

Participation of women farmers on beef cattle farming management in Pandan Mulyo group, Bantul Yogyakarta

Ida Wulandari, Budi Guntoro, and Endang Sulastrri

¹Faculty of Animal Science, Gadjah Mada University, Jl. Fauna 3, Yogyakarta, Indonesia

ABSTRACT: This research was conducted to investigate level of participation and to analyze the social factors related to the level of women participation in raising beef cattle in the cattle farmers group of “Pandan Mulyo” Poncosari Village, Srandakan, Bantul. This research was a case study which gathered all women (wives) of farmer group as respondents. This research was done by interview and questionnaire methods. The data were tabulated and analyzed using Spearman’s Rank Correlation, Chi-Square, and Phi Test to analyze the relationship between social factors and level of participation. The results showed that social factors had significant correlation with level of participation, i.e. respondents age ($r=0.222; P<0.01$), education ($r=-0.173; P<0.05$), cattle raising experience ($r=0.352; P<0.01$), number of their own beef ($r=0.308; P<0.01$) and perception of farmers group ($P<0.05$). Chi-Square analyze indicated that farmer’s attitude had significant relationship ($P<0.05$) with level of participation by strength of $\Phi = 0.679$.

Key words: beef cattle farming, women participation

INTRODUCTION

Nowadays, development in farming sector is oriented to modern, efficient, and strong farming, including cattle farming, development in order to increase farmers and cattle farmers’ income and living standard, extend job and business opportunities, and expand domestic and foreign markets, a modern, efficient, and strong farming is expected able to improve quality of products processing, and support national development.

Along with growth and development of beef cattle farming business in effort to increase productivity and cattle farming, and inseparable from necessity of labor met by all family member, womens as housewife and mother participate within. Besides they work in land cultivation, women in rural area play a role in beef cattle farming, although in fact, small-scale beef cattle farming is still considered as a side job. Men as head of household can’t spend full time in managing livestock, therefore the job also becomes part of women’s responsibility as housewife who has more time to monitor livestock. In research entitled Women’s Role in Beef Cattle Management in Eastern Central Java by Setyowati (2000), women participate in beef cattle business, but in fact, the role doesn’t receive sufficient recognition yet. The fact women’s involvement in extension program and skill training programs held by related institutions is low. Women’s role is only considered as helping role, therefore decision making is still on men’s hand.

In “Pandan Mulyo” cattle farmers group, women’s participation in beef cattle farming, particularly in raising activities, can be seen from duration to feed, clean the stables and maintain livestock’s health. Their participation very help the business, but unfortunately their participation is still considered as a side job, but actually they spend special time to raise livestock.

In that group, there is not a research on women’s participation in beef cattle management yet, therefore this study is expected able to give motivation to women in increasing participation in beef cattle management. Besides that, it is expected able to answer following questions: How was women’s participation in beef cattle management in “Pandan Mulyo” cattle farmers group? And what were sociodemographical and sociopsychological factors relating to women’s participation level in beef cattle management in “Pandan Mulyo” cattle farmers group?

Research objectives were to analyze women's participation level in beef cattle management, and to analyze factors relating to women's participation level in beef cattle management in "Pandan Mulyo" cattle farmers group.

MATERIALS AND METHODS

Research was conducted in "Pandan Mulyo" cattle farmers group, involving women who were farmers' wives, joining "Pandan Mulyo" cattle farmers group as respondents. Number of 137 individuals were selected as respondents. The Method used in primary data collection was survey with interview by using questionnaire guidance. Secondary data were obtained from monography of Poncosari Village, Srandakan Subdistrict, Bantul. Research design used case study design. Prior to research, questionnaire had been tested its validity and reliability in "Anggayuh Rahayu" cattle farmers group, Kaligondang Subvillage, Sumbermulyo, Bambanglipuro, Bantul to 26 members.

Data analysis used descriptive analysis giving description of respondents' age, education, amount of beef cattle ownership, experience in raising cattle, and time allocation in raising cattle.

Women's participation was stated as amount of respondent involving in beef cattle management activities, and for analyzing correlation between sociodemographical factors and perception to farmers group with women's participation level in beef cattle management used Spearman correlation analysis.

Correlation between woman farmers' attitude to elucidations and women's participation level in beef cattle management was analyzed by using *Chi-square* (X^2), if result is significant, then it is continued with *Phi* (Φ) test.

RESULTS AND DISCUSSION

Research Site Condition

"Pandan Mulyo" cattle farmers group is located in Ngentak Subvillage, Poncosari Village, Srandakan Subdistrict, Bantul, in coastal area of Pandan Simo Beach, southwest of Bantul Regency, Yogyakarta. It adjacents to Trimurti Vilage (Srandakan Subdistrict) in north, Gadingsari Village (Sanden Subdistrict) in east, Indian Ocean in south, and Progo River in west. 1. Poncosari Village lies at altitude 2 m above sea level, its temperature is 30°C. Average rainfall is 2,000-3,000 mm/year and area width is 1,186,122 ha.

Socio-demographical Conditions

In a cattle farming business, human factor has a significant role. Age, education level, amount of beef cattle ownership, and experience in raising cattle are elements that have close relation with cattle farmers' capability and skill level. Table 1 showed respondents' characteristics.

Socio-psychological Conditions

Women's attitude to elucidations. Attitude is something learning tendency in giving response to an object or group of objects, which is thought much of or not thought much of, consistently (Sutiana, 2001). Statements in study measuring women's attitude to elucidations are 1) Elucidation activities will add responndents' knowledge in raising beef cattle, 2) Elucidation activities give opportunities to express opinion or ask a question, 3) Respondent favors elucidations, due to introduction of new technology, 4) Respondent wants elucidation is intensified, and 5) Respondent always presents at elucidations held by related agency.

Table 2 showed that 83.94% respondent responds positively elucidation activies from related agency (favorable), while 16.06% states disapproval. This disapproval is due to change of approved schedule without notice from related party. Respondents' attitude can be improved by giving routine schedule about elucidation programs, therefore respondents can keep special time to follow activities.

Table 1. Range of women's age in "Pandan Mulyo" cattle farmers group

Sociodemographical characteristic	Amount of respondent (person)	Percentage (%)
Range of age (year)		
20-29	40	29.20
30-39	42	30.66
40-49	14	10.22
50-59	36	26.28
> 59	5	3.64
Education level		
Unfinished Elementary School	49	35.76
Elementary School	47	34.31
Junior High School	15	10.96
High School	25	18.25
University	1	0.73
Cattle Unit (CU) population		
≤ 1.0	27	19.71
1.1-2.0	48	35.03
2.1-3.0	35	25.54
3.1-4.0	21	15.32
> 4.0	7	4.40
Range of experience in raising cattle (year)		
1-5	50	36.50
6-10	51	37.22
11-15	15	10.95
16-20	12	8.76
21-25	1	0.73
26-30	2	1.46
31-35	1	0.73
> 35	5	3.65
Labor allocation (hour/day)	Time allocation (HOK)	
< 1	< 0.14	2
1-3	0.14-0.43	108
4-6	0.57-0.86	25
> 6	> 0.86	2

Table 2. Women's attitude to elucidation activities

Attitude	Respondent population (person)	Percentage (%)
Favorable	115	83.94
Unfavorable	22	16.06
Total	137	100.00

Perception to farmers group. Perception is stimulus process which is selected, organized, and interpreted (Solomon, 1996 in Sutisna, 2001). According to Mardikanto (1993), farmers group is a group which consists of farmers, either adult farmers (men/women) or young farmers (boys/girls) which is bound informally in a group organization or area, based on harmony and mutual necessities, and exists in power and leadership environment of a farmer contact. Statements about perception to farmers group are: 1) Cattle Farmers Group can help economy of Pandan Mulyo community, 2) By existence of Cattle Farmers Group, respondent has an advantage, because his cattle can be taken care of better, 3) By existence of Cattle Farmers Group, respondent is more comfortable in raising cow, 4) Cattle Farmers Group is an organization to tighten cooperation among community with same purpose, and 5) Cattle Farmers Group is a right place to share opinion each other about problems of beef cattle.

Table 3 showed that 112 respondents (81.75%) show high perception level, 18 respondents (13.14%) show medium level, and 7 respondent (5.11%) show low level.

Table 3. Respondents' perception to farmers group

Perception level	Respondent population (person)	Percentage (%)
High	112	81.75
Medium	18	13.14
Low	7	5.11
Total	137	100.00

Women's Participation Level in Beef Cattle Management in "Pandan Mulyo" Cattle Farmers Group

Women's participation in beef cattle management in "Pandan Mulyo" cattle farmers group consists of some steps, that is: planning, implementation, monitoring and evaluation, and sharing benefits. Each step of participation has score itself.

Planning. First step of participation is planning. Planning is a significant factor in each activity, then an activity won't be well implemented or successful without planning, as Setyowati argued (2000), that women's involvement in beef cattle management, can indirectly influence farmers' attitude to beef cattle business and social relevances, as well as women's participation in planning of beef cattle management in "Pandan Mulyo" cattle farmers group has correlation with social factors relating to beef cattle business. Statements in step of planning are: 1) respondent participates in determining schedule of feeding and stables cleaning, 2) respondent participates in expressing opinion in stables making activity, 3) respondent participates in planning food that will be given to livestock, 4) respondent participates in planning feeding system, and 5) respondent participates in planning total cow that will be raised.

Table 4 showed that 17 (12.41%) respondents stated that involvement level in planning is high, 90 (65.69%) respondents stated medium, and 30 (21.90%) responded stated low. Each respondent has equal right with men in each step of participation, then women should be involved in each step of participation, because they will indirectly give support to the husbands. In improving participation level, women should be involved in planning process of activities in group stables.

Ndraha (1990) argued that community's participation will decrease if they don't play a role or play less role in decision making, therefore participation is essential in each activity, that is participation in planning, participation in implementation, participation in accepting, participation in management, participation in promoting development, and participation in accepting development.

Implementation. In step of implementation, respondents implement planned activities according to goals. Implementation of planned activities, and supported by discipline of each respondent, will increase respondents' participation level in beef cattle management, thus it will bring expected success. Thus, success of a business is very determined by step of implementation. Statements assessing step of implementation were: 1) respondent is involved in livestock sale and purchase, 2) respondent feeds livestock everyday, 3) respondent looks for or provides livestock feed everyday, 4) respondent washes livestock and keeps them healthy, 5) respondent cooperates in cleaning and repairing stables.

Given result of study on step of implementation, 114 respondents (83.21%) had high participation level, 19 respondents (13.87%) had medium level, and only 4 respondents had low participation level. In general, women in rural area only spend time for household activities. They also participate in farming business activities (crops farming, cattle farming, and fishery) in the form of working time allocation and decision making, by more modern cattle farming sector, woman labor is significant and essential (Lestari, 1986 cited by Setyowati, 2000).

Monitoring and Evaluation. Widiati (2003) argued that evaluation means to value or asses job outcomes, if it leads to impression, recognition, and interest to do it. Statements in step of monitoring and evaluation were 1) respondent was involved in monitoring activity in implementation of livestock weighing, 2) respondent was involved in activity of livestock health monitoring, 3) respondent always participates in monitoring and evaluating cash of group, and 5) respondent always monitors heat and mating period on livestock. Result showed that 79 respondents (57.66%) had high participation level, 47 respondents (34.31%) had medium level, and 11 respondents (8.03%) had low level. Monitoring

and evaluation activity had a close relation, as Soekartawi (1990) argued, that monitoring must be able to give direction and recommendation, if that monitored activity run well, and can be followed by an evaluation orienting final outcome of a program. Then it can be found out if the outcome has accorded with intention of program.

Table 4. Women's participation level in step of planning, implementation, monitoring and evaluation, and sharing of benefits in "Pandan Mulyo" cattle farmers group

Step of participation	Respondent population (person)	Percentage (%)
Planning	17	12.41
High	90	65.69
Medium	30	21.90
Low		
Total	137	100.00
Implementation		
High	114	83.21
Medium	19	13.87
Low	4	2.92
Total	137	100.00
Monitoring and Evaluation		
High	79	57.66
Medium	47	34.31
Low	11	8.03
Total	137	100.00
Sharing of benefits		
High	111	81.02
Medium	24	17.52
Low	2	1.46
Total	137	100.00

Sharing of Benefits. Sharing of benefits had relation with share right of each individual involving or participating in an activity. The statements were: 1) By participating in raising cow in group stables, farmer can help her family's economy, 2) By raising livestock, she can utilize waste in farming land for feed availability for livestock, 3) By raising livestock in group stables, she can add her experience in raising cow, 4) She can tighten neighborhood relation with local community, and 5) By raising livestock, she can be more trusted and respected by my husband and family. Table 4 showed that 111 respondents (81.02%) had high sharing benefits level, 24 respondents (17.52%) had medium level, and 2 respondents (1.46%) had low level. This indicated that respondents participate in getting benefits of beef cattle management in "Pandan Mulyo" cattle farmers group.

Total women's participation level in "Pandan Mulyo" cattle farmers group is shown in Table 5. Given the table, high percentage is in step of implementation as 83.21%, and in sharing of benefits step as 81.02%. This means respondents had high participation level in implementation and sharing of benefits.

Information derived in research showed that high respondents' participation level in step of beef cattle management activities implementation is due to fully responsibility transfer of beef cattle management from husband to his wife. Men as head of household and member of farmers group at same time, can not spend full-time to raise the cattle, because they have to work in rice field as their main job. This is supported by Setyowati's argument (2000), that women play a significant role in cattle farming activities, particularly beef cattle management. In cases of feeding and cleaning stables, women's single role are greater than men's single role. Because of high participation in traditional cattle farming business as in rural area in general, women will influence farmers' attitude to beef cattle business and social relevances. Husbands or other family labors have a chance to leave their side job to be endorsed to their wives, and they work in sector needing stronger power than women's power.

In step of sharing of benefits, respondents had high participation level too, because they had experienced benefits of beef cattle management in “Pandan Mulyo” cattle farmers group. After research, we found that respondents who had high participation level in step of sharing benefits were respondent who had realized or understood derived benefits when they participated in “Pandan Mulyo” cattle farmers group.

Table 5. Total women’s participation level in beef cattle management in “Pandan Mulyo” cattle farmers group

Steps of participation	Percentage (%)		
	Low	Medium	High
Planning	21.90	65.69	12.41
Implementation	2.92	13.87	83.21
Monitoring and evaluation	8.03	34.31	57.66
Sharing benefits	1.46	17.52	81.02
Total participation	0.00	45.26	54.74

Source: Processed primary data (2008)

Correlation Between Social Factors and Women’s Participation Level in Beef Cattle Management

Data on social demography and women’s perception to farmers group from research, was processed using Spearman Correlation (Table 6), and data on woman farmers’ attitude to extension was examined using Chi-square with SPSS for Windows version 12.00 (Table 7).

Result of statistic analysis showed that there was correlation of respondent’s age ($P < 0.01$), respondent’s education ($P < 0.05$), experience in raising cattle ($P < 0.01$), amount of beef cattle ownership ($P < 0.01$) variables and woman’s perception to farmers group ($P < 0.05$) with participation, each has correlation coefficient, respectively, is 0.222; -0.173; 0.352; 0.308; and 0.171.

Table 6. Result of spearman’s correlation between participation level and variables which is perceived have correlation

Variable	Probability (Sig.)	Spearman’s Correlation Coefficient
Respondent’s age	0.009	0.222**
Respondent’s education	0.044	-0.173*
Experience in raising cattle	0.000	0.352**
Amount of beef cattle ownership	0.000	0.308**
Time allocation in raising cattle	0.247	0.100
Woman’s perception to farmers group	0.046	0.171*

Note : ** significant on $P < 0.01$

* significant on $P < 0.05$

Source: Processed primary data (2008)

Women’s Attitude. This attitude stated respondents’ favorability and unfavorability on extension activities held by government. *Chi-Square* (X^2) test in Table 7 showed significant correlation (X^2 : 63.131 on $P < 0.05$) between women’s attitude variable and participation level with coefficient *Phi* as 0.679, meaning there was strong correlation between cattle farmers’ attitude and participation level ($\Phi > 0.50$), in this case coefficient *Phi* showed correlation power level among two variables.

Women’s attitude variable had positive correlation with participation level, this can be seen of women’s favorable attitude percentage in “Pandan Mulyo” cattle farmers group was highest (46.71%) in high participation level too (Table 8).

According to Saptarini et. al.’s research (2007) in “Pandan Mulyo” cattle farmers group by selecting members of “Pandan Mulyo” cattle farmers group as respondent, result from *Chi-Square* test and *Phi* test, variable of cattle farmers’ attitude to implementation of government’s program (elucidation) has dependency/correlation with participation level ($P < 0.01$).

Table 7. Result of *Chi-Square* (X^2) and *Phi* (Φ) test of participation level and women's attitude

Variable	Probability (Sig.)	Coefficient <i>Chi-Square</i> (X^2)	Coefficient <i>Phi</i> (Φ)
Women's attitude	0.000	63.131*	0.679

Table 8. Women's attitude percentage in "Pandan Mulyo" cattle farmers group

Participation level	Attitude (%)	
	Unfavorable	Favorable
High	7.30	46.71
Medium	8.76	37.23
		$X^2 : 63.131^*$
		$\Phi : 0.679$

CONCLUSION

After research was carried, it was proven that women's participation level in beef cattle management in "Pandan Mulyo" cattle farmers group is in medium level. Steps of implementation, monitoring and evaluation, and sharing benefits have high participation level. It can be concluded that women's participation level in beef cattle management in "Pandan Mulyo" cattle farmers group is categorized high.

Social factors that have significant correlation with participation level are age, education, experience in raising cattle, amount of beef cattle ownership, women's perception to farmers group, and women's attitude to elucidation.

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