

Analysis Of Household Food Security Status Of Cassava Farmers In Lapodi Village, Pasarwajo District, Buton Regency

Lukman Yunus, Munirwan Zani, Muhammad Aswar Limi

Abstract: Improving food security is highly essential to stop the starvation rate. Moreover, food is a basic human need. This study aims to analyze the food security status of cassava farmers. The study was conducted in Lapodi Village, Pasarwajo District, Buton Regency, from April to October 2018. Primary data were obtained from 32 respondents who were determined by a simple random technique. Data then were analyzed by using the Household Food Security Survey Module developed by the United States Department of Agriculture. The results showed that the cassava farmer households in Lapodi Village, Pasarwajo District, Buton Regency, mostly (62.20% and 9.38%) experienced a marginal and low food security status. Meanwhile, only 28.12% of farmers were in a relatively high quality of food security. The family with marginal food security status was categorized insecure but have not experienced hunger, while for those with low status, food security is no longer unsafe.

Keywords: cassava; farmers; food security; lapodi; survey model

1. INTRODUCTION

Indonesia as a country with a large population faces complex challenges in meeting the food needs of its population. Therefore, the food security policy is a central issue in development and a major focus in agricultural development (Suryana, 2005). Improving food security is very necessary because food is the basic human need. Concerning Ariani and Handewi, P.S. Rachman (2003), food security includes not only the national level but also the household level (Ariani and Handewi, P.S. Rachman, 2003). Based on Law No. 18 of 2012, food, in a broad definition, is whether processed or raw agricultural products, plantations, forestry, fisheries, livestock, maritime, and water. Food also includes additional ingredients, raw materials, and other materials used in the process of food or drinks process. Although food availability has reached national sufficiency index, it does not guarantee the sufficiency of food supply at the household level (Munirwan et al, 2017). Nainggolan in Husaini (2012), states that it is still difficult to improve food security in the community still due to various problems, both the micro and macro level. Because of natural disasters, other chronic food insecurities as well as poverty in the micro side, the governments discover many challenges to strengthen food security for a large population. While on the macro side, efforts to strengthen food security experience major inhibitions in optimizing domestic food resources and production capacity in the era of global trade. Poverty is indeed still a major problem of the Indonesian nation. Data from the Central Statistics Agency (2014), reveals that the number of poor people in Indonesia on March 2014, reached 28.07 million people (11.37%), with the number of poor people in rural areas which were of 17.74 million people (14.32%). This indicates that more than half of the poor people in Indonesia were living in rural areas. The poor population in

Southeast Sulawesi in 2014 was 301.71 thousand people (12.83%). Southeast Sulawesi Province is the third province in Sulawesi that has a relatively high number of rural areas, which is 89.47% of the total poor population or 269.99 thousand people, with a poverty line in the food category in rural areas of Rp 155,466 per capita per month or 15.82%. In Buton, the number of poor people is 39,700 people or 15.25% of the total population. The high level of poverty will affect the food security of households. The poor are often characterized that: (1) the majority of them lives in rural areas with which agricultural sector is their main livelihood (60%), (2) most (60%) low-income people consume less than 2,100 kcal/day based on cross-indicators of the proportion of food expenditure (> 60%), and nutritional adequacy (energy <80%), and (4) poor people with low levels of human resources generally live in marginal areas with limited infrastructure support, and low technology adoption rates (Mostopha, 2012). Furthermore, Sundaya (2007) explains that more than 55 percent of the poor are farmers in which 75 percent of poor farmers are food crop farmers.

In Buton Regency, Southeast Sulawesi Province, there are 37,415 farmer households and 11,107 of all households (30 percent) are cassava farmers. According to Saediman, et al (2015), cassava farmers in Buton District cultivated cassavas in subsystem farming which was rotated with corns. According to BPS data of Buton Regency (2016), it shows that food commodities that are mostly cultivated by farmers in Buton Regency are cassava. Cassava production in Buton Regency is the largest in Southeast Sulawesi Province with 65,399 tons. One of the sub-districts that has a fairly large cassava production is Pasarwajo. In 2016, cassava production in Pasarwajo reached 2,286.30 tons. That production should be able to be to improve household food security. Therefore this study aims to analyze the food security status of cassava farmer households.

2 MATERIAL AND METHODS

This research was conducted in Lapodi Village, Pasarwajo District, Buton Regency, Southeast Sulawesi Province. The research lasted for 4 months, from April to July 2019. The research location was determined purposively considering that most of the residents work as cassava farmers. The method used in this study is a survey method. The data used in this

- Lukman Yunus : Agribusiness Department, Faculty of Agriculture, Halu Oleo University Kendari 93232 Indonesia. E-mail: lyunus883@gmail.com (Corresponding Author)
- Munirwan Zani : Agribusiness Department, Faculty of Agriculture, Halu Oleo University Kendari 93232 Indonesia. E-mail: munirwanzani@yahoo.co.id
- Muhammad Aswar Limi : Agribusiness Department, Faculty of Agriculture, Halu Oleo University Kendari 93232 Indonesia. E-mail: aswar_agribusiness@yahoo.com

study are primary data and secondary data. Primary data were obtained by direct interview (questionnaires) to cassava farmers as the respondents. Secondary data was obtained from the BPS Office of Southeast Sulawesi Province. Sampling was conducted by simple random sampling with a total sample is 32 farm households (15%) of 213 population of cassava farmer households. Data were analyzed using the Household Food Security Survey Module developed by the United States Department of Agriculture. In this study, the questions directed were to measure the condition of food security in the last 30 days, and the question formulation was modified to suit the level of understanding of respondents in rural areas (Saediman, 2012). The answers in the questionnaire form of "yes," "often," "sometimes," "almost every day," and "several days but not every day" are considered affirmative answers. In the context of 30 days a month, the answer "5 days or more" is considered as an affirmative answer. The number of affirmative answers from 10 questions is a household food security score (USDA, 2012), with the categories as follow:

- Score 0 : High food security
- Score 1-2 : Marginal food security
- Score 3-5 : Low food security
- Score 6-10 : Very low food security

3 RESULT AND DISCUSSION

3.1 Characteristics of Respondents

All households interviewed were cassava farmers who sought cassava farming as a source of household income. Table 1 reveals that the majority of respondents (75%) were in the age of 15-54 years old (with an average of 46 years) while the respondents who were over 54 years old were only 25%. This fact indicates that the majority of respondents are of productive age. Based on the level of formal education, data shows that 15.6% of respondents never receive formative school, 12.5% respondents graduated from elementary school, 28.1% respondents graduated from junior high school, and 48.3% respondents graduated from high school. This condition indicates that the majority of respondents have formal education, albeit with different levels.

Table 1. Characteristics of respondents of cassava farmers

Characteristic	Number of Respondents	Percentage (%)
Age		
15 – 54	28	75.0
> 54	4	25.0
Education		
No School Experience	5	15.6
Primary School	4	12.5
Junior High School	9	28.1
Senior High School	14	43.8
Household member		
< 4	5	15.6
4 – 6	18	56.3
> 6	9	28.1
Business Experience		
< 5	5	15.6
5 – 10	11	34.4
> 10	16	50.0

Source: Field survey, 2018

Table 1 also reveals that the majority of respondents (56.3%) had 4-6 household members, with an average of 5 people. Respondents with some households less than 4 were 15.6% and those with more than 6 members were 28.1%. A large

number of household members can be labor in running cassava farming. Furthermore, based on farming experience, it shows that the largest proportion of all respondents (50%) have experience for more than 10 years, while those with 5-10 years and less than 5 years experience are respectively 34.4% and 15.6% (with an average of 16.5 years). This shows that the average respondent has experience in managing cassava farming.

3.2 Food Security of Household

To specifically measure the food security status, 10 questions were asked to each respondent. The ten questions are divided into three topics to find out the conditions or components of low food security and hunger. The three topics are (1) concern or perception that the household budget or food supply is insufficient, (2) the perception that the food consumed is insufficient in terms of nutritional quality, and (3) the reduction of food consumption, or the consequences of reducing consumption of these foods.

a. Concerns or Perceptions Regarding Inadequacy of Budget or Food Supply

Food purchases depend on the income obtained. With a high income, households could meet all their food needs. Conversely, if the income is lower, then the food that could be obtained by households will be less. Two questions fall into this category, namely questions C2 and C3. Affirmative answers to these two questions are presented in Table 2.

Table 2. Anxiety about the inadequacy of the budget and food supply

Code Question	Item Food Security	Affirmative Answer	Percentage (%)
C2	Worried about running out food before earning money to buy food reserve	12	37,50
C3	There is nothing food left and no money to buy food again	3	9,38

Table 2 indicates that 37.50% of the respondent households were anxious if food supplies would run out before having money to buy food. Whereas 9.38% of households experienced high anxiety that there is no food left to buy, and do not have money to buy more food. Thus, there are still 62.50% (100% -37.50%) of respondents who are not worried of food supplies, and there are 90.62% (100-9.38%) respondents that have never experienced the food shortage and on-budget living.

b. Perception Regarding Inadequacy of Foods Consumed from the Nutritional Quality Side

Living in poor conditions will be a source of problems including food difficulties. A family is categorized as poor if they experience difficulties in meeting food needs caused by the economic aspect. The declining food security will cause lack of nutrition to family members (DKP, 2011). The results showed that there were only 25 household respondents (78.13%) consume nutritious food occasionally. While the remaining 7 (21.87%) of the respondents stated that they have nutrition balance. The high doubt about food insufficiency in terms of nutritional quality is due to low household income.

c. Consequences of Reducing Food Consumption

Shortage of food will affect eating behavior in a family or even cause hunger. Households with this condition indicate that the household has poor food security status. Life improvement is needed to improve food security by increasing income. The consequence of reducing food consumption to the respondent's household is presented in Table 3.

Table 3. *The consequences of reducing food consumption*

Code Question	Item of Food Security	Answer Affirmative	Percentage (%)
C5	Ever experience hunger	3	9,38
C5a	Frequency of experience C5	3	9,38
C6	Ever eat small portion food, because of insufficient budget	1	3,13
C7	Ever felt hungry but did not eat because there was not enough money to buy food	0	0
C8	Weight loss because there is not enough money to buy food	0	0
C9	Never eat a full day because of insufficient budget	0	0
C9a	Frequency of experience C9	0	0

Table 3 shows that only a small proportion of the respondent households (9.38%) had reduced food portions because of the insufficient budget. This condition indicates that most of the respondent never reduce their food portion because there is not enough food available. Respondents during the last 30 days still have adequate food. Household respondents who have reduced food portion are about 3.13%. Over the past 30, days poor families experience adequate food. The low percentage of respondents that experienced food shortage is an indication of good food security.

3.3 Food Security Status of Cassava Farmers

FAO in Kusuma (2012) defines food security as a situation wherein all times it has an adequate amount of nutritious food. Food security according to Hoddinott (1999) is often defined as adequate access to food continuously. It means that the status of household food security is not static, but dynamic. The status of household food security is known by the use of scores by the USDA and is applied to the study location. This food security status is the only measurement in the past one month. The status of household food security can be seen in Table 4.

Table 4. *Food Security of Cassava farmer's family*

Number of Affirmative Answers (out of 10 questions)	Food Security Status	Number of Respondents	Percentage (%)
0	High	9	28,12
1 – 2	Medium	20	62,20
3 – 5	Low	3	9,38
Sum		32	100,00

Based on Table 4, it can be explained that the majority of households in Lapodi Village, Pasarwajo District, Buton Regency are in the status of marginal food security (62.50%). Marginal status means food insecure, but not yet experiencing hunger. This is because the respondent's household can diversify its food menu mainly on carbohydrate sources, like

consuming rice and cassava. Cassava is obtained from the farm itself. Thus, they do not need to spend more money. Respondent households with low food security status were 9.38%, while households with high or good food security status were only 28.12%. Low food security status means that food security is no longer safe and has experienced hunger. Although some carbohydrate food sources are managed by themselves, farmers have to wait for the harvest period. Low income causes must reduce the portion of food for each family member. The results showed that the average household income was only Rp 1,310,300 per month. According to Hoddinott (1999), household food security is highly dependent on the ability of households to serve food with the income earned. Besides, many factors, both directly and indirectly, will affect the level of household food security.

4 CONCLUSIONS AND RECOMMENDATIONS

In conclusion, about 62.20% and 9.38% cassava farmer households in Lapodi Village are in the status of marginal food security and low food security. Nevertheless, households with high resilience were only 28.12%. The households of marginal food security status mean that food security is not safe but have not experienced hunger, while for those whose status is low, the food security is not safe and has experienced hunger. To improve food security, cassava farmers need to increase income and knowledge about food and nutrition. In the short term, food aid such as prosperous rice (rastra) is the right choice. The increase in income was done with the help of capital credit, the subsidy of cassava processing equipment, and cassava marketplace.

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