Training Effectiveness of Beef Cattle Fatening Business Based on Industry Waste in Indonesia

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Abstract— The purpose of this research activity is to analyze the effectiveness of training of beef cattle fattening industry based on waste of brem industry as an indicator of training success. This research was conducted on May 4 to August 28, 2017 in Gebang Village, Nguntoronadi District, Wonogiri Regency, Indonesia. The research design used pre-experimental design with one group pretest and posttest design. Determination of research location is done by purposive and respondent determination by purposive method that is beef cattle rancher who follow training of beef cattle fattening industry based on brem waste in Gebang Village. The data used include the primary data from the questionnaires by respondents who are beef cattle ranchers who participated in the business training of beef cattle fattening based on the waste of brem industry and secondary data obtained from the Central Bureau of Statistics (BPS) of Wonogiri Regency and the Animal Husbandry, Fishery and Marine Office of Wonogiri Regency. Data analysis used is descriptive analysis. The results showed that there was an increase in knowledge of respondents who attended the business training of beef cattle fattening based on brem industry waste in Gebang Village, Nguntoronadi District, Wonogiri Regency. The average post-test result is bigger than pre-test result, so it can be concluded that the training of beef cattle fattening business based on industrial waste is successful and effective by showing the increase of knowledge of farmers after the training.

Key words: effectiveness, training, cattle fattening business, knowledge.

I. INTRODUCTION

Wonogiri regency is one of the areas in Central Java which has a high population of beef cattle at 157,468 (Central Bureau of Statistics, 2016). This shows that Wonogiri Regency has the potential to develop beef cattle considering the need for meat continues to increase. One effort to fulfill the sufficiency of meat in Wonogiri Regency is by increasing the production of local breeder cows through the provision of alternative feed sources for cattle that is by utilization of industrial waste brem. In Wonogiri district there is a brem industry center located in Gebang Village, Nguntoronadi District. The surrounding community utilize brem industry waste for animal feed as a fattener of fattening beef cattle so that almost all the people who wrestle this brem industry certainly have a business of beef cattle. In the process of making brem food, from processed ingredients, only about 30% who managed to become brem food. The remaining 70% becomes waste in the form of water and rice waste (Probowati et al., 2012). Utilization of industrial waste as a livestock feed will reduce the cost of animal feed so it has the potential to be developed. Efforts to develop beef cattle farms in Gebang Village Nguntoronadi District is with farmers following the extension and training activities organized by related agencies and universities. According Simamora (2006) one of the development of human resources by training to improve knowledge and skills. Training will be said to be successful if the training is carried out effectively

ie increasing knowledge, skills and skills to the training materials (Hasibuan, 2005). Therefore, it is necessary to know the effectiveness of training of beef cattle fattening industry based on Brem waste in Gebang Village, Nguntoronadi Sub District, Wonogiri Regency, Indonesia.

II. METHODS

This research was conducted in Gebang Village, Nguntoronadi District, Wonogiri Regency, Indonesia on May 4 to August 28, 2017. This research design using Pre-Experimental Design with One Group Pretest and Posttest Design. The use of this design aims to test the effectiveness of training the beef cattle fattening business. This design is done by comparing the pretest and posttest results of the respondents as trainees. Site selection and sample research using purposive sampling method, which is a way of determining the location of research based on several considerations in accordance with the purpose of research Sugiyono (2006). The location was chosen in Gebang Village, Nguntoronadi District, Wonogiri Regency because it is an area that has the potential to develop beef cattle farms. The determination of the sample is determined by purposive method which is the farmer in Gebang Village who attended the business of fattening beef cattle and able to apply the knowledge gained during the training. Researchers considered the selected sample to provide information in support of this research (Sunyoto, 2009). The type of data used is primary is data collected

directly by researchers from the respondents and secondary data are supporting data obtained from books, as well as other sources published by relevant agencies. Data collection techniques include interview, observation, literature study, recording and pretest and post test. Data were analyzed using descriptive analysis.

III. RESULTS AND DISCUSSION

Characteristics of Respondents
Characteristics of farmers in this activity include age, education level, the number of livestock ownership, farm work, farming experience and the number of family members borne by the farmer.

1. Age
Age of farmers who attended the business of beef cattle fattening in Gebang Village, Nguntoronadi District can be seen in Table 1.

Table 1. Age of farmers attending training activities in Gebang Village

Age (year)	Total (people)	Percentage (%)
15-30	0	0
31-45	9	47,37
46-60	7	36,84
> 61	3	15,79
Total	19	100

Source: Primary data is processed, 2017.

Based on Table 1 it is known that the largest number of breeders is in the age group 31-45 years as many as 9 people with a percentage of 47.37%. This shows the age of breeders classified in the productive age to work. The result is supported by Labor Law Number 13 Year 2003, a person who is categorized as a worker aged 15 to 64 years (Arsyad, 1999). The age of productive or young breeders is generally curiosity towards something higher and interest in adopting higher technology introductions (Chamdi, 2003).

2. Level of education
The level of education of farmers who attended the training in Gebang Village, Nguntoronadi District can be seen in Table 2.

Table 2. Educational level of farmers attending training in Gebang Village, Nguntoronadi District

Level of education	Total (people)	Percentage (%)
Elementary school	6	31,58
Yunior high school	1	5,26
Senior high school	11	57,89
University	1	5,27
Total	19	100,00

Source: Primary data is processed, 2017.

The level of education of farmers is high with graduates of high school graduates and sederajad 11 people or equal to 57.89%, The higher the education level of a person, the higher the level of productivity or labor performance (Simanjuntak, 2001). Education will affect the mindset and attitude of a person, especially in terms of decision making and management arrangements in managing a business. Education makes it easier to accept or consider an innovation that can help develop the business better than ever, so farmers are not left behind by the increasingly modern technology (Tiafery, 2016). Soekartawi et al. (1986) states that one's education will affect also in running a business effectively and efficiently.

3. Number of livestock ownership
The number of livestock ownership of respondents who attended the training in Gebang Village can be seen in Table 3 below: Table 3. Number of livestock ownership of the respondents who attended the training in Gebang Village Nguntoronadi District

Number of livestock ownership)	Total (people)	Percentage (%)
1-2	7	36,84
3-4	7	36,84
5-6	5	26,32
Total	19	100

Source: Primary data is processed, 2017.

Based on Table 3 shows that the number of farmers who attended the highest training in Gebang Village is in the number of cattle ownership 1-2 tail and 3-4 tails as many as 7 people with a percentage of 36.84%. In the opinion of Sostroamidjojo and Soeradji (1990), the scale of cattle farming is illustrated by the small number of livestock ownership, the livestock owned by farmers is only one to several. The level of livestock ownership is very influential to the size of business income of beef cattle (Krisna and Harry, 2014).

4. Respondent's Job
The work of farmers who attended the training in Gebang Village, Nguntoronadi District can be seen in Table 4.

Employment	Total (people)	Percentage (%)
Farmer	14	73,68
Entrepreneur	3	15,79
Government employees	1	5,26
Entrepreneurial brem industry	1	5,26
Total	19	100

Source: Primary data is processed, 2017.

Based on Table 4 most of the farmers who participated in the cattle waste processing training in Gebang Village, Nguntoronadi Sub-district, livelihood as 14 peasants with the percentage of 73.68%. Farmers who follow the training are the people farmers who have beef cattle as a side business with the main work varies. Livestock business is used as a side job because the result of the livestock business can be used as additional income for the family (Tiafery, 2016). Susanto (2003) states that to face business risks such as failure of production, farmers do side business as one source of income to meet basic family needs.

5. Breeding experience
The experience of raising the respondents who attended the training in Desa Gebang can be seen in Table 5.

Table 5. The experience of raising the respondents in Gebang Village

The experience of raising (year)	Total (people)	Percentage (%)
1-10	9	47,37
11-20	4	21,05
Total	6	31,58
Jumlah	19	100

Source: Primary data is processed, 2017.
Based on the data in Table 5 indicates that the experience of breeding for most of 1-10 years as many as 9 people with a percentage of 47.37%. Breeding experience becomes one measure of one's ability to manage a farm (Tiafery, 2016). The results are supported by the opinion of Nitisemito and Burhan (2004), that the more experience the more lessons learned in the field. Work experience has a positive influence on labor productivity (Adhadika, 2013).

6. Number of family members
The number of family members who are the responsibility of the breeder can be seen in Table 6 below:

Table 6. Number of family members of respondents in Gebang Village, Nguntoronadi District

Number of family members (people)	Total (people)	Percentage (%)
2	1	5,26
3	6	31,58
4	4	21,05
5	1	5,26
6	5	26,32
> 6	2	10,53
Total	19	100

Source: Primary data is processed, 2017.

Based on Table 6 shows that the number of family members that are the responsibility of most breeders is 3 people with the number of breeders 6 people and the percentage of 28.13%. The large number of families will encourage farmers to do many activities, especially in finding and increasing the income of their families (Soekartawi, 2003). According to Nurcahya (2009) that relatively large farming families are a source of labor supply, but also a burden of life to be endured and endowed by the head of the farmer's family.

Success of Training Program
Based on the cognitive aspect of the beef cattle fattening business in Gebang Village, Nguntoronadi Subdistrict, Wonogiri Regency based on brem industry waste, after the training activities to farmers showed improvement as presented in Table 7 as follows.

Table 7. Pretest and posttest results of farmers following training activities in Gebang Village, Nguntoronadi District

No.	Pretest	Postest	Increasing
1	50	66	16
2	42	26	-16
3	38	90	52
4	66	78	12
5	62	78	16
6	38	50	12
7	14	18	4
8	74	82	8
9	34	54	20
10	54	58	4
11	38	66	28
12	78	78	0
13	42	66	24
14	74	80	6
15	70	86	16
16	34	86	52
17	66	86	20
18	66	74	8
19	86	94	8
Average	54	69	15

Source: Primary data is processed, 2017.

This is seen in the pretest score before the training of 54 and the post test score after training 69 with the average increase in the results obtained is 15. The post-test results are greater than the pre-test results, so it can be concluded that the training of cattle fattening business cut in Gebang Village,

Nguntoronadi Sub-district was successful and effective by showing improvement of knowledge of farmers after the training.

Increased knowledge as a benchmark in determining the effectiveness of a training program. According to Hasibuan (2005) that the training will be said to be successful if the training is carried out effectively is the increase of knowledge, skills and skills to the training materials.

IV. CONCLUSION

Based on the knowledge aspect in training of beef cattle fattening industry based on brem waste in Gebang Village, Nguntoronadi Sub-district, Wonogiri Regency, after training activity to farmers showed improvement. The average post-test result is bigger than pre-test result, so it can be concluded that the training of beef cattle fattening business based on industrial waste is successful and effective by showing the increase of knowledge of farmers after the training.

V. ACKNOWLEDEGEMENT

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