FARMERS PERCEPTIONS ABOUT FEED BANK STRATEGIES IN THE ANDINI MULYO PEOPLE'S LIVESTOCK CENTER (SPR), PAPAR DISTRICT, KEDIRI DISTRICT, EAST JAVA PROVINCE

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Abstract : This community service aims to find out farmers' perceptions about feed banks carried out at community livestock centers (SPR). Perceptions are used as a reference in developing feed bank strategies for farmers. The data used are primary data and secondary data. Primary data was obtained from village programs while secondary data was obtained from interviews and questionnaires. The data obtained was analyzed using descriptive techniques. Respondents' perceptions of the Feed Bank strategy are classified as very good (60.5), meaning that the Feed Bank strategy has relative advantages, is appropriate, simple, can be tried and can be observed. Characteristics that are related to respondents' perceptions are age and length of farming. Young respondents (28-34 years) tend to have very good perceptions. Respondents whose farming period is new (1-10 years) tend to have very good perceptions.

Keywords: Perception, Feed Bank, People's Livestock Center (SPR).

1. Background

The Andini Mulyo People's Livestock Livestock Center (SPR) is a growth area for people's beef cattle farms in Papar District, Kediri Regency. There are 6 livestock groups that are members of SPR Andini Mulyo, namely Bina Harapan, Genjah Semulur, Sido Dadi, Usaha Makmur, Sumber Sari I and Sari Pathi Jaya. Based on primary data, 3 of the 6 livestock groups have colony pens in which beef cattle of the limousin, simental and Ongole crossbreed (PO) breed are kept. The average colony pen capacity is 30 cows. The facilities in the colony pen include cage infrastructure and a feed chopping machine. Each group member has 1 cow in the colony pen. A total of 10% of beef cattle sales are paid to the group as group cash. Apart from beef cattle, 1 livestock group in SPR Andini Mulyo has a side business making bokashi fertilizer.

Feeding in beef cattle farming is done individually. The feed given to beef cattle is forage such as grass, rice straw and corn, as well as concentrates such as pollard and bran. The main forage provided is rice straw and corn plants. Farmers have taken part in training in making silage feed, straw ammoniasis and complete feed fermentation held by the Kediri Regency Food and Livestock Security Service. Until now, breeders have not implemented processing of these low-nutrient feed ingredients. In general, feed technology has not been widely applied to smallholder livestock businesses in Indonesia. In fact, this technology has been introduced since around 1980. Research has found that feed technology generally requires quite a large amount of capital to procure equipment

and raw materials. The scale of smallholder dairy farming with an average population of 2-5 heads has not been able to do so (Mulijanti, 2016). Technological Gap (Wharton, 1971) in feed technology can be overcome by making complete feed in groups (Mulijanti, 2016). Making complete feed in groups is recommended because it is more efficient, namely it can reduce capital for facilities and infrastructure for making complete feed (Mulijanti, 2016).

According to the Oxford Dictionary, bank means heap (a substance) into mass or mound. Feed Bank in this research is defined as a complete feed fermentation manufacturing unit in bulk or in groups. Feed Bank is a unit run by farmers in groups to improve feed nutrition for their own livestock. The establishment of the Feed Bank at SPR Andini Mulyo was supported by various capital owned such as economic capital and infrastructure (group business, group treasury, colony cages, feed processing facilities and bokashi fertilizer processing facilities). There is also social capital in the form of trust, reciprocity and social interaction (Fukuyama, 2002) as well as structural category social capital (Soetomo, 2006). To find a strategy for growing the Feed Bank at SPR Andini Mulyo, a strategy study needs to be carried out.

The recommended feed to be made at the Feed Bank is complete fermented feed. The reason for choosing is that Papar District has abundant agricultural waste (72.5% planted with rice, 32.7% planted with corn), the various agricultural wastes can all be utilized in complete feed fermentation technology. In addition, the preparation of complete fermented feed is relatively short, nutritionally complete, and can be used as the only source of feed for beef cattle. To introduce the Complete Feed Fermentation Feed Bank strategy to SPR Andini Mulyo breeders, it is necessary to provide counseling with the material "Feed Bank Strategy" as the main material and "Making Complete Fermented Feed" as supporting material. Both are combined under the title "Food Bank Strategy for Making Complete Fermented Feed". According to Rogers (1995), the level of adoption of an innovation depends on the adopter's perception of the characteristics of the technological innovation. At SPR Andini Mulyo, it is necessary to evaluate farmers' perceptions of the Feed Bank Strategy. Strategy study, applied study, counseling and research activities to determine the relationship between characteristics and the perceptions of SPR Andini Mulyo breeders regarding the Feed Bank strategy were carried out in a study entitled "Beef Cattle Farmers' Perceptions of the Feed Bank Strategy in SPR Andini Mulyo, Papar District, Kediri Regency".

2. Methods

The research was carried out in February-March 2024 in Papar District, Kediri Regency, East Java Province. The data used is Primary and Secondary. Primary data was obtained from village programs while secondary data was obtained through interviews and questionnaires. Evaluation of the perceptions of SPR Andini Mulyo beef cattle breeders regarding the Complete Feed Fermented Feed Bank Strategy was carried out on 5 innovation attributes, namely relative advantage, level of suitability, level of complexity, tryable and observable. The data obtained was analyzed using descriptive techniques.

3. Result and Discussion
SPR Andini Mulyo Farmer's Perception of Feed Bank Strategy

Perception is an individual's process of receiving, organizing or interpreting an object outside himself. In innovation adoption, the perception process is closely related to the possibility of individuals adopting or not adopting an innovation. According to Rogers (1995), the level of adoption of an innovation depends on the adopter's perception of the characteristics of the technological innovation. Attributes that support the explanation of the level of adoption of an innovation include: (1) relative advantage, (2) level of suitability, (3) level of complexity, (4) tryability, and (5) observability.
a) Relative Advantage

Relative advantage relates to considering the superiority of innovation compared to existing technology (Rogers, 1995). The advantages of innovation can be viewed from technical, economic and social aspects. According to Rogers, 1995), relative advantage is one of the best things to predict the level of innovation adoption.
The Results and Discussion may be combined into a single section or presented separately. They may also be broken into subsections with short, informative headings.

Table 1. Distribution of Respondents' Perceptions about the Economic Advantages of Feed Banks

Category	Intervals	Amount	%	Score	Average
Not enough	1 – 2	1	1,67	2	0,03
Enough	2,1 – 3	9	15	27	0,45
Good	3,1 – 4	37	61,67	148	2,47
Very good	4,1 – 5	13	21,67	65	1,08
Total		60	100	242	4,03

Source: Processed Data (2024).

Based on Table 1, in general (61.67%) respondents' perceptions about the economic advantages of Feed Bank are classified as good (4.03). This means that respondents think the feed made at the Feed Bank is relatively cheap.

Table 2. Distribution of Respondents' Perceptions about the Technical Advantages of Feed Banks

Category	Intervals	Amount	%	Score	Average
Not enough	1 – 2	1	1,7	1	0,02
Enough	2,1 – 3	1	1,7	3	0,05
Good	3,1 – 4	41	68,3	164	2,73
Very good	4,1 – 5	17	28,3	85	1,42
Total		60	100	253	4,22

Source: Processed Data (2024).

Based on Table 2, in general (68.3%) respondents' perceptions about the technical excellence of Feed Bank are classified as very good (4.22). This means that the majority of respondents think that the Feed Bank makes it easier to make fermented feed, and that the feed made at the Feed Bank is superior to the feed usually used by breeders.

Table 3. Distribution of Respondents' Perceptions about the Social Advantages of Feed Banks

Category	Intervals	Amount	%	Score	Average
Not enough	2 – 4	0	0	0	0
Enough	5 – 6	2	3,3	11	0,18
Good	7 – 8	34	56,7	271	4,52
Very good	9 – 10	24	40	222	3,7
Total		60	100	504	8,4

Source: Processed Data (2024).

Based on Table 3, in general (56.7%) respondents' perceptions of Bank Feed's social advantages are included in the very good category (8.4%). This means that respondents think that the existence of a Feed Bank can create jobs for the surrounding community and can increase cooperation between livestock group members.

b) Level of Conformity

According to Rogers (1995), the level of conformity is related to the extent to which the innovation is in accordance with existing values and order. In this study, the level of suitability tested is the extent to which the Feed Bank meets the needs of the livestock group, the social conditions of the livestock group, raw materials, equipment and breeders' beliefs about feed. According to Edwina and Maharani (2010), an innovation will be quickly adopted if it suits farmers' needs.

Table 4. Distribution of Respondents' Perceptions about the Need for Feed Banks

Category	Intervals	Amount	%	Score	Average
Not enough	1 – 2	3	5	3	0,05
Enough	2,1 – 3	2	3,3	6	0,1
Good	3,1 – 4	39	65	156	2,6
Very good	4,1 – 5	16	26,7	80	1,3
Total		60	100	242	4,03

Source: Processed Data (2024).

Based on Table 4, it is generally known (65%) that respondents' perceptions of needs are in the good category (4.03). This means that SPR breeder Andini Mulyo agrees that a feed bank is a necessity for breeders.

Table 5. Distribution of Respondents' Perceptions regarding the Suitability of Feed Banks with Group Social Conditions

Category	Intervals	Amount	%	Score	Average
Not enough	1 – 2	1	1,7	2	0,03
Enough	2,1 – 3	3	5	9	0,15
Good	3,1 – 4	39	65	156	2,6
Very good	4,1 – 5	17	28,3	85	1,42
Total		60	100	252	4,2

Source: Processed Data (2024).

Based on Table 5, it is generally known (65%) that respondents' perceptions are classified as very good (4.2). This means that in general breeders agree that the Feed Bank concept is in accordance with the social conditions of the group.

Table 6. Distribution of Respondents' Perceptions about Complete Feed Fermentation Raw Materials

Category	Intervals	Amount	%	Score	Average
Not enough	1 – 2	2	3,3	4	0,1
Enough	2,1 – 3	5	8,3	15	0,3
Good	3,1 – 4	40	66,7	160	2,7
Very good	4,1 – 5	13	21,7	65	1,1
Total		60	100	244	4,1

Source: Processed Data (2024).

Based on Table 6, in general (66.7%) respondents' perceptions are classified as very good (4.1). This means that in general respondents agree that the raw materials for making feed are available in the Papar District environment.

Table 7. Distribution of Respondents' Perceptions about Feed Bank Equipment

Category	Intervals	Amount	%	Score	Average
Not enough	1 – 2	10	16,7	19	0,31

Category	Intervals	Amount	%	Score	Average
Enough	2,1 – 3	10	16,7	30	0,5
Good	3,1 – 4	32	53,3	128	2,1
Very good	4,1 – 5	8	13,3	40	0,6
Total		60	100	217	3,6

Source: Processed Data (2024).

Based on Table 7, in general (53.3%) the respondents' perceptions are classified as good (3.6). This means that respondents quite agree that the Feed Bank supporting equipment is available at SPR Andini Mulyo. However, there were 16.7% of respondents who thought that feed bank support equipment was not yet available at SPR Andini Mulyo, while 16.7% were still unsure. The doubts and disagreements of a number of respondents were due to the fact that SPR breeder Andini Mulyo thought complete feed fermentation had to be made using tools such as a hammer mill. Even though complete feed fermentation can be made with ordinary feed chopping equipment.

Table 8. Distribution of Respondents' Perceptions about Trust in Feed Banks

Category	Intervals	Amount	%	Score	Average
Not enough	1 – 2	2	3,3	4	0,1
Enough	2,1 – 3	10	16,7	30	0,5
Good	3,1 – 4	38	63,3	152	2,5
Very good	4,1 – 5	10	16,7	50	0,8
Total		60	100	236	3,9

Source: Processed Data (2024).

Based on Table 8, in general (63.3%) respondents' perceptions are in the good category (3.9). This means that, in general, respondents think their beef cattle will want to eat Feed Bank products. There were 16.7% of respondents who were doubtful. Farmers' doubts may be due to breeders having never seen beef cattle eating complete fermented feed.

c) Level of Complexity

According to Rogers (1995), the level of complexity is related to the extent to which an innovation is easy to understand and implement. In the study of the Feed Bank Strategy, the level of complexity is described at the level of complexity of concept and implementation. According to Edwina and Maharani (2010), the simpler the innovation, the easier it is for the technology to be put into practice so that the innovation adoption process is faster.

Table 9. Distribution of Respondents' Perceptions regarding the Level of Complexity of the Feed Bank Concept

Category	Intervals	Amount	%	Score	Average
Not enough	2 – 4	0	0	0	0
Enough	5 – 6	2	3,3	12	0,2
Good	7 – 8	45	75	359	5,9
Very good	9 – 10	13	21,7	121	2,02
Total		60	100	492	8,2

Source: Processed Data (2024).

Based on Table 9, in general (75%) respondents' perceptions are classified as good (8.2). This means that respondents agree that the Feed Bank concept is not complicated or easy to understand.

Table 10. Distribution of Respondents' Perceptions regarding the Level of Complexity of Implementing Feed Banks

Category	Intervals	Amount	%	Score	Average
Not enough	2 – 4	1	1,67	4	0,07
Enough	5 – 6	3	5	18	0,3
Good	7 – 8	43	71,67	329	5,48
Very good	9 – 10	13	21,67	119	1,98
Total		60	100	470	7,8

Source: Processed Data (2024).

Based on Table 10, in general (71.67%) respondents' perceptions are in the good category (7.8). This means that respondents quite agree that Feed Bank can be implemented. Service results consist of quantitative and qualitative results from the activities carried out. If there is a table/chart/image containing a presentation of the results that is meaningful and easy to understand quickly. Tables/charts/images do not contain raw data that can or must be processed.

d) Can be tried

According to Rogers (1995), trialability relates to the extent to which an innovation can be tried with minimal resources. Farmers are individuals who pay attention to efficiency, because of the limited resources they have. Triability is also related to the size of the risk borne if the experiment fails. So, an innovation that can be tried on a small scale and is successful can be slowly adopted by farmers. This is in accordance with the opinion of Edwina and Maharani (2010), that innovations that can be tried little by little will be used more quickly by farmers than innovations that cannot be tried.

Table 11. Distribution of Respondents' Perceptions about the Level of Trialibility of Feed Banks

Category	Intervals	Amount	%	Score	Average
Not enough	1 – 2	1	1,67	2	0,03
Enough	2,1 – 3	4	6,67	58	0,2
Good	3,1 – 4	42	70	190	2,8
Very good	4,1 – 5	13	21,67	230	1,1
Total		60	100	480	4,1

Source: Processed Data (2024).

Based on Table 11, in general (70%) the respondents' perceptions are in the very good category (4.1). This means that respondents agree that the Feed Bank concept can be tried on a small scale first.

e) Observable

According to Rogers (1995), observability relates to how quickly a positive impact of innovation can be seen. According to Edwina and Maharani (2010), to

gain the trust of farmers, an extension agent must look for innovations whose results can be quickly observed.

Table 12. Distribution of Respondents' Perceptions about Feed Bank Observability

Category	Intervals	Amount	%	Score	Average
Not enough	2 – 4	1	1,67	2	0,03
Enough	5 – 6	10	16,67	58	0,97
Good	7 – 8	24	40	190	3,17
Very good	9 – 10	25	41,67	230	3,83
Total		60	100	480	8

Source: Processed Data (2024).

Based on Table 12, in general (41.67%) the respondents' perceptions are in the good category (8). This means that respondents agree that the benefits of the Feed Bank can be observed immediately after it operates. The next step is to determine the general perception of SPR Andini Mulyo breeders regarding the Feed Bank strategy.

Table 13. Distribution of Respondents' Perceptions about Feed Bank Strategy

Category	Intervals	Amount	%	Score	Average
Not enough	14 – 28	0	0	0	0
Enough	29 – 42	0	0	0	0
Good	43 – 56	9	15	469	7.8
Very good	57 – 70	51	85	3158	52.6
Total		60	100	3627	60.5

Source: Processed Data (2024).

Based on Table 13, it is known that 85% of respondents have a very good perception (60.5) regarding the Feed Bank strategy. This means that SPR breeder Andini Mulyo believes that the Feed Bank strategy has relative advantages, a high level of suitability, a low level of complexity, can be tried and can be observed.

4. Conclusion

Respondents' perceptions of the Feed Bank strategy are classified as very good (60.5), meaning that the Feed Bank strategy has relative advantages, is appropriate, simple, can be tried and can be observed. Characteristics that are related to respondents' perceptions are age and length of farming. Young respondents (28-34 years) tend to have very good perceptions. Respondents whose farming period is new (1-10 years) tend to have very good perceptions.

5. Acknowledgement

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