

## **Rice Farmers' Agrarian Dynamics, a Historical Perspective**

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**Abstract:** As the staple food of Indonesians, rice has become an economic and political commodity in the country. This study aims to analyze the agrarian dynamics of rice farmers from a historical perspective, focusing on studying how the agrarian change affected the rice production mode in the present situation. The historiography approach used to produce critical analysis was complemented by tracing literature studies, especially in West Java, one of the main rice producers in Indonesia. The results showed that the structure of land tenure and ownership in rice farming had undergone a fundamental change. The dynamics that appear in rice can be seen at the level of agricultural technology intervention and local and national policies, which have experienced changes due to pressure from the agricultural production input sub-system. This pressure led to a change in peasant institutions that shifted from informal to formal, which was not in line with the structure of land tenure and ownership, which was still dominated by petty commodity producers.

**Keywords:** Agrarian dynamics, farmers, historical, paddy

### **INTRODUCTION**

Concerns about the food sector's inability to meet the needs of the 9 billion world population in 2050 have directed global attention to agricultural development through its various globalization programs. Rice, as the primary food for Indonesians, consists of various sub-systems with various constellations, which then form a dynamic system so that it has a very high complexity as a commodity with a long social, economic, and political history.

Since the kingdoms reigned on Java island, rice, which comes from paddy plants, has been an agricultural product as a staple food to meet the needs of the people. Along with the development of the capitalistic economic system, rice underwent a transformation into a commodity or object of trade. Appadurai (1988) called it commodification, which is anything that can be exchanged or an object with economic value. But fundamentally, rice as food "is not a commodity"; it's people's right which had basically been agreed upon by the constitution and political leaders in various countries (Vivero-Pol 2017).

Like other agricultural commodities, rice production is highly dependent on the availability of agricultural land. The level of land ownership is a key factor for farmers to

keep their businesses efficient and profitable. However, globalization that brings with it modernization has played a role in the commodification of agricultural land. The creation of private property and the establishment of a land market are fundamental to the historical development of capitalism in the northern part of the world and remain central to the development of capitalism in the south (Goodwin 2021). If it is associated with the commodification of agricultural land, Cottyn and Vanhoute (2016) consider it a “farmer paradox”, which relates to an old question at the beginning of the 21st century that resurfaced and never disappeared, “is there a future for farmers?” Urbanization, migration, industrialization, and related vectors of “modernity” seem to stand out as undeniable answers to the question. Nonetheless, the restructuring and intensification of center-outskirt relations have created new differences in the rural economy and farming communities.

The focus of socio-economic studies on the dynamics of rural commodification in the era of capitalism and the formation of capitalist classes includes agrarian capital, land ownership (capitalist), and agricultural labor wages, both driven by 'accumulation from above' or 'accumulation from below' (Bernstein 2015, 2016). McMichael (2009) believes these studies can be further researched through the concept of food regime, which offers a particular analysis from the point of view of historical comparison at the level of political and ecological relations in this era of modern capitalism. The project of the food regime can be divided into three periods, namely the colonial period, the period of development, and globalization (McMichael 2013).

Specifically on globalization programs and subsequent developments, Mulyani (2018) explained the key features of neoliberal globalization in Southern countries, that is, the policy reform agenda regarding trade liberalization, privatization, and the return of the state, which is marked by the increasing burden of state debt for the development process. One of the critical questions Bernstein (2015) offers relates to the transformation of farmers into other classes through dispossession and proletarianization 'from above' and class differentiation 'from below.' Although it is still a long-standing debate among agrarian experts, this statement must be addressed carefully, especially concerning rice as a staple food and the reality of rice farming areas getting narrower over time. This paper is part of an effort to understand the agrarian history of rice in Indonesia, which, citing Wiradi's (1986) opinion, is a chain of decisive moments.

The history of paddy and rice is inseparable from this nation's social, economic, and political problems, all of which lead to the problem of inequality in land control. This paper does not discuss the agricultural history of rice from time to time. Still, it is limited according to the concept of the periodization of the food regime, which started in the New Order era. Therefore, this paper aims to reveal the historicity of rice commodification based on historical literature and inherited from the current situation. In addition, this study is

also written to know the sociological history of the rice commodification-decommodification process in Indonesia that has been going on so far.

## **METHODS**

The historiographical approach is used to produce the idea of rice dynamics from a historical perspective. Historiography allowed researchers to study structural changes that occurred in the past, which could provide a picture of causality that constructs phenomena that occur in the present (Creswell and Poth 2017). The analysis is complemented by a search for literature studies, especially regarding rice cases in West Java, one of the rice production centers in Indonesia. The authors use literature study techniques using relevant written sources, including scientific journals, books, magazines, and newspapers. This research was conducted between March to November 2021. Data analysis used Cova et al. (2019) historical analysis through the stages including 1) investigation, 2) research procedures (construction of causal statements and production of narrative explanations), and 3) interpretation.

## **RESULT AND DISCUSSION**

### **Investigation and construction**

The description in this section is not just a chronicle of the history of paddy and rice in West Java based on historical records that have been traced to the current situation. However, it is an attempt to examine the history of farmers and the commodification of food in Indonesia, especially rice which is considered a staple food from the perspective of agricultural issues.

As an initial study, it is necessary to explain the meaning of farmer and husbandman according to past writings. The word farmer is mentioned in the *Amanat Galunggung*, which is: “upadina pa(n)day bosi panday omas, memen paraguna, hamba lawak, tani gusti, lanang wadon, nguniwéh na raja putra”, translated to: “The comparison: blacksmiths and goldsmiths, puppeteers and gamelan musicians, servants and masters, farmers and landowners, men and women, as well as kings and tribute (offerings)”. In that sentence, the word farmer is placed as a comparison with the land as the area he cultivates. Meanwhile, in this manuscript, paddy is mentioned as a parable conveying the teachings of life. This shows that paddy huma (field) has long been an important part of Sundanese Tatar society, which is confirmed by Wertheim (1959) that paddy huma (field) is different from paddy field.

Some of the historical records of European researchers on paddy and rice still need to be debated. (Lombart 2008) notes on the development of paddy culture explicitly state that paddy only developed massively in West Java in the 17-18 centuries AD. There seems to be a bias in Lombard's observations, even though, as the location of the oldest kingdom

in the archipelago, since the founding of Tarumanegara (Lingga), West Java has been synonymous with paddy field culture. Wallace (1962) emphasized that the terracing and irrigation developed in the Java island's western part were introduced by Brahmins from Kalinga, India. Strictly speaking, something is missing from Lombard's observations about the development of paddy in West Java, especially from the 1st to 16th centuries AD.

Changes during the feudalism period recorded changes in the paddy farming system of the Sundanese, such as huma, tipar, and talun to a rice field system which began to develop after the collapse of the Hindu Padjadjaran kingdom and the establishment of the Banten sultanate in 1520 (Iskandar and Iskandar 2016). Paddy rice began to be developed massively in the northern region of West Java in the early 15th century AD, especially when the Demak Kingdom and the Islamic Mataram Kingdom defended Sunda Kelapa, which was taken by the Portuguese in 1527 AD and seized it from the VOC. These changes, when viewed from an agricultural perspective, are closely related to changes in power which are followed by changes in the pattern of control of agricultural resources, or in other words, did not change the pattern of land control; the land remains controlled by the king and his subordinates, while the people only work on the land to produce food.

The development of paddy cultivation and policy during the colonial period of the 16th-19th century AD was a double-edged sword. On one side, the paddy field culture was opened up by the rulers (regents) massively, especially in the northern coastal region of West Java. On the other side, paddy fields (huma) in the inland are converted by plantation commodities and pushed into the rural area. In other words, there is partiality on the one hand and exploitation on the other.

Things to note during the Dutch colonial period were the preangerstelsels (1720-1916), cultuurstelsels (1830-1870), and preanger planters (1870-1942). During the Preangestelses period, famine hit Central Priangan (Sundanese Tatar highlands, West Java). During the Cultuurstelses, famine in East, North, and West Priangan was inevitable. It is true that they earned their income from non-agricultural activities (becoming laborers), but because the supply and stock of rice were very minimal, the price was very high, so most farmers could not buy it (Maryoto, 2009). In addition, while during the preangerstelsels, farmers were only subject to land tax and rent, during the cultuurstelsels, farmers were subject to land tax, land rent, and delivery of produce. The assumption used by the Dutch government to apply the forced cultivation system was that villages in Java owed 40 percent of the land tax. Hence, the villages had to set aside 20 percent of their land for planting export commodities.

During the preanger planters period, tea and sugarcane were two commodities that were most in demand for development by Dutch private companies in Priangan. Until 1936, West Java had 223 tea plantations stretching from Bogor to East Priangan, in addition to

seven sugarcane plantations. It was recorded that up to 1913 in Priangan, there were nearly 600 leased plots of land and more than 500 were exploited (Hardjasaputra 2005; Lubis 1998).

This shows that, spatially, plantation development had a real impact on rice fields in West Java. The expansion of plantations has converted the huma paddy fields, which have become the paddy farming culture of the people of central West Java (Ekadjati 2006; Kartodirdjo 1888). Adiwilaga (1975) dan Ekadjati (n.d.) emphasized that at the beginning of the 19th century, rice fields were spread out in Bogor, Cianjur, Bandung, Banten, Garut, Tasikmalaya, and Sumedang. Each region had a different way of farming paddy and managing rice fields. A Dutch tea entrepreneur, KF Holle, wrote the guidelines for spreading and cultivating paddy (*handleiding voor het uit zaaien van padi*) and an overview of paddy cultivation (*nota betreffende de padicultuur*). This characterized the transition from traditional agriculture to modern agriculture, and farmers call it the Holle system.

Entering the 1942-1945 period marked the end of Dutch colonial rule and the transition to the Japanese colonial government. The vast expanse of rice fields is one of the attractions for the Japanese army to control West Java. Although the presence of Japan is short-lived, in the historical trajectory, paddy gave its own color. In general, all plantation land belonged to the Japanese government and farmers were forced to plant rice, jatropha, and hemp for logistical needs for the Japanese army and government. However, at the end of Japanese occupation, the farming community destroyed jatropha and hemp, and rice was maintained as the staple food of the Priangan people. People considered the period leading up to independence as an era of freedom to control agricultural land, including rice. This happened until the beginning of independence.

At the beginning of independence, West Java faced a food crisis. In September 1945, through the Allied leadership who occupied West Java, the Dutch offered free rice assistance but was rejected by Soetardjo, Governor of West Java. He emphasized that Indonesia was already independent, so the Government of Indonesia was responsible for the fate of the people in West Java. In 1946 the Indonesian government made the development of superior paddy seed gardens the main policy of the Kasimo I plan (1945-1948). A moment later, the government formed the People's Food Control Agency (BPMR) which later changed to the Food Supplies and Distribution Agency (PPBM).

In 1960, Law No.5/1960 was made regarding the Basic Regulations of Agrarian Principles. The law regulates the existence of land for agriculture, including the redistribution of land. A year later, the government launched the ambitious Eight-Year Plan for Universal National Development (1961-1969). However, because the paddy planting area had not progressed much, while outside Java, the progress had been very small, the increase in rice production failed again, the cause of which was the failure of political and security instability.

In 1963/1964, the Government of Indonesia started a pilot project of rice intensification through Community Demonstrations (Demas) in Karawang Regency. Involving 162 participating farmers on an area of 103 hectares. The results were considered successful because production increased by 40-145 percent. In 1964/1965, the government introduced a program of intensification and expansion of rice production (Demas) to become Mass Guidance (Bimas). Then it was further developed into Bimas AABM/BIMAS SSBM and finally became the Bimas system.

Three methods of increasing paddy production in the BIMAS program are five farming methods (land preparation, irrigation, fertilization, pesticides, and high-yielding seeds), farming credit, and intensive mass guidance by PPL. The land area for development continued to increase, from 11,000 hectares to 480,000 hectares. However, the results were not as expected because the farmers did not immediately adopt the new rice cultivation technology. Farmers' difficulty accessing fertilizers and inadequate farm credit were identified as contributing factors. In the end, a lot of farmers borrow additional capital from private parties or moneylenders. The implication is that rice farmers are burdened with the obligation to return loans to the two branches. BIMAS did increase rice production, but it only lasted until the late 1980s due to those problems (Leksana 2019).

The New Order government tried to pay attention to the needs of its people. The green revolution policy, which was touted as the application of modern agricultural technology, especially rice as the main food for the Indonesian population, in fact still maintains a pattern of land control by a small group of people or parties. This includes rice farming, indicated by the growing capitalization of agricultural production inputs such as superior seeds, chemical fertilizers, and pesticides which are characterized as part of the green revolution policy. The efficiency of production and increased productivity of rice changed the perspective of farmers, especially in Java, to become commercial crops that were previously thick with social commodities.

The collapse of the New Order in 1998 triggered a food crisis, therefore in 1998, SBY's government rolled out the Gema Palagung Program (Rice, Soybean and Corn Independent Movement) to realize food self-sufficiency in 2001 through Presidential Instruction (Inpres) No. 3 of 1999 concerning Reform Irrigation Management Policy (PKPI) whose point is to further decentralize irrigation management. Regencies in West Java Province that were already autonomous have begun to design rice development policies and programs independently. However, they were still accompanied by programs from the Center and the Province. In terms of political economy, most of the regencies are weak on their side towards rice development. This is indicated by the lack of regional budget allocations for agricultural development, especially rice.

In 2000, Banten separated from West Java Province, thus reducing the area of paddy fields to around 183,813 hectares, from 1,123,303 hectares to 933,490 hectares. The same

year, the government introduced a new policy to increase rice production through the corporate farming program. In 2005, the Government launched the Agriculture, Fisheries and Forestry Revitalization Policy (RPPK) with the issuance of Act Number 16 of 2005. This policy was also implemented in West Java, especially for the success of the National Rice Production Increase Program (P2BN), which was initiated in 2007. Responding to the development of organic rice in West Java and climate change, in 2010, the Ministry of Agriculture issued a policy, "Go Organic 2010". To make this happen, the Ministry of Public Works has implemented two irrigation management schemes, namely Participatory Irrigation Management (PISP) in the northern part of West Java and Water Irrigation Sector Management (WISM) in the central and southern parts of West Java. The Ministry of Agriculture itself implements three program schemes simultaneously, namely the Climate Field School (SL-Climate), Integrated Crop Management Field School (SL-PTT), and SRI (System of Rice Intensification). Politically and statistically, rice farming in West Java is still considered strategic for national food security.

Paradoxically, with its strategic position, West Java's rice development is inversely proportional to the carrying capacity of the land. Altemeier, et al. (1991), Purnami dan Santini (2017) revealed, even though Act Number 41 of 2009 concerning Protection of Sustainable Food Agricultural Land (PLP2B) had been enacted, the rate of conversion of agricultural food land in West Java is still inevitable. The rapid development of infrastructure, the expansion of settlements, the high population growth, the increasing demand for land from investors, and the sloping economic exchange rate of land, made it difficult to control the rate of conversion, function change, and land fragmentation (Pham et al. 2015; Rondhi et al. 2018; Su, Xiao, and Zhang 2012). In general, the conversion of paddy fields in West Java occurred massively in food production centers with flat contours and well-drained drainage. Conversion occurred in the form of land tenure transfer from small farmers to investors. Foreign food investment legalized by Law on Foreign Investment No.25/2007 and the Land Procurement for Development in Public Interest Law No.2/2012 is a new threat to rice farming, especially in the northern coastal region of West Java which was starting to be dominated by hilly lands.

The West Java government's response to this condition was by implementing three policies at once: First, establishing sustainable food areas in each district/city and creating new rice fields in the southern part of West Java; Second, regenerating agricultural extension workers; and Third, carrying out farmer regeneration, which is integrated with the implementation of Act Number 6 of 2014 concerning Villages. Apart from being converted, rice fields in West Java were also made worse by the supporting environment's destruction, including the deteriorating condition of irrigation networks (Setiawan et al. 2018).

The SBY government regime specifically developed the Rice Center in Karawang. Responding to this situation, in 2010-2015, the Provincial Government of West Java replaced the Rice Center with the Food Estate Program (PP No.29/2011). In reality, this policy is not free from corporatization but relatively gave a role to the autonomous region. The program was concentrated in Depok, Bogor and Bekasi, so it is expected to be able to maintain or secure the sustainability of the food supply (especially rice) for DKI Jakarta. West Java itself is only positioned as Foodstuff. During this period, the Warehouse Receipt System (SRG) and Grain Pawn System (SGG) policies were also implemented.

The next development, following up on the Food Investment Law, in 2011-2016, the Government rolled out the Corporate-Based Food Production Improvement Motion (GP3K). This policy is also based on Presidential Instruction No. 5 of 2011 concerning the Security of National Rice Production in the Face of Extreme Climate Change (Republic of Indonesia Cabinet Secretariat 2011). In West Java, the program was executed with the involvement of PT Agro Jabar (BUMD owned by West Java Province, which was formed in 2013 and was engaged in managing food reserves). In addition to BUMD, the implementation of food corporatization in West Java was also carried out through the establishment of Farmer Owned Enterprises (BUMP), the result of the synergy of BUMN, BUMD, private sectors, and farmers. The concrete form of BUMP is PT. Padi Energi Nusantara (PEN). Long before it was formalized in Indonesia in 2011-2013, a BUMP pilot had been carried out since 2009 in four West Java rice production centers, namely: PT. Padi Energi Sumedang Tandang (BUMP Sumedang), PT Padi Energi Proklamasi (BUMP Karawang), PT. PT Padi Energi Indramayu (BUMP Indramayu), and PT Padi Energi Subang (BUMP Subang).

In its development, in addition to BUMP, Food Public Enterprises (BUMR) have also developed. BUMR Food was initiated in 2015 by a community of rice farmers in Sukabumi, West Java. Unlike BUMP, BUMR Food is a synergy product of farmers, UMKM-scale rice milling agro-industry, BUMDes, cooperatives, logistics services, and marketing actors (packing houses, e-commerce, exporters) located in villages. Since 2017, BUMR Food has been tested in Tasikmalaya Regency, Ciamis Regency, and Cirebon Regency. In addition to building institutions, food investment is also executed through a program to create new rice fields on community, state, and private lands, including PTPN and Perhutani lands that have potential and access to water resources, both in the northern, central and southern regions of West Java.

Efforts to increase rice production in West Java were also carried out by involving non-governmental organizations, self-help extension workers, and seed-breeding farming communities. Explicitly, Act Number 18 of 2012 concerning Food delegated some of the authority for seed production, which was initially dominated by Corporations (private, BUMN), now had been commissioned as part of its authority to BUMD and the breeding



farmer community. In fact, in 2013, the Provincial Government of West Java also developed Seed-Independent Villages (DMB) in Cirebon, Indramayu, and Majalengka Regencies, which functioned and positioned as centers for the development of locally specific rice seeds. The West Java government also developed a Self-Help Agriculture and Rural Training Center (P4S) specifically engaged in the breeding and management of rice lines. But until 2019, all efforts to revive rice production in West Java have not shown significant results.

In addition to P4S, the government of West Java Province established Regional Regulation Number 27 of 2010 concerning the Protection of Sustainable Food Agricultural Land (LP2B), and to date, regencies and cities in West Java are incessantly establishing perennial food agricultural land, especially for rice crops.

In 2020, Governor Ridwan Kamil adopted two National programs to increase production and the quality of added value, namely the application of modern machines and the revitalization of product processing machine tools. In order for the first program to run, its implementation is synergized with the National Army Institution. The West Java government is also building a West Java food distribution center. The distribution center aims to act as a buffer that can act as a price stabilizer. This buffer's purpose is essentially not in the form of retail but utilizes the Warehouse Receipt System in 13 locations in West Java.

Several things that can be revealed from the historical facts described in this sub-chapter show that the structure of rice farming underwent changes in terms of land tenure and rice production, especially during the New Order era, in which these efforts were able to increase national food security (Fuglie 2004; Hazell 2009; Nugraha 2015; Welker 2012). However, efforts to modernize rice farming during the New Order era could not be sustained in the post-reform era.

Various post-reform policies, in this instance, the case in West Java, showed policies that do not lead to improvements in the structure of land tenure and food production. Sectoral ego, investment flows, and national strategic projects in West Java have caused land fragmentation, accompanied by the rate of land conversion getting out of control. This also indicates that West Java is one of the provinces that is experiencing the fastest transformation from a rice production center to services and industry.

### **Rice and Land Commodification Practices in West Java**

The description of rice as food in West Java from the feudalism era to the current situation is the basis for further analysis to reveal the practice of rice commodification in West Java behind the government regime's efforts to politicize rice distribution. This shows that the development of seed technology, input, cultivation, processing, marketing, and technology related to rice is still not free from the domination of the authorities and national

food politics. This problem needs to be seen from the framework of the food dimension analysis according to Vivero-Pol (2017), that rice as one of the essential foods needed by humans besides air and water experiences a dilemma. One side is food as an absolute need, which cannot be substituted and is not also considered a social construction (Wiggins 1998). On the other hand, rice is food that can be traded as a commodity.

However, according to Vivero-Pol (2017), Food must be re-comprehended as a public good or shared property or, in other words using non-economic terms with cultural and historical roots that are in a transitional period towards a more sustainable and fair food system for producers and consumers. When treated as a public good, food will be better produced and distributed by governance systems implemented at the local level that integrate market rules, public regulation, and collective action. These changes will have enormous ethical, legal, economic, and nutritional implications.

Food is one of the essential things humans need besides air and water. As an absolute need, it cannot be substituted and is also not considered as a social construction (Wiggins 1998). Furthermore, Vivero-Pol (2017) offers 6 dimensions of food consisting of food as a public good, human rights, cultural determinants, renewable resources, basic human needs, and goods. However, only the dimension of food as goods determined food as a political and market commodity.

Rice as a commodity cannot be separated from various problems, food as a problem of convergence of issues (Larastiti 2018), urbanization which also accelerates the process of commodification of land (Hudayana 2020) which can also maintain the commodification of food, and the presence of a food corporation regime (Mulyani 2018). Those three things alone confirm the persistence of food as a market and political commodity. In the last century, food has increasingly become a commodity that is constructed as a commodity in the global food system. By prioritizing the profit-making ability of food, the primary goal of the food system loses track of its original purpose, which was to feed the population (Vandenbroeck 2019). It also shows the homogenizing power of capitalism and the strong global market that has commodified food and its social context (Lind and Barham 2004). The historical process of food commodification in the world (Vandenbroeck 2019) takes place through 4 mechanisms that encourage food commodification (Clapp 2016), including industrialization, trade liberalization, corporatization, and financialization.

First, food industrialization emerged from the United States in the early 20th century with a wave of intensification in Western European countries in the 19th century and spread throughout the world with the term "Green Revolution" (Moore 2016). Indonesia itself, especially with regard to food in West Java, experienced the same thing, which entered through the BIMAS program at the beginning of the New Order. Second, followed by food liberalization, which is a process of opening global markets through geopolitics (McMichael 2013; Vandenbroeck 2019), which is demonstrated by efforts to be

self-sufficient in food accompanied by the start of a flood of imports of agricultural production inputs and also imported food into Indonesia. The three corporatizations in Indonesia strengthen Indonesian people's dependence on imported food such as wheat and soybeans which encourage more space for corporations to grow, gain power, and take a central role, which is referred to as "food system corporatization" (Clapp 2017). Fourth is financialization, which is a shift from profit-oriented trading activities through industrial and production facilities to benefit from financialization (Isakson and Ryan 2014). The presence of various forms of agricultural and commercial credit is a form of financialization. This is a financial bondage to food farmers in Indonesia, especially in West Java. This financialization, in addition to increasing the dependence of farmers on "money", has also caused an increase in foreign debt.

Food as an industrial agricultural commodity overrides biophysical relationships, preferring the circulation time of commodity values above the natural reproduction time. In economic terms, environmental "externalities" result from suppressing these self-regulating natural cycles. The resulting ecosystem woes are vigorously challenged by the "food sovereignty" movement dedicated to institutionalizing ecological value as a central organizing principle of modernity. This countermovement envisioned a second "great transformation" (Polanyi 1957), in which market principles governing social reproduction were subordinated to ecological temporality instead of mere public oversight and regulation.

Successive food regime episodes are cumulative yet distinct, each delimited by a specific historical time but positioned relationally across space and time. The four mechanisms overshadowed by industrialization are inseparable from the aspect of the temporality of the "food regime" of capital (McMichael 2015). The first temporality is a comparative construction of world history. The second concerns the contradiction in the food regime between capital time and natural time. Second, from a production point of view, food is produced for the benefit of the market and not to meet people's needs (De Filippi and Vieira 2014). This shows that the food system governed by commodification (and the path of market expansion) deviates from its original purpose, which is to provide food, and is more concerned with profit (Zerbe 2018).

Learning from the history of food commodification, (Vanhaute 2011) suggests that the liberalization of food markets and the expansion of the 'company food regime' over the past three decades has greatly influenced the nature of the food chain and the position of farmers. So that farmers are unable to survive in an integrated global food market and must depend on sources of income that are increasingly insecure and, of course, affect food rights and access to agricultural land. The commodification of rice food in this article is a process that is closely related to capitalism which turns an object into a commodity and market product (Jane and Barker 2016), and the expansion of capitalist production has

led to the commodification of all things solely for profit (Moore 2016). The expansion could also drive increases in the value of rural agricultural land, reflecting increased demand for food, and increased opportunities for commercial agriculture (Jayne et al. 2021).

In food production, land is the most important element. So access and rights to land are very basic for the livelihood of village communities, especially farmers (Moreda 2018). However, the government's efforts to maintain/increase rice production from the reform era until now have not been able to support the availability of and access to productive land for rice farmers. Land degradation, which is one of the biggest threats to rice production, is still very common in rice production areas in West Java (Kurnia et al. 2022).

Discussion on the historicity of the commodification of rice in West Java from the feudalism period to the current situation, referring to José Luis Vivero-Pol's (2017) opinion, ideas and actions are needed to break the hegemony of food commodification to an unconventional and radical perspective into the debate about possible solutions to achieve a more just and sustainable food system. The reality of rice food as a commodity needs to be positioned again as a public good, although it cannot be separated entirely from commercialization.

The commodification of land and rice contributed to what is known as the '*agricultural squeeze*' (Czyżewski, Matuszczak, and Miśkiewicz 2019; McCarl et al. 2007; McCarl and Reilly 2006; Moss 1992; Newsome 2020; Owen 1966) which mainly hit lowland rice farmers in Indonesia. If it is associated with rice as the main food of the Indonesian people, all forms of threats and challenges faced by rice farmers will certainly pose a threat to food security in the future (Nugraha, et al. 2016).

## CONCLUSION

The results of the research show that the structure of tenure and land ownership in rice production has undergone fundamental changes. The dynamics that arise in rice food as a food ingredient from rice plants can be seen at the level of agricultural technology intervention and regional as well as national policies that have changed due to pressure from the agricultural production input sub-system. This pressure led to changes in farmer institutions that shifted from informal to formal, which was not in line with the structure of tenure and land ownership, which small-scale farmers still dominated.

The agrarian dynamics of rice farmers are linked to the dimensions of food commodification, namely industrialization, trade liberalization, corporatization, and financialization. If examined more deeply, in only a short time or only one century, the four mechanisms entered Indonesia at almost the same time and resulted in rice, which should be a public good or shared property, unable to withstand the four dimensions of food commodification. Therefore, the road to a sustainable and just food system for

producers and consumers faced a long and seemingly closed road to achieving food sovereignty.

In Indonesia, rice is the main staple food of the people, so the Indonesian government pays special attention to the production and distribution of rice. However, rice as a commodity in Indonesia has also created several problems that need to be addressed.

One of the problems that arise is the occurrence of price fluctuations that are quite high. The price of rice is highly dependent on factors such as weather, production, and government policies, so unexpected price changes often occur. These high price fluctuations can lead to rice scarcity for people with low incomes, thus worsening the poverty rate in Indonesia.

In addition, it also resulted in monopolistic actions from several parties with interest in the production and distribution of rice. This monopoly can lead to higher rice prices, making it difficult for people who can't afford it. This, of course, will further exacerbate the existing conditions of poverty.

To overcome these problems, appropriate actions from the government are needed. The government can make policies that guarantee rice price stability, such as providing sufficient rice reserves or regulating rice imports. In addition, the government also needs to take action to prevent monopolies in the production and distribution of rice.

Overall, the agrarian dynamics related to food cases in West Java have indeed provided benefits for some communities but also caused significant problems for other communities. The government needs to pay attention to these problems and take appropriate actions to overcome them so that the scarcity and fluctuation of rice prices can be minimized. Thus, Indonesian people will have easier access to staple food, which is crucial for their survival.

In addition, the government also needs to pay attention to policies that can support sustainable rice production. This can be done by paying attention to environmental, social, and economic aspects so that rice production is profitable for producers and able to continuously meet the needs of the community.

Rice as a commodity cannot be avoided, but with the right actions, the problems that arise can be minimized. Thus, Indonesian people will have easier access to staple food, which is very important for their survival, while at the same time creating agrarian justice for paddy rice farmers in Indonesia.

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