

Dynamics of rice farmers responding to the challenges of global change (Case study in Kesugihan Kidul Village, Cilacap, Central Java)

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Abstract: The purpose of this study was to analyze the dynamics of rice farmers in responding to the challenges of global change, particularly the dynamics of the profile of rice farmers in Kesugihan Kidul Village, rituals in rice farming, shifts in farming culture, and the challenges of maintaining rice productivity. The approach used is qualitative with a case study method. The results of this study indicate: a) the profile of rice farmers shows diversity, which has implications for responsibilities in cultivating rice fields; b) farmers' rituals in carrying out cultivation use stages that inherit the habits of previous generations while making several adaptations or adjustments; c) farmer culture has shifted from merely fulfilling daily needs to becoming profit-oriented by taking advantage of existing opportunities, including the expansion of livelihoods outside of farming; and d) the challenges farmers face in maintaining rice productivity are increasingly complex, both due to the narrowing of rice fields and the reduced quality of rice cultivation. Suggestions in this study are: a) a study of the life of farmers from the perspective of cultural geography is important to identify the diversity of farmer profiles in order to formulate policies that are more targeted; b) farmer rituals must be understood as part of the national system for increasing rice production; c) shifting farmers' culture, both materially and immaterially, and addressing the challenges farmers face in maintaining rice production must be supported by the government through policies that are favorable.

Keywords: *Dynamics of Rice Farmers, Global Challenges.*

1. Introduction

The life of rice farmers in Kesugihan Kidul Village, Cilacap, Central Java, is interesting to study because geographically the village is a transition between rural and urban areas. Rural characteristics are marked by the simplicity of the community and the existence of large rice fields with the support of irrigation canals. On the other hand, the village has urban infrastructure facilities, such as a health center, communication center, education center, business center, banking, entertainment venue, and is the center of the sub-district government. The younger generation is accustomed to urban life because many have migrated for education and work. This transition has caused people, especially farmers, to have a unique culture in their daily activities, namely agrarian culture mixed with urban culture. The character of the community also changes from a rural character to an urban character [1].

Universally, the elements of culture consist of a) religion, b) community organization, c) knowledge, d) language, e) livelihood, f) art, and g) technology and equipment. The form consists of things in the form of abstract culture in the form of thoughts, human activities, and artifacts or objects [2].

The embodiment of these cultural elements, although separated, in their function shows the relationship and dependence between one element and another, including the relationship between

humans and nature. The relationship between humans and nature shows the cultural identity of a group of people. Culture becomes a symbol of the characteristics of the existence of a society that distinguishes it from other societies. One of the characteristics of society that is easily recognizable is the farming community that creates, works, and utilizes technology to assert its existence, especially in sustaining its life.

As a symbol of the unification of cultural elements, farmers' lives experience dynamics that are difficult to predict due to environmental changes, global challenges, and the temptation of other sectors of the economy that will affect the food availability of a region. The farmer is a symbol of defense whose existence must be understood as the savior of future life. Farmer groups are actually influential groups in the context of saving the country's economy.

So far, the various food needs of 276 million people have been placed on small farmers. Based on simple statistical data, the production of various foods in 2018 showed 59.2 tons of dry milled grain, 30 million tons of corn, 1.2 million tons of sugar, and 982,598 tons of soybeans. If the price of rice is Rp. 5,000 per kilogram, corn is Rp. 4,000/kg, sugar is Rp. 10,000/kg, and soybeans are Rp. 7,500/kg, then the total value of these four commodities is Rp. 435 trillion [3].

The producers of the four commodities are none other than small farmers scattered throughout Indonesia. In fact, there are not many corporate powers in Indonesia that can exceed the power of small farmers. What's even more amazing is that they use their own capital, don't take on debt, even crop failures are borne by themselves, so it can be understood that farmers have a high level of adaptation because they are brave and able to face any situation. This independence is culturally very important given the complexity of efforts to provide a country's food sources.

The resilience of farmers, especially rice farmers to face global challenges, cannot be doubted. The resilience of farmers to face every difficulty emphasizes that the culture of farmers is a culture that is tough to adapt to any changes because it firmly adheres to the culture [4].

2. Research Methods

This study uses a qualitative approach, as for the method, based on the type of question, the level of control by the researcher, and the focus used, the case study method is used [5]. Researchers directly interact with the community, especially farmers, to get direct information about the dynamics of the profile of rice farmers, rituals in the rice farming system, and to explore in depth the challenges faced by farmers, including carrying out observations and participating in several activities so that the information obtained is more accurate. Data were obtained through interviews, observations, and available documents [6]. Interviews were conducted with community leaders, especially leaders in the agricultural sector such as the head of farmer groups, and farmers in general. The informant is believed by the researcher to know every process that takes place, including the events behind the events that occur. Observations were carried out on the ongoing agricultural process, from the preparation process for planting, the planting process, to observing post-harvest activities such as the process of buying and selling grain from farmers to traders. Then the data is verified, cross-checked with other sources in order to obtain real data that reflects the life of farmers as the purpose of this research.

3. Results and Discussion

3.1. Dynamics of Rice Farmer Profile in Kesugihan Kidul Village

Based on interviews and observations at the research site, it can be described that the profile of farmers in Kesugihan Kidul Village and its surroundings shows diversity. At least the farmers in the research location can be identified as follows: a) pure farmers, both rice field owners and land tenants, namely farmers who completely depend on their livelihood from activities in the fields, do not carry out economic activities in other sectors such as construction workers, mining sand, working in companies, or other occupations that have implications for welfare, b) mixed farmers who own land but have other jobs that are prioritized, such as government employees, sand miners, construction workers, traders, and company workers, c) tenant farmers but also have other jobs such as traders, company workers,

sand miners, and traders, d) farm laborers, namely workers who rent out their services or labor either to cultivate rice fields, plant seeds, take care of plants, and become seasonal workers at harvest, e) owners of rice fields but for some reason the process Field work is handed over to the tenant through a certain agreed system.

Apart from the four types of farmers, there are at least several other groups that have an influence on local agricultural activities, namely: a) seed, fertilizer and drug traders who provide all the needs of farmers, b) tractor owners who rent tractor services and their workers, where the contract system with farmers is closed, meaning that farmers only depend on the owner of the tractor because they cannot rent another tractor, c) the owner of the rice grain separator, d) grain traders, buyers of farmers' grain who usually have workers to harvest, e) owners a rice mill that rents out milling services with a per kilo of rice service system.

The area of rice fields does not increase from year to year, in fact tends to narrow due to changes in land use, for example for campus buildings, houses, car wash businesses, construction of SUTET network towers, and other places of business. Another phenomenon, the area of rice fields that tend to narrow, it turns out that the number of land owners is actually increasing. Based on interviews, observations, and available documents, it is shown that rice field owners pass their fields to their children, so that the number of rice field owners increases while the area of ownership of each person decreases. In its development, due to various needs, for example for school fees, building houses, paying for children to work abroad, some of these rice fields are sold to other parties who are not local residents or local residents who previously did not have rice fields, so that more and more land owners rice fields in the area. The implication is that the ownership of rice fields is getting narrower.

The process of transferring the owners of the rice fields causes the owners of paddy fields to become more and more diverse, and the characteristics of the owners to be more diverse, because the new owners of the paddy fields are not people who culturally work as farmers. The new owners are employees, or TKI from abroad who set aside their income to buy the rice fields. The motivation is as an investment or savings that will be used when the person concerned returns from abroad.

This phenomenon causes changes. First, the meaning of farmers is getting more fluid and even more unclear because of the fact that it is found that many rice field owners do not cultivate rice fields. They sell the rice fields annually to the cultivators (*kemplong*) at a certain price every season. On the other hand, there are also many farmers who work on the fields, either by themselves or by employing other people, while they have other jobs that are more economically promising. Second, there is a change in the mindset of views on rice fields, which were originally a source of production to be processed to produce grain, the next development of rice fields is an investment whose selling value is increasing. The new owners don't really care about how much grain is produced for each unit of paddy field they buy.

The phenomenon that occurs in the region can be interpreted as a symptom of agricultural involution. Agricultural involution is the stagnation of agricultural patterns which is indicated by the absence of true progress. Even if there is movement such as people walking, running or showing other movements in the water environment, there is no movement that causes progress. Whereas in agriculture, involution is described by the level of productivity that does not increase, where individual productivity (labor) is used as a measure. The increase in yield per hectare was indeed achieved but the higher yield was only sufficient to maintain the food supply for the individual, rice-eaters. Involution is a change in which almost no development occurs because it is divided, meaning that the increase in the amount of production coincides with the increase in the population. Rice production follows a geometric progression, while population growth follows an arithmetic progression [7].

Involution can also be interpreted as an increase in the number of residents without being accompanied by additional arable land so that they are then forced to share agricultural land equally,

equally, so that as farmers, the ownership of rice fields is getting narrower which causes the level of rice production to also decrease [8].

3.2. Rituals in Rice Farming

In a year there are two rice growing seasons, meaning that farmers have the opportunity to plant rice twice, namely the *rendeng* planting season (around September) or the planting season in the rainy season and the *sadon* planting season (around April) or the planting season before the dry season. Each planting season there are several stages, namely the stage of planting (*tandur*), stages of plant care, and stages of harvesting. Each stage consists of several activities that involve farmers and other parties.

Tandur consists of several activities, namely preparing seeds, spreading seeds, and preparing land or *leleran*. Seeds are grains of grain that have been processed in such a way that they can be used as seeds. The *rendeng* season starts around September, there is no need to wait for the rain to fall, because irrigation or sier water begins to flow. Farmers wait a few days until their rice fields are wet and soft under water (*mutah*). After the land is wet and soft, the tractor owners immediately order their workers to tractor the fields. The division of land under tractor machines already exists based on an agreement between the tractor owners, the village government, and the farmers. This means that the plots are clear. Farmers may only use the services of a tractor that has been agreed upon, they may not use the services of another tractor.

When the tractor cultivates the fields, the farmer begins to prepare the nursery. Some farmers use a portion of the grain produced from each harvest as seed for the next growing season. Most farmers buy rice seeds in farm shops which provide various types and trademarks. Each type of seed has characteristics and advantages, including plant clumps, rice grains produced, water requirements, plant height, spacing, and advantages. The shop owner will explain the advantages of each seed, including the various fertilizers and medicines they provide. The process of preparing seeds to become rice plants takes about 21-25 days, from the process of soaking the seed grains to spreading the seeds to a special land until they grow into seedlings, pulling and binding the seeds (*ndaut*), and placing the seeds at the planting location.

Seedlings are ready-to-plant rice tillers aged between 21-25 days. Because it comes from various types of seeds, that is why the types of rice planted will vary according to the tastes of farmers, although at first glance it looks the same, in fact each has specifications so that it is slightly different in setting the distance between plants. In the *rendeng* season, the type of seed selected by farmers will also be different from the *sadon* season, because the characteristics between the *rendeng* season and the *sadon* season are different. In the *sadon* season, farmers will plant those that are more able to survive if there is little water, because usually before harvesting the irrigation flow has stopped. Based on experience, irrigation flow stops when the rice plants are in bloom (*mratag*), and certain types of rice are considered quite capable of surviving until the harvest arrives.

The next activity is planting ready-to-plant seeds on land that is ready (*tandur*). *Tandur* can be carried out if at least 4 things are fulfilled, namely the land has been processed, the rice seedlings are old enough and not too old, there is enough water on the land, and there are planters available. If the 4 requirements are met, the graft can be carried out. Usually farmers work on farm laborers consisting of women who live around paddy fields who are paid based on land area. Farmers have made an agreement on the cost of planting rice for each area of land. The wider the automatic the greater the cost to plant.

The *tandur* workers start working before sunrise in groups. Technically, they line up at a certain distance and then put the plant seeds into the ready land which has been marked in the form of lines that are 25-30 cm apart. The tool for making lines is called a line which is made of wooden or bamboo sticks which are mounted with ruler teeth with a distance of 25-30 cm. Line pullers are usually male workers because they are more capable. The line pullers are also in charge of pulling out the seeds (*ndaut*) and then tied them to a certain size.

The selection of the distance between the lines takes into account the type of seed planted, and care during the growing period of rice. Regularly they will move backwards following the marking line. The right hand is busy inserting the seeds, while the left hand holds the seeds, if the seeds they hold run out, then they will take other seeds that have been provided in the form of bundles that have been placed along the rice field area.

Around 08.00 in the morning, the rice field owner sent food for breakfast, consisting of rice and side dishes wrapped in paper accompanied by a warm drink in the form of warm tea and water. The *tandur* workers take a break while enjoying the breakfast provided. They sat among the rice fields while talking about light things in their environment. After breakfast, the *tandur* workers will continue to complete the planting process. When they are finished they will move to another rice field owner. Generally, *tandur* is carried out from morning until noon, after which they will rest and continue *tandur* the next day.

After *tandur*, the next stage is the treatment of rice plants. In general, farmers clean weeds, fertilize, spray pests, ensure adequate water needs, and replace dead plants with new ones (*nanjangi* or *nyulami*). The activity was carried out a week after planting by thoroughly inspecting the rice fields. Farmers always provide seed reserves to replace the dead plants. Weed cleaning is done using a simple alar made of wood with a certain model that is pushed from behind, so that the grass that interferes with the growth of the rice plant can be removed by immersing it in the mud. Fertilization is an important activity because it affects plant growth, generally the fertilizers used are chemical fertilizers combined with organic fertilizers. Some farmers say that organic fertilizers cause weeds to grow faster so weed removal should be more intensive, but they admit that the use of organic fertilizers also brings benefits, including looser soil and not hard.

Rice plants are prone to pests, especially snails, rats, and leafhoppers. Several methods were used to overcome these pest attacks, including using drugs, using traps, and other efforts, including guarding rice plants. Farmers are also worried about changes in weather that affect rice crops, such as drought and heavy rains that cause rice to collapse and be submerged in water.

Procurement of fertilizers and pesticides purchased from the existing farm shop. In fact, in the Kesugihan Kidul Village area, there are several farmer groups that are provided with fertilizer and pest control facilities so that the farmers should be able to buy agricultural needs from the farmer groups, but the farmers prefer to give directly because they consider fertilizers and pesticides to be used. sold in farmer groups more expensive. The government has also issued farmer cards that farmers can use to get assistance from the government, but only a few farmers know.

The final stage in the rice planting ritual is the harvest stage. In general, rice is harvested around the age of 3 months or 90 days from planting. When the rice has shown the presence of grains (*mratak*), then the water is not really needed, meaning that until the harvest arrives the rice plants are quite able to survive, but if before *mratak* the water has is not available, then what happens is that the rice will die, or even if it can survive until it bears fruit, the condition of the fruit is relatively empty, lacking in content. Usually, if that happens, farmers will leave their rice unattended because there is no hope of getting optimal results.

Rice harvest age is about 90 days. The parties involved in harvesting rice include workers (*barwon*), owners of grain threshing machines, and outside that there are those who look for crop residues (*ngasak*). *Barwon* usually comes from the community around the village consisting of men and women aged between 45–55 years. Rarely do young people join *Barwon*. These *barwons* share tasks, some are in charge of creasing (cutting the rice plants), taking rice from the cutting location to the thresher machine, packing the grain into sacks, and some specifically threshing the grain from the stalk. In addition, there are harvesters who deliberately choose grain residues that are not taken by workers. After the grain is threshed and packed in sacks, the next stage is the *barwon* must move the grain to the owner of the field or a certain specified place. The process of transferring grain from the fields to the collection location is carried out on a shoulder or using a vehicle (motorcycle or car).

When harvesting takes place, grain traders are very busy, this is indicated by their activity in coordinating the *bawon* to work and utilizing the presence of vehicles to transport the harvested grain. Every day they carry a bag containing notes and money to buy and record the farmers' crops. After the grain is collected, the traders will immediately weigh the grain in the presence of the rice field owner and the *bawon*. The weighing process is carried out together to ensure that the weighing process is open, between *bawon* and the owner of the fields will know together how much grain yields and how much is their right.

The cost of the rice harvesting process is based on profit sharing with a ratio of 10:1+0.4. If the harvest produces 10 tons, then the distribution is, *bawon* gets 1 ton, the owner of the machine gets 400kg of grain.

Most of the farmers who own the fields directly sell their grain to traders because they prefer practicality, they only keep a few sacks for consumption purposes. Only a few farmers store their crops after they are dry. The grain drying process is carried out by drying in the sun in their respective yards, or in other places, for example behind the campus in the village, or along the roadside using a pedestal. There is no grain drying machine that helps accelerate the drying of grain.

The rice planting ritual is interesting to follow and observe. On the one hand, the ritual shows the loyalty of farmers at every stage of rice planting which has been inherited from the previous generation by adaptation or adjustment. On the other hand, the ongoing rituals do not reflect the accelerated efforts to increase grain production as expected in the national agricultural system, as well as show the complex challenges faced by farmers in increasing rice production nationally [9].

As is known, that rice is the main commodity of food crops that have a strategic function, namely as a staple food, so that domestic rice production plays a role in food security and independence. The commodity of rice has high sensitivity to political, economic, and social vulnerabilities related to the role of rice as a staple food for more than 95% of the Indonesian population, so that based on this phenomenon, policy makers need to develop more progressive policies that have a positive impact on farmers, especially sharecroppers who directly involved in the rice cultivation process [10].

3.3. Farming Culture Shift

Rituals in rice planting activities produce farmer cultural phenomena related to the community. Geography examines the reciprocal relationship between various phenomena that integrate natural phenomena and community culture as cultural beings. When environmentalism was still dominant, farmers' activities were determined by the will of nature. Agricultural activities take place adjusting and surrendering to what is available.

Based on interviews with prominent farmers, farmers in Kesugihan Kidul Village have experienced a situation where the process of planting rice can only be done once a year, namely during the rainy season. This was because the culture of farmers at that time was still limited. There is no physical infrastructure to support agriculture and farmer organizations, including the use of equipment. Practically, strength and muscle are dominant in the process of cultivating land, planting, and harvesting crops.

Farmers rely on the generosity of nature so that rice plants grow and bear fruit well without relying on the help of modern technology. Along with the development of public knowledge, farmer culture has developed in such a way from relying on nature to turning into agricultural activities that combine the dynamics of nature with a cultural system consisting of knowledge, activities, and increasingly developing forms of technology.

The determination of rice planting time, the type of rice planted, the distance between plants, the use of agricultural tools, to the farmer organization system also underwent changes. When the elements in the rice farming system were successfully managed by farmers, village governments, and government support, they tasted the sweetness of glory. The rice harvest is abundant, sufficient to meet daily needs and some of it is sold to traders. Many farmers have dry grain storage places. When needed, the grain will be taken to the rice mill and then processed into rice as a staple food source.

It is at this point that the farmer feels the sweetness of life as a farmer which is marked by the sufficiency of food ingredients, and there is still some left over from the harvest to sell. The quality of the harvest and the type of grain produced is better than the grain produced from other regions, so the rice produced is also tastier. According to the community, even though they are both rice, it turns out that not all of them taste the same, so that in the current trading system several regions are famous for producing a type of rice that is considered tastier than other regions.

This difference in the taste of rice has prompted some traders to cooperate with the owners of the rice mills to buy rice from other areas that taste bad at a cheaper price to be mixed with local grain and then resold as if it were Kesugihan Kidul rice. This practice in subsequent developments is detrimental to farmers because the price of grain is falling. This situation, in a certain point of view, shows the emergence of changes in people's attitudes in responding to the situation and reading the opportunities that exist. Adaptation which was originally interpreted as a way of defending oneself to meet needs has turned into seeking profit from the existing situation.

Over time, the dynamics of farmers continue to move to find a balance point to manifest themselves as a community group with a new identity. The increase in new livelihoods, increased education, fluid interaction between communities, the construction of public facilities, houses, and the increasing number of young people who leave the area encourage social and cultural changes.

The phenomenon of shifting peasant culture has been predicted by Ogburn [11] who divides culture into two categories, namely material culture and immaterial culture. Changes in material culture are marked by changes in farmers in adapting cultural systems, especially the use of technology. One of the changes in immaterial culture is marked by changes in the form of profit-taking practices [12].

It is also worth noting that changes in material culture will have an effect on changes in immaterial culture as stated by Munandar [13] that acceptance of technology for the community, especially rural communities, whether forced or on their own initiative from the community will affect social behavior on a large scale or degree.

3.4. The Challenge of Maintaining

Rice Productivity Although local in nature, rice farming in Kesugihan Kidul Village is part of the national rice farming system which is experiencing challenges in maintaining its production. The main challenge is the decline in production. Not only the problem of declining rice production (2014-2019) and food imports that continue to increase, Indonesia is also experiencing serious problems related to the availability of land for food. The area of raw rice fields decreased sharply from 8.38 million hectares in 2012 [14] to only 7.46 million hectares in 2019 [15] down by almost 1 million hectares in the last seven years. For every 1 hectare decrease in rice fields in Java, 2-4 hectares must be replaced outside Java to achieve the same level of production [16].

The decline in rice production in Kesugihan Kidul Village based on the analysis of the researchers was characterized by two main factors, namely the narrowing of rice fields and a decrease in the quality of rice cultivation. The narrowing of paddy fields occurs because the trend of physical development continues in the form of changes in the use of rice fields into various buildings, both for settlements, industry, trade, public facilities, and educational buildings. These changes occurred along the highway and continue to this day. For motorists or people who travel, it will be easy to find the difference. Previously, along the right and left of the road, you could see views of the rice fields, now the views of the rice fields are behind the building which is increasingly filling the side of the road. There is no effort to expand the rice field area, although around the rice field there is vacant land.

The narrowing of paddy fields cannot be separated from changes in rice fields owners, both regenerating and changing owners due to sale. The regenerated rice fields will be narrower because each family who inherits the rice fields must share it fairly, and when the rice fields are divided, not all of the rice fields are maintained as rice fields, there are some who try to make the rice fields a place of business.

The next factor is the reduced quality of rice field management which is marked by a decrease in the quality of rice fields, the weakness of the younger generation working as farmers, and changes in local government policies in agriculture.

The weakening interest of the younger generation to work in the agricultural sector is caused by many factors. In general, young people, especially those with a high level of education, are more interested in working in companies or employees in offices outside the city, some choose entrepreneurship to open service businesses. Young people who graduate from high school choose to work in foreign countries such as Korea, Japan, Taiwan, and Malaysia. Those who work abroad usually send their salary to their families to buy a plot of land, build a house, or buy a car, and some of it is saved for business when the contract work abroad is successful.

As a result, agriculture becomes sluggish due to the scarcity of new workers, because it only leaves workers whose age is less productive. In the fields and fields, generally older farmers work with work effectiveness and productivity that tends to decline. The outpouring of energy in the fields and fields is no longer optimal so that agricultural productivity is threatened with erosion.

In the perspective of urban culture, working on agricultural land seems to be a symbol of backwardness that humiliates the youth or young women of the village. Working in the fields and fields is imaged with shabby clothes as a sign of failure. If they want to be considered successful, rural youth must go to the city to be anything, seem cooler. This view is recognized or not valid in the community. The shift of livelihoods from farmers to other livelihoods has also been predicted by Lerner [17] who has special attention on changes in farmers' livelihood patterns. Although for different reasons, the change in livelihood patterns from farmers to other livelihoods is a phenomenon that cannot be resisted, although in some cities we find many young people involved in urban agricultural projects with more advanced technological approaches [17].

The quality of support for infrastructure has decreased, marked by damage to irrigation canals at several points, either due to age or lack of maintenance. Irrigation canal improvement projects do not involve farmers, so that when they are finished, they are a pain for farmers.

Farmers' access to cheap fertilizers is very limited. According to Alta [18] an increase in the fertilizer subsidy budget does not automatically increase agricultural production. In other words, it can be stated that there is no correlation between fertilizer subsidies and an increase in agricultural productivity [19].

Government policy, fertilizer subsidies are only given to farmers who have a "farmer card", while most farmers do not have such cards. Farmers get around this by borrowing from other farmers who have farmer cards to get cheap fertilizer. In fact, besides the challenge of maintaining rice productivity, agriculture is also challenged to contribute to reducing global warming, one way of which is to use the right combination of organic and inorganic fertilizers [20]. To combine the two types of fertilizers, farmers need access to affordable prices.

The challenges faced indicate the still weak position of farmers in the agricultural production system. According to Dimyati [21] this problem is due to the weakness of farmers and farmer institutions in Indonesia in terms of: a) the lack of insight and knowledge of farmers on issues of production management and marketing networks, b) not fully involved farmers in agribusiness activities. Farmers' activities are still focused on production activities, and c) the roles and functions of farmer institutions as a forum for farmer organizations have not run optimally [21].

4. Conclusions and Suggestions

Based on the results of the research and discussion, the conclusions in this study are: a) In general, the profile of farmers consists of: pure farmers who completely depend on their livelihoods from rice fields, mixed farmers who have rice fields but prioritize other jobs, tenant farmers but also have other jobs, farm laborers who rent out their labor in the agricultural process, and rice field owners but the process is handed over to other parties, b) Farmers' rituals in carrying out cultivation use stages that inherit the habits of previous generations by making several adaptations or adjustments, but have not

shown accelerative efforts that encourage increased production grain, c) Farmers' culture has shifted, from just meeting their daily needs to getting profits by taking advantage of existing opportunities, including expanding their livelihoods outside of farmers, and d) Farmers' challenges in maintaining rice productivity are getting tougher due to the narrowing of paddy fields. due to land conversion and reduced quality of rice field processing due to the decreasing quality of labor, limited access of farmers to fertilizers, and the weak managerial ability of farmers.

It is important to study the life of farmers in terms of cultural geography to identify the very diverse profile of farmers in Indonesia. Through proper identification, the policies drawn up have a rational basis and accurate data so that they are more targeted. Farmers' rituals must be understood as part of the national system of increasing rice production, so they must be fully supported by the government. The shift in peasant culture, both material and immaterial, must be addressed wisely. Farmers' challenges in maintaining rice production must be supported through policies that favor small farmers in accessing fertilizers, seeds, and medicines through simplification of distribution chains.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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