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# Farmers' Participation on Rice, Corn, and Soybeans Enhancement Production Food Self-Sufficiency Program at Juwangi District Boyolali Regency

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**ABSTRACT**
**Rice, Corn, and Soybeans Enhancement Production Food Self-Sufficiency Program is the government development program in agriculture area. This program is aimed at achieving food self-sufficiency through increasing food crop production, involving the participations of rice, corn, and soybeans farmers. This research aimed at analysing the differences participation among rice, corn, and soybeans famers on food self-sufficiency program. The research took place in May to August 2019 in Juwangi district Boyolali regency as it had three commodities for the program. The research used survey approach involving 130 respondents as the sample from total population of 972 farmers. The cluster sampling technique used to determine the sample. The research used questionnaire to collect the data and t-test to analyse the data. The research showed that there was no significant participation between rice farmers and corn farmers. However, there was a significant participation between rice farmers and soybeans farmers too between corn farmers and soybeans farmers.**
**through increasing food crop production**

**Keywords:** Farmers, Food Self-sufficiency, Participation

## INTRODUCTION

Food is the most important basic human need [1]. Fulfillment of food is guaranteed in the 1945 Constitution of the Republic of Indonesia. Described in the Act, food is a part of human rights as a basic component in the realization of quality human resources. Food needs in Indonesia tend to increase in line with the increasing population. The food need as predicted in Thomas Malthus theory that the availability of food is in line with the row count while population growth is in line with a geometric progression. Malthus proposes that there is a disproportionate growth between population growth and food production growth [2].

To deal with this issue, it is necessary to increase food production to make it in line with population growth. This issue is the basic consideration that the Indonesian need to achieve food self-sufficient. This effort has been taken by the government in the food self-sufficiency program through particular efforts to increase the production of rice, corn and soybeans in the central production of food crops. This program is aimed at achieving food self-sufficiency by

 

involving farmers' participation. Verhangen (1979) [3] revealed that participation is a special form of interaction and communication relating to the division of responsibilities, authority, and benefits. Participation according to Mubyarto [4] is a willingness to help the success of programs in accordance with individual capabilities without sacrificing self-interest. The participation of farmers in the food self-sufficiency program to increase Pajale production can be known through the main points in the program including the stages of planning, implementation, and result utilization. These stages are in accordance with Eugene C. Ericson's research [5] that participation can be known through the planning, implementation and utilization stages.

Farmers of each food crop commodity are expected to have high participation in supporting the success of the program. The success of the program will be hampered if it is not supported by the participation of farmers as the main actors as well as development targets. On the other hand, the reality illustrates that the perpetrator and the target will not participate if they feel the program is not his/her goal. This reason serves as the background in this study.

Each food commodity self-sufficiency has a different achievement result. The success of each food commodity self-sufficiency has a different impact on the welfare of farmers. This is determined by the amount of participation of each food crop commodity. This study aimed at analysing the differences in the participation of rice farmers, corn farmers and soybeans farmers in the food self-sufficiency program to increase production of rice, corn and soybeans.

## RESEARCH METHODS

### Research Type

Quantitative research type using survey methods was conducted in this study. Quantitative research is research that involves statistical data to do calculations and interpretations. The survey method was done by gathering information through interviews using a questionnaire to the respondents.

### Place and Time Of Research

The study was conducted in Juwangi district Boyolali regency. The rationale for selecting the research location is that Juwangi is a district implementing the food self-sufficiency program to increase Pajale production with complete commodities, namely rice, corn and soybeans. The study was conducted in May-August 2019.

### Population and Sample

The population in this study were 972 farmers consisting of 522 rice farmers, 243 corn farmers and 207 soybean farmers. Sampling was done by cluster sampling until 130 respondents were obtained.

### Research Variables and Operational Definitions

The variables in this study were the participation of rice farmers, the participation of corn farmers and the participation of soybean farmers. Participation is a special form of interaction and communication with regard to the division of responsibilities, authority, and benefits. Participation can be recognized through the planning, implementation and utilization. Participation in this study is a special form of interaction and communication relating to the division of responsibilities at the planning stage, the authority in implementing programs, and the utilization of program results.

## Data Collection Technique

The data used in this study are primary data and secondary data. Primary data is data obtained directly from respondents by conducting interviews through a list of statements in the questionnaire. Secondary data is data obtained from the relevant agencies or institutions in the study.

## Data Analysis Technique

Data analysis was performed with T test. The hypothesis in this study was that there were significant differences between the participation of rice farmers, corn farmers and soybean farmers in the food self-sufficiency program to increase production of rice, corn and soybeans.

# RESULTS AND DISCUSSION

## Results

The data was processed with different T-test. The initial step was finding the requirements of normality and homogeneity test. Distribution of normality test was intended to determine the normal distribution of data in the studied variables. Normality test showed that research data is normally distributed with Asymp values. Sig. (2-tailed) 0.200> 0.05. Homogeneity test showed that all Sig. > 0.05 so that it can be concluded that all variables are homogeneous.

The participation of each food commodity farmer is shown in the results of the different T-test. The results of the different T-tests are summarized in Table 1.

**Table 1. Independent Sample T-test**

| No | Independent Sample Test | Sig. (2 tailed) |
|---|---|---|
| 1 | rice farmers vs. corn farmers | 0.116 |
| 2 | rice farmers vs soybean farmers | 0.000 |
| 3 | corn farmers vs soybean farmers | 0.001 |

**Source: 2019 statistical data processing**

The participation of rice farmers versus corn farmers showed a p value (0.116) above 0.05, so it showed that there was no difference in participation between rice farmers and corn farmers. The participation of rice farmers versus soybean farmers showed the value of p (0,000) above 0.05, so it showed that there was a very significant difference. The difference between rice farmers and soybean farmers was very significant in generating participation. The participation of corn farmers vs. soybean farmers showed the value of p (0.001) above 0.05, so it showed that there was a very significant difference. The difference between corn farmers and soybean farmers was very significant in generating participation.

## Discussion

The results of the research between rice farmers and corn farmers showed there were no significant differences in participation. Rice farmers and corn farmers had same preparation of planning, farmer principal farming, the strength of farmer groups, intensification of empowerment, and the use of programs /marketing facilities.

Both rice farmers and corn farmers compiled a list of Prospective Land Prospective Farmers (CPCL). The implementation of the CPCL preparation was accompanied by counselors/assistants. Submission of opinions and decision making in the preparation of CPCL was carried out by farmers in accordance with their needs. Planning based on farmers' needs would provide a sense of responsibility so that farmers would participate in the program. This means that farmers implement the program because some farmers' needs can be answered in the program.

 

Similarities in basic farming were owned by rice farmers and corn farmers. The types of commodities cultivated in the program were the same as the main farms that were undertaken by farmers (not as side farms). Farmers who carry out the program in accordance with farming which was their main business, will participate more. This is because farmers felt that the program's goals were also farmers' goals.

Rice farmers and corn farmers have good group strength. This is indicated by the existence of group meetings that are held regularly and have been going well before and during the program. The level of attendance of farmer group members in group meetings reaches more than 75%. Rice and corn farmer groups consist of elements of chairman, secretary and treasurer, and some have sections. Farmers with good group strength will be more easily directed to participate in the program because cooperation and cohesiveness have been established.

Intensive empowerment was obtained by rice farmers and corn farmers before the implementation of the program and continued during the program. Empowerment is done through counseling activities in routine meetings and field mentoring. The output of the results of empowerment before the program is implemented, will provide farmers with provisions in participating. Participation arises because farmers want to deepen their knowledge and experience. The output of empowerment during the program were the raising of the enthusiasm of farmers to participate, especially in the application of technology. Participation arises because farmers want to apply this knowledge.

Rice farmers and corn farmers have the ease of utilizing harvests. Aside from being consumption and supplies, middlemen can be bought by middlemen, or marketed to markets, both traditional and local markets. Rice farmers and corn farmers have an easy market system because the market price is stable and the number of consumers of these two products is relatively large. The guarantee of a stable market price will lead to optimism that farmers will get more benefit from participating in the program

The results of the study that comparing rice farmers and soybean farmers showed there was a very significant difference in participation. In line with this, the results of research by corn farmers vs. soybean farmers, also showed that there was a very significant differences in participation. Both rice/corn farmers were different with soybean farmers. These differences include the preparation of program planning, farmer principal farming, the strength of farmer groups, intensification of empowerment, and the use of programs/marketing facilities.

Rice farmers/corn farmers and soybean farmers make a planning in the program by compiling a list of Prospective Farmer Candidates (CPCL). The difference is that the preparation of CPCL for rice farmers/dominant corn farmers is carried out by farmers with the participation of extension workers as a companion. Soybean farmers make CPCL more passive, so that it requires more participation from extension workers as a companion in decision making (dominantly done by extension agents). The passivity of soybean farmers is due to the pessimism over the selling price of soybean harvests that are not yet in line with farming costs. Decision making in the dominant CPCL by farmers will illustrate the representation of farmers' needs. Decisions derived from the needs of farmers will encourage the emergence of ownership and responsibility of each farmer. The taste is a commitment of farmers to participate. It is different if decision making is dominated by extension workers (decisions come from above), then what arises is the feeling of doubt, obedience and fear of farmers towards the extension/program. The planning of rice farmers/corn farmers goes better than soybean farmers, so that rice farmers/corn farmers more easily participate. According to

Wibowo [6] things that need to be done in realizing participation include creating a sense of ownership and responsibility among all parties involved in planning.

Rice/ corn farming in the program carried out by farmers is a basic farming business, while soybean farming is a side farming business. Soybean farming is carried out to fill the planting gap after the main farming business is harvested, or only when the estimated harvest price is good. Program implementing farmers who carry out programs with the same type of farming business as farms that are their main businesses will be more enthusiastic in participating. This is because farmers feel that their goals are the same as the objectives of the program. According to Wibowo [6] participation needs to be realized through the implementation of programs that are more focused on the target needs. The purpose of meeting the needs of farmers is to improve their welfare. This is in accordance with the objectives of the program. This condition is similar to the Ife [7] presentation that participation which includes the ability of the people to influence activities is aimed at improving people's welfare.

In terms of strength, rice/corn farmer groups have long been formed before the program is implemented. This group has been active before and during the program, so that there is a relationship of trust and close cooperation between its members. The group administrator has a lot of experience running organizations in accommodating the interests of farmers. Unlike the case with the strength of the soybean farmer group that started running when the program was implemented. This is due to the fact that this farmer group was only formed at the time the program was running, so that cooperation has not been closely established. The management of the soybean farmers group has not much experience in accommodating the interests of soybean farmers. Zulpicha, et al, [8] explained that business sustainability is influenced by the role of farmer groups. Farmer group organizations contain social capital including trust and mutual relationship between farmers and fellow farmers, group administrators and the outside parties. The same thing was said by Ife [7] that being a member of an organization will give a sense of identity to its members. An organization allows members to interact with each other in a variety of roles. The positive benefits of participating in farmer groups are ease of information and problem solving. Anwas [9] explained the benefits of being a member of a farmer group including the ease of gaining access to information, farming innovation, and ease in problem solving. The strong condition of the farmer groups encourages the readiness and ease of farmers participating in the program because of the bonds of mutual trust and cooperation. Based on the strength of the farmer groups, rice farmers corn farmers have better group strength so that they have better participation than soybean farmers.

Farmer groups with rice/corn farming were formed long before the program was implemented. In terms of empowerment intensification, intensive empowerment was obtained by the rice/corn farming group since before the program was implemented. Sustainable empowerment is recovered while the program is running. Unlike the case with soybean farmers, soybean farming groups begin to form when the program runs. Intensive empowerment was obtained by the soybean farming group at the time of program implementation. The size of the empowerment time is relatively short (1 planting season) so it is considered less intensive. Farmers who obtain intensive empowerment will be more empowered in setting their own goals by being more courageous in making decisions, especially in the application of recommended science/technology. Rice farmers/corn farmers receive more intensive empowerment than soybean farmers, so they participate more in the program. This is in accordance with the opinion of Mardikanto [3] that intensive and sustainable counseling will increase the ability to participate in local communities.

The ease of marketing products is one of the benefits of programs that determine the welfare of farmers. Rice/corn farmers are easier to market their crops compared to soybean farmers.

Apart from broad consumers, the market price of rice/corn is more stable. Soybean farmers are more at risk in utilizing their crops because of the physiological nature of soybeans. Soybean consumers are more limited compared to rice/corn consumers. Market prices for soybean commodities are also low and not yet in line with farming costs. The benefit of the program has not been in favor of soy farmers. The marketing difficulties experienced by soybean farmers cause them to be pessimistic about gaining benefits when participating in the program. According to Ife [7] one of the conditions that encourage participation is that people must feel that their actions will make a difference. Even though it is not the main job/priority, but if there is a belief that community action will make a change then the incentive to participate is great. This opinion is reinforced by Mardikanto [3] the ability to participate in society is influenced by clarity about the benefits of the program. That depends on the nature of the distance and proximity of the benefits to be received and felt by the community. The thing that needs to be the focus for farmers to participate in the program is that the scope of the program should not be limited to production businesses, but also includes aspects of post-harvest handling and marketing networks.

## CONCLUSIONS AND SUGGESTIONS

### Conclusion

Based on the results of the study, it can be concluded that the difference in participation between rice and corn farmers is not significant. The most significant results are shown by differences in participation between rice farmers and soybean farmers as well as differences in participation between corn farmers and soybean farmers. Differences in participation are shown in the preparation of program planning, farmer principal farming, strength of farmer groups, intensification of empowerment, and utilization of programs/marketing facilities.

### Suggestion

Based on the results of the study, several suggestions were formulated:

- **food self-sufficiency programs are implemented based on the needs of farmers farming**
- **target participation is involved in program planning**
- **The business orientation of the food self-sufficiency program is not limited to increasing production but is also complemented by post-harvest handling to the marketing network.**

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