eISBN: 978-967-14569-4-1 (Publication Date: 27 October 2021) UiTM Cawangan N. Sembilan, Kampus Seremban

LAPANG MOCAF SCHOOL AS A METHOD TO IMPROVE THE ECONOMY OF RURAL COMMUNITIES: A STUDY CASE IN SUMURUP VILLAGE, TRENGGALEK INDONESIA

Isnaini Rizkyah[1], Moses Glorino Rumambo Pandin[2*], Christrijogo Sumartono Waloejo[3], & Dina Sunyowati[4]

[1,2,3,4]Airlangga University, Surabaya, Indonesia

*E-mail: moses.glorino@fib.unair.ac.id

1. INTRODUCTION

Indonesia experiences many disasters, moreover during pandemic Covid-19 (Waloejo et al., 2021; Pandin et al., 2021; Pramukti et al., 2020; Prakoeswa et al., 2021). Indonesia must prepare for emergency food to face many disasters. One of the potential local foods for emergency food is Cassava plants. According to the Central Statistics Agency, the production value of cassava agricultural products in Indonesia reached 24.08 million (*Badan Pusat Statistik*, 2015). Cassava management is easy because the growth of cassava plants is not affected by the season and can grow both in the highlands and the lowlands (Salim, 2011). However, based on the data, cassava cannot become a commodity with a high selling price. It can even be said that it cannot be a substitute for rice. It happens in Sumurup Village, Dam Subdistrict, Trenggalek Regency which most residents are farmers. Here is the spread of work from the people of Sumurup Village:

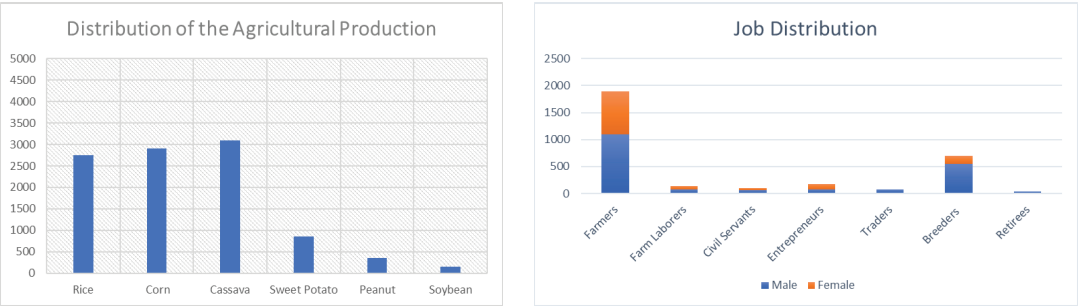

Figure 1: Distribution of the Sumurup Village (Sumurup, 2019)

Much of the people work as farmers with their primary commodities, namely cassava. It is also evidenced by farmers who can produce cassava as much as 661 tons in an area of 785 hectares. As in the previous discussion, the problem occurred because the selling value of raw cassava commodities decreased. As a result, raw cassava, which has an initial price of Rp 1200 per kilo, decreased to Rp 500. Therefore, it is undoubtedly very impactful for the economy. The researchers are trying to raise the selling price of cassava commodities by applying the process of processing cassava after harvesting as wheat flour or *modified cassava flour.* Mocaf flour is a modified flour with fermentation and drying treatment. Mocaf flour is an advantage because it is produced from local foodstuffs, and the price is relatively lower and derived from cassava or yam that has less gluten content (Nala Fauziyah et al., 2016). The increase in the selling price of cassava commodities also impacts improving the economy of Sumurup Village. In this case, there need to be facilities and learning methods through the Mocaf Field School addressed to the cassava farmers of Sumurup Village.

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The purpose of this study is to assess the value of the success of Mocaf Field School as an effort to improve the economy of cassava farmers in Sumurup Village. So the question of this study is how the success rate of Mocaf Field School as an effort to improve the economy of cassava farmers in Sumurup Village.

2. METHODOLOGY

The study uses the Participatory Action Research (PAR) approach (Norman et al., 2009). The subjects are the members of the Bina Usaha peasant women's group or specifically the group of peasant women farmers of tubers such as cassava in Dusun Pule Desa Sumurup, Dam Subdistrict, Trenggalek Regency.

Data collection techniques used Participatory Rural Appraisal techniques or rural understanding based on the broad participation of collective approaches, identification, and classification of problems in a rural area. In this study, researchers used several methods in collecting data, including semi-structured interviews; mapping the area in Sumurup village of Trenggalek Dam District, Focus Group Discussion (FGD), and a household shopping survey or SRT is researching the family's home-shopping budget.

Data validation techniques are using the triangulation method which was utilizing outside data for comparison. In the PAR Triangulation technique to obtain accurate data or information, which includes(Afandi et al., n.d.) a) Triangulation of Team Composition, b) Triangulation of Tools and Techniques, c) Triangulation of Diversity of Information Sources. Data Analysis Techniques applied the calendar of seasons, the chart of changes and tendencies, Venn diagrams, Problem Tree Analysis and Hope Tree, Usaha Tani Analysis and the governance of property, governance over management, and the use of property are all emphasized to get sustainability from the Mocaf field school to be initiated.

3. RESULTS AND DISCUSSION

Mocaf field school pattern designed Trials are carried out up to 7 times with several stages. The seven stages are presented in Table 1.

Table 1: Research Results

	Selection and Weighting	Stripping and Cutting	Washing and fermentation	Drying	Milling	Result
Trial 1	Choosing cassava quality standard, gross = 10 kg	Knives and traditional surrender tools	Rinsed three times starter enzyme I ounces starter=10 kg cassava=5 liters of water 12 hours of fermentation	Five days of drying	The result is 2kg	fail
Trial 2 (packaging materials)	15 kg of cassava	Same	Clean the cassava mucus. Comparing 2 enzymes: 1 using	Washed first removes the acidic properties	Two times grinding	Experiments using enzymes succeeded, and the

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			starter- 10 kg, 1 not 5kg Three days three nights fermentation	Using a bamboo base Four days three nights		one that is not using enzymes was not succeeded because there is still a distinctiv e smell of cassava.
Trial 3 (entrep reneuri al materi al)	78kg cassava	Same	Fermented water is not disposed of in the use of deposits resulting from the fermentation of tapioca flour.	same	24kg Mocaf flour, 2kg tapioca flour Conclusion: 3.5 kg cassavaà1 kg Mocaf flour	Succeed
Trial 4 (profit and loss)	same	Same	same	same	same	Succeed
Trial 5	Two quintals	Same	Fermented water is used three times for three days.	same	same	Succeed
Trial 6	same	Same	Not using starter enzyme, five days five nights	same	Same with Mocaf flour that uses enzyme starter new findings make flour without the help of enzymes	Succeed
Trial 7	Two quintals	Same	same	same	same	succeed

The field school is designed to open vast learning opportunities to farmers, ranging from observing the environmental conditions themselves and discovering the science and principles in it, post-harvest management, namely the management of Mocaf flour manufacturing trials, and entrepreneurial science (products, prices, marketing). The teaching system in airy schools focuses on discussing with groups the analysis of agricultural businesses, income and expenditure of agricultural production, and analysis of agricultural trends. Finally, all farmers can contribute advice and criticism to each other so that discussion activities produce discovery learning. The meeting schedule is also carried out as flexibly as possible, using forums to solve the problems faced.

Processing of Post-Harvest Cassava Technology into Mocaf flour innovation is an innovation in this village Sumurup newly carried out. This process creates diversity through the emergence of

superior products created by farmers from their agricultural production. Farmers will be more complementary instead of dropping each other. There is a harmonious relationship between farmers and consumers. The development of Mocaf flour by Sumurup farmers will have a very positive impact on future lives. Food availability will be more guaranteed, and the independence of farmers will be more substantial. In addition, farmers' development of Mocaf flour business will participate in fighting for himself and his environment facing the problem of low selling value of cassava in the harvest season arrives. Without any anxiety, the threat of prices supplied by middlemen or collectors. Breaking away from this threat will create new hope for future farmers.

The community response to the presence of Mocaf flour in Sumurup Village of Dam Subdistrict is very high. Moreover, they are very interested in trying to buy this flour. The Father of Dam Subdistrict also does this, Nur Kholik, who gave a review to a group of peasant women from other villages "Making innovations that have never existed in other sub-districts, such as this lo flour Mocaf, not just limited to cassava chips, bananas, and tempeh chips, look for the latest innovations." The Head Sub-district statement motivates other groups to continue to innovate in bringing up the village's flagship program. With the positive response, cassava farmers who are members of this field school participants become confident with their results. Confidence will make farmers continue to encourage experiments in sustainably making Mocaf flour.

4. CONCLUSION

Efforts to make a Mocaf school model carried out have successfully improved the economy of cassava farmers in Sumurup Village. Processing technology after harvesting raw cassava into the innovation of Mocaf flour (modified *cassava flour)* is an effort that can create diversity through the emergence of superior products created by farmers from their agricultural production. Success is also achieved because it increases the community's selling value and positive response to Mocaf flour. The development of Mocaf flour is expected to be a foundation for farmers to develop products that add more selling value. One of them is because Sumurup Village, Trenggalek, where natural disasters often occur, can be an opportunity to apply Mocaf flour into disaster food emergencies.

5. ACKNOWLEDGMENT

The authors would like to express appreciation for the support of the authors would like to express appreciation for the support of the Directorate of Research and Community Service, Deputy for Research Strengthening and Development of the Ministry of Research and Technology/National Research and Innovation Agency Republic of Indonesia, PDUPT Scheme, number of grant contract: 4/E1/KP.PTNBH/2021 and 535/UN3.15/PT/2021.

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