

**FOOD SECURITY UNDER PARTNERSHIP SCHEME
AT PRODUCTION FOREST REGISTER 42 WAY KANAN, LAMPUNG PROVINCE**

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ABSTRACT

Food security is a major thing in the development of a nation to achieve prosperity. In other words, whatever is the condition in an area, the food must be available in sufficient quantities, both in the harvest time or famine, distributed evenly throughout the region, at reasonable prices to all residents, quality and safety. This means that food security must be occurring anywhere in Indonesia, including in the conflict-prone areas such as around the production forest area Register 42, Way Kanan - Lampung. The study conducted in July - August 2015 aims to determine food security in the conflict-prone areas so that it can be taken into consideration in the development of food security policy in the region or other conflict-prone regions. From the analysis results it is known that the stability score of food security in the study site is 1.85 (good), score of availability is 1.72 (moderate), and a score of access is 1.98 (good). Especially for utilization is in a low level, that is 0.98. It has concluded that food security in research area is 6.53 (low) therefore must be developed planning on short, moderate and long period of proper policy towards to increasing community food security.

Key words: food security, production forest, proper policy

INTRODUCTION

Generally, the community came to Sidoarjo and Karya Agung in 1965 through transmigration program. At that time the transmigration program did not provide the facilities of houses, but only provided land around 2 ha for each household. Deforestation of Forest Register 42 at surrounded those 2 villages occur generally due to population growth so that the cultivated land is shrinking. Population growth in the sub district of Blambangan Umpu, Way Kanan district is 2.47 (Lampung

Post, 2011). According to respondents, population growth in this village is due to marriage and also migration from other sub districts.

High increasing in the number of population make the cultivated land of each family smaller. It is known from the results of field survey that a lot of families began to lost their cultivated land, as a result they began to go out of the village and worked as a laborer. Additionally, the hunger of land in this community also causes an increase of encroachment on the production forest Register 42 which is under the management of PT Inhutani V. They were generally planting forest land with cassava but without permission, so they must be ready if one day they have to leave it due to the instruction of PT Inhutani V. They planted cassava on production forest to meet the needs of everyday life.

Land planted with cassava by the community expanding by the year, on the other hand the financial condition of PT Inhutani V was inadequate to hold a program that can tackle the encroachment. In order to overcome these two problems then the management team of this company held a partnership program with the community in 2013 as one way out. This partnership program allows community to plant cassava in production forest which is the concessions area of PT Inhutani V with special agreement and profit sharing with the agreed percentage. The type of cassava that is grown generally cannot be eaten, but between the lines of this type of cassava there are communities who plant edible cassava. Then on the banks of cassava, they also planted with trees for example *turi* (*Sesbania grandiflora*). Then for the fulfilment of their daily needs, they also grow a few vegetable plants also fruit such as banana, pineapple, and dragon fruit in their yard. With the lack of the cultivated land and also the minimize amount of food crops in the 2 villages area, then this research has been conducted. The research objective is to analyze the level of food security in the three villages that have the partnership program with PT Inhutani V, so it could be useful for policy recommendations to ensure the food security at the research sites.

MATERIALS AND METHODS

Study was conducted in two villages i.e. Sidoarjo and Karya Agung in July - August 2015 which have 3,609 person of population (Blambangan Umpu Monography, 2014). The sampling of respondents using Slovin formula (Wulandari *et al.* 2015), that is:

$$n = \frac{N}{1 + Ne^2} = \frac{3,609}{1 + 3,609 (0.05)^2} = 360 \text{ respondents}$$

notes:

n = number of sample

N = number of population at research sites

e = 5% margin of error

Based on the Slovin analysis, then determined the number of respondents = 360 persons. As proportionally based on the number of population in each village, sampling was conducted in the two villages namely Sidoarjo and Karya Agung subsequently as follows: 157 and 203 person. Then all respondents were interviewed based on a questionnaire that had been prepared. The questions in the questionnaire are divided into four categories, that is food stability, food availability, food accessibility and food utilization. Each answer of respondents is weighted so that would be obtained certain values in each category.

Each indicator was measured using the following methodology (Landicho *et al.*, 2015): (1.) Food stability. Its indicator was measured that they produces multiple crops throughout the year. Food stability score is described as follows: 1.50 – 2.00: Food is highly stable. 1.00 – 1.49: Food is moderately stable and <1.00 when Food is not stable. (2.) Food accessibility. It was measured by the level of food availability in their households, which ranged from “always available”, “sometimes available” and “not always available.” The weighted score for each item was computed by determining the frequency count for each item, divided by the total number of respondents. Sum of weighted scores for each item represents the food accessibility that can classified by scores i.e. 2.00 –3.00: Food is highly accessible in the household, 1.00 – 2.99: Food is moderately accessible in the household, and <1.00: Food is not accessible in the household. (3.) Food availability. Its indicator was measured by farm produce are used for their home consumption; able to meet their basic food needs; and, whether the market is accessible for food items that may not be available in their farms. Score of food availability is described as follows: 1.50 – 2.00: Food is highly available, 1.00 – 1.49: Food is moderately available and <1.00 when Food is not available. (4.) Food utilization. It was measured whether their farm produce are consumed by their household; by the local communities; and or by those outside the community. Food utilization scores are described as follows: 1.50 – 2.00: Food is highly stable, 1.00 – 1.49: Food is moderately stable, and <1.00 when Food is not stable. Average score of status of food

security was computed by adding up the scores in each of the four indicators divided by the total number of indicators. Scoring was based on the following: 8.00 – 9.00: High level of food security, 7.00 – 7.99 : Moderate level of food security, 6.00 – 6.99 : Low level of food security and <6.00 : Food insecure.

Especially for the preparation of the policy recommendations are made in desk study. Policies at the national and regional level, as well as at the company of PT Inhutani V are made as reference in drafting policy analysis to support increased food security in the 2 research villages. The policy referred to is the policy of the ministry of forestry and the ministry of agriculture which is relevant to the food security program.

RESULTS AND DISCUSSION

Food security in Indonesia is alarming because of the high dependence on food imports. There are several factors contributing to this occurred in Indonesia, such as, due to the relatively small percentage of agricultural land, which is only 29.75% of the land or any terrestrial or an area of 536,000 km² (Kompas, 2013). Unlike the United States, which is currently has a vast agricultural land area of 44.1% or 4.04095 million km² that make them able to export food (Kompas, 2013). Associated with a crisis of food availability, according to Deputy Chairman of Kadin on the Sector of Food and Livestock, FAO has estimated that most of the countries in the world will begin to experience the food crisis in 2015 (Kompas, 2013). In facing the food crisis which is expected to be occur in 2015, then Indonesia must immediately prepare a food security strategy, both at national and regional levels.

According to the Act No. 41 of 2009 on the Protection on Sustainable Food Agricultural Land and Act No. 18 of 2015 on Food, definition of food security refers to the conditions of food fulfillment for household food which is reflected in the availability of adequate food, both in quantity and quality, safe, equitable and affordable. Food supply can be done by: (1) self production, and (2) imported from other countries. This study analyzes the food security through four parameters of FAO (1996) namely: food stability, food availability, food accessibility and food utilization. Food security through partnership programs in the two research villages is important to examined because it is the prime program in anticipated the increasing encroachment on the forest of register

42 that carried out by the communities in the those villages to meet the needs of daily life (Nyanga, 2012). Moreover, since published the Ministerial Regulation of Forestry No P.39/2013 on Community Empowerment through Partnership then of course this should be that encroachment in production forest register 42 or forests under the management of PT Inhutani V started to be controlled. This could occur because the community get the official recognition from the government cq PT Inhutani V over the management rights at the same time obligations in managing state forest lands including benefit sharing between community and PT Inhutani V. This right is only short term of 2 years and can be renewed again. Even only short time but it is expected to help improve the taste of secure on communities in manage the forests so as to increase its productivity and support the food security of the community surrounded forest register 42.

Based on the survey results, it is revealed that the partnership program of PT Inhutani V with the community which is just implemented since 2013 gives the score of food security parameters results of the levels 0.98 to 1.98. In detail result it is known that the stability score of food security in the study site is 1.85 (good), the food availability has a score of 1.72 (moderate) and food accessibility of research sites is 1.98 (good). Although it is easy access to the location of the research villages but the food availability is only moderate, this probably because food security influenced by geological factors of a region (Premanandh, 2011), for example, the road conditions are poor or many rocky and potholes roads that make only none to a few people who intensively manage their land so that the productions are less optimal. Further Sen (2000) revealed that food insecurity often occurs because of lack of access to food, even when the food production is plentiful.

If food accessibility is moderate and food availability is good means the region does not have serious problem about food security. It is evident that the food stability in these 2 villages is in the category of good (1.85), meaning that community can still continuously meet the needs of everyday life. It is reasonable as Adam (2008) showed at his research result that household's food security is highly dependent on the factors of demographic, ecology, social, economic and cultural. Specific correlation of food security to social aspects, particularly to gender issue has been proven in research sites. Women respondents at both sites said that there are other advantages of the partnership program by PT Inhutani V, their husbands no longer need to go out of their villages to earn money for their families. It means that the majority of households in two villages headed by

a father. According to Zakari, Liu Ying, and Song (2014), male as the head of family will give better food security level to their household than the female one.

According to Tambunan (2008), the resilience of food security consists of three main sub-system that is availability, access and absorption of food, while the nutritional status is an outcome of food security. Based on this statement, community should be eaten enough nutritional from varied food, included vegetables, fruits and other agriculture or non timber forest products. Sunnaru (2008) added that food security is the condition of food fulfillment for households that reflected from the availability of sufficient food, both in quantity and quality, safe, equitable, and affordable. While for a region (village, sub district, district, and so on), a region has a good food security if: (1) food is available sufficiently, (2) food prices is stable, and (3) availability in sufficient and affordable price.

Sunderland (2011) said that the nutritional and livelihood benefits of diverse production systems are one way of achieving food security. Thus, it is very understandable if the conditions in the research villages, obtained from the analysis results that the food security at Sidoarjo and Karya Agung is in the category of low (6.53) because of the diversity of food-plant species is low (either agriculture and non timber forest products). Based on the score research results of 4 food security pillars, to increase food security in the two villages should be prepared diversification strategies with the development of food technology which is easily done by the community with affordable cost (Arifin, 2004 and Wulandari *et al.*, 2014).

Based on the low food security in these villages there should be a government policy development efforts so that the partnership program implemented by PT Inhutani V can increase the existing level of food security (Arifin, 2004 and Downey and Richter, 2013). Currently the partnership policies implemented by Inhutani V still solely based on the Ministry of Environment and Forestry policy, namely: regultion of Ministerial Forestry No. P.39/2013. On the other hand, food security aspects often tangent to the main task and function of also based on the policy of Agricultural Ministerial, e.g Acts No. 18 year 2012 about Food.

As definition of food security quoted above, then there should be policy development synergies between those 2 ministerial in addition also synergized with the policy of Industrial and Trade Ministerial for the products marketing. Besides works and program synergy of 3 ministerial, food

security policy should be prepared based on short, medium and long term (Darwanto, 2005) because in principle, the food should always be there and the supply can not be done at once. Thus for the policy aspects, it can be given 2 recommendations as follows: (1.) For short-term policies are still needed to support the development of key commodities such as rice, corn that grown in agroforestry accompanied by the completeness development of infrastructure and facilities. (2) Medium and long-term policy can be as community-based agro-industrial development as well as to encourage the development of households agro-industry in order to improve the welfare of rural households in the study area and as well as the surrounding villages which have partnered or not with PT Inhutani V.

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