

PEASANT ECONOMY UNDER THE PLANTATION CAPITALISM (The Study of Peasant Agricultural Plantation in Java at the Nineteenth to the Beginning of Twentieth Century)

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Western Capitalism in Java was firstly introduced since 17th Century when Dutch East India Company (VOC) monopolized trading network in Indonesia archipelago. After the VOC insolvent, the economic activities was directly controlled by the Dutch Colonial State, especially since 1830 when the Cultivation System was introduced. After 18970, the situation was changed, the Netherland India officially started Liberal Colonial policy that made Western Private Capitalism in deeply influenced in Economic life in Java. The western private enterprises operated in Java on plantation enterprise, especially sugar industry until the early of Indonesian Independence. At that time the crop areas belonging to farmers in Java coincided with commercial plant areas which were developed by the plantation capitalists. Most sugar cane plantations in Java were run and belonged to the western businessmen, especially Dutch and the minority was belonged to the local businessmen, especially the sugar cane plantation belonging by indigenous people and Chinese. The establishment of Western Capitalism made impacts to the peasant economy in Java. This article analyze of the existence of peasant plantation and food consumption of Javanese people in Java at the nineteenth century .

Keywords: Cultivation system, Private capitalism, Plantation, Java, liberal colonial politics, indigenous, peasant life.

Introduction

The economy condition of most South-East Asia countries have a historical root in the Colonial period. Those heritage is called Boeke (1953) as dualistic economy. The economy is indicated by a state of being separated between modern economy and traditional economy. The modern economy is indicated by the development of a strong capital (a dense capital), the economical workers, modern production method, and international-market oriented. The traditional economy is indicated by the labor intensive with a few capital, inefficient workers, traditional production method, and local-market oriented. Most of the first economy group is dominated by conglomerate and the second one is dominated by the farmers. Based on those circumstance, the economy condition for farmers always become an ignored side. All this time, the point of departure for History- Economy study in the South- East Asia, especially Indonesia, is more in the modern economy of South-East Asia

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which is dominated by a foreign capital. Kartodirdjo dan Djoko Suryo (1991) analyze the history of plantation in Indonesia. This study discusses the plantation economy, such as sugar cane, coffee and tobacco during the Dutch colonization in Indonesia. It is same with the previous writer, Mubyarto, et.al. (1992) who also nearly write a similar study to the Sartono's study, that is about land and plantation labor (Wasino, 2016).

One of the main important study of capitalist economy is analysis of the impact toward native or local economy. The appearance of Western Capitalism, especially the sugar cane, has caused a direct effect to a system in the rural community in Java because a sugar cane is planted together with the rice in the same land (van Niel 2002:29). The rice becomes the main plant for Javanese people for centuries, which is needed as food source for both rural community's necessity and urban community's necessity, which has to be planted alternates with the sugar cane.

The appearance of the foreign capitalism can be both positive and negative for the economy condition to farmers. For the negative effect, there is a fight for taking their land between businessmen and farmers. There is a huge exploitation to the cultivated land belong to the native society which threatens their economy life. On the positive side, the diversification of the field work in Javanese village, so the farmers have opportunities to work outside food plant sector. In addition, their lands also get irrigation from sugar cane plantation. .

The economy condition for the farmers must be observed from their perspective. The study of traditional economy from the farmers related in the modern capitalism has begun. Wasino's study (1996) is a path concerning about the historical writing of food crops comparing between Colonial period and The New Order. Furthermore, Wasino's study (in Margono, ed.2010: 26-125)) also observes in the endurance of foods in the Dutch Colonialism. The same way is also observed by Wasino (2007) concerning about the development of "*Lumbung Desa*" (rice barn in the village) institute as an effort of food endurance for farmers in Java. Through this study, according to those studies, it can be seen that there is a connection of production between the modern economy which is dominated by Western Capitalism and the traditional economy which is dominated by the local or native society (Wasino and Nawiyanto, 20017).

Research Method

This research uses a historic approach. There are four phase that has be done for gathering historical data until writing history. Firstly, *Heuristics*, that is an investigation process of history sources. The investigation process of history sources is done by method of documentation research. The documentation is carried out in some libraries and Archives Institution in Indonesia, Netherlands and Malaysia. The library departments which had visited as research places are: *KITLV* library in Leiden, Leiden University Library, Amsterdam University Library, and Jakarta

National Library. The history sources which had been include statistic data of agriculture, the result of census, newspapers, the officials' memory. *Secondly*, Critical sources, is a process which evaluates valid and authentic history sources. A critical sources include internal critics and external critics. The external critics is used to evaluate an authentic of sources, while the internal critics is used to evaluate a credibility of sources. The result of critical sources includes a fact of history convinced as a truth. Third, Interpretation and Explanation. A history fact produced by critical process of history sources is singular. Connecting among sources needs interpretation process and explanation in the relationship of facts. The interpretation includes verbal interpretation, technical interpretation, logical interpretation, psychological interpretation and factual interpretation. The explanation is done deductively. A deductive explanation comes from general conclusions, such as theorem, law, regulation or rule, etc. and then it is matched in the finding of history. Related in this national research, it will come from a general rule and will be connected in reality. Fourth, Historiography. This stage is a stage to write a history based on history facts which has been passed by interpretation and explanation process. The history is written thematically and chronologically (Wasino, 2006; Tosh, 1987).

Theoretical Debates

Conceptual Limitation

Capitalism becomes a political discussion in Indonesia from the past till now. A capitalism has become a hateful term for nationalism fighter, such as Sukarno, Hatta, Tjipto Mangun Kusumo, etc. At the moment, capitalism is made identical as colonialism taking wealth of Indonesian people for colonial's necessity. However, at this moment, capitalism is interpreted as capital properties to some rich people which causes social-economy gap in the society (Wasino, 2005: 59).

The reality which occurs in South-east Asia describes that capitalism has become a dominant concept in the economy world. The most hateful capitalism in the national movement has spread in Indonesian people nowadays. Mass media has a role for those spread, especially electronic media which becomes a daily funnel for the capital owners. Furthermore, communication routes for capitalism products completely achieve some villages in Indonesia, especially the isolated villages in the past.

Max Weber (2010) assumes that capitalism is determined by orientation of economy activity marked by the pursuit of economy advantage rationally (sistematic and full of calculation) by using merely economy facility. Besides, Karl Marx says that capitalism is determined by motive or orientation from capitalists. No matter what the motive that they realize, actually, they are motivated by logical economy

system for fostering the capital. Capitalism based on Marx's view is a class of society pattern which is structured specially, which inside of those, men are organized to product their needs. On the other hand, Dobb says that capitalism is a economy system based on casual workers who having been free from production facility.

Finally, Ruth Mc. Vey (2008: 3) defines a capitalism concept by simpler method. That is a system which uses production equipments is private sectors to create profit and almost of those profit is invested again to increase a capability of profit earning.

Capitalism Production Method

This capitalism system firstly develops in Europe, such as France, England, Netherland, etc. The system replaces feudalism system. The difference between two systems comes from their method mode of production. According to Hamza Alavi (1987: 205-230), there are five characteristics distinguishing between the relationship of feudal production and capitalist production relationship, namely :

- (1) In feudal method of production, the laborers' condition are not free and the producer owns their production equipment directly, such as agricultural land. Related to capitalist production, the laborers' status is free from feudal duties, possession right is taken and there is a separation of producers from their equipments
- (2) In feudal method of production , there is an extra economy pressure for getting surplus. However, in capitalist method of production, there is an economy "force" from producer which is taken their possession right.
- (3) in feudal method of production, there is a combination between a political and economy power for increasing the production. In capitalist method of production, the is a separation between economy power (class) and political power (state), state forming and bourgeois law.
- (4) In feudal method of production, there is a limited self-support economy which is supported by sirculation of a simple commodities. In capitalist method of production, it produces general commodities, commodities which will be sold in the market, and even the laborers' energy is considered as commodity.
- (5) In feudal method of production, reproduction has a simple characteristic and almost of its consumed surplus. Besides, in capitalist method of production, there is a capital repruduction which is wider and occurs in form of organic capital composition.

Capitalism firstly developed in the West Europe, then spreads in Asia- Africa and Latin America countries together with colonization process. Because of running along with colonialism, the relationship which is built with the local society is a colonial relationship. In Netherlands-India case, based on Sartono Kartodirdjo and Djoko Suryo, the colonial relationship originates in domination, exploitation and extraction, discrimination, and dependencies. (Kartodirdjo, and Djoko Suryo, 1994: 7).

The Capitalism Impact toward The Peasant Economy

Although those attention is less superficial toward the peasant economy, Marx proposes than in the capitalism system, the rural farmers will experience a death top. Farmers originally producing goods using their own production equipments, change gradually into small capitalists in one side and become casual workers on the other side. During this capitalism journey, the majority of the farmers will change into proletariat, that is a class suffering due to production method for capitalism. (Hashim, 1988:20-21). This Marx's conception is clarified by Lenin who is called it as differentiatonal process of farmers. The differentiation occurs because of the development of the rural middle class on one side, and rural proletariat class on the other side. The ploterialiat class has not a land and just works as a casual worker. (Lenin, in Harris (ed.), 1992: 130-138). Because there is a production activity in the household production form, Bernstein suggests the last class as *disguised proletarians*. Kautzky does not agree with both Marx and Lenin's conceptions. For him, a rural capitalism actually can increase an agricultural, but it should not remove the little farmers. In the West Europe, the agricultural industry inautomatically destroys the agriculture of common people (*small holder*). Both of those production exactly support each other. (Henry Bernstein, in John Harris, 1992: 169-171).

Beside it, Teodor Shanin (1972) supports Lenin's statement that capitalism has caused a differentiation and social – economy unfair justice in the rural areas. This process occurs in the mobility of farmer's household in the certain period. A special characteristics from various farmer's mobility are mobility cycle and all direction mobility which has levels and is not in polaritation form.

Earnesto Laclau (1971:67; Hashim: 29-30)), Marxism structural follower from France, refuses Lenin's theory which assumes that capitalist production contradicts pre-capitalist method of production. The result of his research in Latin America shows that the development of capitalism still preserves pre-capitalist method of production. Among two methods of production are interrelated called "subordination", that is pre capitalist method of production into subordination capitalist method of production. Farmer society does not crush because of the development of colonial capitalism, but even intergrated in subordination relation. Farmer society becomes source of a cheap workers for the plantation and it also produces commodity for colonial markets.

In colonized countries, there are some theories concerning about the impact of capitalism towards the peasant economy. J.H. Boeke (1953) says that the impact of capitalism towards Asian society is a change of society into dualism in economy aspect. On tone side, there is a development of capitalist economy and there is an existence of pre-capitalist economy. The capitalist economy has some characteristics, namely capital intensive, focusing on modern sector, in agriculture aspect, focusing on the development of export plants (plantation form. On the

other hand, the pre-capitalist economy has some characteristics, namely labor intensive and focusing on substitution plant sector. If the major capitalist method of production is dominated by the western people (colonizers), on the other hand, the pre-capitalist method of production is done by indigenous people. According to Boeke, both of those system are run by themselves and live together. The first system more is developed in the colonial cities, but the second one is developed in Javanese villages.

Boeke's conception, about the society dualism has been completed by Furnivall (2010). Based on him, in Netherlands- ndia society, it is not just separated into two parts, but multi-separated called plural society. The plural society is reflected in political and economy aspects. Im economy aspect, their motivation is not coordinated by different cultural values. Emphasizing in production aspect rather than social life is a special characteristic of a plural society. Some big problems faced in those society is the similarity of chances, social mobility, and wealth distribution.

D.H. Burger (1983), also agrees with Boeke about economy dualism in the society which is under the command of colonial capitalism. However, he assumes that between modern sector and traditional sector must not be separated firmly as Boeke's said, but there is a relationship between capitalist method of production and pre- capitalist method of production. Next, Burger says that colonialism has a wider impact toward Javanese people, that is called as a structural change.

The impact of capitalism towards the peasant economy is also reflected in controversial work from Clifford Geertz (1963), "*Agricultural involution*". Based on title of his book, the impact of capitalism is agricultural involution and shared poverty. Involution refers to a technical changing pattern that the agricultural production is increased just by increasing income of workers for each track of field. The involution actually has had a root long time before colonialism, but it is sped by the existence of sugar cane plantation during cultivation system (*Kultur Stelsel*) period and it is more sped during the Liberal Colonialial period. The involution process based on Geertz has caused particular phenomena in Javanese society, namely : (1) post traditional character and social structure of rural area, (2) communal ownership of land is stronger, (3) the development of *palawija* production, (4) the equal poverty aggravately in the work chance and for earning income.

In contrast with Geertz, Elson (1984) and Husken (1998) find a fact that the impact of capitalism toward the rural peasant economy does not cause involution, but differentiation. If involution is like the sharing of cake in Javanese people as cultivated land, on the other hand, in the differentiation concept, the rural community is classified into some stratified classes or strata, so there are a rich farmer, a half-rich farmer and a poor farmer. In the agricultural aspect, the differentiation is signed by lack of distribution in land property for every farmer in the village. In the different society, there is people having a good luck in their life which means that

they have a prosperous life, and there is a group of people who is not lucky in economy life or poor. Elson also adds that in Pasuruan society, people do not live from agriculture, but there is other work such as opening a store, becoming a coachman, etc. Then, Husken emphasizes that the role of elite group in the village from generation to generation who enjoys economy profits and becoming a small capitalism in the vilage.

If almost theories of the impact of capitalism towards the rural community have negative characteristics, so it is different from “linkage” theory. “Linkage” theory is suggested by Thee Kianwie (2010) and John Mellor (1974). Thee suggest that the industry of plantation can also support the development of an area through some appeared chances. The industry of plantation enables to create some new work fields for many people. The other important contribution is the appearance of stimulation for the improvement of various infrastructures. The development of industry can also give chances for causing some economy activities which is related by the various necessity for industry and the fulfillment of daily necessity for the workers. Then, for knowing the impact of sugar cane plantation must know related in “*backward linkage*” and “*forward linkage*”. (Kianwie,2010). John Mellor who takes capitalism of agriculture case in India says that the development of agriculture, through “*linkage*” to no- agriculture can support the expansion of production and intensive workers , and a small-scale industrialization in the rural areas.(Mellor, 1974: 100). Wasino (2008) also supported this theory that was linkaged between sugar plantation and peasant economy.

Except social aspects, the impact of capitalism in industrial form also changes the physical environment. Kuntowijoyo says that the opening plantation (coffee, tobacco, sugar) in the Javanese areas in nineteenth century has caused a biological change. The existence of sugar plantation in the village can be changed. Rural area or village can be reorganization , so a village which firstly is fragmented can be a clustered village. The opening of sugar cane plantation is usually followed by the opening of communication path such as train and road. The opening of communication path all together changes the social economy structure of fund. (Kuntowijoyo, 1994: 70; Kuntowijoyo.1989/1990).

Research Finding

In the beginning of nineteenth century, most Javanese societies live in agricultural sector. Boomgard (2004: 142), argues that even though pre-farmer and capitalist elements are exist, life as a farmer is a main occupation of Javanese communities. The agricultural production method is supported by a strong country system which collects taxes from farmers who are commonly substance-oriented. According to data from 1815-1830, he concludes that 70% of Javanese people live as sharecroppers who control the land. Javanese people live as sharecroppers who control the land.

Since 1830, Dutch Colonial introduced Cultivation System (*Kultuur Stelsel*). This system tends to be dominated by state in managing economy of public sectors. It can be said that was operated State Capitalism. The state as own and managed all modern plantation activities for export as coffee, tea, and especially sugar. The land for plantation firstly used by peasant for subsistence plantation especially rice must be used as rotary system (*glebagan*) with the sugar cane. This rotary system in land used for planting can be influenced to the production of the rice production (Fasseur, 1975; Nagazumi (ed), 1986:11-76).

After 1870, the State Capitalism on plantation in form of *Forced Plantation System* in Java gradually was vanished. The cultivation of plantation plants is not managed by the government anymore, but by the private entrepreneurs. They have to make contracts with some villages to obtain lands, workers or crops. After that, indigo is not used as export plants, but sugarcane is still maintained. Thus, the rotation plantation method between sugarcane and paddy using *glebagansystem* still occurs (Boomgard, 2004:147).

In developing paddy plantation, not only the fields, the investment of irrigation is very important. An attention of irrigation has been applied by the colonial government since the beginning of nineteenth century. The attention is steadily increasing together with the Forced Plantation Policy, the Liberal Colonial Politics, and the ethical colonial politics. Improvement of agriculture is one of main consideration to construct irrigation system. In the Forced Plantation, (1830-1870), the government directly involves in the sugar production process, in this case, water supply for sugarcane land is considered as the main factor. The sugar industry requires water to irrigate the sugarcane in the field and to grind cane in the sugar factory. The owners of sugarcane plantation rent the field from the colonial government. In contract, they often decide that the administration government employees in the Ministry of Internal Affairs have to guarantee water supply in sugarcane field and factory. This shows the reason to develop irrigation involving the public. In addition, frequent incidents cause the damage of traditional irrigation belonging to society causing crop failure and poverty.

In Central Java, there is terrible crop failure and poverty that is in *Afdeeling* (local state administration) Demak Grobogan, Semarang residency. Endah Sri Hartatik (2002: 71-98) states that *Afdeeling* Demak and Grobogan, especially Demak regency in nineteenth century are flood prone areas. In note controller of Demak, P. D Menso Haager says that Baud resident agrees in excavation of rivers and canals located in Demak to patch the overflow. The climax catastrophe occurred in *Afdeeling* Demak and Grobogan in 1849, is famine. The famine is caused by crop failure as a result of flood, pests and long drought. The famine illustration in *afdeeling* Demak and Grobogan is reported by Semarang resident on October 1849. The report explains that 7000 indigenous people die and 2000 people are wandering their life. This catastrophe causes Buijsker resident honorably

discharged from his position as official state (written in decision on 6 Mei 1850) (ANRI, 1903).

Crop failure and famine has encouraged the government to construct irrigation system for agricultural interest. Unfortunately, the government investment related to irrigation has not been handled optimally. Therefore, in 1880s, the construction of irrigation network cannot be applied based on technology principles, for example, Demak Irrigation Construction. This irrigation network is considered as big work completed with irrigation and drainage canals, can serve 33.800 hectares of fields, so the famine as a result of crop failure does not appear in this area (Srihartatik, 2002: 101-117).

The government employees are organized to construct bridges and water canals as their own initiative or they advise the local people to repair the inadequate irrigation or organize labor intensive. The original technology largely causes in irrigation. This is due to some factors, first, because there is lack of involved employees. Secondly, the government employees commonly have lack of technical knowledge of constructing irrigation, hydrology or water control (van der Eng, 1993:50).

In the irrigation areas which are planned naturally, dam is constructed properly to survive from huge flood. Water is distributed through sluice to primary channel, which means that water supply can be arranged wisely. From the primary channel, water is distributed to the secondary channel, continuing to tertiary channel, then to farm level channel and finally to the rice terraces. Ir van der Meulen is employed to devise and to supervise the implementation of irrigation system construction. He develops the technical irrigation system. Based on irrigation system which has been developed by local people, the irrigation system is developed. For organization managerial interest of irrigation, it is established a particular agency which is concerned in irrigation. The agency is the Irrigation Agency, Irrigation and Embankment as the part of Department of Public Work. The field executive like Ir van der Meulen could make reportation about the budget plan and its field implementation (Booth, 1977; Pasandaran & C. Taylor (ed) 3-19).

The appearance of irrigation building and channel really supports the development of crops plants. The width of fields which can be irrigated becoming wider. Table 1 shows the width of irrigation field which is increasing during the late nineteenth century. However, the improvement of irrigation field actually is also followed by the development of other lands, namely the rainfed land, swamp field and dry land.

The raised question is whether investment in irrigation sector in the late nineteenth century is equal with the paddy production. Table 2 depicts that there is a significant relationship between ratio of irrigation and paddy production. The significant number is 5% for entire Java including Madura.

TABLE 1: THE DEVELOPMENT OF THE LANDS OF IRRIGATION FIELDS AND ITS COMPARISON WITH THE WIDTH OF LANDS IN THE LATE NINETEENTH CENTURY (000 HECTARE).

<i>Year</i>	<i>Irrigation Field</i>	<i>The Rainfed Land</i>	<i>Swamp Field</i>	<i>Dry Land</i>	<i>Total</i>	<i>Comparison Between Irrigation Field and Lands Width</i>
1880	1.060	580	33	438	2.111	0,50
1885	1.191	686	38	534	2.449	0,49
1890	1.201	712	37	579	2.529	0,47
1895	1.244	723	35	630	2.632	0,47
1900	1.260	770	40	798	2.868	0,44

Source: Anne Booth, 1977, "An Historical Review of Irrigation Development in Indonesia, part I", in *Bulletin of Indonesian Economic Studies*, vol. XIII, no. 3

TABLE 2: RATIO OF IRRIGATION AND PADDY HARVEST IN 1880S

<i>Area</i>	<i>Irrigation Ratio in 1888</i>	<i>Harvest of Dry Rice in 1889-93 (quintal/ha)</i>
Pasuruan	93,9	34,6
Besuki	99,4	30,7
Pronolinggo	82,6	25,8
Kediri	82,9	25,2
Tegal	62,9	24,2
Priangan	72,3	24,0
Krawang	48,6	23,9
Surabaya	42,1	22,4
Bagelen	63,0	20,9
Pekalongan	92,0	20,8
Kedu	84,7	20,6
Cirebon	82,7	20,3
Semarang	53,3	19,9
Banyumas	62,4	19,4
Madiun	81,5	19,3
Banten	45,0	19,0
Jepara	65,2	15,6
Rembang	22,1	14,4
Madura	9,3	12,9

Correlation of irrigation ratio and harvest : 0,69

It means the significance is 5 %

Source: *Kolonial* Verslag 1889-94; Booth, 1988, *Agricultural Development in Indonesia*, Sydney: Allen dan Unwin, hlm; 75.

Beside irrigation, the plant development (including food) is that there are the agriculture research. In 1817, (the reign of Raffles) it is built berdiri The National Botanical Gardenin Bogor. This National Garden is popular named *Kebun Raya Bogor* which is internationally famous as botany center. terkenal Many researchers

are involved in agricultural research, but there are only few of them involved in the practical problems and agricultural cultivation. They work to measure in order to increase food production in 1847. In 1850s, some researchers investigate poverty threshold and farming practices among poor people in various areas in Java. There are many of their experiences from tradition and farming techniques of indigenous people from one area which succeeds but in other areas are not. For this importance, the government supports by regulations about farming techniques issued by the botanical garden. Many government employees publish their experiences using particular planting techniques, such as seeding and nursery, planting space, plant varieties, soil cultivation and irrigation procedure. The famous agricultural expert is Holle. He propagandizes few change towards agriculture of local people which is affordable cost to be adopted by the farmers. He adjusts varieties of import paddy and his experience with new variety in Priangan. He introduces measurements such as; using of paddy seeds instead of all of them to seed paddy; planting seedling with greater distance and obvious line, planting green fertilizer after harvesting paddy, making terrace in the dry lands and highland which likely erosion occur (van der Eng, 1993:73).

Impact from all efforts by Hole to propagandize the agricultural development obviously is not good. Farmers tend to plant *genjah* paddy than excellence variety of paddy which is long to harvest, hoes not too deep, abandones fertilization. Activity of government employees is more dependent from initiative and personal ability. There are lack of knowledges and time to develop further agriculture. The most viable sometimes use *parintah alus* (fine command) or *parintah keras* (rude command) to persuade farmers changing their agricultural techniques. However, such innovation is unsuccessful. There is an area which succeeds in its harvest, but there is no guarantee in other areas.

Research about various crop plants and trade plants starts in 1850s. At that time, there are seeds and germ collection process from species of plants in The Bogor Botanical Garden. Those collections are developed in specialized gardens for perennial plants (annual) in Bogor in 1876. Applied research is further developed by choosing Treub as the director of The Botanical garden in 1880. He is trying to raise funds and to expand trade plants collection with new plants, such as cinchona tree, havea rubber tree, coconut tree and dan the wide variety of new interesting commercial plants. The Botanical garden becomes an important source of new plants and varieties for western plantation in 1880s. The coffee and sugar plantation ask the Botanical garden for assistance when the serious diseases of coffee and sugarcane plants spread which largely cause in exporting both plants (van der Eng, 1993: 74).

It must be admitted that the agricultural research in the nineteenth century is focused on plantation plants. Crop plants, such as paddy which is more concern in farming by Javanese people are less attention. Thus, it can be stated that those

research do not take enormous impact of crop plants development. Farmers who develop crop plants have to rely on their own instincts. They plant paddy in some fields which switches with sugarcane or in the dry fields as the *gaga* paddy. This is considered as a consequence as lack of alignment from the colonial government about crop plants.

In the Forced Plantation System Era, the development of paddy production generally is not very good, even though there are good areas such as Pasuruan (Elson, 1994). This is due to the oppression from sugarcane and indigo plants towards the fields which are usually used for planting paddy.

TABLE 3: THE RICE PRODUCTION IN THE BEGINNING OF THE FORCED PLANTATION IN METRIC TONS (X 1000) 1837-1855

<i>Year</i>	<i>Rice production</i>
1837	1196,9
1838	1195,2
1839	1150,7
1840	1269,2
1841	1425,8
1842	1456,7
1843	1569,6
1844	1394,1
1845	1658,5
1846	1621
1847	1621,7
1848	1732,8
1849	1574,4
1850	1562,8
1851	1619,4
1852	1558,9
1853	1791,6
1854	1705,6
1855	1800,3

Source: Boomgard & van Zanden, 1990, *Changing Economy Indonesia (CEI)*, vol 10, page.112

In the first time the Forced Plantation System applied, the development of paddy production in Java is extremely low. In 1837, the number of rice production is only 1.196.900 tons. This production has a fluctuative rise until 1856 at 1.800.300 tons. This production increase likely does not reach double number for 20 years.

The low paddy production during the forced plantation is truly determined by the limitation of workers to cultivate agricultural production. The limited number of Javanese people has to split time between cultivating plantation plants which are required by country and crop plants which become their daily needs.

TABLE 4: THE RICE PRODUCTION IN THE LATE OF THE FORCED PLANTATION IN METRIC TONS (X 1000) 1837-1870

<i>Year</i>	<i>Rice production</i>
1856	2036,3
1857	1948,9
1858	2043,7
1859	2032,0
1860	2051,2
1861	2084,9
1862	2020,9
1863	2187,5
1864	2072,8
1865	2193,6
1866	2774,0
1867	2445,5
1868	2503,3
1869	2650,1
1870	2849,2

Source: Boomgard & van Zanden, 1990, *Changing Economy Indonesia (CEI)*, vol 10, page.115-116

Table 4 shows that there is a considerable change of paddy production. From 1856-1865, paddy production only moves between 1.948.900- 2.193.600 tons. Since 1866-1870, there is a high production between 2.445.500-2.849.200 tons. This change is caused by making not so binding of the Forced Plantation System and the construction of some colonial irrigation facilities.

The production change is continuing since the liberal colonial politics era. Beside some factors of availability of irrigation facilities which are coming better, the relationship of loose production between the plantation producers is considered as one of the factor causing this change. Theoretically, farmers are free to cultivate plants based on their own interest. They also can rent their lands to the plantation entrepreneurs.

Table 5 shows the development of paddy production which continues to increase from 1870 to 1900. In 1870, the production is at 2.922.400 tons and continues to increase with the highest number in 1900 at 4.828.000 tons. The development of production is quite fantastic compared with in the Forced Plantation era.

The development of paddy production during the liberal colonial politics period is caused by extensiveness factor. The rapid growth of population since the middle of the Forced Plantation System encourages the number of population. As a result of this, the number of workers is increasing. When the liberal colonial politics period is applied, the expansion of fields rises significantly.

TABLE 5: THE RICE PRODUCTION IN THE LATE OF THE FORCED PLANTATION IN METRIC TONS (X 1000) 1837-1870

<i>Years</i>	<i>Rice production</i>
1871	2922,4
1872	2927,1
1873	3231,1
1874	3576,1
1875	3467,7
1876	3504,1
1877	3447,7
1878	3654,7
1879	3842,8
1880	3804,1
1881	3687,9
1882	3880,1
1883	3534,6
1884	4225,5
1885	4424,4
1886	4347,9
1887	4423,0
1888	4197,9
1889	4053,1
1890	3760,7
1891	3794,5
1892	4274,7
1893	4071,6
1894	4330,5
1895	4537,0
1896	4061,6
1897	4356,5
1898	4445,7
1899	4637,3
1900	4828,0

Source: Boomgard & van Zanden, 1990, *Changing Economy Indonesia (CEI)*, vol 10, page 116-118.

Table 6 shows the expansion of fields during the liberal colonial politics era. Based on the data, it can be described that the development of production does not illustrate the production quality. The average field production per hectare likely does not have significant increase. Production only moves from 1.85 tons per hectare to 2,16 tons per hectare.

TABLE 6: THE EXPANSION OF AGRICULTURAL LANDS BELONGING TO LOCAL PEOPLE AND THE HARVEST WIDTH 1866-1900

<i>Year</i>	<i>Agricultural lands (000 ha)</i>		<i>Harvest Width (000 ha)</i>		<i>Paddy Production (tons per/ha)</i>
	<i>Fields</i>	<i>Total lands</i>	<i>Fields for Paddy</i>	<i>All Crop Plants</i>	
1866-70	1426	2021	1350	Ttd	1,85
1871-75	1514	2133	1527	Ttd	2,11
1876-80	1679	2079	1678	Ttd	2,18
1881-1885	1794	2301	1805	Ttd	2,20
1886-90	1955	2546	1939	3231	2,14
1891-95	1976	2582	1965	3419	2,14
1896-1900	2041	2754	2077	3700	2,16

Booth, 1988, *Agricultural Development in Indonesia*, Sydney: Allen and Unwin,

Although there is a large rise of paddy production, it is not equal with the growth of local population. Local population increases sharply and becomes poorer. The numbers supports an opinion from van De Venter which is that the rise of rice production is far below the population increase. As argued by Gongrijp that the growth of people spends bigger production, they consume food per capita less than the previous eras. Even though most of them earns income from other works, such as wage as the plantation workers, but the wage is too cheap to fulfil their needs. People obtain rent f42,48 /armtheir land under the forced plantation system from the government, only obtain f25 per arm for the similar lands from the plantation owner in 1900 (Furnivall, 2010).

Beside paddy plants growing in wet lands, there are other foodstuffs in Java such as grains, legumes, root-tubers and fruits. The complementary foods are corns (favourite food), beans, peas, cucumbers, chili, onions, peanuts, soybeans, potatoes and watermelons. Those secondary plants are generally planted in the dry lands. Those lands are planted in the rainy season. However, corns are planted in fields during the drought, the time before planting paddy (Elson, 1994: 6-7).

Beside production local, the important and noticeable thing is food consumption. The simple question is that whether such those food productions can be sufficient to food consumption for Javanese people. Creutzberg says that one family consumes two slices of meat everyday, in the morning and in the evening, and it consists of cooked rice and vegetables and sometimes the mixture of corns and root plants flavored by salt. It is often also added as animal protein, such as chicken and salted fish, and sometimes it also comes from the old buffalo meat which is not productive for agricultural activity. Meats completed with fruits and water and sometimes sugar and coffee. Alcohol as great wine and sugar usually is drunk in party. The number of food consumption everyday for an adult is half kilogram, excluding the complementary food. In some areas such as East Java which are many Madura people, the number of rice consumption is less because

they consume other food, such as corns, tubers, yams, and sago. On the other hand, together with the prosperity development, the rice consumption is also increasing (Elson, 1994: 6-7).

The rice consumption as the primary food in nineteenth century apparently also applies in some areas which are not controlled by the Dutch Colonial Government. For instance, Surakarta is governed directly by local authority, Sunan and Mangkunegara. In Creutzberg's book, he states that according to records in 1824, Surakarta which is one of political center in Java, has its people who also consume rice as primary food. However, rice is not the main food throughout the year from people in the area. It can be said that in the crop failure, they consume corns and tubers. They also eat leaves from various plants and tubers collected from the forest. Those people also cultivate other plants. Those plants include varieties: *Colacosia* and *Dioscorea*, *Xanthosoma violaceum* Schott, and *Coleustuberosus* Benth. Leaves from consumed plants include *Hiptage benghalensis* Kurz, *Spenoclea Zeylanica* Gaerth., *Morinda citrifolia* Linn., *Vitis landuk* Miq., *Colocasia esculenta* Schott, *Ficus flabella* Bl., *Hydrocotyle sibthorpioides* Lamk, *Actinophora fragrans*, and *Pistia stratiotes* Linn. The wild collected tubers are *Amorphophallus campanulatus* bl., *Pongamia pinnata*, and *Alocasia macrorrhiza* Schott (Creutzberg and Laanen (ed.), 1987).

Rice as primary food consumed is running until nineteenth century. there is no reducing interest to consume rice, but it is more increasing. During 1848 to 1872, consumption is fluctuated, and after three times, each five years, sequently passed, then the rice consumption is quite high. There seemingly is adequate purchasing power among people, so the terrible harvests during years should be completed by import rice in quite number. For twenty years later, the average level is simply lower. In the late nineteenth century, there is prosperity decrease in javanese people signed by the rice consumption decline per capita. If food consumption per capita 1880 raises 120 kg per kapita, in the late of nineteenth century is only 103 kg per kapita (Booth, 1989: 111-116). This is due to the price of the expensive import rice and slow rice production, so it cannot offset the population growth (Wasino, *et al*, 2015; Wasino, 2016 b).

Conclusion

Java Island was familiar with rice plantation before Colonial time. Rice was the main food for Javanese people. Since the third decade of nineteen century rice agriculture had competitor namely sugar cane. Since those time Dutch Colonial government focused on corp plantation, especially sugar cane. Booth plantation used the same area of plantation namely rice field or sawah. Theoretically rice will be decreased from time to time, but the reality was different. In the area when the sugar cane was exploited the rice production was increase. This condition was caused by linkaged production between wet rice and sugar cane. The rice agriculture

get benefit from irrigation and fertilizer that was used by sugar cane plantation. This finding denies Geertz's theory about agricultural involution and dual economy of Boeke.

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