

FARMERS, AGRICULTURE AND FOOD SECURITY OF NATIONS: COMPARISON OF RURAL ECONOMIC CHANGES IN JAVA AND PUNJAB

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Until now, the development of the agricultural sector and the life of rural communities has not reached what is expected. From the point of view of economics, it can be said that our agricultural structure is still wobbly, so it has not been able to be a supporter to move to the next stage that is to the industrial community stage. Meanwhile, the life of rural people is also faced with various social problems, including poverty, income inequality, unemployment, agrarian conflict, as well as other socio-cultural issues. With an integrated management pattern, it is hoped that it will be able to maximize the potential (resources) in each actor, so that the production of basic food needs can be improved and provide added value to farmers / fishermen, farmers / fishermen groups or to the community. In addition, the stages of food security development can be directed sustainably and focus on technology development and innovation. It is necessary to improve the system of crop cultivation, post-harvest handling, food processing and distribution handling to be more productive.

Keywords: farmer, agriculture, food security, rural

A. INTRODUCTION

Indonesia has long been known as an agrarian and also a maritime country. Agriculture plays an important role in people's lives and livelihoods, and maritime forces support their distribution. The success of the agrarian sector is inseparable from the active role of Indonesian farmers, as a decisive force in the production of land, and the success or failure of the harvest. Farmers have been viewed as the object of a work design, whereas its position can not be substituted. Unilaterally, farmers are often still treated as cultivators and harvesters, and are less rewarded both in terms of ability and knowledge. While the work design made by the ruler sometimes is not in accordance with natural and field conditions.

Until now, the development of the agricultural sector and the life of rural communities has not reached what is wanted. From the point of view of economics, it can be said that our agricultural structure is still shaky, so it has not been able to

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be a supporter to move to the next stage, that is, to the industrial community stage. Meanwhile, the life of rural people is also faced with various social problems, including poverty, income inequality, unemployment, agrarian conflict, as well as other socio-cultural issues.

The next burden that can not be separated from the agrarian structure is the availability of the nation's food that seems to be charged on farmers' responsibility. The nation's dependence on the availability of rice as a staple food has become a problem in itself. Today the effort to make non-rice carbohydrate source comes as a trend as well as alternative for people's food security.

Some research about this topic has been done. Wasino (2017: 251-271) analysed about the rural life at the time of Dutch Colonialism in Java. From those article can be seen that there was the life of peasant not good condition. In other article Wasino (2017 a: 63-127) also made historical analysis about the history analysis of the life of peasant in special palece in Java at the Dutch Colonial time. If Wasino focus on the Colonial time, Ewout Frankema (2015: 259-278) studied economic life of the Indonesian under the New Order.

B. RESEARCH METHOD

This research is a pilot study that tries to photograph two research sites using the same viewpoint, that is rural in Java and rural in Punjab. This research is a humanities research that uses approaches from various studies of social science, such as historical approach, sociology, anthropology and demography. Broadly speaking, the steps in this study are as follows: (1) Data collection, (2) Preparation and classification of data (3) Data Validation, (4) Data Interpretation, (5) Conclusion drawing, (6) Preparation of articles ((Wasino, 2006; Tosh, 1987).

C. INDONESIAN FARMERS, SMART CULTIVATORS

The ability and knowledge of farmers is the intellectual property that is passed down from time to time and from generation to generation. In the past, when a pest attack occurs, they could not do anything, and accept it as a fate. However, it is precisely in this resignation that emerges a kind of local genius movement based on the observation of the changing seasons, climate and weather, and the signs that are often raised by the environment to remind the occurrence of natural phenomena. That is what is meant by *Pranata Mangsa*. The way farmers cultivating their fields then follow the directions and guidelines set forth in the *Pranata Mangsa*, because inside it is clearly guided, when is the good season and when the time is not good to grow crops. In some places, the *Pranata Mangsa* is also used to guide fishermen to go to sea, traders to trade, even travellers to travel. The *Pranata Mangsa* can be said to be a tradition of an ancient agrarian society, which, according to historian S.Margana, is unfortunately not found in the official records, until the Dutch Orientalists desired it.

Further, S. Margana expressed his disagreement over the notion that the *Pranata Mangsa* is a counter-cultural formalism. He further adds that, the presence of a *glebakan* system in the land leasing system in the kingdom by European plantations contributes to the destruction of the *Pranata Mangsa* tradition.

In Java, for example, the Mataram dynasty is a dynasty of peasants, Ki Pemanahan, Ki Penjawi, etc. They have extensive knowledge of agricultural technology, especially when the king then put the economy and politics of kingdom on land and land crop. The king and his family, including the nobles, have an interest in making agriculture work and produce a satisfactory product. This is the main concern of the rulers, because that is where power is put. So there is an attempt to formalize the *Pranata Mangsa* for power to continue and affect the guarantee of the life of the nobility. (Van Niel: 2003).

In East Lombok regency, traditional methods based on natural cues (*Pranata Mangsa*) have also been widely used in agriculture, fisheries, building carpentry and others. From the inventory it is known that *Pranata Mangsa* growing especially in the Sasak tribe community in Lombok Island and in general in Batu Nampar Village in Jerowaru subdistrict, and Ketangga in Suela subdistrict mostly relates to other livelihoods. The growing variety is in the field of agriculture (planting crops), setting a good time to do something and other provisions concerning the season / planting time, and overcome the climate problems according to the conditions caused by natural phenomena due to natural characteristics that become habitual in certain *Pranata Mangsa*. (Harl: 2005).

In general, there are 3 (three) natural indicators which become the traditional time-setting standard in the *Pranata Mangsa*, namely:

1. Natural phenomenon (star)
2. Behavior of fauna (animals)
3. The development of plants (flora)

Knowledge about the calendar in the sasak month is used by many farmers to determine when the start of agricultural activities, such as: cultivate the soil, plant, predict the type of plant pests plant, and the like. Each month has its own characteristics.

D. INDONESIAN AGRICULTURE, A COMPLEX AGRARIAN SYSTEM

In the agrarian context, all systems related to Java in the nineteenth century were essentially encouraging export commodities derived from agricultural processes. The system is a complex, coherent and logical set of thoughts that is imbued with basic economic and social principles. The purpose of creating the system is to make Java island profitable for its European owners. (Niel: 2003) The system is an affirmation of European policy that takes on its importance in light of the fact that it exists rather than by deep insight into the real conditions in Java.

Long before the Europeans interfered in the Javanese farmers' household affairs, they had become accustomed to working on the land to produce agricultural surpluses, both for self-use and for export. In turn, production and movement of agricultural production, both economically and politically, form a pattern of civilization that prints the mindset, customs and expectations of the members

Tania Li (2008) mentions that the agrarian issues debate in the 20th century is characterized by talks on issues related to land access, labor, consolidation and capital mobility. These agrarian issues are seen in a linear analytic framework; trying to explain the shift from the subsistence production system to the market economy, the shift from agriculture to industrialization, the change from rural to urban, where all these processes are driven, excommunicated, and guided by capital forces

In its development, agrarian land is limited to mere agriculture. In fact, various agrarian issues and conflicts are also occurring in plantation and even forestry areas, such as nationalization, privatization and clear boundaries between land belonging to the people, customs and government property, land redistribution, social differentiation, marginalization of women, migration, extinction of biodiversity and rural unrest (Li: 2007). Agrarian talks also can not be separated from changes in the economy of rural communities

In the old order there has been government policies and efforts to increase food production that is vital to people's survival and political stability. Even the realization of self-sufficiency in food has become the focus that wants to go through policy and its implementation. At the inauguration of land reform, President Sukarno asserted that land reform is inseparable from the Indonesian social revolution (Ahmad Nasih, *et al.* 15: 15). It means that land reform will abolish the status of landlords who do agrarian business by hiring farm laborers. On the other hand, land reform will reduce the number of landless tenants. Land of the landlord is not taken over, but through the process of applying the excess land and the appropriate compensation. Also, through landreform the people of Indonesia will increase the production of food that since the independence underwent shortages. In general it is not too much if in the old order, the government tried to produce food in absolute terms. (Syahyuti: 2004).

In the field of agrarian, this country has been problematic since the beginning. The difference between densely populated areas and non-densely populated areas is not only about the population density, but also about other matters such as agrarian culture, production systems, technological mastery and the concept of land rights (Ruwastuti 2000: 110) . The Basic Agrarian Law (Law No. 5 of 1960) is seen as an agrarian reform of Indonesia. Previously, the Law on Production Sharing Agreement (UUPBH), which has protected the rights of farmers (Law No. 2 of 1960) has been ratified. BAL aims to unite and thereby eliminate the dual system of agrarian laws based on the colonial agrarian laws of 1870. The law imposes a

dual standard in the exercise, in which rights under Western law are applicable to foreign investors in one party, and local traditional rights based on indigenous customs on the other (Winangun, 2004: 38).

UUPA 1960 also includes four basic principles, (1) agricultural land is the land for smallholders, (2) the main right to land, for example private property, is specific to Indonesian citizens. But a foreign citizen may obtain the additional right to rent or use the land within a specified area and timeframe that is governed by law. (3) the owner of *guntai* (absentee) is not justified except for those who are active in the State service and in the exemption. (4) peasants with weak economies should be protected against those with stronger positions (Winangun, 2004: 39).

According to the records of Margo L. Lyon, in most of the rural areas of Java there is a lack of land ownership in the villages. Crooked soils may be hectares larger than the land area of the average of other villagers. The area of *wakaf* land may be hundreds of hectares in rich Islamic regions or large Islamic schools. There are many landlords in some areas who have large land but do not reside in the area. For example, Sadjarwo notes that among the 20,488 rice field owners in Indramayu, 6,010 are not residents of the area. The owner of the culvert is also widely found in several sub-districts of Batang. In 1959, the cadres of the PKI (Indonesian Communist Party) researchers collected data on the relative distribution of land among selected villagers. It was found that there were many farm laborers who had no land. According to Sadjarwo's estimation, 60% of the rural population are laborers in landless agriculture, while the other 40% are landowners, both large and small (Winangun, 2004: 40-41).

Implementation of the land reform program to limit the area of land ownership in its implementation was in fact faced a hindrance. Landlords seek to avoid the provisions of the LoGA in various ways. Another interesting feature of the land issue at the time was the use of land reform as a PKI strategy to instill influence among rural communities. The PKI used the issue of land reform to polarize villagers into two opposing classes, namely landlord "village devils" and farmers. In the end, social conflicts between landless peasants and landlords occurred when the PKI argued that the government was incapable of implementing land reform, imposed the implementation of land reform through unilateral actions (Kuntowijoyo, 1993: 15).

Referring to the research conducted by Priyono in 2011 on the conversion of agricultural land, it can be known as follows, according to the Central Bureau of Statistics (2001), the area of Indonesia's rice fields in 1993 was \pm 8,500,000 ha. In 2000 (7 years later), it has shrunk seriously to become 7,790,000 ha or 710,000 ha of land losses or every year Indonesia's rice fields shrink 59.167 ha. Meanwhile, according to the Directorate of Land Order of BPN (National Land Agency) (1998), the area of paddy field in Indonesia until 1998 both technical irrigated rice field and non technical one was 7,796,430 ha. The detail description in Java, rice field

with technical irrigation was 58%, and non technical irrigation and non irrigation was 42%. Outside of Java Island most of the rice fields were non irrigated (> 75%).

TABLE 1: WETLAND AREA IN INDONESIA

No.	Region	Irrigation Village (ha)	%	Non- Irrigation Village (ha)	%	Total	%
1.	Sumatra	997.06	23,74	1.332.040	36,84	2.329.224	29,80
2.	Java & Bali	2.442.100	58,74	968.44	27,34	3.430.698	43,89
3.	NT & Mlk	154.92	5,69	155.12	4,29	310.144	3,97
4.	Kalimantan	228.85	5,45	772.89	21,38	1.001.845	12,82
5.	Sulawesi	373.5	8,89	346.63	9,59	720.239	9,21
6.	Irian Jaya	4.24	0,10	20.64	0,57	24.98	0,32
7.	Indonesia	4.200.670	100	3.595.760	100	7.796.430	100

Assuming that the depreciation and addition of farmland area is proportional to it can be estimated that in the period between 1960-1970 the area of agricultural land in Java was about 6,473,556 ha.

E. NATION FOOD SECURITY, TO WHAT EXTENT?

In an article criticizing food insecurity occurring in Indonesia, it is quoted some of the Indonesian sociologist's statements as follows, according to Usman (2004), rice mentality is not really a matter of coincidence and is not a personal matter either (taste or taste). Rice mentality actually grows and develops in conjunction with national agricultural development policy choices that are originally focused on or emphasize the fulfillment of rice needs. This is seen from the jargon that developed since the early 1960s, that is, rice self-sufficiency instead of food self-sufficiency.

State hegemony of the food sector through national food policy has created rice as the nation's mentality. When in 1960-1970 the international community declared that there had been a great food insecurity around the world, then in the 1980s Indonesia launched a program of self-sufficiency in rice. When in the 1990s the island of Java was no longer able to support the food production burden due to industrialization, the policy of opening a million hectares of rice fields in Kalimantan to be planted with rice was issued. After the 1990s, when the poor were deemed incapable of meeting their food needs, a rice for the poor program emerged. Sispariyadi (2005) says the key to these three examples of national macro policies shows that the country has been translating food the same with rice. Food is rice. So unilaterally it can be concluded that food insecurity is the same as rice gristle. Or it could be said that enough food is enough rice. In the end all potential national food policies are directed to how to increase rice production (Sujarwoto, Tri Yumarni, ____: 4-5)

Indonesian food security conditions nowadays worsened, due to the function switch of agricultural land in Indonesia. The Indonesian government should be more sensitive to this condition. Not just land issues, as posted by FAO (Food and Agriculture Organization), Indonesia is at a serious level in the global hunger index. It is predicted to continue to deteriorate as the population continues to grow in Indonesia. In the future it is predicted that there will be food scarcity caused by some things such as environmental damage, land conversion, high fossil fuel prices, climate warming and others.

The problem of the main food commodities of Indonesian people is due to the scarcity of rice. Actually, this scarcity did not happen because every region in Indonesia did not consume rice. Main meals in several regions in Indonesia are also different. The main food ingredient of Madurese and Nusa Tenggara people is corn. The people of Maluku and Irian Jaya have sago as their main food. And rice is the main food for the people of Java, Sumatra, Kalimantan and Sualwesi although there are a number of people make cassava, sweet potato and sorghum as the main food. But the whole thing changed completely after the New Order government with Rice Self-Sufficiency indirectly forced people who could consume non-rice food to consume rice. Problems that then arise include:

- the spike in national consumption / demand for rice until now that forced the government to import rice.
- changes in the diet of Indonesian society have made the diversity of agricultural commodities featured from every region in Indonesia disappeared because of the program of Rice Self-Sufficiency
- total land area, efforts for fertilizer and good seeds

Efforts to improve the nation's food security can be explained in two components, namely:

1. Increasing the Value of National Food Security

Various sources of local and traditional food currently owned by the entire region, can still be developed to meet the diversity of food community in the region concerned. From 2005 to 2014, the Government through the Ministry of Agriculture has found and released various types of food crops to be cultivated by Indonesian farmers communities with the number of new varieties registered were 844 kinds. Support programs have also been undertaken by the Central and Regional Governments to boost the production of Indonesian crops, such as providing subsidized seed, increasing certified good seed production, and socialization of rural farming seeds.

Meanwhile, the higher level of public education is also an opportunity as the basic capital for the acceleration of the process of raising the awareness of nutritious food consumption, so it is expected to change the behavior

of their consumption with the achieved level of nutritional status is getting better. In terms of the development of information technology and public communication strategy, it can provide high opportunities to accelerate the process, as well as expand the reach of public education efforts to increase community awareness of nutrition. This opportunity will be more fruitful if accompanied by the process of building awareness to them on the importance of eating foods with balanced nutrition, both for health, productivity and the intelligence of children as the next generation.

2. Development of Food Security Partnership

The challenge faced by the Indonesian nation today and in the future is how to develop cooperation pattern between Academician, Businessman, Government and Community Institution that will strengthen integration of achievement of stronger national food security, so that it can run more efficient and effective along with the guarantee on the availability of the supply of food commodities in the market, with an affordable price and a good nutritional quality for the consumption by the community. Integrated management pattern is expected to be able to maximize the potential (resources) contained in each actor, so the production of main food can be increased and provide added value to farmers / fishermen, farmer/ fishermen groups or to the community. In addition, the stages of food security development can be directed sustainably and focused on technological development and innovation. It is necessary to improve the system of crop cultivation, post-harvest handling, food processing and distribution handling to be more productive.

F. CONCLUSION

Traditional farmer, wherever he is, holds the spirituality and wisdom of his locality. With that spirituality, they believe, every day they will definitely earn fortune, also if they are in the most difficult circumstances. That is because the spirituality of the earth lives so strongly in them, that they can never doubt, that they will always be able to live, survive and rich in fortune, like the living earth, powerful and giving fortune. This spirituality may be lost, when they can no longer feel the love of the earth within them, because out there the earth has been marred by global warming.

By looking at the examples of other countries that have narrow region but the technology is able to help the problem can provide motivation for Indonesia. The quality of the farmers also needs attention to cultivate the existing natural resources. The farmers need to be given the knowledge to be able to advance the number of agricultural commodities. For example, training is provided for farmers to enable them to safely and effectively protect their crops from pests, diseases, and others.

All efforts to address the problem of food security must involve all parties. This is so that the whole plan of handling can be done well so that there is no more food problems. The support of academic role is a key factor in the development and innovation of food products so as to spur added value, competitiveness, and profit / benefit for national food products that will be generated through technology applications which is measured by quality assurance of standardized food products and able to meet the expected quantity value criteria.

Therefore, increasing food security for the development of domestic food commodity production becomes a priority as a joint effort of all actors to make it happen. Moreover, we must prepare for the era of global market by the end of 2015 by producing diverse quality and competitive food products, reinforced by integrated inter-sectoral cooperation from upstream to downstream.

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