

## **Participation of Jabres Cattle Farmers in the Development of Jabres Cattle Raising at Barokah Farmers Group Kebandungan Bantarkawung Brebes**

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### **ABSTRACT**

This research aimed to analyze the level of Jabres cattle farmers' participation and analyzed the influence of farmers' demography characteristic to the high and low level of participation in the development of Jabres cattle raised at Barokah Farmers Group Kebandungan, Bantarkawung, Brebes. This research was conducted in Kebandungan Village, Bantarkawung Sub-districts, Brebes Regency. The research was conducted from May to August 2016. The numbers of respondents in this research were 68 farmers. Respondents were Jabres cattle farmers, members of Barokah Farmers group. All respondents owned and raised Jabres cattle. The sampling method used in the research was Sensus method. Data were collected by direct interview and involving valid and reliable questionnaires. The data analysis used Multiple Linear Regression. The result of the research showed that the participation of most farmers was classified as high (60.52%). Participation level of farmers during planning stage was classified as low (63.15%). Participation level of farmers during implementation stage was relatively low (55.26%). Participation level of farmers during monitoring and evaluation stage was classified as high (55.26%). Participation level of farmers during the benefit sharing stage was classified as low (68.42%). Farmers' demography that affected the level of farmer's participation was 72.1 percent. This research also showed the independent variable that significantly affected the participation level that was the education level of farmers ( $P \leq 0.05$ ). The conclusion of this research was that the higher the level of farmers' education level the more positive the participation level of farmers.

**Keywords:** Farmer group, Jabres cattle, Participation

### **INTRODUCTION**

The Jabres cattle (Java-Brebes) are local cattle that only exist and are raised by the community in the Brebes Regency, Central Java Province. These cattle are Javanese cattle that have adapted to the environment in the Brebes Regency so that they are more familiar with the name Jabres cattle (Lestari *et al.*, 2014). Today, most of the Jabres cattle farms are still managed by smallholder farmers, small business scale, and is integrated with other activities. Therefore, the Jabres cattle have very complex functions in supporting the farmers' life. Mubyarto (1993) states that the smallholder farming has characteristics as follow: small scale business, home production motive, and is performed as side business. Jabres cattle have been long raised by some farmers through a traditional rising management and have a main function as saving. In order to promote the smallholder farming business, the efforts for the development of cattle rising activities are strongly needed. Therefore, at the end, it can

improve the productivity of cattle. The effectiveness of cattle rising development cannot be separated from the farmers' participation in their activities.

The farmers' behavior and action are very influenced by the characteristics of the farmers. The characteristic of farmer's demography is reflected from the age, education, farming experience, and livestock ownership. The characteristic difference owned by each farmer causes a different farmer's participation level. The problem in this study is how far the influence of farmer's characteristics to the high and low of participation level in the development of Jabres cattle rising.

The objectives of this research were to identify the level of farmer's participation in the development of the cattle rising and analyze the influence of the characteristics of farmer's demography to the high and low of participation level in the development of Jabres cattle rising in the Barokah farmer group at Kebandungan Bantarkawung Brebes.

## MATERIALS AND METHODS

This research was conducted by applying Survey method, which was done on May to August 2016. The research was an observation study to the development of Jabres cattle rising in the Barokah farmer group Kebandungan, Bantarkawung, Brebes. The research involved four stages. The first stage was by doing site survey to gather the farmers' data and identify the image of research area. The second stage was creating and testing the validity and reliability of the questionnaire. The third stage was interviewing the respondents to gather the primary data using questionnaire. The fourth stage was doing tabulation and analysis on the gathered data.

The material in this research was the farmers, member of Barokah Jabres cattle farmer group at Kebandungan village, Bantarkawung, Brebes as much as 30 farmers for validity and reliability tests, and 38 farmers for final interview. The determination of respondents used in the research was by census method, which was by involving all the members in the population. The respondents in the research were all active members of Barokah Jabres cattle farmer group. The research used questionnaire that has been tested its validity and reliability.

The questionnaire's reliability test in this study was by applying Cronbach Alpha method. According to Sekaran (2006), the reason to use this method was due to it was practical and also applied Likert scale model. The results of the questionnaire's reliability test can be seen at Table 1.

**Table 1.** The results of the questionnaire's reliability test

Participation indicators	Cronbach Alpha
Planning	0.869
Implementation	0.742
Monev	0.791
Benefit Sharing	0.840

Source: Processed primary data (2017)

The result of the questionnaire's reliability test showed the score of Cronbach's Alpha from planning to the benefit sharing was more than 0.6. According to Sekaran (2006), with regard to the reliability test by Cronbach's Alpha method, that the closest the coefficient of reliability with number 1.0 and above number 0.6 the better the result, or internal consistency of reliability can be accepted. According to this reference, it can be concluded that the measurement tool in this research was categorized as reliable.

The method to investigate the participation level of respondents was by classifying the participation score gained by each respondent by calculating the maximum deviation score with minimum score divided into two. The maximum score was obtained from the multiplication of the highest score (5) with number of statement items of each participation indicator namely planning, implementation, monitoring, and benefit sharing. The minimum score was obtained from the multiplication of the lowest score (1) with the number of statement items of each participation indicator. The level of participation was determined with the following formula.

$$\text{Category Interval} = \frac{\text{maximum score} - \text{minimum score}}{\text{Number of categories}}$$

The respondents were classified into two categories namely the high category and the low category. Respondents who were around the low score were identified as respondents with low participation level, while respondents who were around the high score, were identified as respondents with high participation level. The criteria of participation category which was based on the participation indicators can be seen in the Table 2.

**Table 2.** Criteria of participation category

Variable	Minimum Score	Maximum Score	High Category	Low Category
Planning	50	10	31-50	10-30
Implementation	30	6	19-30	6-18
Monev	25	5	16-25	5-15
Benefit Sharing	30	6	19-30	6-18
Total Score	135	27	82-135	27-81

Source: Processed primary data (2017)

The data on the effect of farmers' characteristics to the participation level were analyzed by using the Multiple Linear Regression analysis with statistical program application SPSS for windows. Based on Santosa and Ashari (2005), the use of Multiple Linear Regression is the research is only defined into two scores: high participation and low participation. The Multiple Linear Regression was used to identify the effect of some independent variables  $x_1, x_2, \dots, x_n$  to the variabel  $y$  as response variable that only has two scores.

The general formula of the Multiple Linear Regression analysis is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$$

Annotation:

- $\beta_0 - \beta_4$  = Regression coefficient
- Y = Participation (dependent variable)
- $X_1$  = Age (Year)
- $X_2$  = Education (Year)
- $X_3$  = Farming experience (year)
- $X_4$  = Livestock ownership (LU)

## RESULTS AND DISCUSSION

The distribution of participation level categories in the planning, implementation, monitoring, and benefit sharing according to the respondents' answer is presented on the Table 3.

Table 3. The distribution of participation level categories based on participation indicators

Participation indicators	Categories			
	High (people)	Percentage (%)	Low (people)	Percentage (%)
Planning	14	36.84	24	63.15
Implementation	17	44.73	21	55.26
Monitoring and evaluation	21	55.26	17	44.73
Benefit sharing	12	31.57	26	68.42
Total	23	60.52	15	39.47

Source: Processed primary data (2017)

The planning is the initial stage of farmers' participation process in farmer group activities. The participation of a member in the planning stage influences the effectiveness and success of an activity organized in the group. Based on the analysis result on the Table 3, it can be identified that the respondents' answer on the planning stage, most of respondents (63.15%) stated that they did not participate or considered as low participation. This occurrence illustrated that most of respondents did not actively participate in creating the activity planning and less participated in the regular meeting held by the group. According to Ndraha (1990) the community's participation will diminish if they did not or less play a role in the decision making.

The participation in the second stage was the implementation. This stage was the effort to implement the activities planned and decided on the planning stage. Based on the analysis result on the Table 3, it can be identified that the result of the respondents' answers on the implementation stage was more than a half of respondents (55.26%) had low participation levels. This occurrence shows that more than a half of respondents did not participate or had not implemented some or all activities planned in the group. According to Purnamasari (2008), the tendency to make the community as development object, in which the community is only being the organizer without being encouraged to understand and acknowledge the problems they faced caused the participation did not completely run.

Based on the respondents' answer on the Table 3, in the monitoring and evaluation, it can be identified that more than a half of respondents (55.26%) had high participation. The high participation in this stage was due to basically each farmer still concerns about the activities held by the community and also has the habit to observe and monitor the activities performed by the farmers. Suharto (2005) states that monitoring is a process to gather information continuously since the planning stage to the implementation stage of a program. Monitoring can be done directly.

The benefit sharing was based on the results obtained by each individual who involved or participated in an activity. Based on the respondents' answers presented on the Table 3, it can be known that the majority of respondents (68.42%) had low participation on the benefit sharing. According to Sapei (2015), in the benefit sharing, it covers how the community can gain the result of the activity planned and further developed it.

The parameter of farmers' demography characteristics used in this research was age, education level, the length of farming experience, and number of livestock ownership. The

analysis conducted was to investigate the effect of independent variables covering age ( $X_1$ ), education level ( $X_2$ ), the length of farming experience ( $X_3$ ) and number of livestock ownership ( $X_4$ ) to the dependent variable that was participation level (Y). The analysis method used was the Multiple Linear Regression analysis with SPSS 20.0. The result of analysis can be seen in the Table 4.

**Table 4.** The result of significance analysis of independent variables to the dependent variable

Variables	Coefficient	Std. Error	T test	Significance
Constanta	78.797	9.845	8.003	0.000
Age ( $X_1$ )	-0.070	0.176	-0.398	0.693
Education ( $X_2$ )	3.209	0.539	5.956	0.000***
Farming experience ( $X_3$ )	-0.066	0.112	-0.588	0.561
Livestock ownership ( $X_4$ )	0.061	0.734	0.093	0.934
R	0.849			
R <sup>2</sup>	0.721			
F	21.371			0.000**

Source: Processed primary data (2017)

\*\*\*Significant ( $P \leq 0.01$ )

\*\*Significant ( $P \leq 0.05$ )

\*Significant ( $P \leq 0.10$ )

Based on the regression analysis result (Table 4), the independent variables that showed significant effect to the farmer's participation level was education level. The independent variables that did not show significant effect were age, length of farming experience, and number of livestock ownership. The score  $R^2$  obtained was 0.721 meaning that 72.1% of farmers' participation level can be explained by those variables, while the rest 27.9% was explained by the undefined variables and also other variables outside the model. The equation of the double regression analysis result was:

$$Y = 78.797 + (-0.070) + 3.209 + (-0.066) + 0.061$$

The education level of respondents gave significant effect ( $P \leq 0.05$ ) to the high and low of farmers' participation level. The farmer with higher education has high motivation and broad view in analyzing an event and also be aware of the importance of the activity of Jabres cattle rising development. The higher the education level, the more positive have the farmers' participation level. This research result corresponds to Rahawarin (2013), who states that the education level has significant relation to the community's participation in developing the village. Yasin (2005) states that the education is one of the individual's characteristics that correlates to the farmer's participation in the artificial insemination program implementation.

## CONCLUSIONS

The result of the research showed that the participation of most farmers was classified as high (60.52%). Participation level of farmers during planning stage was classified as low (63.15%). Participation level of farmers during implementation stage was relatively low (55.26%). Participation level of farmers during monitoring and evaluation stage was classified as high (55.26%). Participation level of farmers during the benefit sharing stage was classified as low (68.42%). The characteristic of farmer's demography in term of

education level has a significant effect to the participation level. This occurrence means that the higher the education level of a farmer, the higher its participation level. The characteristics of farmer's demography that did not influence the participation level were age, the length of farming experience, and the number of livestock ownership.

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