Article

Social Relations in Clove and Rubber Plantations

Komunitas: International Journal of Indonesian Society and Culture
16 (2) (2024): 180-188
DOI: 10.15294/komunitas.v16i2.14415

p-ISSN 2086-5465 | e-ISSN 2460-7320
Web: https://journal.unnes.ac.id/journals/komunitas

Gunawan Gunawan[1]*, Muh. Sholeh[1], Tur Nastiti[2], Elsha Pipit Nathalia[1], Ema Kartika[1]

[1]Universitas Negeri Semarang, Indonesia
[2]Universitas Gadjah Mada, Indonesia

Abstract
Plantations are a vital non-oil and gas sector that contributes to state revenues. However, the potential of plantations in Indonesia has not fully provided welfare for planters due to the complexity of social networks in management and harvesting. This article attempts to describe how social networks are formed in rubber and clove plantations by looking at the context of social structures in society. The focus of the Research on rubber and clove plantations is not to make comparisons but to explore more broadly the forms of social relations in different plantation management systems and commodity types. Data were collected through a qualitative approach using direct observations and interviews with rubber tappers and clove planters. The study results indicate that in managing rubber latex, tappers use sales networks with companies and middlemen, while in clove plantations, harvesting is closely related to the social relations of the community. This situation indicates that the management system and commodity type determine the social ties formed.

Keywords
clove plantation, rubber plantation, social relation

Corresponding author
Sekaran, Gunungpati, Semarang 50229
Email: goenantro@mail.unnes.ac.id

INTRODUCTION

Law Number 39 of 2014 concerning plantations states that "plantations are all activities of managing natural resources, human resources, production facilities, tools and machines, cultivation, harvesting, management, and marketing, related to Plantation Crops. Plantations are one of the critical sectors, especially in meeting the needs of global market commodities. Before palm oil plantations became leading commodities as they are today, plantation commodities originated from Indonesia, which were leading commodities in the world market, such as rubber, coffee, tea, tobacco, cocoa, copra, cloves, and nutmeg. These commodities experience ups and downs according to market conditions and global industry needs. Plantations usually develop in areas with an altitude of 300 - 1600 meters above sea level. In its development, each commodity experiences ups and downs. Some remain, but some are only worth a slight change in the global market.

The types of commodities being the focus of this study are old commodities in the world market, namely rubber and cloves. Historically, these two commodities have had dynamic ups and downs in the market. Rubber is a plantation commodity mostly produced from plantations in the Sumatra and Java regions. Meanwhile, cloves are primarily found in Sumatra, Aceh, and the Eastern Indonesian region, such as Sulawesi, Maluku, and Halmahera. In Java, clove plantations are only in a few places, such as West Java and Central Java.

Rubber is one of the world market commodities. Rubber plantations became a source of livelihood for transmigrants in Jambi when they first arrived (Febriani et al., 2023). It is also one of the plantation commodities with high economic value. Some rubber plantations are managed independently, often called smallholder rubber plantations, and the government manages some through PT Perkebunan Nusantara (PTPN). The rubber sales system is carried out through companies, auction markets, and middlemen (Nurkhasanah & Iskandar, 2022). According to the Directorate General of Plantations, Central Java Province is Indonesia's 14th largest producer of rubber latex, with a land area of 30,868 ha in 2021. Part of the rubber plantation area in Central Java is owned by PT. Perkebunan Nusantara IX or PTPN IX. The PTPN IX is a state-owned company that is engaged in agribusiness. This company manages rubber, sugar cane, tea, and coffee plantations. The main commodity developed by this company is rubber, which has a total plantation area of 23,546 ha spread throughout Indonesia. Although rubber plants have a long-term productivity level, according to data from the Directorate General of Plantations in 2021, rubber production in Central Java Province decreased by 3.32%. The decline in rubber latex production was caused by weather, tree productivity, and the availability of workers. Control is needed so that rubber latex production remains stable. PTPN IX, a rubber plantation management company in Central Java, is trying to improve production levels by increasing the workforce, especially tappers. Based on the Directorate General of Agriculture records, rubber latex prices declined from 2015 to 2017. Hence, the rubber tapper's income is insufficient to meet daily needs if they only rely on weekly wages from the factory. Socially, the existence of rubber plantations also brings social problems, such as those in the Karo Community of North Sumatra. During the colonial period, rubber plantations created social tensions in the management of customary lands. Meanwhile, 1960, when the food crisis occurred, rubber latex was the target of theft for those who wanted additional income to meet food needs (Ruiter, 2005).

Cloves (Syzigium aromaticum) are known as a spice plant that is used as a traditional medicine. Cloves are processed as a producer of essential oils and used as a material for the pharmaceutical and food industries. Currently, 95% of the clove production is used as raw material for making kretek cigarettes. The rest is used to meet the needs of the food and pharmaceutical industries. The potential market for cloves is still quite large (Nurhayati et al., 2020). However, the large market potential is not

balanced with the standard of living of clove farmers. Price fluctuations make people's clove gardens poorly maintained and even replaced with other types of plants (Bagio et al., 2022). The higher the maintenance costs, the higher the farmer's income.

Meanwhile, in terms of the selling price, the higher the selling price, the farmer's income will also increase (Nazarreta et al., 2020). In other conditions, farmers' income from clove production is still unable to support farmers' living needs due to shrinking areas and unstable prices (Kristina et al. 2021; Potapov et al. 2021). It can provide a good income if properly maintained, although high maintenance costs are required. Another aspect affecting farmers' income is the cost that must be spent during harvest. The high cost of harvesting, including equipment and labor, increases the expenses borne by farmers and is not even comparable to the yield.

Social studies on rubber and clove plantations have recently become less common, replaced by studies on oil palm plantations. This is because, in the last decade, oil palm plantations have developed expansively, resulting in environmental pollution and land conversion and changing the demographic structure and social order. However, social studies on rubber plantations need to be carried out because, in several regions, rubber plantations have increased in area and have even become substitute crops for oil palm plantations. This occurs in areas that have limited access to oil palm bunch processing. Meanwhile, social studies on clove plantations are important, considering that clove commodities have long historical roots in developing plantations and global market commodities. In the context of colonialism, especially in Indonesia, cloves are native to Maluku and have spread worldwide through global trade since the colonial era. The spread of clove plantations brought by the British gave birth to slavery in the Zanzibar Islands (Crisp, 1987).

This article focuses on the form of social networks in the rubber and clove harvesting system. This focus was chosen to describe how social networks in the management of rubber and clove harvests are intertwined with social relations in the daily lives of the community, thus forming social relations in both commodities.

METHOD

This study uses a qualitative research method with data collection through observation, interviews, and documentation. This study was conducted in two villages: Kebon Ndowo Village, Boja, Kendal Regency, and Central Java. At that location, there is a rubber plantation owned by PTPN IX with a land area of 623.13 ha. The second location is Nyatnyono Village, Ungaran Regency, and Central Java. This village has a smallholder clove plantation with an area of 111.39 ha. The Kebon Ndowo and Nyatnyono were chosen because both have the largest rubber and clove plantation areas in Central Java.

This Research was conducted from February to July 2023. Data collection was carried out by following the activities of rubber tappers and clove pickers when working. Direct observation was carried out to obtain data about the actual situation experienced by the informant. Interviews were conducted through open interviews with informants who were directly involved in tapping rubber and harvesting cloves. Interviews were conducted at their workplaces and the informant's home to reveal their views and cultural knowledge of the research focus.

Data analysis was conducted qualitatively with data categorizations to obtain patterns of behavior and informant knowledge. Then, the data was interpreted by linking the context and understanding of the research focus.

RESULTS AND DISCUSSION

Social Relations of Rubber Tappers

Rubber *(Hevea brasiliensis Muell. Arg)* is one of the main market commodities. Rubber plants originate from Brazil, South America and were first introduced to Indonesia in 1864 during the Dutch colonial period. Initially, it was introduced as a collection plant at the Bogor Botanical Gardens

and then developed as a plantation crop. The first rubber plantation was opened in Pamanukan and Ciasem, West Java. Then, it expanded to be planted in Eastern Sumatra. Data from the Directorate General of Plantations noted that in 2021, in Central Java, there were 30,648 ha of rubber plantations, and it became the largest producer of rubber latex in Indonesia. The management of rubber plantations in Central Java is in the hands of PT. Perkebunan Nusantara IX (PTPN IX). One of the rubber plantations owned by PTPN IX is located in Kebon Ndowo Village, Boja, Kendal Regency, Central Java. The plantation in Kebon Ndowo Village is included in the Pluwang or Blanten Afdeling with a land area of 623.13 ha.

PTPN IX employs rubber tappers from the community around the plantation to manage the plantation. The plantation is located between residential areas, so many tappers come from Kebon Ndowo residents. However, there are also residents from surrounding villages such as Banjaran Village, Keji Village, and Kalidapu Village. The status of tapper workers is divided into piecework or daily freelance tapper and permanent tapper. Piecework tappers receive wages based on the weight of the sap obtained. Wages are given per week. The range of salary obtained is IDR 300,000 to IDR 500,000. Working hours for piecework tappers are more flexible. When necessary, workers can apply for permission not to work with the foreman. However, in working, piecework tappers do not get facilities from the company. Piecework tappers do not get work equipment and skills training to support their work. Meanwhile, permanent tappers are plantation employees. Wages are given based on the Kendal Regency Minimum Wage (UMK) of around 2.5 million per month. The company still strictly regulates the working hours of the tappers. They also get training facilities to support their work.

The tappers work under the supervision of a garden head or foreman. The foreman is responsible for arranging the rotation of the tappers' work locations with a number of 10-15 tappers. The foreman's work is reported to his superior, namely the *sinder*. The *sinder* is a person from the company, while the foreman is a worker selected by the *Sinder*. The person chosen as a foreman is a person who was proposed by the previous foreman when he was about to retire. The selection of the foreman is based on the nature and skills, accuracy, and work diligence observed by the old foreman. The person selected must undergo work training for 1-2 months before starting work as a foreman. The difference between permanent and piecework tappers' status creates a different social relationship, especially in their work system. Permanent workers have strong ties to the company. They are bound by various company when working rules. Meanwhile, piecework tappers with weak ties to the company are freer to do their work, especially in tapping.

Besides permanent tappers, there are piecework tappers in the company. Becoming a piecework tapper does not need administrative requirements or special skills. People can come to the foreman anytime and register as a piecework tapper. If the foreman is permitted to join the work, the foreman will include him in the crane group and show him the necessary tools. There are times when the foreman teaches how to tow to new workers, but what often happens is that a new worker will learn directly from other experienced workers. Piecework tappers do not have work facilities, such as tools for towing. They must provide their equipment, such as drums, tapping knives, lighting, and motorbikes, to go to the plantation and transport the rubber sap they obtain. The company only provides tools to cut down rubber trees that no longer produce sap and tools to treat diseased rubber trees. Piecework tappers are usually residents of the plantation. They are people who returned from overseas because they did not get the life they expected or were laid off (termination of employment) at their previous workplace.

The results obtained from tapping rubber differ from one tapper to another. Male tappers can produce 70-100 kilograms daily, while females and older tappers can only produce 20-50 kilograms. The rubber latex obtained is then weighed by the Fore-

man. The weight calculated is the net weight after deducting the weight of the container used. According to the regulations, each tapper must deposit 50-68 kilograms of rubber latex daily. This is to ensure the continuity of production and as a standard for farmer productivity. However, the growers cannot consistently achieve this amount because the conditions of the cutters and the rubber trees being cut are uncertain. The Foreman will make notes in two versions to comply with the rules. The first version is a special note belonging to the Foreman, which contains the weight of the actual gain. For example, farmer 1 gets 75 kilograms while farmer 2 gets 30 kilograms, then the notes will be written according to the weight of the sap obtained by each farmer. This record is used as a basis for calculating the wages earned by the tappers.

Meanwhile, in the second version of the note, the foreman recorded the results of the two cranes following company regulations. Crane one was recorded as getting 55kg, while crane two was recorded as getting 50 kilograms. The second version of the note is sent to the company as a report. This recording method is the Foreman's way of reporting to the company that productivity in tapping rubber is following specified standards. If it is discovered that there are workers who do not get sap according to the specified standards, the Foreman will be deemed not to have done a good job.

Piecework tappers receive weekly wages. The wages received are insufficient, with various tools and costs that must be covered, such as fuel and vehicle repairs. Therefore, besides being piecework tappers, they are trying to increase their income by collecting rubber sap that drips overnight, known as *kukut* glue. In the morning, at 07.00, the tappers started working on the taps. However, they had left their house at 02.00. They will go around the garden to pick up the kukut glue. The collected kukut glue is then taken home and collected in large quantities before finally being sold to middlemen. Kukut glue is collected together with sap obtained from their private gardens. On average, residents around plantations also have rubber plantations. Privately owned land originally planted with fruit was replaced with rubber plants because it was deemed more profitable. The number of rubber trees owned personally is between 10 – 50 trees, depending on the area of the land

The existence of kukut glue is an issue between the tapper and the company. According to the company, taking kukut glue is an action that violates the rules because it is considered theft. However, the company represented by Foreman cannot take action against the perpetrators because it would also be a hassle for the company. If an action is taken, it will cause problems with the labor supply. One of the methods taken by the company was only giving an appeal, through banners pasted in several places with the words "All Rubber Sap Products Must Be Handed Over to The Company. If Not, It Will Become Haram Property." However, the public ignored the writing.

Kukut glue is sold through a sales system outside the plantation. Tappers who take kukut glue sell it to middlemen who have become their customers. The middlemen come from around the village. Between the tapper and the middleman, there is a bond between buying and selling, resulting in a binding bond that requires each other (Gandi et al., 2017; Azizah, 2016).

The middlemen still have close relations with residents. Usually, sellers choose middlemen whose homes are in the same village as theirs because they feel bad if they sell the harvest to middlemen outside the village (Antoni & Tokuda, 2019). The relationship between the seller and the middleman is a buying and selling relationship that develops into a debt and receivable relationship. Middlemen will lend money to tappers when there is an urgent need. Payment is deducted from the harvest sold to middlemen. Such debts and receivables are called *ngebon*. This situation makes the bond between the middleman and the tapper very strong, so they don't want to move to another middleman even though another middleman offers a higher price.

Even though the relationship between the middleman and the seller is very strong,

this does not mean that this relationship can last forever. Sometimes, sellers decide to move to other middlemen when their relationship is disrupted. Relationship disorders that result in relationship breakdown can occur when the seller feels there is fraud in the middlemen's weighing of the *kukut* glue.

Social Relations in Clove Harvesting

Cloves are a type of plant that can be sold in all parts, from stems flowers, to leaves. Dried clove flower stalks cost around IDR 19,000/kg. Clove leaves sell well for around IDR 2,000/kg. Clove leaves can be processed into clove oil. However, recently, clove leaves have not been sold because taking clove leaves can cause damage to the tree, so the yield will decrease, and the tree will even die.

For clove farmers in Nyatnyono, the clove harvest season is long-awaited. Economically, the clove harvest is an essential source of income to fulfill family needs, so farmers' daily activities are different from when it is not harvest season. Socioculturally, the clove harvest season is a social event intertwined with farmers' social interactions. Harvest management, starting from the source of labor and its distribution, is culturally institutionalized in the farmers' social norms and values

Cloves are a source of income for the people of Nyatnyono Village, especially those who live on the upper slopes of Mount Ungaran, which directly borders the forest area. People's clove trees are planted in gardens. Initially, the plant that was widely planted was coffee, but because people discovered that the price of cloves was higher, the coffee trees were cut down and replaced with cloves. Currently, there are only a few coffee plants left. Cloves are the main crop, with coffee and fruit plants between the clove trees. Apart from being planted in gardens, cloves are planted around houses, even if only four to five trees.

Clove trees are a type of plant that does not require intensive care. Clove trees require fertilization and weeding at less than five years of age, but after they are more than five years old, they no longer need to be fertilized frequently. The work carried out was limited to weeding the grass underneath, which doesn't require everyday labor, so the garden owner does not need to check his garden all the time until harvest time arrives.

The clove garden in Nyatnyono is a clove garden that has been managed for generations. The existing clove garden is a garden inherited from their parents. However, some have clove plantations from buying and selling. Money collected from working as laborers or raising cows is then used to buy a garden, which is planted with cloves. Landowners who are unable to plant and care for their clove gardens themselves can use the *maro* system or profit sharing. The garden owner gets other people to plant and care for clove trees. The cultivator gets half of the clove plantation to be harvested, and the other half goes to the landowner. However, currently, the *maro* system is rarely found

Land leasing is also found in clove plantations. The rental price is determined by the number of trees on the land. The more trees there are, and the bigger the trees, the higher the rental price will be. One form of land leasing found was land with 50 trees, rented for 40 million rupiah for six years. During this period, the land is managed by the tenant for use and harvest

Cloves are an annual plant with a once-a-year harvest. Cloves begin to flower when the tree is between 4.5 - 6 years old. The harvest season is determined by the height of the land and the weather. In the Nyatnyono area, clove gardens located at the bottom of the land will flower more quickly than higher gardens. The Nyatnyono people calculate the clove harvest time based on the Hijriyah calendar. When cloves flower in the rainy season, the harvest period will last from Shawwal to Dzulhijjah. Meanwhile, when cloves flower in the dry season, the clove harvest season will last from the month of Rajab until Ramadhan/Pasa. The crops obtained will also differ between the dry and dry seasons. If the harvest occurs in the dry season, the yield will be greater than in the rainy season. In the rainy season, clo-

ve flowers will bloom more quickly and be red, so they will be lighter in weight when harvested and dried. At the time of the Research, the price of dried cloves reached Rp. 126,000/kg – Rp. 140,000/kg. The price of wet cloves can reach Rp. 30,000/kilograms – Rp. 35,000/ kilograms. Meanwhile, the price of dried cloves is around IDR 130,000/ kilograms. Every 3 kilograms of wet cloves will become 1 kilograms of dry cloves.

The clove harvest period lasts for 3 months. The right time to harvest clove flowers is when they are still in the bud before fully blooming. If harvesting is done after the clove flowers have bloomed, the weight will not be optimal. With this harvest season limit, clove harvesting requires regulation so that it does not exceed the harvest period.

When the clove harvest season arrives, the source of labor for harvesting is one of the aspects that contribute to changes in residents' social activities. Most of the people of Nyatnyono Village work as casual daily laborers on construction projects or other sectors outside the village. During the clove harvest season, they work as clove-picking workers. Women who, on regular days, work as housewives will also use some of their time to take part in the clove harvest. The women are involved in picking cloves, separating the clove flowers from their stems or called *mipil*, and drying the cloves

"People's routines during harvest and before harvest also change. "Men who previously worked as casual laborers, during the harvest season will become clove farmers, specifically farmers who pick cloves, and they can also become clove picking workers" (interview, 2023)

Farmers' busyness in the plantations seems to be increasing. The clove gardens become busy with clove pickers. During the harvest season, the footpaths, which are usually quiet, will be crowded with people carrying the harvest from the garden to the house on motorbikes. The source of labor for clove pickers can be family members or workers outside the family. If the clove harvest is small, family members can provide sufficient labor. But if the harvest is large, they will employ pickers. Clove-picking workers pick and transport them to the clove owner's house. Clove-picking workers are divided into two types, namely piece workers and daily workers. Piece workers receive a wage of IDR 6,000/kg or IDR 100,000 per sack. Meanwhile, daily workers get a salary of Rp. 100,000 per day with working hours from 08.00 to 15.00.

The plantation owner will choose clove-picking workers who come from the local community. However, the need to pick workers is insufficient at harvest time, so workers must be brought in from other villages.

"Labor is taken from neighbors. We usually prioritize bringing workers from the village first, but we will take them from outside the village if we don't have one. The priority is local people first because if we take it directly from outside, our neighbors do not have jobs (Interview, 2023).

When choosing harvest laborers from within the village, the plantation owner has a sense of *ewuh pakewuh. Ewuh pakewuh* is a social norm in the form of a feeling to maintain good social relations so that one can avoid uncomfortable situations because one feels worried that one's behavior or actions could hurt other people's feelings (Tobing in Fatmawati, 2016). Another consideration when selecting harvest workers is their expertise in picking cloves. Local workers will be chosen because they are more skilled in picking cloves, are used to them, and are more familiar with the garden's conditions. In some places, clove trees with sloping land conditions require special skills to avoid falling when picking cloves. The safety aspect of pickers is very important because pickers have a higher risk of work accidents, namely falling from trees (Triani, 2021; Pandey, 2020).

The working relationship between the plantation owner and the workers will continue. The plantation owner will use the same workers every harvest season if the working relationship is compatible. During the main harvest season, the need for picking workers is insufficient, so clove garden owners must look for clove-picking workers from other villages, such as Sukorejo and Limpung.

Picker workers from Sukorejo and Limpung will come to Nyatnyono and visit the plantation owners every time the harvest season arrives.

The labor needed during the harvest season is not only for harvesting work but also labor for piping or separating clove flowers from their stalks, which is known as *mipil*. *Mipil* is done at the home of the garden owner. Women usually do it as a side job with undetermined working hours. The wage for *mipil* is Rp. 2000/kilograms.

When harvesting cloves, there are clove flowers scattered around the tree. These scattered flowers are sometimes not picked up by the picker and will then be picked up by others. This work is called *nutur*. Usually, people who *nutur* are still the plantation owner's relatives. They collect the scattered clove with the permission of the garden owner. *Nutur* and *mipil* activities are a form of women's contribution to the household economy from the agricultural sector. The role of women in the agricultural sector is significant in agricultural production in addition to doing household chores such as taking care of families, ensuring the education of the children, feeding family members and others (Pradipta, 2020)

The social relations of clove farmers are intertwined with a complex social system. In managing clove plantations, social considerations are needed regarding who is involved, when the right time to harvest is, and how energy sources are obtained. When harvesting, the garden owner can harvest it himself or sell it on a wholesale. Garden owners who harvest their cloves must arrange labor resources for harvesting and drying them. If the workforce is insufficient, looking for additional workers is necessary. It is different when harvesting is done using a wholesale method called *tebasan*. *Tebasan* is a local term for selling cloves ready to be harvested while still on the tree. The buyer will pay according to the agreement and harvest until the cloves have all been harvested. Sometimes, garden owners sell their cloves when the clove flowers are still young and not ready to be harvested, and then buyers will harvest them when the clove flowers are old. This method is known as *ijon* (Munawwir et al., 2023).

"When the cloves are still on the tree, it will be estimated how much harvest will be obtained. If one quintal is valued at three million, multiply by how many quintals the yields. "Payment is done at the beginning because if the payment is made later when the cloves have fallen, sometimes there is a lot of discussion and negotiation" (Interview, 2023).

When cloves are sold by *tebasan*, the plantation owner immediately gets money without having to do harvesting and drying. The tebasan method is an option for garden owners who do not have enough labor to harvest until the drying process. Garden owners who have adequate labor will pick cloves and sell them themselves. It produces more money than using the *tebasan* method.

Another consideration in determining how to sell cloves is considering the family's needs that must be met. Income from selling cloves is the main source for meeting life's needs, especially for large amounts of money, such as weddings, death anniversaries, medical expenses, or building a house. When fulfilling a significant need, the plantation owners choose to sell by tebasan because they will immediately get cash. However, garden owners who do not need large amounts of money decide to harvest the cloves themselves to be used as savings. The harvested cloves can be stored for a long time and will be sold little by little according to the financial needs that must be met.

Natural conditions also determine the sales method chosen by the garden owner. When the harvest occurs in the rainy season, the cloves will be sold by *tebasan*. This system was chosen to reduce the risk of cloves becoming rotten or of poor quality due to problems in the drying process. The process of drying cloves is done naturally by drying in the sun. When harvesting during the rainy season, the intensity of the sun is reduced, so the cloves cannot be dried quickly

Buyers who do the tebasan come from local villages and other villages. Local buyers come from Nyatnyono, while buyers

from outside come from the Gunungpati sub-district. Garden owners have several special considerations when selecting buyers. There are garden owners who consider the selling price high or low, but there are also those who consider the family side, preferring the closest neighbors.

CONCLUSION

Rubber latex and cloves are important commodities in global trade. The research findings show that in the harvesting and sale of the crops of these two commodities, social relations are formed that are embedded in the local social system. The case of *kukut* glue sales in PTP IX plantations shows that although the company has established a mechanism for harvesting rubber sap, the company must deal with another system formed between farmers and middlemen outside the company. Although the sale of *kukut* glue by tappers around the plantation is considered an illegal activity by the company, it also helps the survival of the company because of the working relationship with the company. What happens in the smallholder clove plantations further shows tight relations in managing the clove harvest. Rubber and cloves as commodities are not only produced to fulfill market needs but are intertwined with social relations that determine the sustainability of a commodity.

ACKNOWLEDGMENT

The author would like to thank LPPM UNNES for funding the Research and writing of this article through DANA DPA FISIP UNNES 2023 Number: 34.5.6/UN37/PPK.03/2023

REFERENCE

Antoni, M., & Tokuda, H. (2019). Identification of Obstacles and Drivers of Smallholder Rubber Farmers to Become Members of A Processing and Marketing Unit in Indonesia. *Applied Economics and Finance*, *6*(2), 79. https://doi.org/10.11114/aef.v6i2.3938

Azizah, E. N. (2016). Peran Positif Tengkulak dalam Pemasaran Buah Manggis Petani: Studi Jaringan Sosial Tengkulak di Desa Karacak, Kecamatan Leuwiliang, Kabupaten Bogor. *Indonesian Journal of Sociology and Education Policy*, *1*(1), 80-102.

Bagio, B., Rifalmi, R., Athaillah, T., & Kembaren, E. T. (2022). Kontribusi Pendapatan Usahatani Cengkeh Terhadap Pendapatan Rumah Tangga Petani Di Kecamatan Teupah Barat Kabupaten Simeulue. *Jurnal Ekonomi Dan Pembangunan*, *13*(1), 13–23. https://doi.org/10.22373/jep.v13i1.741

Crisp, N. (1987). Cloves, Slaves, and British Imperialism: The Rise and Fall of Omani Plantation Slavery in Nineteenth-Century Zanzibar. *Footnote, a Journal History*, *1873*, 43–62.

Febriani, D., Hardi, E., Sejarah, D., Sosial, F. I., & Padang, U. N. (2023). *Kehidupan Sosial Ekonomi Transmigran Jawa Di Desa Sido Rukun Kecamatan Rimbo Ulu Kabupaten Tebo Tahun 1980- 2022*. *5*(1), 76–88.

Kristina, O. M., Daro, S., Moan Banda, Y., & Ma, S. G. (2021). Biaya Pemeliharaan Dan Harga Jual Terhadap Pendapatan Petani Cengkeh Di Desa Selalejo Timur. *Jurnal Pendidikan Dasar Dan Sosial Humaniora*, *1*(2). https://bajangjournal.com/index.php/JPDSH

Nazarreta, R., Hartke, T. R., Hidayat, P., Scheu, S., Buchori, D., & Drescher, J. (2020). *Myrmecological News*. 175–186. https://doi.org/10.25849/myrmecol.news

Nurhayati, N., Busaeri, S. R., & Hasan, I. (2020). Analisis Kelayakan Usahatani Cengkeh Di Desa Kompong, Kecamatan Pitumpanua, Kabupaten Wajo. *Wiratani: Jurnal Ilmiah Agribisnis*, *3*(1), 47. https://doi.org/10.33096/wiratani.v3i1.48

Nurkhasanah, N., & Iskandar, S. (2022). Analisis Perbedaan Pendapatan Petani Karet Yang Menjual Getah Karet Ke Tengkulak Dan Pasar Lelang Di Desa Mekar Jaya Kecamatan Keluang Kabupaten Musi Banyuasin. *Societa: Jurnal Ilmu-Ilmu Agribisnis*, *11*(1), 69. https://doi.org/10.32502/jsct.v11i1.4720

Pradipta, Lengga. (2020). Land Resources Management in Southeast Asia: Redefining the Role of Women as Land Managers. *Komunitas: International Journal of Indonesian Society and Culture 12(2),* 206-216, https://doi.org/10.15294/komunitas.v12i2.24977

Potapov, A., Schaefer, I., Jochum, M., Widyastuti, R., Eisenhauer, N., & Scheu, S. (2021). Oil palm and rubber expansion facilitates earthworm invasion in Indonesia. *Biological Invasions*, *23*(9), 2783–2795. https://doi.org/10.1007/s10530-021-02539-y

Ruiter, T. G. (2005). Agrarian transformations in the uplands of Langkat: Survival of independent Karo Batak rubber smallholders. In *Transforming the Indonesian Uplands* (pp. 281–232). Taylor and Francis.