Impact of the Covid-19 Pandemic on Fluctuation the Commodities Price of Plantation in Ambon City

Natelda R Timisela, Ester D Leatemia, Johanna M Luhukay, Raja M Sari, Esther Kembauw, Marfin Lawalata, Maisie T F Tuhumury, Raihana Kaplale, Septianti P Palembang and Noviar F Wenno
Department of Agricultural Economics Social, Faculty of Agriculture Pattimura University
Jl. Ir. M. Putuhena, Kampus Poka, Ambon 97233

nateldatimisela@yahoo.com, rina_lea@yahoo.com, johanna_m19@yahoo.com, rajamilyanizasari@gmail.com, ekembauw@yahoo.co.id, marfinlawalata@gmail.com, mtftuhumury@gmail.com, rehana_kaplale@yahoo.com, septiantipermatasari@gmail.com, noviarwenno@gmail.com

Abstract

The study aims to determine the impact of COVID 19 on the fluctuations in the price of plantation commodities. COVID 19 is very influential for farming communities in rural areas related to the cultivation of plantation crops. Farmers, even in the current conditions, do not reduce their intention to continue gardening and harvest plantation products such as nutmeg, cloves, and coconut (copra). The research sample of 20 respondents taken by incidental sampling, namely farmers who met by chance to sell the results of plantation crops to distributors. During the COVID 19 pandemic, clove prices from January to May continued to decline, namely in January Rp. 68,000 moves down to June amounting to Rp. 60,000. Unlike the nutmeg commodity, the price of nutmeg seeds tends to be fixed in the last three months, namely April and May of Rp. 60,000 / kg. This means that the demand for nutmeg tends to be good, so that distributors do not reduce the price of nutmeg on the market. While mace nutmeg prices tend to move down from January of Rp. 265,000 until June of Rp. 215,000 / kg. Copra prices tend to decrease dramatically during the COVID 19 pandemic from January to April. However, in May, it increased to Rp. 5,200 / kg then moved down in June at Rp. 5,000 / kg. Prices that fluctuate in the COVID 19 pandemic condition make copra farmers' tastes to produce copra tend to decrease; moreover, there are restrictions on the use of transportation and restrictions on people to do activities.

Keywords
The COVID 19 pandemic, plantation commodities, cloves, nutmeg, and copra.

Introduction

Coronavirus disease (COVID-19) is a virus that exists in animals and humans. The virus will infect humans, and there will be various diseases such as the flu to fatal conditions such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). This virus can spread from human to human through liquid droplets from the mouth and nose when an infected person coughs or sneezes like a flu transmission. Until now, there is no vaccine to prevent someone infected with the coronavirus. It should be noted that the conditions and places where we are potentially exposed to the coronavirus must be avoided to protect ourselves from deadly virus attacks. The Center for Disease Control and Prevention (C.D.C.) in the United States recommends several things to prevent the spread of the virus including washing hands with water and soap, using hand sanitizer, avoiding touching the face, avoiding contact with sick people, staying at home if sick, wearing masks, clean the furniture in the house.

COVID 19 has a significant impact on farming communities in rural areas related to the cultivation of estate crops. Farmers, even in the current conditions, do not reduce their intention to continue gardening and harvest plantation products such as nutmeg, cloves, and coconut (copra). According to farmers, their lives are sourced from plantation crops. This is because plantation crops when they are harvesting, can be harvested several times and are sustainable. If it is time to reap, they must intensively handle the harvest and post-harvest of the plantation. The product will be
Covid-19 has an impact on the price of agricultural commodities in Maluku, such as cloves, nutmeg, and copra. Clove as a plantation commodity contributes to national and regional income both for exports and for meeting domestic needs. Maluku people plant clove for generations, and the diversity of clove genetic resources in Maluku is relatively high. However, in the future, it is predicted that clove production will decrease due to several problems such as minimal rejuvenation system, rehabilitation of damaged clove plants, which is very low because farmers leave clove plantations due to lower prices and lack of technology introduction causes low clove productivity (Santoso, 2018).

The second estate crop that is no less important than the clove is nutmeg. Nutmeg (Myristica fragrans Houtt) as a potential export commodity that is relied on by the Provincial Government of Maluku. Nutmeg (Myristica fragrans Houtt) as a potential export commodity that is relied on by the Maluku Province government. This is because nutmeg is a source of economic growth and regional income. Nutmeg is a native plant of Maluku (Purseglove et al., 1995), which is cultivated and traded for generations in the form of smallholder plantations. Indonesian nutmeg products are considered superior in the world market because they have a distinctive aroma and high oil yield. Nutmeg is a significant commodity in the world spice trade and a leading export commodity of Indonesia. Nutmeg is the oldest and most crucial spice product in international trade, so nutmeg is known as the "King of Spices." Nutmeg is given the nickname because it is known as the oldest and most crucial spice product in international trade. Nutmeg is spread on Ambon Island and Banda Island so that Indonesia is dubbed the "center of origin." As a center for nutmeg development, Indonesia must play a significant role in the sustainable management, development, and utilization of nutmeg (Deryanti et al., 2014).

The most significant export demand for nutmeg is mace, mace, and nutmeg oil. Indonesia is currently the largest exporter of nutmeg and mace globally, supplying around 70-75 percent of the world's nutmeg needs. Indonesia is the largest nutmeg producer globally (70-75%), Indonesian nutmeg commodity, and smallholder plantations produce approximately 98%. The total area of nutmeg plantations in Indonesia in 1996 reached 60,735 ha and decreased to 43,873 ha in 2000 (Adrianto, 2007). Indonesian nutmeg excels in the world market because of its distinctive aroma and high oil immersion. Indonesia, as the world's largest supplier of nutmeg, is 60%. The rest is met from Granada, India, and several other nutmeg producing countries (Marzuki, 2007).

Plantation crops that are no less important than the two commodities above are coconut. Coconut has many benefits. All parts of the coconut are used by humans to be known as a multipurpose plant. At present, the most significant economic value obtained by farmers from coconuts is copra. Copra is coconut meat that is processed and dried as an essential derivative product. Copra as a raw material for making coconut oil is quite potential so that the demand for copra is reasonably good. Copra is an economically valuable trade commodity, but in its development, the price of copra is always low, and a long processing time sometimes makes farmers bored and switches to other activities even the coconut land is converted into residential land (Budiman et al., 2015).

The three plantation commodities mentioned above are the mainstay of farmers because large-scale harvests can be marketed both within and outside the region. With the widespread distribution of COVID-19, farmers have difficulty in marketing because the selling prices of these three commodities have decreased significantly. This study aims to determine the impact of the COVID 19 pandemic on fluctuation the commodities price of plantation in ambon city.

Methods
This research was carried out in Ambon City. The research sample of 20 respondents taken by incidental sampling, namely farmers who were met by chance, sells plantation crops to distributors in Ambon City. Data analysis was carried out qualitatively and quantitatively. Qualitative data analysis of the characteristics of estate crop farmers, while quantitative data analyzes the production and price of plantation commodities.
Results and Discussion

Farmer's Characteristics

Farmers who sell estate crops produce, on average, 35-50 years old as much as 70 percent. Farmers aged 35-50 years have extraordinary physical abilities to manage their farming. This is because they can work full time to take care of estate crops continuously. After all, the yields of estate crops are excellent, so they are very determined to carry out their farming activities the education level of respondents, namely junior high and high school. This level of education is maximal because achieving even higher levels of education is not possible because it depends on parents' income to send their children to tertiary education. Education is not an obstacle in developing plantation farming because of any level of education; if they have a wealth of knowledge and knowledge, they will work well.

The average farmer experience in farming is 30 years. This farming experience is quite good because of the age of 6-8 years. Thus, the experience of businesses owned by farmers can apply the knowledge gained by self-taught learning to expand their business. The learning process is not only through education channels in schools, but outside school education is much in demand by farmers to seek knowledge as much as possible from friends, relatives, extension workers, and academics.

The area of farming plantations ranges from 1-1.5 ha. The area of land owned by farmers is quite extensive because, in the existing land area, farmers can plant cloves, nutmeg, coconut, cocoa, and other seasonal crops such as bananas, cassava, and sweet potatoes, taro, and horticulture. According to farmers, one hectare is planted with clove, nutmeg, coconut, banana, cassava, and vegetables. Each farmer has an average of 50-100 clove plants with a 6m x 7m, an average nutmeg plant of 50-75 trees with a spacing of 9m x 9m, an average coconut plant of 50-75 trees with a spacing of 9m x 9m. The extent of land planted with nutmeg, cloves, and coconuts is well regulated because there are intercropping plants on farmland.

Development of Area, Production, and Price of Plantation Commodities during the Covid-19 pandemic

Clove Commodity

Clove plants are widely used for various purposes such as medicinal ingredients and flavor enhancers and aromas in food, beverages which eventually develop as raw materials for clove cigarettes and cosmetics. Cloves are useful because there are components of essential oils in flowers, stems, and clove leaves. The main component of clove oil is eugenol as an active ingredient in medicines. Clove yields fluctuate with big seasons and small seasons, with 60 percent differences. This results in unstable farmer income, and sometimes there is overproduction and sharp price fluctuations (Nurdjannah, 2004). Clove plants are almost scattered in all provinces in Indonesia. One of the provinces with the most distribution of clove plants is Maluku Province.

Clove plants as native plants of Maluku belong to the Myrtaceae plant family in Myrtales's order (Razafimamonjison et al., 2014). Cloves have long been known as herbal plants used by Middle Eastern and Asian countries (Dehghani et al., 2012). Maluku native cloves known include A.F.O. Cloves, Tibobo, Tauro, Sibella, Indari, Tears, Dokiri, and puffer leaves, while cultivation cloves are Zanzibar, Siputih, Sikotok, and Ambon. Diversity of varieties and agroecological conditions that support makes Maluku the largest clove producer in Indonesia after South Sulawesi (Santoso, 2018).

Clove plants are native spices of the Maluku Islands (Rukka 2010), cultivated for generations in the form of smallholder plantations and traded both domestically and abroad. In Maluku, cloves are generally traded in the form of dried flowers. Clove plants aged 6.5 - 8.5 years produce wet clove flowers 3 kg / tree / year and deciduous clove leaves 26 kg / tree / year or 2.6 t / ha / year (plant population 100 trees / ha).

As a tropical plant, cloves require hot climates with high humidity. Average temperatures range from 20-350C with 150250 mm rain distribution per year. If the humidity is high, it is not suitable for the flowering process of clove plants. (Thangaselvabai et al., 2010). An archipelago, Maluku, lies on the equator with all the conditions for the growth and development of clove plants. Such geographical conditions keep Maluku from getting rain even in dry climates, and clove plants can grow well (Santoso, 2018).

Clove plants in Maluku are somewhat different from cloves in other regions. After planting, cloves are allowed to grow and develop with nature, without any treatment such as fertilizing and other maintenance. With the proper natural and geographical conditions of Maluku, the growth of cloves makes it possible to develop well. Clove plants
grow between mountains and beaches, exposed to the sea breeze that is sufficient to allow cloves to flourish with good quality even without maintenance. Without intensive maintenance, clove plants thrive, and clove yields provide high economic value so that Moluccans continue to rely on cloves as a commodity that generates income for generations. For people in Central Maluku or West Seram, clove plants are long-term savings.

Clove crops are usually functioned to finance family needs. Farmers who own cloves when harvesting the produce will be used to build houses, send their children to school, family wedding expenses, and allotment for religious holidays. Clove prices had dropped around the 1990s when there was a trade monopoly through the Clove Counter and Marketing Agency (BPPC). Prices of cloves reach around Rp. 2,000 / kg. This price is very improper because it is not by the sacrifices issued by farmers when cloves will enter the harvest period. Because when the clove harvest arrives, farmers must clear the land and prepare all kinds of equipment and equipment for harvesting. The clove price condition has plummeted, and the clove farmers have suffered, and there is no desire to make clove nurseries, plant, and harvest. However, when the price of cloves rises, farmers are happy because they can do activities better and still maintain cloves as a family asset. Farmers do rejuvenation for clove plants, make nurseries, and replace old plants with new plants that can increase yield productivity.

Clove, as a Maluku identity, has a high economic value, Maluku identity value, assets, and savings for long-term life and become the pride of Maluku people. Cloves are an essential source of life economically, culturally, socially, and a hope for a better life. The COVID 19 pandemic had a profound effect on clove farmers in Maluku. Farmers have to harvest the produce for sale and can spend their money on daily needs. However, it appears that the price of cloves has decreased due to the process of trade outside the region must stop. Termination of the distribution chain COVID 19 caused a temporary termination of the supply chain of estate crop sales. That is because the delivery of clove products out of the area is constrained. After all, the factory processing derivative products are not operational. Therefore clove hoarding occurs at distributors in Ambon City.

The COVID 19 pandemic greatly affected farmers and distributors in Ambon City, as a result of landfill causing prices to decline. Because sea transportation does not operate continuously for the sale of produce from Ambon City to Java Island and beyond. The total area of clove plants varies for each regency/city in Maluku Province. Based on the outer area of clove plants, it can be seen that the three regencies with the most significant area are Central Maluku Regency (42.46%), East Seram Regency (22.21%), and West Seram Regency (15.93%). The number of clove production in the three districts is also high, namely Central Maluku Regency (46.30%), East Seram Regency (22.08%), and West Seram Regency (15.78%). This is because these three regions are located on Seram Island; most farmers are clove farmers. Cloves’ production strongly supports Their lives because of the results of clove farmers who can meet all the needs of family life. The COVID 19 pandemic condition is very troubling for people whose lives depend heavily on clove commodities. Outside the area and production of cloves in Maluku are shown in Table 1.

Table 1. Clove Area and Production Area in Maluku Province

<table>
<thead>
<tr>
<th>Districts</th>
<th>Area (Ha)</th>
<th>Percentage (%)</th>
<th>Production (tons)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maluku Tenggara Barat</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Maluku Tenggara</td>
<td>20.5</td>
<td>0.05</td>
<td>7.9</td>
<td>0.04</td>
</tr>
<tr>
<td>Maluku Tengah</td>
<td>18614.5</td>
<td>42.46</td>
<td>9954.2</td>
<td>46.30</td>
</tr>
<tr>
<td>Buru</td>
<td>1186.4</td>
<td>2.71</td>
<td>443.9</td>
<td>2.06</td>
</tr>
<tr>
<td>Kepulauan Aru</td>
<td>0.3</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Seram bagian Barat</td>
<td>6985.8</td>
<td>15.93</td>
<td>3393.7</td>
<td>15.78</td>
</tr>
<tr>
<td>Seram Bagian Timur</td>
<td>9738.4</td>
<td>22.21</td>
<td>4746.4</td>
<td>22.08</td>
</tr>
<tr>
<td>Maluku Barat Daya</td>
<td>211.4</td>
<td>0.48</td>
<td>373</td>
<td>1.73</td>
</tr>
<tr>
<td>Buru Selatan</td>
<td>5555.7</td>
<td>12.67</td>
<td>2257.9</td>
<td>10.50</td>
</tr>
<tr>
<td>Ambon</td>
<td>1301</td>
<td>3.42</td>
<td>312.7</td>
<td>1.45</td>
</tr>
<tr>
<td>Tual</td>
<td>29.1</td>
<td>0.07</td>
<td>10.8</td>
<td>0.05</td>
</tr>
<tr>
<td>Total</td>
<td>43843.1</td>
<td>100</td>
<td>21500.5</td>
<td>100</td>
</tr>
</tbody>
</table>

The area and production of cloves are quite good, but farmers cannot carry out their farming activities properly because they have to continue maintaining a healthy body, especially the price of cloves, which fluctuated substantially during the COVID-19 pandemic. The development of clove prices from January to June continued to decline. The price of cloves in January is Rp. Sixty-eight thousand moves down to June amounting to Rp. 60,000. At
this price, farmers are not eager to pay close attention to clove plants. According to them, with the low price of
cloves, their lives are not as healthy as before because all the necessities of life are getting more and more
expensive. Therefore, farmers do not routinely carry out gardening activities due to erratic prices coupled with the
coronavirus's spread that does not yet know how long it will end. The development of clove prices in Maluku is
shown in Figure 1.

Figure 1. Development of Clove Prices in Ambon City during the Covid-19 Pandemic Period

The cloves' price has decreased because cigarette companies in Java still have clove stock, so they do not make
purchases, which ultimately affects the price of cloves in Maluku. Also, export activities to several countries in
Europe have decreased, and the possibility of the supply of clove raw materials for processing products is still
available so that there is no purchase of raw materials from exporting countries.

Nutmeg Commodity

Nutmeg commodities produce two high economic value products, namely nutmeg and mace or nutmeg enveloping
the seeds. Both of these products produce essential oils used as raw materials for the beverage, medicine, and
cosmetics industries (Bustaman, 2007). Besides the quite high economic value of nutmeg, the market opportunities
of nutmeg and its derivatives are still wide open. Indonesia is a significant nutmeg supplier and its derivative
products for the U.S., U.K., and Germany markets. The shortage of needs in the country is supplied by Grenada and
Sri Lanka (Bastaman, 2008; Rodianawati et al., 2015).

Nutmeg has a high economic value (Rodianawati et al., 2015) and plays an essential role in the economy of the
community in various regions, especially in Eastern Indonesia. As the largest nutmeg producer in the world,
Indonesia is also the largest supplier of nutmeg needs in the world, with a market share reaching 60-75% of the
world's needs (Hasibuan et al., 2010; Rodianawati et al., 2015; Nurdjannah, 2007).

Nutmeg commodity is an export-worth commodity because it is a native Indonesian spice plant spread in several
provinces such as Maluku and North Maluku. Nutmeg is cultivated from generation to generation in the form of
smallholder plantations. Indonesian nutmeg products are among the superior products globally because they have a
distinctive aroma and have a high oil yield (Bustaman, 2008). Essential fats and oils from mace are food seasonings
(saues) and food preservatives (Ojechi et al., 1998).

Overall the quality of Indonesian nutmeg is still inferior compared to the quality of nutmeg from other countries.
The low quality is due to the plants in production are old-age plants, and the rejuvenation of nutmeg plantations and
maintenance of nutmeg gardens are rarely performed. This can reduce the productivity of the nutmeg plant so that it
cannot meet market standards. The community still carries out the traditional drying nutmeg process: natural drying
by using solar power and fumigation known as coca, which is carried out mainly during the rainy season. Nutmeg
seeds that have been dry enough are seeds that have been separated from the shell (skin) with moisture content in the
seeds <7%. Drying mace (nutmeg) To improve the quality of mace is carried out through mace being dried in the
sunlight slowly for several hours, then being drained repeatedly until the mace is dry, so that the result is a mace that
is springy (not brittle) and of high quality (Salampessy et al., 2012).

Nutmeg, mace, and nutmeg oil are export commodities that play a role as sources of economic growth and state
income. Indonesian nutmeg has a high value globally because it has a distinctive aroma and high oil yield. Nutmeg
is one of the commodities focused by the Indonesian government for export orientation to the European continent to restore the glory of the archipelago's spices. Based on data from the Directorate General of Plantations, Indonesian nutmeg production in 2018 amounted to 36,242 tons with a total planting area of 202,325 ha. Table 2 shows the area and nutmeg production in Maluku.

Table 1. Area and Nutmeg Production in the Province of Maluku

<table>
<thead>
<tr>
<th>Districts</th>
<th>Area (Ha)</th>
<th>Percentage (%)</th>
<th>Production (tons)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maluku Tenggara Barat</td>
<td>13</td>
<td>0.04</td>
<td>1.9</td>
<td>0.03</td>
</tr>
<tr>
<td>Maluku Tenggara</td>
<td>2769.3</td>
<td>8.76</td>
<td>457.9</td>
<td>8.31</td>
</tr>
<tr>
<td>Maluku Tengah</td>
<td>11155.4</td>
<td>35.27</td>
<td>2134.1</td>
<td>38.72</td>
</tr>
<tr>
<td>Buru</td>
<td>942.3</td>
<td>2.98</td>
<td>111.2</td>
<td>2.02</td>
</tr>
<tr>
<td>Kepulauan Aru</td>
<td>23</td>
<td>0.07</td>
<td>4</td>
<td>0.07</td>
</tr>
<tr>
<td>Seram bagian Barat</td>
<td>2299.5</td>
<td>7.27</td>
<td>251.1</td>
<td>4.56</td>
</tr>
<tr>
<td>Seram Bagian Timur</td>
<td>8831</td>
<td>27.92</td>
<td>1287.2</td>
<td>23.35</td>
</tr>
<tr>
<td>Maluku Barat Daya</td>
<td>1510.4</td>
<td>4.78</td>
<td>84.4</td>
<td>1.53</td>
</tr>
<tr>
<td>Buru Selatan</td>
<td>2218.8</td>
<td>7.02</td>
<td>413.4</td>
<td>7.50</td>
</tr>
<tr>
<td>Ambon</td>
<td>1763</td>
<td>5.57</td>
<td>746.1</td>
<td>13.54</td>
</tr>
<tr>
<td>Tual</td>
<td>98.4</td>
<td>0.31</td>
<td>20.8</td>
<td>0.38</td>
</tr>
<tr>
<td>Total</td>
<td>31624.1</td>
<td>100</td>
<td>5512.1</td>
<td>100</td>
</tr>
</tbody>
</table>

Figure 2. Development of nutmeg and mace nut prices in Ambon City during the Covid-19 Pandemic Period

Table 2 shows that the biggest nutmeg-producing districts are Central Maluku and Eastern Seram. Both of these districts are great regions in Maluku. The total nutmeg area for Central Maluku Regency is 11,155.4 ha (35.27%), while the total area of nutmeg for East Seram Regency is 8,831 ha (27.92%). Total nutmeg production in Central Maluku Regency amounted to 2134.1 tons (38.72%), while East Seram Regency amounted to 1287.2 tons (23.35%). Farmers in both districts are very enthusiastic about developing nutmeg farming. The area and production are quite promising for nutmeg farmers, but the selling price of nutmeg and mace seeds is less favorable for farmers during
the current COVID 19 pandemic conditions, so prices always fluctuate from January to June 2020. The development of commodity prices for seeds nutmeg and mace nutmeg is shown in Figure 2.

The results of Fauziyah et al., 2015 show that nutmeg has good prospects for development because there are factors that support its development, such as being physically compatible with the growth of nutmeg plants, socially acceptable to the community because previously many farmers have cultivated nutmeg on their land. Economically, it has a high and stable price to provide additional income, marketing conditions; both fruit and seeds are straightforward, and the government's attention to the development of nutmeg at the level of production to post-harvest processing is quite considerable. These factors are by the current prospects for nutmeg development in Maluku.

Nutmeg is harvested from the age of 7-9 years to the age of 25, which can produce fruit throughout the year. According to Hidayah (2005), at the age of 7 years, nutmeg can produce fruit, with a production level of 90 kg of nutmeg seeds and 21 kg of mace nutmeg per ha.

Farmers' yields are in the form of nutmeg and mace nutmeg. Farmers sell both of these crops as additional income to the family. The sale can support the family life of nutmeg farmers. Now with the COVID-19 pandemic, the price of the nutmeg is unstable. However, for the price of nutmeg, seeds tend to remain for these two months, from April to June, amounting to Rp. 60,000/kg. This means that the demand for nutmeg tends to be good, so that distributors do not reduce the price of nutmeg on the market. In contrast to the price of mace nutmeg, which tends to decrease in May and June, amounting to Rp. 220,000/kg and Rp. 215,000/kg.

Mace prices are relatively higher than nutmeg. Mace is a thin fiber (areolas) of red or light yellow color, shaped like a perforated membrane found between meat and nutmeg seeds (Hadad et al., 2006). Fresh mace has a bright red color with a fragrant aroma but not as sharp as the fig. The taste of nutmeg is almost the same as that of nutmeg, except that it is softer or smoother. Mace is usually used as a primary ingredient for making essential and useful essential oils. Mace is a stimulant, tonic, carminative, and seasoning. Some of the properties above cause the price of nutmeg more expensive than nutmeg seeds.

So far, nutmeg marketing has not been organized in an institution such as a cooperative. Farmers are free to sell their produce to villages or sub-district traders. Subsequently, the sub-district collection traders sell to district / provincial city traders. Such a marketing system results in low nutmeg prices at the farm level—transportation as a significant obstacle in nutmeg marketing results in high farm costs (Bastaman, 2007).

The COVID 19 pandemic caused the price of nutmeg to tend to remain in April to June. However, it decreased from January to April. Nutmeg mace prices have decreased from January to June. Falling prices for seeds and mace made farmers less eager to sell their products to distributors in Ambon City. Moreover, transportation problems that limit farmers' trips to the sales location cause farmers to save their produce. At present, there is no transportation to load passengers from island to island. Only transportation is available to load goods. Farmers feel disadvantaged when they sell to village collectors because the price received does not match the price of the distributor ie, the price received by farmers in the village is only Rp. 45,000 for nutmeg seeds while nutmeg mace Rp. 200,000. Therefore, farmers choose to save nutmeg and mace until the COVID 19 pandemic condition starts to decline, and transportation is smooth, and then the farmer will sell.

The COVID 19 pandemic condition decides all the farmers' activities to produce and access marketing. The distributors in Ambon City follow the development trend of selling plantation products nationally and even internationally. Indonesian nutmeg products are superior and famous in the world market not only because they have a distinctive aroma and high oil yield, but their products are processed into value-added products that have high economic value (Astanu, 2013).

The global economy could shrink by one percent by 2020 due to the COVID-19 pandemic. This can contract even further if restrictions on economic activity are extended without an adequate fiscal response. Developing countries that depend on tourism and commodity exports face increased economic risk. This analysis warns that the adverse effects of prolonged economic restrictions in developed countries will spread to developing countries through trade and investment channels. A sharp decline in consumer spending in the European Union and the United States will reduce imports of consumer goods from developing countries.
Coconut/Copra Commodity
Indonesia is the world's largest coconut producing country because production in 2001 reached 3.0 million tons of copra equivalent. Indonesia's main competitors are the Philippines and India, with a production of 2.8 million tons and 1.8 million tons, respectively (Jumiati et al., 2013). Most (> 90%) of coconut in Indonesia is exported to the U.S.A., the Netherlands, the UK, Germany, France, Spain, Italy, Belgium, Ireland, Singapore and other Asian countries such as Malaysia, China, Bangladesh, Sri Lanka, Taiwan, South Korea, and Thailand. Indonesian coconut exports continue to increase from year to year (Turukay, 2008).

Table 3. Area and Coconut Production in Maluku Province

<table>
<thead>
<tr>
<th>Districts</th>
<th>Area (Ha)</th>
<th>Percentage (%)</th>
<th>Production (tons)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maluku Tenggara Barat</td>
<td>17245.6</td>
<td>15.05</td>
<td>19767.4</td>
<td>19.18</td>
</tr>
<tr>
<td>Maluku Tenggara</td>
<td>22495.2</td>
<td>19.64</td>
<td>20708.1</td>
<td>20.09</td>
</tr>
<tr>
<td>Maluku Tengah</td>
<td>20880.8</td>
<td>18.23</td>
<td>18476.2</td>
<td>17.93</td>
</tr>
<tr>
<td>Buru</td>
<td>4826.4</td>
<td>4.21</td>
<td>3780.7</td>
<td>3.67</td>
</tr>
<tr>
<td>Kepulauan Aru</td>
<td>2967</td>
<td>2.59</td>
<td>1622.7</td>
<td>1.57</td>
</tr>
<tr>
<td>Seram bagian Barat</td>
<td>7673</td>
<td>6.70</td>
<td>7795.5</td>
<td>7.56</td>
</tr>
<tr>
<td>Seram Bagian Timur</td>
<td>18594</td>
<td>16.23</td>
<td>16222.7</td>
<td>15.74</td>
</tr>
<tr>
<td>Maluku Barat Daya</td>
<td>6301.2</td>
<td>5.50</td>
<td>5198</td>
<td>5.04</td>
</tr>
<tr>
<td>Buru Selatan</td>
<td>10604</td>
<td>9.26</td>
<td>8063.9</td>
<td>7.82</td>
</tr>
<tr>
<td>Ambon</td>
<td>2311.7</td>
<td>2.02</td>
<td>1169.5</td>
<td>1.13</td>
</tr>
<tr>
<td>Tual</td>
<td>662.8</td>
<td>0.58</td>
<td>263.1</td>
<td>0.26</td>
</tr>
<tr>
<td>Total</td>
<td>114561.7</td>
<td>100</td>
<td>103067.8</td>
<td>100</td>
</tr>
</tbody>
</table>

Copra is a product derived from coconut. Coconut production in Maluku is relatively good. The largest coconut area is Southeast Maluku Regency (19.64%), Central Maluku Regency (18.23%), East Seram Regency (16.23%), West Southeast Maluku Regency (15.05%) and South Buru Regency (9.26%). Based on the area, the most significant coconut production is Southeast Maluku Regency (20.09%), West Southeast Maluku Regency (19.18%), Central Maluku Regency (17.93%), East Seram Regency (15.74) and Buru Regency South (7.82%). The General area and coconut production in Maluku Province are shown in Table 3. The biggest coconut-producing districts as well as copra-producing districts. Copra-producing farmers in all districts make copra every day to market. Copra sales proceed to increase income to meet family needs.

Copra prices offered by buyers in Ambon are now moving down, after surviving since mid-December 2019 at Rp 6,500 / Kg. Copra prices fell again because the price development in Surabaya's primary market has decreased. If there is a price change in Surabaya, it will affect the purchase price in Ambon. Copra prices follow price developments in Surabaya because the copra results are sold to Surabaya as the primary market and export port. In January 2020, there was a decrease in copra prices, but copra farmers continued to sell copra to large traders in Ambon City even though the price was Rp. 6,000. Farmers take advantage of the opportunity to sell copra at this price range because copra prices are sometimes uncertain when there are always price fluctuations.

Copra prices tend to decrease dramatically during the COVID 19 pandemic from January to April. However, in May, it increased from Rp. 4,800 / kg to Rp. 5,200 / kg and again declined in June of Rp. 5,000 / kg. This price is relatively good, but the condition of the COVID 19 pandemic makes copra farmers' tastes to produce copra tend to decrease; moreover, there are restrictions on the use of transportation and restrictions on people to do activities. The development of copra sales prices is shown in Figure 3.

Copra farmers have recently been tough to increase copra production because prices continue to move down from January to April. In May, it moved up a little and then moved down in June, but according to farmers, this price is not comparable to the work of making copra, which is very time-consuming, labor and cost. Copra farmers feel a significant loss when they produce in large quantities because of uncertain prices and even make farmers uneasy. This is in line with the study of Sondakh et al., 2015, that copra cultivation at the farm level is not profitable, even though it has a competitive and comparative advantage in the world market. The COVID 19 pandemic is the biggest obstacle when farmers produce and sell copra products. Because in the COVID 19 pandemic, farmers did not carry out copra processing activities because prices were inadequate, transportation access was closed, and weather conditions were unfavorable.
conditions were uncertain. Community life in rural areas aside from being dependent on clove and nutmeg plants, copra accounts for the largest share of family income.

![Figure 3. Development of Copra Prices in Ambon City during the Covid-19 Pandemic Period](image)

**Conclusion**

During the COVID 19 pandemic, the cloves' price from January to May continued to decline, namely in January Rp. 68,000 moves down to June amounting to Rp. Sixty-eight thousand. In contrast to the nutmeg commodity, the price of nutmeg decreased from January to March and tends to remain stable for the last three intendeds, from April to June, amounting to Rp. 60,000 / kg. This means that the demand for nutmeg tends to be good, so that distributors do not reduce the price of nutmeg on the market. While mace nutmeg prices tend to move down from January of Rp. 265,000 until June of Rp. 215,000 / kg. Copra prices tend to decrease dramatically during the COVID 19 pandemic from January to April. But in May it increased to Rp. 5,200 / kg then moved down in June amounting to Rp. 5,000 / kg. Prices that fluctuate in the condition of the COVID 19 pandemic make copra farmer, however,tastes to produce copra tend to decrease; moreover, there are restrictions on the use of transportation and restrictions on people to do activities.

The global economy can shrink due to the COVID 19 pandemic. Contract further, if economic activity restrictions are extended without an adequate fiscal response. Developing countries, especially those that depend on plantation commodity exports, face increased economic risk. This has an impact on trade and investment channels in developing countries.

**References**


Biographies

Natelda R Timisela is a lecturer at Pattimura University, Department of Agriculture Socio-Economic, Faculty of Agriculture. The academic position is the associate professor. Bachelor of agriculture in 1998, agricultural social economics at Pattimura University. Master in agriculture in 2005, Agricultural Economics at Gadjah Mada University. Doctor of Agriculture in 2013, agricultural science at Gadjah Mada University. Has published several scientific articles on proceedings and accredited national journals, international journals and international journals indexed Scopus. My research interests include the study of agricultural economics, agribusiness, agro-industry, entrepreneurship, and marketing. She has taught courses in Agricultural Production Economics, agribusiness management, agribusiness marketing, agro-industry, and econometrics. Active in various scientific meetings and joined as a member of the Forum Dosen Indonesia (FDI), the Indonesian Agribusiness Association (AAI) and the Indonesian Agricultural Economic Association (PERHEPI). Involved in joint research with WWF Indonesia in 2016-2019. As a sago researcher along with the provincial agriculture office in Maluku in 2019. As a mentor of young Indonesian agricultural entrepreneurs, the Faculty of Agriculture of Pattimura University from 2018-2020.

Ester D. Leatemia, is a lecturer in the Agricultural Socio-Economic Department, Faculty of Agriculture, Pattimura University. The pass graduate in 2001 at the Pattimura University Agricultural Social Economic Study Program, and master's education in the field of Agricultural Economics studies at Padjadjaran University in Bandung in 2006. Some of the published scientific works include the contribution of the eucalyptus oil processing industry to household income in the village Wahana Baru of fenais leisela sub-district, Buru Regency, Supply Chain Management.
Of Agro Industry Of Cassava, Analysis of Consumer Satisfaction Rate of Nutmeg Juice Products of Tomasiwa Morella Cooperative in Ambon City.

**Johanna M Luhukay**, is a lecturer at the agribusiness study program, Department of Agricultural Social Economics, Faculty of Agriculture, Pattimura University, Ambon. The main activities are teaching and guiding students at the undergraduate level, courses taught are Agricultural Science, Agricultural Economics, Banks and credit, Other Financial Institutions, Livestock Agribusiness Management and Agribusiness Project Management. Has published several scientific articles on proceedings and accredited national journals, international journals and international journals indexed Scopus. As a mentor of Indonesian young agricultural entrepreneurs for the faculty of agriculture at Pattimura University in 2020. Active in various scientific meetings and joined as a member of the Indonesian Agricultural Economics Association (PERHEPI).

**Raja Milyaniza Sari**, is a lecturer in the agribusiness study program, Department of Agricultural Social Economics, Faculty of Agriculture, Pattimura University, Ambon. The main activities are teaching and guiding students at the undergraduate level, courses taught are Agricultural Science, Agricultural Economics, Regional Economics, Agro-Industry, Regional Planning, Operations Research, and Agribusiness Project Management. Routinely conducts research and publications in the fields of Agricultural Economics, Agroindustry, Regional Economics and regional planning both in teams and independently. Active as a researcher at the Regional Center of Excellence and Coastal Community Development Studies at Pattimura University (2016-2019), Research Team and Development of Maluku Essential Oil Downstream Products (2020). Active in various scientific meetings and joined as a member of the Indonesian Agricultural Association (PISPI) and the Indonesian Agricultural Economics Association (PERHEPI).

**Esther Kembauw**, As a Doctor in Agricultural Economics who is currently one of the lecturer staff at the Agribusiness Study Program, Social Economics Department, Faculty of Agriculture at Pattimura University Ambon - Maluku Indonesia. Ever received award as the 109th Indonesian Innovation Winner given from the BIC (Business Innovation Center). Currently as the Chair of the Pattimura University Development and Innovation Center from 2018 - until now. Some of the writer's works published in reference books and chapter books. In addition, the author has produced publications in internationally accredited and nationally accredited journals. And currently also a reviewer in several international journals and national journals to accredited national journals. On this occasion the author was also the Scientific Committee at PSP2M International Conference the Role of Science in the Covid-19 Pandemic.

**Marfin Lawalata**, is a lecturer in the agribusiness study program, Department of Agricultural Social Economics, Faculty of Agriculture, Pattimura University, Ambon. The main activities are teaching and guiding students at the undergraduate level, courses taught are Production Economics, Econometrics, Agricultural Economics, Cooperatives, Banks and Credit, International Trade and Operations Research. They were routinely conducting research and publications in the field of Agribusiness, Agricultural Economics, and Demography. They are involved as supervisors in a joint project set up a blended learning program for sustainable and inclusive value chain development in Indonesia, a joint project Indonesia - the Netherlands NUFFIC, AgroFair, Maastricht School of Management, Sekolah Bisnis-IPB, UNPATTI 2017 - 2020. Research members at the center for Excellence in Spice science and technology. They are incorporated in a study center that researches and develops spices in the Maluku islands. Helping researchers at the demographic study center, and being one of the authors of Indonesia's demographic and health survey report, 2017. Profile of Maluku province. In 2019 examined the value chain analysis of the broiler industry on Ambon Island to improve competitiveness (Case Study of PT. Mitra Jaya Partner Farmers). Active in various scientific meetings and joined as a member of the Indonesian Agribusiness Association (AAI) and the Indonesian Agricultural Economic Association (PERHEPI).

**Raihana Kaplale** is a lecturer at Pattimura University in the Department of Agricultural Social Economy, Faculty of Agriculture. Ms. Raihana holds a bachelor of Agriculture in Agricultural Socio-Economics from Pattimura University Ambon and a Master of Science degree in Agricultural Economics from Gadjah Mada University. He has taught subjects in Cooperative Subjects, Banks and other financial institutions, Entrepreneurship and Business Ethics, and International Trade.

**Septianti P. Palembang** is a lecturer at Pattimura University in The Agricultural Social Economy Department, Faculty of Agriculture. Mrs. Septianti holds a Bachelor of Agriculture degree in Agricultural Social Economy from
Pattimura University and a Master of Science degree in Agribusiness from IPB University. She has taught courses in Cooperative Subject, Banks and Other Financial Institutions, Introduction of Agricultural Science, and Agricultural Politics and Food Sovereignty.

Wenno, Noviar Flasiana. Born in Bandung, November 22nd, 1968. Agronomi S1 graduated in 1993 On the Department of Agricultural Cultivation Faculty of Agriculture Pattimura University Ambon. Continuing the S2 at Sam Ratulangi University Manado in the field of Science Planning & Regional Development and graduated in 2002. Lecturer at Agricultural Socio-Economic Department Faculty of Agriculture Pattimura University Ambon. Teaching courses in Regional Economics, Planning & Regional Development, Natural Resource Economics & Environment, Entrepreneurship & Business Ethics, Agricultural Entrepreneurship & Marketing, Organic Farming. Member of WUBI (Bank Indonesia Entrepreneur) and Owner NiiC’S, (Smart Food’s Corner & Beranda Hidrophonic) of Micro Small Medium Enterprises that producing culinary processed by Maluku's flagship resources and production of horticultural crops with hydroponic systems. To provide socialization and training of urban farming system Model on a regular basis.