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ANALYSIS OF THE USE OF PALM OIL SLIPPING IN INCREASING TALUN KONDOT II VILLAGE COMMUNITIES INCOME

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ABSTRACT:

The purpose of this study is to determine the level of income derived from palm oil frond waste as it is known that agriculture is part of the national economy which has an important role because this sector can absorb the greatest human resources and utilize resources efficiently and is a source of income for the majority of the Indonesian population. In general, one example is that Indonesia is a developing country. Talun Kondot II villagers do not utilize palm oil waste, so burning palm fronds is one way to deal with it. Present creative industries change what is considered waste into products of economic value. Economic development is the driving force for obtaining data or information needed for this research. In interviews conducted in several Talun Kondot II villages, it was concluded that the development strategy discussed in the research is to generate economic value by processing palm frond waste processed in several processes and then sold to the one receiving the essay and will be sent to various.

Keywords: Industry, Frond Waste, Income.

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INTRODUCTION

Agriculture is very important for the community's economy and plays an important role because this field can handle the most human resources and use human resources efficiently and is a form of income for the majority of the population in Indonesia in general and one of the models in developing countries. Indonesian. Palm oil, also known as *Elaeis*, is an important industrial crop used to make cooking oil, industrial oil, and biodiesel fuel. The height of the oil palm plant can reach 24 meters. Lots of bunches of flowers and fruits on many branches. The fruits are small and reddish when ripe. Oil can be found in the skin and flesh of the fruit. Candles, soaps and cooking oils are the possible uses of oils. The remaining feed is used as animal feed, particularly chicken feed. Carbon and fuel are both stored in the shell.

Palm fronds are one of the solid waste products from palm oil processing that has not been widely utilized. Each palm tree produces 22 trunks yearly, weighing 2.2 kilograms and producing 6.3 tons of biomass per hectare of fronds. Palm fronds are often used as animal feed ingredients. In oil palm leaves, cellulose, hemicellulose, and lignin comprise 31.7%, 33.9%, and 17.4% of chemical compounds. (Pope Jr et al., 1999) claim that organic matter containing lignin, hemicellulose, and cellulose can be used as raw materials for producing activated carbon due to its superior ability to absorb waste in liquid form. In addition, most of the components of lignin and cellulose are carbon elements that can generally be used as carbon. With a specific gravity of 1.16 g/cm³, fronds are materials with a higher cellulose content than wood. The resulting activated carbon will have a greater absorption capacity with

a higher density of raw materials, making it suitable for use as activated carbon.

Table 1. Nutritional Content Found in Palm Fronds

Nutritional Substances				
Heavy	Protein	Fat	Fiber	Gross
Dry	Rough	Rough	Rough	Energy
(%)	(%)	(%)	(%)	(K.Cal/g)
80,56	5,8	3,8	9,98	1,54

Source : Labolatorium Loka Goat Pod Sei Putih, 2014

Table 2. Chemical Compound Content of Fiber Preparation in Palm Fronds

Chemical Elements	Palm Fronds
Cellulose	33,7
Hemicellulose	35,9
Lignin	17,4
Silica	2,6
Abu	3,3
Nitrogen	2,38
Potassium	1,316
Calcium	2,568
Magnesium	0,487
Pos	0,157
Sulphur	0,40
Chloride	0,70

Source: (Ginting, 2015)

The main crop in the industrial economy in Indonesia is oil palm (*Elaeis guineensis* Jacq). The growth of Indonesia's palm oil industry and the clear prospects of the world's vegetable oil commodities, which are old plantations, aim to maximize production yields and minimize production

losses. Six tons of waste from palm fronds are generated annually in 1 ha (Anwar et al., 2011). If with a large number of fronds, special handling is not carried out, and it will be a problem of garbage that takes up space and costs.

In areas with much rain, oil palms need between 1500 and 4000 millimetres yearly to produce more fruit. 24-28 °C is the ideal air temperature for oil palm growth. Therefore, oil palm thrives at altitudes between 1 and 500 m/dpl. To help fertilize and manage palm trees, the ideal humidity is between 80 to 90 per cent and wind speeds of 5 to 6 kilometres per hour. For palm oil, the ideal soil pH is between 5.0 and 5.5. Oil palm needs loose, fertile, even, well-drained, irrigated soil. It has a solum layer 80 centimetres deep and no rock layer.

The information business sector of the economy earns little. Most Indonesians live in poverty, which is not a new issue. Work in the agricultural sector determines the fate of approximately half of the national labour force. National development is about making people's lives better. The quality of life of a Kuga is reflected in the level of well-being of the people. Due to the improved quality of life, families with a higher level of well-being are ultimately able to improve their well-being by processing palm frond waste into products that have a selling value and can be optimized. Palm frond waste has been widely used in various research fields as the main ingredient for animal feed production, bio briquettes, boards, and other products.

The purpose of this study was to utilize palm oil life to increase the income of the people of Talun Kondot II village.

Palm trunks are not only sold domestically but are in demand in other countries, such as Pakistan; many community groups already make palm products and branches. Handicrafts. Piles of palm fronds will be received by presenting raw materials from palm debit in the form of leaves which are then cleaned and shaved using a knife and a barber stick. After that, the lid is dried for 2-3 days and completely dry. If the rainy season can be as long as five days, it will be completely dry, and the last stage is to tie the lid and be ready to be sold to the recipient.

The front of the palm is divided into three parts: petioles (base of the stem), rachis (where leaves appear on the stem), and leaflets. The oil palm plant produces 18 to 24 fronds each year starting at the age of four. For 30 months, palm leaves grow. Palm leaves have a petiole length of 1.5M and a rachis length of 5.5-6.5M.



Figure 1. Palm Trunks

According to (Fauzi et al., 2021), this type of palm oil is more commonly found in the Brazilian wilderness than in Africa, so its origin lies in South America, specifically Brazil (Fauzi et al., 2021). states that oil palm can thrive between 120LU and 120S, with a maximum temperature of 24-28°C and an average annual rainfall of 2000-2500 mm. (Pahan, 2008) claims that African palm oil cultivation in West Africa was successful between 16th and 17th centuries, or much earlier. According to (Coal, 2002), one of the plantation crops that can thrive in Indonesia is oil palm, especially in areas with an altitude of fewer than 500 meters above sea level. According to (Budianto, 2015), many internal and external factors affect the development and efficiency of palm oil. Climate, precipitation, temperature, humidity, soil type, and pH are external factors. Moreover, internal factors include fruits, roots, stems, and leaves. The faster oil palm plantations develop, the more waste is generated. One solution is to use waste as feed for ruminants (Miswandi, 2009).

(Kum & Zahari, 2011) said that palm frond are widely used for ruminant fodder. The highest digestibility and fermentation values are obtained when palm fronds are substituted for forage in a 25% grade ratio (Consortium et al., 2009). In a 1999 study of local Korean goats, Shin and Han found that palm leaves are easier to digest for nutrition than sugarcane straw. According to Diwyanto et al., the yield other than fronds is about 0.5 kg of leaf weight per frond,

resulting in 0.66 tons/ha/year of dry matter for feed.

The bones of the palm frond are rod-shaped. Palm fronds can be used as products when waste is processed into sticks. Palm sticks are popular in the United States and in demand elsewhere, including in Pakistan. Palm fronds are now sought after to be processed into high-value waste products. One of them is made into palm fronds by processing. Several community groups have used palm trunks to make handicrafts in Kalimantan and Sumatra. Handicrafts such as plates, trays, fruit containers, and glass holders are made from piles of sticks made from palm fronds. This craft can help the economy of Talun Kondot II Village residents. After obtaining raw materials like fronds from oil palm plantations, the artisans started managing palm oil crafts (Dabukke & Sigalingging, 2018). First, they clean and then shave the leaves with a knife and a stick sharpener. The palm trunks can then be woven into various kinds of crafts. After that, it is varnished to change the colour, increase the durability and sheen of the weave, and then it can be sold. This palm oil craft provides additional income for the people of Talun Kondot II Village and fills their spare time. Brooms have many benefits, including their use in everyday life, such as for cleaning offices, homes, and cleaners (Garnasih, 2020).

Broomsticks are usually made from palm fronds (Akhmad, 2021). Most people use frond broomsticks, a common hygiene tool among Indonesians, especially in

Simalungun Regency, which is still widely used by the community. Palm frond brooms are sought after by the people of Talun Kondot II in rural areas near plantations. Many people use it not only for themselves but also as a source of food. Because we can use it to clean the page. Cheap broomsticks make it easy to get and make materials (Pratiwi, 2020). Therefore, broomsticks are considered simple goods with many benefits. The oil palm plants in the manor are not only natural palm products that can be used. Even the stems contained in the palm fronds can also be used as useful items that can be turned into artistry items. Indeed, the palm fronds can be used for broomsticks and then sold by the people of Talun Kondot II. Most of the capital cities of Talun Kondot II spend time looking for palm fronds in PTPN III oil palm plantations. Broom seekers pick up some palm stalks or fronds from the fall of palm fronds harvested by plantation harvesters to be used as palm fronds. Young coconut usually stems separate from their leaves while still green or wet.

RESEARCH METHODS

Descriptive qualitative research is a type of research conducted by researchers. In particular, internal and internal and external factors were analyzed to determine the development strategy used by palm frond artisans in Talun Kondot II Pematang Siantar Village.

Here is the source of data to be used in this study Primary Data: Basic facts, especially facts obtained without delay

from sources received or collected in disciplines, both by those who conduct research and those who have hobbies and desires (Petri et al., 2020). The main information for this study consisted of interviews and direct commentary by palm frond waste artisans. Secondary Data, Additional facts are accepted indirectly (Petri et al., 2020). Secondary sources of information for this researcher include articles, journals and the internet about palm fronds.

The methodology of this study includes observation, interviews and literature studies. Observation dIn this study; researchers observe and identify where researchers are involved in everyday life. In particular by observing various activities and events at the researcher's site. Interview the nature of this study conducted by the researcher in a question-and-answer format. A semi-textured interview was conducted between the penny or peawancara and the respondent so that the questioner prepared several questions for the artisans in the village of Talun kontot II. Study Literature This research method is supported by data collection in theoretical studies in shared scientific journals.

RESULTS AND DISCUSSION

Several stages for the implementation of stringing palm fronds that are for supply to various demand areas.

A. Palm oil waste

It results from palm oil crop residues not part of the main product or other by-products of the palm oil

processing process. Waste is transformed into valuable material that contributes to the economic development of the people living in oil palm plantations.

B. Palm oil life

Palm frond leaves consist of leaf sheaths, leaflets and leaves. The variety and environment affect the average length of the leaf sheath. On average, the front of an adult has a length of up to 9 meters. Between 100 and 150 leaf blades are contained in one midrib located on the left and right of the leaf sheath. Each leaflet has two leaf blades and one palm trunk 40-60 centimetres long. The collection level is usually a clean stick like the one in the image below.

C. Palm oil grated process

Marking is carried out with a kitchen knife by homemakers. The process of stem shrinkage involves several obstacles, starting with the release of the leaflets from the midrib and continuing with the release of the stem midrib from the leaf blade. In the process of sharpening, the sharpness of the knife is very influential. The sticks are sharpened manually with a knife, so grating them takes a long time and more effort, like in the image below.



Figure 2. Palm Oil Lidi Marking Process

D. The drying process of life

The drying process of palm oil can take 2-3 days until it is completely dry; during the dry season, it can reach 3-4 days to get the desired results. In the drying process, this is a mandatory process. It can be seen in the picture below the drying process.



Figure 3. The Process of Drying Palm Lidi

E. Palm oil binding process

The binding process is carried out manually; after drying, the palm oil is immediately tied using neat ropes and ready to be sold to the nearest agent in the village of Talun Kondot II, which can be seen as shown below.



Figure 4. Palm oil binding process

This research was conducted in Talun Kondot II village, Simalungun regency, PematangSiantar city. Palm oil is a major sector in the village. From the results of oil palm plantations, some residents use palm fronds or waste from these fronds. And the leaves of the palm tree. One of the villages

that utilize the results of oil palm trees is not only harvesting the fruit but also from oil palm trees can be used properly.

CONCLUSION

Local communities benefit from the existence of a creative industry that processes palm oil waste. The ability to improve quality and have high selling prices, as well as increased incomes of palm oil waste seekers and public demand for processed palm stem products, is a consequence of the industry's existence. Since palm oil waste is the main raw material, the creative waste industry can bring positive changes by reducing the unemployment rate in the regions.

Some suggestions that, according to the author, should be considered by several parties, including the Talun Kondot II village apparatus and related Inatansi, to play a more role in improving the welfare of the community and life artisans and providing financial support for the growth of the Talun Kondot II lid waste creative industry.

To the artisans, improve the quality of the goods they produce and introduce various new products because it can increase people's income and opportunities. The community, especially artisans, should be more persistent in improving the quality of the sticks produced so that the collected sticks can be sold.

To the academic community and students to always conduct special research and research to improve the creative industry of stick artisans in the future. This will ensure that the research findings are in

the community's best interest and can increase local revenues.

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