFB prices at PPKS and remains at the same value. The price difference is then deducted from the operational costs of the business so that the profit that will be received by the Alam Tuah Loading Ramp business can be found. The profit received by the business owner is IDR 113.13 kg-1 . The profit is received every time the business owner sells FFB to PPKS. The profit received by the business owner is smaller when compared to the operational costs incurred by the business owner to run his business. The difference between profit and operational costs amounted to Rp 73.74.

Based on the results of the study, it can be concluded that the determination of the price of oil palm FFB at Loading Ramp Alam Tuah is influenced by the benchmark price of PPKS FFB, operational costs and profits. The benchmark price of PPKS FFB is the price of FFB taken from PPKS Cahaya Bintang Sawit Sejati (CBSS) Kuaro District. PPKS CBSS is the first choice for selling FFB owned by Loading Ramp Alam Tuah. Alam Tuah Loading Ramp sets the difference between the price of PPKS CBSS and Loading Ramp at Rp 300 kg-1 . The price difference is determined by the business owner and becomes a permanent price difference.



## CONCLUSION

Based on the research and discussion of the fluctuations in the price of fresh fruit bunches (FFB) of oil palm at the Loading Ramp of Desa Janju, Tanah Grogot District (Case Study of Alam Buah Loading Ramp), the following conclusions can be drawn:

1. The FFB price at Alam Buah Loading Ramp does not align with the price set by the government through the East Kalimantan Plantation Service. The highest discrepancy between the Alam Buah Loading Ramp FFB price and the Plantation Service price occurred in May 2022 with a difference of Rp 1,640 per kg, while the lowest was in February 2023 with a difference of Rp 90 per kg. The FFB price at Alam Buah Loading Ramp is consistently lower than the price set by the government through the Plantation Service.
2. The fluctuation in FFB prices at Alam Buah Loading Ramp reached 35% in 2022 and 11% in 2023. Over the period from 2022 to 2023, the price fluctuation averaged 27%. This coefficient of variation (CV) is higher compared to the strategic plan of the Ministry of Trade, indicating that the fluctuations are unstable. The fluctuations at Alam Buah Loading Ramp are greater than those at the Plantation Service and PPKS CBSS.
3. The factors underlying the determination of FFB prices at Alam Buah Loading Ramp include the benchmark FFB price at PPKS, operational costs, and profit.

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