

Farmer Resilience in Maintaining Agricultural Production during the COVID-19 Pandemic: A study in Solokuro Subdistrict, Lamongan

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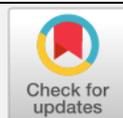
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ABSTRACT

This research examines how the lives of farmers in rural Lamongan during the pandemic, the challenges faced by farmers during the pandemic, and the forms of resilience that farmers take in maintaining their agricultural productivity in the pandemic era. Data was collected using qualitative research methods and a case study approach to show how farmers carried out the form of resilience in rural areas in Lamongan Regency during the COVID-19 pandemic. There were eight informants whose data were extracted in this research consisting of four male farmers and four female farmers. Observations and interviews with informants were carried out from July to October 2020. This research occurred in a rural area, namely in Dadapan Village, Solokuro Subdistrict, Lamongan Regency, East Java, considering that farmers in the village still carry out farming activities even though they are in a pandemic condition. From this research, it can be seen that farmers in Dadapan Village are the affected parties during the pandemic and must make efforts to survive. The challenge farmers face the losses experienced due to difficulties in marketing their agricultural products. Farmers' resilience forms include, first, continuing to do farming during this pandemic while still paying attention to health protocols; second, creating marketing strategies for their agricultural products online; and third, maintaining their enthusiasm to continue farming.

Keywords: Agricultural Production; COVID-19 Pandemic; Farmer; Lamongan; Resilience; Social Action

1. Introduction

According to [Siche \(2020\)](#), several groups of people are most vulnerable to being affected by the COVID-19 pandemic during this pandemic. They are the poor, farmers, and children. During the COVID-19 pandemic, farmers are one of the most vulnerable groups to be affected. The existence of farmers as one of the vulnerable groups affected during this pandemic is a unique and interesting phenomenon because farmers are food producers who are the hope of the community in maintaining food stocks and are expected to be able to overcome food problems. This also happened to farmers in Dadapan Village, Solokuro Subdistrict, Lamongan Regency.

Concerning agriculture, the issue of food security is also important and is also vulnerable to risk during the current COVID-19 pandemic. The availability of food or food security, according to [Rosales & Mercado \(2020\)](#), indicates the availability of public access to human food sources because they must be able to meet the basic needs of human life, namely food.

Farmers are individuals who work to utilize resources to produce food through the land to cultivate certain types of plants for human benefit ([Richard, 2004](#); [Rodjak, 2006](#)). Farmers with their land must be able to provide welfare for their families. According to [Scott \(1989\)](#), farmers are a group whose lives are very close to the subsistence line. A poor harvest for a farmer means fewer food staples to eat and may also be a burden to others. For farmers, selling part of their land or livestock means reducing the possibility of achieving adequate food sufficiency (subsistence) in the following year. In his life can be called a farmer depending on the time of a certain season.

Adaptation from production to consumption is a common phenomenon in the community. The farmers only rely on their livelihood from land cultivation and rice fields. Poor harvests sometimes also make them have to face an uncertain life. They must have started to adapt and design strategies to survive maturely. High innovation and creativity are needed, so their socio-economic life runs at least the same as before the pandemic.

The people of Dadapan Village, Solokuro Subdistrict, Lamongan Regency, who have jobs as farmers, both as farmland owners and as farm workers, also carry out various strategies to survive. Working as a farmer is the job of most of the people of Dadapan Village. As many as 52% of all types of work in Dadapan Village. While being a farm laborer is the livelihood of 7.5% of the people of Dadapan Village, Solokuro Subdistrict, Lamongan Regency. The COVID-19 pandemic has also caused the socio-economic life of farmers to experience an impact where they only rely on life from processing paddy fields and fields. They carry out strategies to survive during a pandemic. The COVID-19 pandemic has not prevented them from doing their activities to survive. This article wants to explain how farmers live during this pandemic, the challenges they face, and the form of resilience they take during this COVID-19 pandemic.

Resilience, according to various figures, is the ability to overcome external disturbances and pressures due to changes that occur both in social, cultural, political, and environmental changes faced by individuals and the community ([Adger, 2000](#)). The process of positive adjustment to danger or threats that threaten ([Asfaw et al., 2016](#); [Freitas & Downey, 1998](#); [Luthar et al., 2000](#)). Furthermore, [Luthar \(2003\)](#), [Rutter \(2012\)](#), and [Chang et al. \(2015\)](#) state that resilience carried out by individuals or community groups is more emphasized to face conditions that create crises, either obstacles, challenges, or conflicts in a more positive way and not eliminate or avoid the risks that will arise.

In the context of agricultural problems, resilience is an adaptation strategy to deal with problems in the agricultural sector, such as a pandemic that causes changes or pressures in

farmers' lives. In this research, the resilience of the farmers in question is a farmer's survival strategy in maintaining agricultural production during the COVID-19 pandemic. The concept of resilience is important to study in rural communities in an area because pressure from the environment can occur at any time, which will risk the crisis faced by humans, mainly in the household unit, in this case, the rural farmer household. However, each household unit can reduce and counteract these pressures through the ability to plan, anticipate and respond to changes through adaptive mechanisms to deal with these pressures or changes. Similarly, farmers have a certain strategy for dealing with these pressures or changes.

This research used Max Weber's theory of action as an analytical tool. According to Weber, to understand the various characteristics of the community, the best way is to appreciate the typical forms or models of the actions of the people that have become their characteristics, namely by trying to understand the underlying reasons why these people act, also what historical events have influenced their character. So that when the community action is carried out, the meaning and significance of the action are known (Jones, 2010). In addition, Verstehen Weber also wants to know how certain people in a certain area formulate meaning and meaning for their own lives so that they take certain actions. Verstehen Weber understands how the community's values, traditions, and actions give meaning to the perpetrators (Kuper & Kuper, 2000). Therefore, this research uses Weber's theory to determine the reasons underlying the farmers in Dadapan Village act and how the actions taken by the farmers give meaning to the perpetrators.

2. Literature Review

Many studies have been conducted to examine the character of farmers in maintaining agricultural productivity, including studies that discuss the character of farmers in increasing agricultural productivity. Astuti et al. (2020) found that farmers' characteristics affect the productivity of agricultural businesses and the desire to develop. These characters are shown by several indicators, namely ethnic origin, experience, and age. Discipline, perseverance, desire to seek and improve knowledge, and mastery of technical skills that can increase agricultural business productivity are largely determined by ethnic origin, experience, and age. Another study by Astuti et al. (2019) found that a dominant farmer character could influence farmers' entrepreneurial behavior. These characteristics include the courage to take risks, responsiveness to opportunities, innovative attitudes, and motivation.

Evahelda et al. (2021) found that the post-harvest farming process carried out by farmers was influenced by entrepreneurial orientation and market orientation. Farmers who desire to advance, excel, dare to take risks and are willing to innovate through new agricultural production methods generally tend to carry out good post-harvest handling activities.

Andini et al. (2020) explain the factors that can affect the resilience of farmers' ability to earn a living in Negeri Latuhalat Ambon are influenced by age, education level, land area, and the number of family members. The resilience of farmers in Negeri Latuhalat Ambon is carried out through various strategies for making a living, such as through agriculture and outside agriculture. Mariyani et al. (2019) examine the resilience of rainfed rice farming communities to the threat of food insecurity due to climate change in South Lampung, which is carried out by building adaptive capacity networks, especially social capital, and managing their resources.

Another study by Chamro & Widjyanthi (2020) found that fishermen in Puger, Jember are resilient during the lean season, during which fishermen can take advantage of their livelihood assets both in the livelihood system and in fishermen's household assets. Marseva et al. (2016)

found that education level, income level from previous harvests, length of farming, and other dummy jobs affect the resilience of farmer households. Farmers adapt to survive by meeting their daily needs. Adaptation carried out by farmers in Wanasari Village, Brebes, is done by changing the planting period, changing fertilizers, reducing fertilizer doses, and replacing seeds. At the same time, adaptation in livelihoods is to have other jobs through fishing and off-farm work.

Berkes & Ross (2013) state that resilience makes a community or individual in a household able to withstand stress in a system. Holling (1973) argues that resilience is a process (used to reduce disturbance by an ecosystem) so that an ecosystem can maintain itself in the face of perturbation and change. Resilience refers to the homeostatic principle, namely resistance or a regulatory mechanism that leads to dynamic equilibrium so that the system continues to run constantly.

Meanwhile, Berkes & Ross (2013) argue that resilience is the ability to build and enhance learning and adaptation capacities. According to Speranza et al. (2014), in resilience, each community or individual has its way of organizing, the capacity to learn, and knows its threats and opportunities.

Based on all the studies on resilience described above, following the studies in this research, it can be seen that in the face of change or pressure, each community or individual has its system to withstand these changes. Each community or individual has its way of organizing, learning process, and knowledge in dealing with challenges and changes. This is also done by farmers in Dadapan Village, who have their form of resilience to survive and maintain their agricultural production during the COVID-19 pandemic.

3. Research Method

This study uses a qualitative method with a case study approach to explain the lives of farmers during the pandemic in a complete and in-depth manner in a natural setting. In this study, Dadapan Village, Solokuro Subdistrict, Lamongan Regency was chosen as an intensive research unit as a community to understand farmer behavior. In this case study, in-depth, detailed, and detailed research is carried out to determine how resilient the farmers are in dealing with the phenomenon of the COVID-19 pandemic in depth in the community or village.

The data in this study were obtained to understand the meaning of the life of farmers in Dadapan Village, Solokuro Subdistrict, Lamongan Regency, during the COVID-19 pandemic. The research subjects or informants whose data were taken in this study were farming communities and selected eight informants with the first criteria, farmers who are domiciled in Dadapan Village, Solokuro Subdistrict, Lamongan Regency. Second, the farmer is still working during the COVID-19 pandemic (Creswell & Creswell, 2017). The determination of informants is done by a purposive method based on the two criteria mentioned above.

Data were obtained through observation and in-depth interviews in this research on farmers. Researchers conducted interviews using interview guidelines to obtain answers to the formulation of research problems that have been determined. Interviews were conducted by taking notes and recording information from the informants using cell phones to store the results of the interviews and their recordings. Interviews were conducted at the farmer's house or in the fields or fields where they farmed. The data obtained through observations and in-depth interviews are then reduced, after which the data is presented, and conclusions are drawn. Data testing is carried out using data triangulation by comparing different information and data (Creswell & Creswell, 2017).

All farmers who became informants in this study were farmers who, in addition to cultivating their fields by planting rice and planting crops in the fields simultaneously. With the consideration that farmers who own paddy fields and their fields are more likely to bear the risks that arise, starting from processing the land before planting seeds; looking for seeds, fertilizers, and medicines; the process of planting rice and crops in the fields, carrying out harvesting in the fields and fields, to marketing their agricultural products after harvest.

All informants in this study were those who had been doing farming work since their parents, so on average, they had been doing it for more than fifteen years. The informants are also farmers who continue farming even during the pandemic. All informants were at the research location during the research, and the researchers conducted observations and interviews and met them at their residences, rice fields, and fields. The selection of informants amounted to eight people considering the data obtained already had saturation, so the researchers decided to stop searching for more informants.

4. Results and Discussion

4.1. Farmers' Life in Dadapan Village during the COVID-19 Pandemic

Dadapan village has a large area dominated by agricultural land and settlements. Agriculture in this village depends on the rainy season because agricultural land is far from water sources. Dadapan village has two types of agriculture, namely fields and rice fields. The fields are usually planted with corn, chilies, cassava, and peanuts, while the rice fields are only planted with rice. In one year, farmers can only get one harvest for rice and chili, but for corn, cassava, and peanuts, farmers can get up to two crops in a year. In general, the farmers in this village have agricultural land, and although they sometimes work as laborers on other farms, they still own one or two farms where they cultivate their agricultural land.

In Dadapan Village, Solokuro Subdistrict, Lamongan Regency, there are three types of farmers in the village, with the type of capital, income, and daily needs of each type of farmer as seen in the table below.

Table 1. Typology of Farmers in Dadapan Village

Farmer Type	Capital	Income	Fulfillment of Daily Needs
Farmland owners (farmers who own their land and, when harvesting, get results from their land)	The capital spent is quite a lot for seeds, fertilizers, medicines, and hiring labor farmers because of the extensive arable land. Labor farmers are hired to get the job done quickly.	If the plants are included in the category of healthy and good plants, it can be said that they can earn a decent profit. Still, if the plants fail due to pests, the income is only enough to cover the capital spent to buy seeds, fertilizers, and others.	Not only depend on income from farming, but they have other jobs besides being a farmer. Harvests from farming are usually used to buy land, jewelry, and pets.
Cultivators (farmers who work on other	Own capital and the results are shared	The income of smallholders is not	The fulfillment of the needs of the

Farmer Type	Capital	Income	Fulfillment of Daily Needs
people's land by dividing agricultural products according to the agreement)	with the land owner when harvested. The business capital needed by smallholders depends on the area of cultivated agricultural land. The larger the agricultural land cultivated, the greater the business capital needed.	entirely for themselves. They have to share the results with the farmland owners.	smallholder family is also influenced by the income from the harvest obtained by the sharecropper. Generally, the results from farming are only sufficient for the family's needs. Agricultural activities are the only source of income they have to do to meet the family's needs, both for clothing, food, and school fees for children daily.
Farm workers (farmers who work on someone's land and will get wages from the farmland owner)	Farm workers do not need to spend capital, and they only rely on their energy to increase their income and try to get more working hours and working days	Farm workers' income can be seen from their daily work for land-owning farmers. Farm workers who already have landowner subscriptions usually have more working days than free laborers because land-owning farmers have contracted them. Meanwhile, free laborers do not work with only one farmland owner. They can change days to move to another land owner, so the income they receive is daily.	The fulfillment of the needs of farm laborers is influenced by the income obtained from the number of farmland owners.

For farmers in Dadapan Village, farming activities during the pandemic must still be carried out due to economic demands and to maintain their family's food supply. BM revealed that he continued to farm as usual because of economic demands and to maintain food supplies for his family. Even though during the COVID-19 pandemic, the government was advised to stay at home, this was not done because he had to harvest chilies in certain months. According

to him, farming work is relatively no problem because there are no field crowds. Likewise, as stated by IA, he continues to farm because all his farms have already been planted with corn, chilies, cucumbers, and so on. If left alone, he feels affectionate.

During this pandemic, farmers in Dadapan Village continue to carry out farming activities as usual by observing health protocols. IT said this, who stated that during the pandemic, he still went to the fields using a mask and kept his distance because he felt that going to the fields would be no problem because there were no crowds.

During the coronavirus pandemic, farmers in Dadapan Village continue to carry out farming processes such as planting and harvesting. However, planting and harvesting during this pandemic differ from the previous situation and conditions. During harvest, farmers wear masks and keep their distance to avoid the spread of the coronavirus. Harvesting rice is still conventional, but farmers still apply the government's advice to keep the distance not too close. They also diligently wash their hands, wear masks, and consume nutrients to strengthen their immune system.

For farmers, no matter what happens, the farming process must not stop and must continue to maximize production. The harvesting process in Dadapan Village, Solokuro Subdistrict, Lamongan Regency, is still carried out in the usual or conventional way. Still, farmers participate in implementing government recommendations by keeping the distance between them so they are not close together. The farmers carried out health protocols such as washing hands, wearing masks, and keeping a distance. Another thing that farmers can sunbathe while farming, which is considered useful to prevent the transmission of the COVID-19 virus.

Max Weber, through his theory of action, states that human individuals in the community are creative actors. Max Weber explained the *verstehen* approach to understanding the meaning of one's actions that individuals in acting do not only carry them out but also place themselves in the environment of thinking and behavior of others. This approach leads to action with a motive for achieving the goal (Ritzer & Stepnisky, 2017). Weber saw social reality as something based on individual motivation and social actions. For Weber, the world exists because of social action. Humans do things because they decide to do them, intended to achieve what they want. After selecting a goal, they take into account the circumstances, then choose an action. Farmers determine this action with the hope as a 'condition' or 'means' to achieve the expected goals through rational efforts and calculations. Instrumental rational actions taken by farmers are directed towards goals, tools, and consequences that have been calculated and considered rationally (Ritzer, 2012).

4.2. The Challenges of Dadapan Village Farmers in the Pandemic Period

For farmers in Dadapan Village, the pandemic caused them to suffer losses because they had spent a lot of capital. According to the eight informants, three months before the arrival of this virus, farmers were planting corn, rice, chilies, and others, which required a lot of capital. The COVID-19 pandemic came along with the harvest season when the government recommended staying home, working from home, and keeping a distance. The most difficult situation experienced by the farmers is that they cannot leave their crops unattended without treatment because if left unchecked, their family's food stock will decrease and reduce their income. Because so far, they only rely on agricultural products. BM, an informant, revealed that he experienced a loss from farming during the pandemic. He suffered a loss because he should be able to harvest chilies, corn, and rice, but because the selling price dropped, he suffered a loss. Even if he made a profit, the profit would be very small. Other informants, IT, IM, and A,

said that the selling price of the harvest had fallen, even though it was time for a large-scale harvest.

According to the eight research informants, the COVID-19 pandemic hugely impacted agriculture. They felt disadvantaged because when the virus arrived, the agricultural process in Dadapan Village was during the period of a massive harvest. Meanwhile, the cost of production to harvest in the form of fertilizers, seeds, and maintenance that they have spent is quite high. Not to mention the unavailability of markets due to government policies that closed the operations of several people's markets as an alternative for farmers in marketing their crops.

The capital for obtaining seeds, fertilizers, and medicines varies. Some choose to borrow from middlemen, and some choose to pay cash, depending on the farmer's economic life. However, from these informants, it is known that, on average, they choose to owe money to middlemen because the prices of seeds, fertilizers, and medicines are quite high. The yields they get are only enough for their daily needs. It can also be said to take advantage of the opportunities that exist because, indeed, middlemen allow them to take on the debt first, then after the harvest, they will pay.

The people in Dadapan Village have been farmers for decades because the land they own has been passed down from generation to generation by their parents. In the past, farmers in Dadapan Village only had capital with their nurseries and used manure from cow dung, but the yields were less than optimal. Hence, the farmers switched to using quality seeds and chemical fertilizers to increase their agricultural yields.

Many farmers in Dadapan Village admit that it is difficult to sell their crops as long as regulations restrict people's activities outside their homes. In addition, the distribution of goods is also slightly hampered due to the regional government's large-scale social restriction policy. Some crops that are difficult to sell include tomatoes and chilies. Due to limited market operating hours, farmers cannot freely distribute to the market. And if not sold immediately, vegetables quickly rot. Farmers continue to harvest abundantly in June-July, but during this pandemic, the selling prices of tomatoes and chilies are not as expected. Curly chili is sold for Rp7,000 per kilogram from the normal price of Rp30,000 per kg, while tomatoes are Rp4,000 per kg. Vegetables such as tomatoes and chilies must be harvested immediately, and it can't wait for prices to stabilize. Because if it is not harvested quickly, it can rot on the tree, increasing the farmers' losses.

The government's implementation of the Large-Scale Social Restrictions policy in several regions also affects food production, distribution, and consumption (Sadono, 2008). This causes the distribution process to be limited, which causes reduced food productivity. In this COVID-19 pandemic situation, small farmers are one of the parties who are not spared the impact. Not only does it impact the disruption of the supply of national food availability, but it also threatens the farmers' welfare. The COVID-19 pandemic in Indonesia also shows that farmers also have considerable risk. The condition of Dadapan Village farmers, dominated by elderly farmers over 50 years old, need to implement health protocols to prevent disease transmission due to COVID-19.

Some farmers in Dadapan Village, Solokuro District, Lamongan Regency use social media to promote their agricultural products. So even if they sell their crops at a price far below the market, they lose money. This way of marketing online has never been done before, before the pandemic. As stated by IA, who usually sells his agricultural products, chilies, and cucumbers, to middlemen, during the pandemic because the markets were closed, he finally marketed his agricultural products online via Facebook.

The way farmers in Dadapan Village face challenges during the pandemic shows what Weber said that farmers act rationally according to their knowledge. They must continue farming activities, including selling agricultural products during the pandemic, with all risks because if not done, it will affect the continuity of their family life. The actions of farmers, according to Weber, must be understood and seen from the meaning that governs their actions, causal relationships, and consequences (Turner, 2012).

Weber emphasizes social conditions, namely placing consciousness, states of mind and feeling, and actor orientations in the most important focus. According to Weber, individuals orient the meaning of their social actions. This affects the perception of actors, in this case, farmers, about how they must act in and towards the world to maintain or change it. Farmers in Dadapan Village choose to take actions that they think should be done even though it involves risk, which is their view of the world.

4.3. The Resilience of Dadapan Village Farmers in the Time of the COVID-19 Pandemic

Each individual and group has different levels of resilience based on their environmental conditions. Various forms of resilience are carried out according to their challenges and knowledge. The strategies adopted are adapted to existing conditions, as with the people of Dadapan Village. Their livelihoods depend on agriculture, even though the farmers' lives in Dadapan Village are currently being tested due to the COVID-19 pandemic. Farmers are not discouraged from farming. They still maintain food supplies for the welfare of their families and communities (Hanafie, 2010).

4.3.1. Keep Doing Farming Activities by Implementing Health Protocols

Most of the people in Dadapan Village are farmers, both owners of agricultural land and farm laborers. Farmers in Dadapan Village during this pandemic are also among those affected. However, agricultural production activities must still be carried out despite the pandemic requiring individuals to remain at home. Farming activities are still carried out while implementing health protocols such as wearing masks, maintaining distance, and farming in the hot sun. Farmers in Dadapan Village carried out all these strategies as a form of resilience during this pandemic. IM stated that he would continue to farm because if he didn't farm, he and his family would not be able to eat. For other farmers, farming activities must continue because they have spent a lot of capital. As said by IT, he continues to farm as usual because he feels sad if his fields are left unplanted because he has spent a lot of capital.

In this pandemic period, farmers adopt a lifestyle according to health protocols, initially when they go to the fields or fields without wearing masks. Now, farmers are accustomed to wearing masks according to government recommendations. However, even though there is an appeal from the government for the community to stay at home, farmers cannot follow this appeal because many things will be missed if they stay at home. They will suffer losses if left behind starting from the initial capital of planting vegetables or rice, the condition of farm workers who are accustomed to working with daily wages, food stocks, and family economic income will be lost.

To prevent coronavirus transmission, farmers do not do big harvests in the morning but in the afternoon when the sun is already felt. Harvesting is carried out in the afternoon or after 08.00 AM until before noon, as it feels hot. The farmers hope that sunlight can prevent the transmission of the coronavirus outbreak. After harvesting, farmers pursue the second planting period to anticipate water shortages in the face of possible dry seasons. The social distancing

rules imposed by the government on the community to reduce or break the chain of the spread of COVID-19 cannot be carried out by farmers because they have to go to the fields so that agricultural production can continue.

During the threat of the coronavirus outbreak, farmers in Dadapan Village continue to harvest as usual. However, the implementation is different from the previous situation and conditions. During the harvest season, farmers continue to carry out health protocols as recommended by the government, such as wearing masks, keeping a distance and washing hands frequently.

4.3.2. Creating an Online Marketing Strategy

This COVID-19 pandemic inevitably causes farmers to be able to play many roles other than as a farmer who produces agricultural products. Farmers must also be able to act as sellers or sellers of both online and offline sales. LSSR conditions that do not allow farmers to meet directly with buyers or consumers require innovation and marketing strategies so that farmers can survive during a pandemic, one of which is through delivery services or online sales of agricultural products through social media. Farmers in Dadapan Village do this. They market their agricultural products through social media, namely through Facebook. Young farmers market it themselves online. In contrast, farmers who are elderly and less familiar with information technology market it with the help of their children or close relatives.

As said by one of the informants, to continue to distribute the harvest that used to be directly sold to middlemen, they market their harvest through social media because the markets are usually used as middlemen sales during the pandemic. COVID-19 is all closed and not operating. So it is considered necessary to have innovation and strategy in the marketing department by expanding the sales system through online media. It is hoped that changes to the food distribution and supply chain will become more efficient due to the termination of marketing channels for commodities and agricultural products.

4.3.3. Keep Upholding Passion for Farming

According to the eight research informants, they do not know the word “work from home”. They work hard and enthusiastically for the food stock that the community needs so that the food supply in this country is not hampered. They also create that spirit by thinking that being a farmer must benefit others. If there are no farmers who continue to grow crops, Indonesia will experience a food supply crisis. And also, in Dadapan village, agriculture is their only source of livelihood, so they must continue to be eager to meet the family’s economic and food needs. According to the BM informant, they have to go to the fields because if they don’t farm in the fields, their families don’t eat and can’t survive. The farmers also think that they must provide food for the community.

In the COVID-19 pandemic, Dadapan Village farmers are also one of the parties who are not spared the impact. It impacts the food supply disruption and threatens farmers’ welfare. Even though the farmers of Dadapan Village have been affected by the COVID-19 pandemic, the enthusiasm to maintain food supplies is still being carried out. They are still actively cultivating agricultural land. The farmers of Dadapan Village apply farming patterns according to health protocols. At first, when they went to the fields or fields without wearing masks, farmers started to get used to masks and maintain a distance according to the rules set by the government.

Although there is an appeal to stay at home by the government, farmers cannot do this, because if they stay at home, many things will be harmed, starting from the initial investment of planting vegetables or rice that does not return. Farm workers who are used to working for daily wages cannot get their wages, and food stocks and the family economy are also affected. A number of farmers in Dadapan Village admitted that they had difficulty selling their harvests, and the distribution of goods was also slightly hampered due to the regional government's large-scale social restriction (LSSR) policy. Some crops that are difficult to sell include tomatoes and chilies. Due to limited market operating hours, farmers cannot freely distribute to the market. And if not sold immediately, vegetables quickly rot. To work around this, farmers innovate by selling their agricultural products through social media because the markets during the COVID-19 pandemic are all closed and not operating. In addition, they must always maintain their farming spirit so that their agricultural production is maintained for the needs of family life.

The findings of this study indicate that farmers have all authority to determine actions to provide food supplies for families and maintain their lives. Freedom in choosing an action to improve the socio-economic life of the family is their choice. Working as a farmer is a subjective desire of individuals to do so as an effort, they must make to support their families during the COVID-19 pandemic.

Max Weber's theory of action states that people do things because they decide to do them and also aim to achieve what they want. Individual or group action is intended if the goals, means and consequences have been calculated and considered rationally. The actions taken by farmers in Dadapan Village are based on considerations in maintaining food supplies that have subjective meaning for farmers and are then directed to other people. Directed to others means that the results from agriculture they get are not only intended for personal interests, but also given to families, grandchildren and families to survive. In addition, agricultural products will also be sold to meet economic needs and the general public's food needs.

Weber's view believes that acting rationally is acting according to the knowledge of the forces that influence one's behavior. Social action must be understood and viewed from the meaning that governs people's actions, causal relationships and consequences (Ritzer, 2012). In line with Scott (1989), those farmers are a group whose lives are very close to the subsistence line. During this pandemic period for farmers in Dadapan Village, it is better to take risky actions, namely continuing to do farming activities with the risk of contracting the disease and even death, than if the family does not eat or starves to death. In addition, working as a farmer has become a habit for the people of Dadapan Village, which cannot be changed even by a deadly disease.

The findings of this study emphasize that the resilience carried out by the farmers of Dadapan Village is carried out to deal with conditions that create crises, obstacles, and challenges by taking risks for their security that can threaten life safety. Farmers are not afraid of the risks that arise if they continue to farm during the pandemic. They fear their families and grandchildren will not survive due to starvation. The findings of this study support Scott's argument that farmers will do anything to survive, even if it may threaten their safety. That is the principle held by farmers as community food providers.

Interpretive understanding of a situation allows understanding of people's actions and how people act through cause and effect. The meaning (sense) is the meaning that people attribute to their actions, and the reference is the action itself which is a unique event open to verification (Ritzer, 2012, p. 123). The ability of farmers in Dadapan Village, Solokuro

Subdistrict, Lamongan Regency, to survive during a pandemic shows the ability of farmers to create independent strategies both in the production process and marketing of agricultural products to maintain the spirit to keep farming. Farmers' efforts to continue the production process during the COVID-19 pandemic by following health protocols, social distancing, paying attention to working hours, doing online marketing and maintaining their enthusiasm are farmers' strategies to survive during a pandemic. As stated by [van der Ploeg \(2017\)](#), farmers have their strategy with independence as the main way to survive amidst various pressures.

The results of this study confirm Max Weber's theory of action that humans do something because they decide to do it, and it is intended to achieve what they want. Action is directed when the goals, means and consequences are calculated and considered rationally. This research also supports Berkes and Ross's theory of resilience that each community or individual has its system to survive these changes in the face of change or pressure. Each community or individual has its way of organizing, learning process and knowledge in dealing with challenges and changes. It also supports James Scott's argument, which states that farmers will do anything to survive even though it may threaten their safety, as demonstrated by farmers in Dadapan Village, Solokuro Subdistrict, Lamongan Regency.

5. Conclusion

During this pandemic, farmers in the village of Dadapan Lamongan are also affected. Farmers continue to do farming activities during the pandemic due to economic demands and to maintain their family's food supply. The farming process is carried out by observing health protocols. The challenges faced by farmers are that they suffer losses because they have spent a lot of capital. Still, the selling price of agricultural products has dropped so that there is almost no profit, even if there is only a little, and it is not uncommon to experience losses.

Farmers are doing various ways to maintain life to deal with the pandemic. The forms of resilience carried out by farmers include, first, continuing to carry out farming activities as usual, even though this is a risk that can threaten the safety of their lives. Farmers must continue to do farming activities in the fields so that they and their families can survive during the pandemic. Farmers prefer to take life-threatening risks by continuing to farm in their fields during a pandemic than if their families starve and cannot survive. Second, create an online marketing strategy for agricultural products. The pandemic period gave rise to the creativity of farmers by way of marketing that was not what they usually did before the pandemic, namely online. Marketing of agricultural products online is done because many places selling agricultural products are closed, so they have to find other marketing ways so that agricultural products can be sold. They can survive by selling their agricultural products. And third, maintain a sense of enthusiasm for farming. Farmers have to keep going to the fields because if they don't farm in the fields, then their families don't eat and can't survive.

This study is limited to discussing the challenges faced by rice and smallholder farmers and the forms of resilience they carry out during the pandemic, where they depend on their agricultural land to survive. To further complete the study on farmers, research can be carried out on the socio-economic impacts of large-scale farmers with better agricultural systems during this pandemic.

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The authors have declared no potential conflicts of interest concerning this article's research, authorship, and/or publication.

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