

Contribution of Swamp Buffalo Farms and Coconut Plantations Palm Oil on the Income Structure of Farmer Households in Kuripan District, Barito Kuala Regency

Kontribusi Peternakan Kerbau Rawa dan Perkebunan Kelapa Sawit Terhadap Struktur Pendapatan Rumah Tangga Peternak di Kecamatan Kuripan Kabupaten Barito Kuala

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Abstract

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Work as a buffalo breeder has been developed for generations in Kuripan District, Barito Kuala Regency, South Kalimantan Province. Since the existence of nucleus and plasma oil palm plantations, the living space for swamp buffalo has been reduced. The aim of this research is to determine the contribution of swamp buffalo farming and oil palm plantations to the structure of household income in Kuripan District, Barito Kuala Regency, South Kalimantan Province. The research was conducted using qualitative methods. For data collection purposes, data sources were determined purposefully and snowball. Data collection techniques were carried out using observation, interviews and documentation. Data analysis is carried out continuously while in the field. The process of data collection and presentation is carried out based on the stages of data reduction, data display and data verification. The results of the research show that swamp buffalo farming makes a more significant contribution to the income structure of farmer households compared to working on oil palm plantations. The research findings indicate that developing and increasing the productivity of swamp buffalo farming can be considered a more effective strategy in improving the household income structure of livestock farmers in Kuripan District. Thus, there is a need for further development of the swamp buffalo farming sector in the area and greater support from the government and related institutions to encourage sustainable and inclusive economic growth.

INTRODUCTION

Swamp buffalo farms can be found in several districts in the South Kalimantan region, including Barito Kuala District. In this district, swamp buffalo farming is being developed in Kuripan District. Even in the Barito Kuala Regency Regional Regulation Number 6 of 2012 concerning the Regional Spatial Planning (RTRW) of Barito Kuala Regency for 2012-2031, South Kalimantan Province, the Kuripan District area has been designated as a swamp buffalo breeding center. In

Kuripan District there are three villages with swamp buffalo farming centers. The number of swamp buffalo breeders and livestock in each village can be seen in the following table.

Table 1. Number of Swamp Buffalo Breeders and Livestock in Kuripan District

No.	Village Name	Number of Breeders (People)*	Number of Livestock (Head)**
1	Tabatan Baru	19	503
2	Tabatan	15	905
3	Rimbun Tulang	6	101
Amount		40	1.509

Source : (Rochgiyanti, 2021), has been processed.

Based on table 1, it can be seen that the village with the largest number of breeders is in Tabatan Baru Village with 19 owners. Then in Tabatan Village there were 15 people and in Rimbun Tulang Village there were 6 people. Meanwhile, the largest number of livestock is in Tabatan Village with 905 livestock. Followed by Tabatan Baru Village with 503 and Rimbun Tulang Village with 101.

The livelihood of swamp buffalo breeders has been carried out by breeders for generations. Raising swamp buffalo is the main source of livelihood for livestock farmers. However, the situation began to change when at the end of 2009 oil palm plantations began to invest in plantations in the Kuripan District area. The oil palm plantation has obtained a plantation business permit covering an area of 10,810 hectares on land considered unproductive, including swamp buffalo grazing grasslands. The concession land area obtained by the company includes plasma plantations and swamp buffalo conservation areas. Oil palm plantations operating in Kuripan District consist of nucleus plantations and plasma plantations. The area of core and plasma plantations as well as conservation areas can be seen in the following table.

Table 2. Area of Core and Plasma Gardens and Conservation Areas in Kuripan District

No.	Information	Area (Ha)
1	Core garden land	8.528
2	Plasma plantation land	2.032
3	Swamp buffalo conservation area	250
Total area		10.810

Source : (Rochgiyanti, 2021), has been processed.

Based on table 2, it can be seen that the area of core gardens in Kuripan District is 8,528. For plasma plantations the area is 2,032, while the swamp buffalo conservation area is 250. Thus, it can be concluded that the area of land operating in Kuripan District is core plantations.

The opening of oil palm plantations, both nucleus plantations and plasma plantations, has narrowed the living space for swamp buffalo. In fact, keeping swamp buffalo is very profitable, because it does not need to be kept intensively but there is certainty of results. According to Subhanet al. (2006), Swamp buffalo can be kept all the time, the results are quite potential, and can be used as savings, because they can be sold quickly if at any time you need cash. If breeders want to sell swamp buffalo, they just contact the buyer, and the livestock is paid in cash. When swamp buffalo grazing land has been turned into oil palm plantations, livestock farmers have changed their source of livelihood. Even though a conservation area has been provided, the area is not comparable to the number of swamp buffalo. This change in livelihood sources can create vulnerabilities in the income structure of farmer households.

Vulnerability can occur when an established livelihood system suddenly experiences shocks in a surprising way or over a long period of time (Scoones, 2015 dalam Yulian et al., 2017). Swamp buffalo breeders who participate in oil palm plantations have experienced a transformation in economic orientation from subsistence to a market economy. In a subsistence economy, what is put forward is principle safety *first*, because farmers will try to avoid failure that could destroy their lives, rather than trying to gain big profits by taking risks (Scott, 1994). This transformation has made the

value of what is produced increasingly determined by impersonal market fluctuations. In Scott's (1994) view, such a transformation has radically damaged the previously existing patterns of social insurance and moral economy of the subsistence ethic.

METHOD

This research uses qualitative methods because there is a problem or issue that needs to be explored regarding the change in livelihoods from swamp buffalo farmers to oil palm farmers. The swamp ecosystem is a source of livelihood for swamp buffalo breeders in Kuripan District, Barito Kuala Regency, South Kalimantan Province. Based on Creswell's (2015) opinion about five approaches in qualitative research, this research tends to be an ethnographic approach. Ethnography is the study of the life and culture of a particular society or ethnicity holistically, a research strategy that allows researchers to explore and research culture and society which are a fundamental part of the human experience. This research method assumes that the researcher's involvement with the community is the key to understanding certain cultures or social conditions (Martono, 2015).

This ethnographic study approach has strengths and weaknesses. Quoted from Martono (2015), the strength of ethnographic studies is that it allows researchers to explore and research culture in more depth, so that they obtain a complete picture of their social world. The weakness of ethnographic studies is that the time required to collect field data is very long, and it requires sensitivity to the individuals/groups being studied (Creswell, 2015).

This research was conducted in three villages with swamp buffalo farming centers in Kuripan District, Barito Kuala Regency, South Kalimantan Province. This research location was chosen because Rimbun Tulang Village, Tabatan Village, and Tabatan Baru Village are maintenance centers of buffalo swamp. Apart from that, in the Kuripan District area there are oil palm plantations, some of the HGU areas are in swamp buffalo grazing grasslands. Based on the Barito Kuala Regency Regional Regulation Number 6 of 2012 concerning the 2012-2031 Barito Kuala Regency Regional Spatial Plan, South Kalimantan Province, the Kuripan District area has been designated as a swamp buffalo cultivation area.

RESULTS AND DISCUSSION

General description of Kuripan District

This research was conducted in the Kuripan District, Barito Kuala Regency, South Kalimantan Province. Kuripan District is located at the northernmost tip, and is one of the 13 sub-districts in Barito Kuala Regency. Kuripan District has its capital in Rimbun Tulang. The map of Kuripan District, Barito Kuala Regency can be seen in the image below.

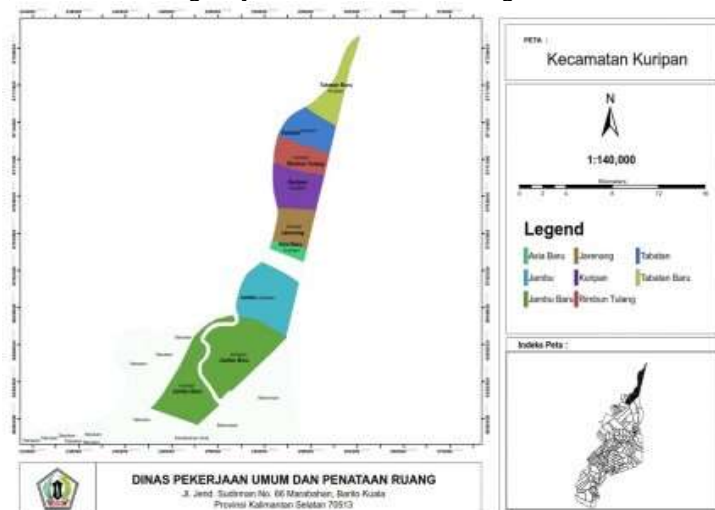


Figure 1. Map of Kuripan District, Barito Kuala Regency

Source: http://simpedu.apps-batola.id/home/kec/02v08sd1Ts2srBh179-bnbKRAo5G9zPsROpcnLvy8_k (accessed 1 August 2023)

Geographically, Kuripan District is at the northernmost tip of Barito Kuala Regency. The area stretches from North to South. The average height of the Kuripan District area is 0-5 meters above sea level. Based on astronomical location, Kuripan District is located between 02°31`22"-02°47`43" S and 114°41`54"-114°51`43" East Longitude, with the coordinates of the Kuripan District office located between 02°36`21" LS-114°47`50" BT (BPS Batola District, 2020:7). Administratively, Kuripan District has the following territorial boundaries:

- To the north, it borders Paminggir District, North Hulu Sungai Regency, South Kalimantan Province.
- To the east, it borders Tapin Regency, South Kalimantan Province.
- To the south, it borders Bakumpai District, Barito Kuala Regency, South Kalimantan Province.
- To the west, it borders Kapuas Regency, Central Kalimantan Province, and Tabukan District, South Kalimantan Province.

As a sub-district area in Barito Kuala Regency, Kuripan District has adequate office infrastructure. The Kuripan District area consists of nine villages with the following details:

Table 3. Area by Village in Kuripan District 2019

No.	Village	Area (Km2) of Total Area (Km2)	Percentage to District Area (%)
1	Jambu Baru	84,00	24,45
2	Jambu	36,00	10,48
3	Kabuau	24,00	6,99
4	Asia Baru	24,00	6,99
5	Jarenang	25,00	7,28
6	Kuripan	22,50	6,55
7	Rimbun Tulang	22,50	6,55
8	Tabatan	35,00	10,19
9	Tabatan Baru	70,50	20,52
Amount		343,50	100,00

Source: BPS Barito Kuala Regency, Kuripan District in Figures (2020)

Based on table 3, it can be seen that the area according to the villages in Kuripan District in 2019 is Jambu Baru Village with an area of 84.00. Then Tabatan Baru Village has an area of 70.50, Jambu Village 36.00, Tabatan Village 35.00, Jerenang Village 25.00, Bauau Village 24.00, Asia Baru Village 24.00, Kuripan Village 22.50, and Rimbun Tulang Village 22.50.

From this table it can be seen that Jambu Baru Village is the largest village in Kuripan District, its area reaches 84 km² or 24.45% of the total area of the sub-district, it is located at the southern tip. The second largest village is Tabatan Baru Village, which covers an area of 70.50 km² or 20.52% of the total area of the sub-district, it is located at the northern tip.

Participation of Farmers as Plasma Farmers

It is hoped that the entry of oil palm plantations into the Kuripan District area will provide additional employment opportunities for the community, including *hadangan* breeders. The number of *hadangan* breeders who have worked on oil palm plantations can be seen in the table.

Table 4. *Hadangan* Farmers Based on Participation as Workers in Oil palm plantation

No	Participate in working on plantations	Frequency	Percent (%)
1	Once	13	34,21
2	Never	25	65,79
Amount		38	100

Source: Rochgiyanti (2021), has been processed.

There were 13 people (34.21%) breeders who had worked on oil palm plantations, and 25 people (65.79%) had never worked on oil palm plantations. Of the breeders who had worked on oil palm plantations (13 people), two people (15.38%) worked at PT. Tasnida Agro Lestari (PT. TAL) which operates in Kuripan District, Barito Kuala Regency; and as many as 11 people (84.62%) worked at PT. Tri Buana Mas (PT. TBM) which is administratively part of Tapin Regency. They worked between 2010 and 2020. Among the 13 people who had worked on oil palm plantations, 10 people (76.92%) had stopped working and three people (23%) were still working on oil palm plantations.

Those who work at PT. TBM, there are those who work cutting grass, pump operators, cleaning grass, planting seeds, foremen and employees. Some of them get monthly wages, monthly salaries, or piece wages.

Before the plasma plantation was opened in Rimbun Tulang Village in 2015, the number of breeders obstacle 40 people. After the oil palm plantations entered Rimbun Tulang Village, the number of breeders remained only 38 people. The work to maintain barriers that is still being carried out by residents can be seen in the following table.

Table 5. Hadangan Farmers After Entering Oil Palm Plantations

No	Sustainability Maintain <i>Hadangan</i>	Frequency	Percent (%)
1	Still keeping <i>hadangan</i>	38	95
2	Stop nurturing <i>hadangan</i>	2	5
Amount		40	100

Source: Rochgiyanti (2021), has been processed.

When oil palm plantations entered the Kuripan District area, *hadangan* breeders were still able to survive. Of the 40 breeders, 38 people (95%) still keep *hadangan*, only two people (5%) have stopped being breeders. They changed jobs as fish sellers. This condition is not the same for the three research villages. In Rimbun Tulang Village, oil palm plantations have been open since 2015. This has affected the area of grazing grassland as the main food for *hangan*. The plasma plantation was opened in Tabatan Village in 2018. In Tabatan Baru Village there has been no activity from the plasma plantation. Whether the existence of oil palm plantations also has a positive impact on livestock farmers, the data can be seen in the following table.

Tabel 6. Table 6. Breeders *hadangan* Based on Participation as a Plasma Farmer

No	Participate as a Plasma Farmer	Frequency	Percent (%)
1	Yes	7	18,42
2	No	31	81,58
Amount		38	100

Sumber: Rochgiyanti (2021), telah diolah.

The existence of oil palm plasma plantations does not have a significant impact on *hadangan* farmers. Only seven people (18.42%) participated as plasma farmers, while 81.58% did not participate as plasma farmers. Of the seven breeders who took part in plasma, four people came from Rimbun Tulang Village. Plasma plantations are already operating in Rimbun Tulang Village. Three people came from Tabatan Village, whose plasma plantation started operating in 2018.

Contribution of Swamp Buffalo Farmers and Oil Palm Plantations to Community Household Income

Reported by the official website of the Subulussalam City Agriculture, Plantation and Fisheries Service, the history of celebrating National Palm Oil Day is based on the moment when oil palm was first planted commercially in Indonesia on November 18, 1911. Commercial planting of oil palm in Indonesia was carried out for the first time in the Sungai Liput (Aceh) and Pulu Raja (Asahan) plantations, North Sumatra. This places North Sumatra as a pioneering area for oil palm plantations in Indonesia.

In 2017, the Indonesian Palm Oil Council (DMSI) proposed establishing World Palm Oil Day to be celebrated on November 18 every year. The aim is to introduce and show that Indonesia is one of the world's largest palm oil producers. (<https://news.detik.com/berita/d-7039866/sejarah-hari-sawit-nasional-yang-diperingati-tanggal-18-november>, accessed 3 September 2023).

Development in the plantation and agricultural sectors will at a certain stage become a way for the development of agribusiness and investment by third parties in a region. Suprpto & Fahmi (2019) said that the existence of oil palm plantations has provided new opportunities for employment. Furthermore, Siregar et al. (2019) argue that the existence of plantation areas has led to the emergence of new and varied sources of opinion. Before the opening of plantation areas in rural areas, the community's income sources were relatively homogeneous, namely they depended on the primary sector for their livelihoods, utilizing the available natural resources as they were without significant use of technology (Siregar et al., 2019). Rochgiyanti et al. (2024) added that the main job of livelihood in Kerang Dayo Village changed to the profession of being an oil palm farmer because the profits earned were greater than being a woodcutter. Nevertheless, for Lestari et al. (2015) household income of plasma farmers and independent farmers is still dominated by income originating from non-agricultural activities.

By opening oil palm plantations in the Kuripan District area, it will open up employment opportunities for local people and immigrants. And with the establishment of oil palm plantations, the economic conditions of the region and local communities will directly and indirectly improve.

At first, there were several people who objected to accepting the existence of oil palm plantations in the village because the land for storing buffalo was becoming narrower. Apart from that, the land has also become polluted, causing several buffalo to die due to chemicals used to eradicate/spray wild plants in oil palm plantations, but because of agreements, permits and decrees from the government, the community cannot refuse this. the.

Some of the village communities in Kuripan District are people from the Bakumpai Dayak tribe and have a livelihood as buffalo breeders who have been passed down from their parents and are also fishermen. When they become buffalo breeders, they need capital of around 16-20 million rupiah for one buffalo. Apart from having their own buffalo livestock, they also receive donations of buffalo from other residents using two systems for sharing profits. Firstly, the wage system, buffalo farmers receive wages of around 1 million rupiah/year for raising one buffalo. These buffalo breeders usually graze their own buffaloes and are entrusted to them by residents, up to 150-300 buffaloes tended by 5 people. Second, the profit sharing system of buffalo breeders will receive profits in the form of buffalo calves while raising the buffalo, so these breeders do not get wages but instead get results in the form of buffalo calves resulting from the mating of the buffalo they have been herding. (interview with Feri, Buffalo Farmer. 13 August 2023)

One of the breeders named Feri, who has also been a plasma farmer in oil palm plantations since 2010, stated that since the entry of oil palm plantations, the land has become polluted because of the chemicals used to eradicate or spray wild plants in oil palm plantations, the land for grazing buffalo has also increased. narrow, so that it is not uncommon for buffalo to stray or enter oil palm plantations even though the plantations have been provided with high barriers/dykes.

According to the breeders who also work as palm oil plasma farmers, according to them both businesses have their own risks. However, if the buffalo breeder has a risk, namely if the buffalo experiences an illness that cannot be treated any longer, then one of the actions that must be taken is to sell it at half the price on the market. Thus, buffalo farmers can experience quite large losses.

Based on the results of the presentation by buffalo breeders who are also palm oil plasma farmers, they revealed that being a buffalo breeder is still a very promising livelihood, while being an oil palm plasma farmer is still far from being a livestock breeder, but the job risks of being a buffalo breeder are considered greater than being a farmer. palm oil plasma.

So it can be concluded that the household income structure of the Kuripan District village community is still very dependent on buffalo farming. Their lives are becoming more decent from year to year thanks to being buffalo breeders.

Galib and Hamdan (2008) in Utomo (2018) said that buffalo livestock contributed quite high household income of 52.81%. Buffalo livestock functions as family savings (Utomo et al., 2018). Welerubun (2023) added that breeders contribute to family income.

CONCLUSION

Even though villages in Kuripan District have been developed into oil palm plantation areas, thereby reducing the area of land for raising and grazing swamp buffalo, the community still considers being a swamp buffalo breeder to be a very promising livelihood compared to being a plasma farmer on oil palm plantations. This is because the income obtained from the selling price of buffalo is relatively stable and tends to be profitable, so that the income of swamp buffalo breeders is relatively more stable compared to plasma farmers and mustard plantations. Apart from that, as a buffalo breeder, swamp buffalo can support their children up to graduate level.

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