

ANALYSIS OF BREEDER MOTIVATION IN RAISING MADURA CATTLE AT WEST WARU VILLAGE, WARU DISTRICT, PAMEKASAN REGENCY**Melisa Hayatul Maryam*, Teti Sugiarti, and Taufik Rizal Dwi Adi Nugroho**

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ABSTRACT

The motivation of farmers to raise cattle in Waru Barat Village is only done as a side business and fill their spare time for useful activities, because each farmer has a specific goal of raising cattle according to their respective needs and hobbies. The aims of this study were (1) to analyze the characteristics of farmers (2) to analyze the level of motivation of farmers in raising cattle (3) to analyze the effect of farmer characteristics on the motivation of farmers to raise cattle. The research location was chosen deliberately, namely in the Waru Barat Village, the sample used was 43 respondents. Data were collected by simple random sampling technique, then quantitative descriptive analysis and statistical analysis were performed using multiple linear regression. The results showed that the average age of the breeder was 30-40 years, elementary school education level, experience raising 21-30 years, the number of cattle kept 1-3 heads, the number of family dependents as many as 3-4 people, with the level of knowledge about AI technology within the medium category, and the intensity of communication in the high category, the level of motivation of farmers is in the very high category, the motivation comes from the motivation of raising livestock for the needs of existence, connection, development and entertainment. The characteristics of breeders that have a significant effect on motivation are the number of cattle kept, the number of dependents in the family, and the intensity of communication.

Keywords: *breeders, Madura cattle, motivation***BACKGROUND**

Madura cattle are a type of local cattle resulting from crosses between ongle cattle (*B. indicus*) and banteng (*Bos javanicus*). which is not very big (Lutvanyah et al., 2017). Madura cattle also have a high tolerance for stress and tick disease, have a high level of adaptation to the environment and are able to survive with dry and limited feed due to the hot climate of Madura. Refer to data of Ministry of Agriculture PKH Director General (2021) in the last 5 years the number of beef cattle in East Java has continued to increase. In 2017 the cattle population totaled 4,511,613 heads and increased to 4,938,874 heads in 2021, and 21.17% of the beef cattle population in East Java was contributed from the island of Madura (Central Bureau of Statistics, 2021). East Java Central Bureau of Statistics (2021) noted that the overall population of beef cattle on Madura Island will reach 1,047,783 in 2021. Most of the Madura cattle cultivation activities are carried out in Pamekasan Regency, especially in the conservation area and Madura Cattle purification center which consists of 4 sub-districts, namely Pakong sub-district, Pasean, Baturmarmar, and Waru, or commonly known as Papabaru (Nurlaila & Zali, 2020).

The current problem is that although many Madura cattle breeding activities are carried out by the community and are supported by geographical conditions and the role of the government through various programs such as the introduction and assistance of artificial insemination programs, providing cattle breeding assistance and making Waru District one of the conservation areas for purification of Madura cattle, but the facts on the ground show that corn farming is still the main occupation of the community, while raising cattle is only done as a side job that is not business oriented with a low scale of livestock ownership of between 1-3 heads, and managed traditionally with limited resources. Beef cattle farming business is perceived as a source of side income for the family (Simamora et al., 2021).

Based on these problems, it is important to carry out an assessment of other aspects, namely what motivates breeders to carry out maintenance activities for Madura cattle. According to Priyono (2014) in running a cattle raising business, every breeder must have different needs and have specific goals related to economic conditions, social conditions, and hobbies so that a person is motivated and moved to take action to fulfill his needs. It is suspected that it is difficult for people's livestock businesses to develop due to differences in the motivations and goals of each breeder (Halim, 2017 and Nurdayati et al., 2020). Research on the motivation of farmers in raising cattle is important because without motivation from within a farmer, all support from outside will be meaningless (Afriani et al., 2014).

Motivation comes from the word motive which means encouragement or power from within and from outside that moves a person to do an action (Rusdiana, 2018). Existence, Relatedness, and Growth (ERG) theory of motivation is one of the theories used as a basis for measuring a person's motivation in doing a job. The ERG theory is a framework that serves as a basis for understanding the factors that contribute to individual behavior at work (Caulton, 2012). Clayton Alderfer in the theory of ERG motivation states that motivation in a person is formed because of 3 needs, namely: (1) existence, (2) relatedness, (3) growth, of these three needs if one needs are not met, a person will move flexibly wherever the needs they can fulfill first are what they do (Prihartanta, 2015). Soufyan et al. (2015) explained that farmer motivation arises because breeders feel that by doing livestock business they can fulfill basic needs, social needs, and carry out business development. Research conducted by Abidin et al. (2018) and Sani et al. (2021) states that the motivation of beef cattle breeders arises because of 4 things, namely social status, entertainment, environmental and economic motivation.

Porter and Miles in Halim (2017) state that there are 3 variables that influence a person's motivation, namely individual characteristics, work, and work situations. The individual characteristics of farmers are one of the aspects that shape the motivation of farmers in doing their business (Waloyo, 2019). In this study, individual characteristics that were thought to influence motivation included the breeder's age, education level, farming experience, number of livestock owned, and number of family dependents, knowledge of AI technology, and intensity of communication. Marak et al. (2021) in his research stated that knowledge and communication intensity had a very significant relationship with motivational variables, meanwhile Luanmas et al. (2011) in his research stated that age, education, experience, the number of family dependents had an influence on the level of motivation and success in running a beef cattle business.

Cattle rearing efforts carried out by breeders are difficult to develop even though they have been carried out for decades by the Madurese community, therefore it is important to study what motivations underlie breeders in raising cattle. Basic human needs (needs for existence, relationship,

and development) which refer to the ERG theory, also added with entertainment motivation, because Madurese people often make cows as a means of entertainment. Based on the background and problems that have been described, motivation from within livestock actors is the foundation of the success of livestock activities, but research on farmer motivation has not been carried out much, so this study aims to (1) analyze the characteristics of Madura cattle breeders in Waru Barat Village, (2) analyze the level of farmer motivation in raising cattle (3) analyze the effect of breeder characteristics on farmer motivation in raising Madura cattle in West Waru Village, Waru District, Pamekasan Regency.

RESEARCH METHODS

Research Location

This research was conducted in West Waru Village, Waru District, Pamekasan Regency in November 2021-January 2022. The research location was chosen purposively through various considerations, namely: (1) Waru District is one part of 4 districts designated as a conservation and purification area madura cattle, (2) The majority of the population of West Waru Village carry out the business of raising Madura cattle, according to West Waru Village officials the number of breeders in West Waru is 1,700 breeders.

Sampling Method

This study used a sample of 43 respondents, data from respondents were collected by simple random sampling method. The number of samples in this study was obtained from calculations using the slovin formula:

$$n = \frac{N}{1 + Ne^2}$$
$$n = \frac{1700}{1 + 1700 (0,15)^2}$$
$$n = 43 \text{ respondents}$$

Collecting Data Method

This study uses 2 types of data, namely primary data and secondary data. Primary data regarding the motivation and characteristics of breeders were collected through observation, interviews and filling out questionnaires. Secondary data regarding the description of the research location, population, livestock population were obtained from books, journals, the Central Bureau of Statistics and previous studies. Variable motivation is measured through 4 indicators, namely the need for existence, connection, development, and entertainment which are described in the form of questions in the questionnaire. The level of motivation, knowledge about AI technology and the intensity of farmer communication were measured on a Likert scale. In the Likert scale, the respondents' answers were divided into 5 classes, namely 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly agree.

Data Analysis Method

This study uses 2 methods of analysis, namely quantitative descriptive analysis to analyze the characteristics of farmers and the level of motivation of farmers. Statistical analysis used multiple linear regression to analyze the influence of farmer characteristics on the motivation to raise livestock.

Measuring the level of motivation, knowledge about AI technology and the intensity of the respondent's communication is carried out in the following stages: (1) classifying the respondents' answers and then calculating the frequency (2) calculating the score of each answer (3) calculating the percentage of the answer score (4) determining the maximum score and minimum score (5) determine the class interval (6) determine the level of motivation. The answer score is calculated by the formula:

$$\text{Score} = T \times P_n$$

T : Total respondents who voted

P_n : Class value in Likert scale

The percentage of answer scores is calculated by the formula:

$$\text{Score (\%)} = \frac{\text{Score}}{\text{Total score}} \times 100$$

The maximum score and minimum score are calculated by the formula:

Max score = Highest class × Number of questions × Number of respondents

Min score = Lowest class × Number of questions × Number of respondents

Class intervals are calculated by the formula:

$$\text{Intervals} = \frac{\text{Skor maks} - \text{Skor min}}{\text{Jumlah kelas}}$$

Multiple linear regression analysis was performed to determine the effect of farmer characteristics on motivation. Regression analysis has advantages over correlation analysis because it can predict and generate models that can be used in simulations (Ihsannudin, 2015). The regression equation used in this study is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + E$$

Information:

Y : Motivation (Score)

α : Constant

β : Regression Coefficient

X₁ : Age (Years)

X₂ : Education Level (Year)

X₃ : Breeding Experience (Years)

X₄ : Number of Cattle Raised (Heads)

X₅ : Number of Family Dependents (Person)

X₆ : IB Technology Knowledge (Score)

X₇ : Communication Intensity (Score)

E : Errors

RESULT AND DISCUSSION

Characteristics of Respondents

Based on the results of the analysis in table 1, it can be seen that the age of the respondents is in the range of 30-70 years and the average age of the respondents is 49 years. The highest frequency

was in the age range of 30-40 years, namely 13 respondents (30.23%). This shows that the majority of Madura cattle breeders in Waru Barat Village are of productive age. In accordance with the age category according to BPS which classifies 15-63 years as the productive age category tend to be open to new knowledge, more innovative and still have excellent physical abilities.

The education level of the respondents was at the non-university level and the average education level of the respondents was elementary school (6 years). The highest frequency was at the elementary school level (1-6 years), namely 26 respondents (60.47%). These results can be interpreted that the education level of the majority of Madura cattle breeders in West Waru Village is still low. The higher the farmer's education, it is expected that the higher the motivation of the farmer to develop his business because the farmer will more easily accept new knowledge and have a more advanced mindset. Nurlaila & Zali (2020) stated that a low level of education causes difficulties for farmers in accepting a new innovation that is useful for developing their business, because the level of education can affect a person's mindset in managing a business.

Respondents' farming experience ranged from 1 year to more than 50 years and the average respondent's farming experience was 25 years. The highest frequency was in respondents who had farming experience for 21-30 years, namely 14 respondents (32.56%). This means that most of the Madurese cattle breeders in West Waru Village can be considered experienced in running the business of raising Madura cattle because they have been doing this for decades. The higher the experience of the breeder, the higher the motivation is expected because the amount of knowledge and knowledge that has been obtained in raising cattle, both obtained from generation to generation and from practice while running their own business.

The cattle kept by the respondents varied, between 1 to more than 6 cows. The highest frequency was in breeders who raised 1-3 tails, namely 35 respondents (81.40%). This means that cattle owned by breeders are included in the low ownership scale. Amam & Harsita (2021) state that most smallholder livestock businesses are not business-oriented, managed traditionally with an ownership scale of between 1-2 heads. The higher the number of cows kept by the farmer, the higher the motivation of the farmer in running his business because a high number of livestock has a high risk so that the farmer will be more motivated to learn and seek the right knowledge and technology to avoid failure and loss.

The number of dependents of the respondent's family is in the range of 1-6 people and the average number of dependents of the respondent's family is 4 people. The highest frequency was in respondents who had 3-4 dependents, namely 21 respondents (48.84%). These results can be interpreted that the farmers in West Waru Village have a varying number of family dependents. The higher the number of family members, it is hoped that the higher the farmer's motivation in running the cattle rearing business because the large number of family members means the higher the cost of living that must be fulfilled.

Table 1. Characteristics of Respondents

Characteristics	Information	Amount	Percentage (%)
Age	30-40 years	13	30,23
	41-50 years	12	27,91
	51-60 years	12	27,91
	61-70 years	6	13.95
		43	100.00

Level of education	No school	7	16,28
	Elementary School	26	60,47
	Junior High School	4	9.30
	Senior High School	5	11.63
	Bachelor	1	2,33
		43	100.00
Breeding Experience	1-10 years	7	16,28
	11-20 years	13	30,23
	21-30 years	14	32.56
	31-40 years	3	6.98
	41-50 years	5	11.63
	>50 years	1	2,33
		43	100.00
Number of cows kept	1-3 tails	35	81.40
	4-6 tails	7	16,28
	> 6 tails	1	2,33
		43	100.00
Number of Family Dependents	1-2 people	9	20.93
	3-4 people	21	48,84
	5-6 people	13	30,23
		43	100.00

Source: Primary Data Processed, 2022

Breeder Knowledge Regarding Artificial Insemination Technology

Knowledge of artificial insemination technology is a breeder's understanding of the information that has been provided. Knowledge about artificial insemination is used as one of the variables that is thought to influence motivation because of the various types of cattle rearing technologies, artificial insemination is one of the most well-known technologies and has been adopted by farmers in West Waru compared to other types of technology such as feed processing and waste treatment. Based on table 2, it is known that most farmers already know about the symptoms of lust in cows, the ideal time to mate cows and the things that affect the success of AI, but this knowledge is limited to hereditary knowledge obtained from parents and fellow breeders.

Lack of understanding of AI technology causes breeders in West Waru Village to prefer to carry out natural mating processes on their livestock. Breeders consider that the offspring of cattle produced by AI are not as good as those produced by natural mating, therefore the local government needs to increase the intensity of counseling so that breeders understand more about the benefits, processes, costs and objectives of AI.

Table 1. Breeder Knowledge Level Regarding AI Technology

No	Statement	IB Knowledge					Score	Percentage (%)
		STT	TT	R	Q	st		
1.	Know the IB process	0	13	0	26	4	150	13.64
2.	Know the purpose of IB	0	18	10	11	4	130	11.82
3.	Know the cost of implementing IB	0	12	9	20	2	141	12.82

4. Know the things that influence the success of IB	0	4	4	31	4	164	14,91
5. Knowing the symptoms of lust in cows	0	3	0	21	19	185	16,82
6. Know the ideal time for mating cows	0	4	4	21	14	174	15,82
7. Know the benefits of IB	0	8	5	25	5	156	14,18
Amount						1100	100.00

Source: Primary Data Processed, 2022

The total score for the knowledge level of farmers regarding AI technology is 1100. Figure 1 shows that the level of knowledge of Madura cattle breeders in West Waru Village is in the medium category. This is due to the behavior of breeders who tend to be reluctant to adopt new technologies and prefer to maintain the traditional cattle rearing system with knowledge that has been passed down from generation to generation, for this reason extension workers and local governments need to increase the intensity of communication, socialization and demonstrations as an effort to increase knowledge and understanding so that more and more breeders are adopting AI technology.

The comparison of the total cost of inventory between the policies implemented by the company and the calculation of the EOQ method is very different. The total inventory cost based on company policy is Rp. 3,941,366.1 while based on the calculation of the EOQ method it is only Rp. 1,429,481.24. The total cost of inventory based on company policy is almost 2 times greater than the calculation of the EOQ method. If the EOQ method can be applied, it will be able to provide benefits because it can issue costs appropriately and as minimally as possible. Rumah Tempe Zanada is able to save expenses.

$$E = \frac{\text{Company Inventory Costn} - \text{Inventory Cost Using EOQ Method}}{\text{Company Inventory Cost}} \times 100\%$$

$$E = \frac{3.941.366,1 - 1.429.481,24}{3.941.366,1} \times 100\%$$

$$E = 63 \% \text{ (Percentage cost efficiency)}$$

Cost savings can be made up to 63%. The efficiency of the total cost of supplying soybeans as a raw material for "Kizz Crunchy" chips obtained according to the EOQ method allows Rumah Tempe Zanada to make savings and the remaining costs can be allocated to other fields, one of which is increased marketing because this product already has a good image, but not widely known by the public. So, it is unfortunate if the costs incurred are only focused on raw materials. The marketing activities carried out are to influence consumer purchasing decisions for this "Kizz Crunchy" tempeh chip product.

$$\begin{aligned} \text{Score obtained} &= 100 \\ \text{Maximum score} &= 5 \times 7 \times 43 \\ &= 1.505 \\ \text{Minimum score} &= 1 \times 7 \times 43 \\ &= 731 \\ \text{Intervals} &= (1.505-731)/5 \\ &= 744/5 \\ &= 154.8 \end{aligned}$$

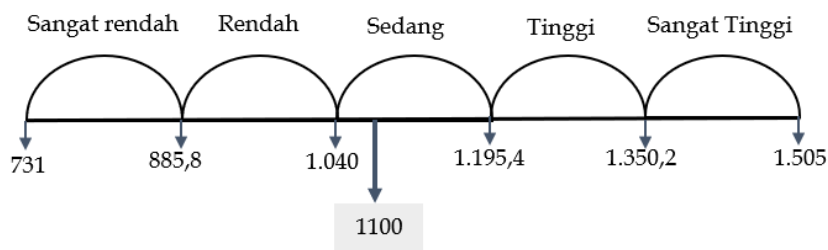


Figure 1. The Continuum Line is the Level of Farmer's Knowledge of AI technology

Communication Intensity

The intensity of communication is an assessment of how often the farmer communicates and discusses the maintenance of cattle, both among breeders and extension workers. Based on table 3 it is known that communication between farmers is going well, as evidenced by the conditions in the field which show relatively the same way of raising cattle, because they communicate a lot and share the knowledge they have with fellow breeders. Farmers strongly agree that communication is important to increase knowledge and motivation. The highest intensity of communication is communication with fellow breeders, this communication is almost done every day when farmers are in the fields and looking for grass, or when they meet at the mosque after congregational prayers.

Table 2. Communication Intensity Level

No	Question	Communication Intensity					Score	Percentage (%)
		STS	TS	N	S	SS		
1.	Able to communicate well	0	0	2	26	15	185	18,24
2.	Discuss frequently with fellow breeders	0	2	2	21	18	184	18,15
3.	Frequent discussions with extension workers	0	11	7	13	12	155	15,29
4.	Frequent counseling	0	25	4	6	8	126	12,43
5.	Often share experiences with fellow breeders	0	4	1	26	12	175	17,26
6.	Understand the importance of communication to increase knowledge	0	2	4	12	25	189	18,64
Amount							1014	100.00

Source: Primary Data Processed, 2022

Overall the total score for the intensity level of farmer communication is 1014, Figure 2 shows that the communication intensity of Madura cattle breeders in West Waru Village is included in the high category, because breeders in West Waru Village have understood the importance of communicating to gain insight, even though the intensity of communication between farmers and Extension agents still need to be improved, but breeders have been intensely communicating and exchanging information with fellow breeders so that they can still gain knowledge and be able to strengthen relationships between fellow breeders.

- Score obtained = 1014
- Maximum score = 5 x 6 x 43 = 1.290
- Minimum score = 1 x 6 x 43 = 258
- Intervals = (1.290-258)/5

$$= 1.032/5$$

$$= 206.4$$

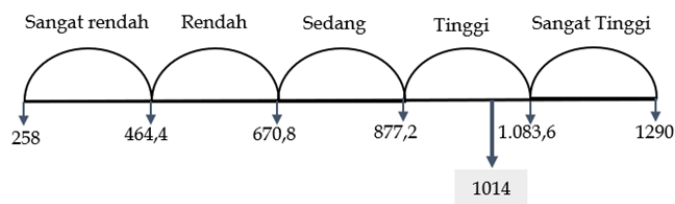


Figure 2. Communication Intensity Continuum Line

Breeder Motivation

The level of motivation of Madura cattle breeders in Waru Barat Village, Waru District can be described as follows:

Existence Needs

Based on the results of the analysis in Table 4, it is known that the highest score, which is equal to 182 (50.70%), is obtained from the statement that the farmer's motivation in raising cattle is to pay for their children's school fees. Farmers often rely on money from selling cows as a source of children's education costs such as going to college or entering Islamic boarding schools, because the job of being a corn farmer cannot provide a regular and constant income, therefore one of the motivations for breeders to raise cattle is to meet large needs such as children's education costs. Furthermore, a score of 177 (49.30%) obtained from the statement that the farmer's motivation in raising cattle is for savings. Farmers in West Waru Village consider cows to be a wealth asset which is used as savings to be sold when there is a need that requires large costs such as building a house, a celebration, and experiencing a disaster. One Madura beef cattle has a sale value ranging from 10-20 million.

Table 3. The Motivation for Raising Livestock for the Need For Existence

No	Statement	Existence Needs (Economy)					Score	Percentage (%)
		STS	TS	N	S	SS		
		1.	For savings	0	3	0		
2.	For children's school fees	0	4	2	17	20	182	50,70
Amount						359	100.00	

Source: Primary Data Processed, 2022

Relationship Needs

Based on the results of the analysis in Table 5, it is known that the highest score of 183 (36.67%) was obtained from the statement that the farmer's motivation in raising cattle was to strengthen the sense of brotherhood between breeders. closely because on average the surrounding community also raises cows so that a sense of mutual assistance arises, as well as to be accepted and mingle with fellow breeders in their environment. In addition, the motivation of farmers to raise cattle also arises because of the support from families who have raised cattle for generations.

Table 4. Raising Motivation for Related Needs

No	Question	Relationship Needs (Social)					Score	Percentage (%)
		STS	TS	N	S	SS		
1.	There is support from the family	0	2	2	26	13	179	35,87
2.	Strengthen brotherhood among breeders	0	1	3	23	16	183	36,67
3.	To be better known	1	14	6	20	2	137	27,45
Amount							499	100.00

Source: Primary Data Processed, 2022

Growing of Need

Based on the results of the analysis in Table 6, it is known that the highest score of 183 (36.67%) was obtained from the statement that the farmer's motivation in raising cattle was to maintain and preserve the Madurese cattle population. Madura cattle can continue to increase because breeders consider that Madura cattle are part of their culture that must be maintained and preserved. In addition to preserving the Madura cattle population, the motivation of farmers in raising cattle is also driven by the desire to achieve success and profit.

Table 5. Raising Motivation for Growing Needs

No	Question	Growing Needs					Score	Percentage (%)
		STS	TS	N	S	SS		
1.	Develop farming skills	0	2	4	26	11	175	23,36
2.	Maintaining the Madura cattle population	0	0	2	16	25	195	26,03
3.	Achieve success and profit	0	0	2	18	23	193	25,77
4.	Increase the success that has been achieved	0	0	2	25	16	186	24,83
Amount							749	100.00

Source: Primary Data Processed, 2022

Entertainment

Based on the results of the analysis in Table 7, it is known that the highest score of 199 (25.95%) is obtained from the statement that the farmer's motivation in raising cattle is to fill free time between farming activities with useful activities, after carrying out farming activities which are mostly carried out in the morning until noon, then fill the rest of the day. Farmers in West Waru Village use their free time for useful and productive activities such as caring for cows and looking for grass. Furthermore, a score of 192 (25.03%) was obtained from the statement stating that raising cows can give a feeling of pleasure, for cattle breeders in West Waru Village raising cattle can be entertainment and give a feeling of pleasure, especially if the cattle are raised and can develop well and be healthy so that they produce a sale value.

Table 6. Farming Motivation for Entertainment

No	Question	As an Entertainment					Score	Percentage (%)
		STS	TS	N	S	SS		
1.	Farming is entertainment	0	3	1	15	24	189	24,64
2.	Farming gives a feeling of pleasure	0	1	2	16	24	192	25.03
3.	Breeding for hobby	0	3	1	17	22	187	24,38
4.	Fill free time with useful activities	0	1	1	11	30	199	25.95
Amount							767	100.00

Source: Primary Data Processed, 2022

Breeder Motivation Level

Table 7. Breeder Motivation Level

No	Motivation	STS	TS	N	S	SS	Score	Percentage (%)
1.	Existence	0	14	6	184	155	359	15,12
2.	Relate	1	34	33	276	155	499	21.02
3.	Develop	0	4	30	340	375	749	31.55
4.	Entertainment	0	16	15	236	500	767	32,31
Total Score							2374	100.00

Source: Primary Data Processed, 2022

Based on Table 8 it is known that the motivation of farmers in raising Madura cattle in West Waru Village is driven by the need for existence by 15.12%, the need for connection is 21.02%, the need for development is 31.55%, and the motivation for entertainment is 32.31%. The biggest motivation that encourages farmers in Waru Barat Village to raise cows is entertainment, the highest motivation comes from the desire of breeders to fill spare time with useful activities. The results of this study are different from the results of the study Abidin et al., (2018) which states that the biggest motivation for breeders in raising beef cattle is economic motivation, namely increasing income, obtaining additional income and having savings that can be sold at any time. The results of this study are different from the results of previous studies because each breeder has a specific goal in raising cattle according to the economic, social and hobby needs of each breeder.

The desire to fill free time with useful activities is the biggest motivation for breeders in raising cattle because of the high work ethic of the Madurese people, as it can be seen that the Madurese are known to have a tenacious and diligent attitude, and will not waste time. Farmers also think that their spare time is better spent doing useful activities such as caring for cows and looking for grass. This is supported by the results of research conducted by Husaini (2015) which states that the Madurese people have a work ethic of hardworking, tenacious, disciplined and not wasting time. Farmers in West Waru Village also stated that raising cattle has become a hobby and part of the Madurese culture, without a love for the culture of raising cows, farmers will choose other jobs that are more productive and profitable as a source of income. The total score of the farmer's motivation level in raising cattle as a whole is 2374, from these results it can be interpreted that the motivation

level of Madura cattle breeders in West Waru Village is included in the very high category as shown in Figure 3.

Score obtained = 2374
 Maximum score = 5 x 13 x 43 = 2.795
 Minimum score = 1 x 13 x 43 = 559
 Intervals = (2.795-559)/5 = 2.236/5 = 447.2

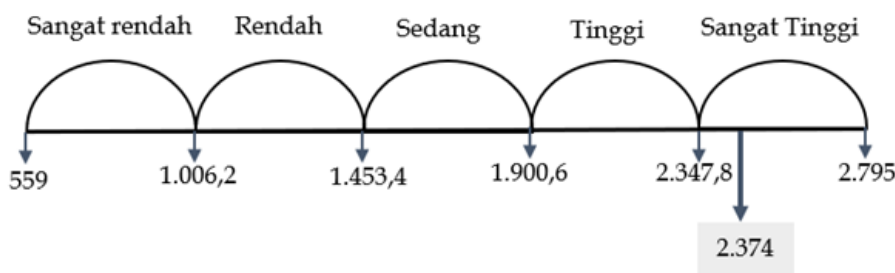


Figure 3. Continuum Line of Farmer Motivation Level

Effect of Characteristics on Motivation

Determination Coefficient Test

Table 8. Determination Coefficient Test Results

Model	R	R Square	Adjusted R Square	std. Error of the Estimate
1	.874a	.763	.716	259,985

Source: Primary Data Processed, 2022

The results of the analysis in table 9 obtained a value. *Adjusted R Square* equal to 0.716, meaning that 71.6% of the dependent variable, namely the farmer's motivation can be explained by the independent variable (age, education level, farming experience, number of cows kept, number of family dependents, knowledge of AI technology and communication intensity), while the remaining 38.4% is explained by other variables outside the model.

F-Test

Table 9. F test Results

ANOVA b					
Model	Sum of Squares	df	MeanSquare	F	Sig.
1 Regression	762,544	7	108,935	16.117	.000a
residual	236,572	35	6,759		
Total	999,116	42			

Source: Primary Data Processed, 2022

The results of the simultaneous influence test in table 10 show that the calculated F value is equal to $16.117 > F_{table} = 2.285$ with a significance level ($\alpha = 0.05$), meaning that simultaneously or jointly there is a significant influence between the independent variables (age, education level, farming experience, number of cows kept, number of family dependents, knowledge of AI technology and intensity of communication) on the dependent variable, namely farmer motivation.

t-Test

Table 11. t-test Results

	Coefficients			Information
	B	t	Sig	
(Constant)	29,421	6,286	.000	
Age	.055	.877	.386	No effect
Education	-.114	-.903	.373	No effect
Breeding Experience	-.059	-1,006	.321	No effect
Number of Cattle	1,344	4,207	.000	Significant influence
Family Liability	1,228	3.114	.004	Significant influence
IB Technology Knowledge	.174	1530	.135	No effect
Communication Intensity	.566	4,081	.000	Significant influence

a. Dependent Variable: Y

Source: Primary Data Processed, 2022

Based on the results of the simultaneous influence test in table 11, the regression model equation is obtained as follows:

$$Y = 29.421 + 0.55 X_1 - 0.114 X_2 - 0.059 X_3 + 1.344 X_4 + 1.228 X_5 + 0.174 X_6 + 0.566 X_7 + 0.05$$

The age variable (X1) obtains a significance value of $0.386 > 0.05$ with a t count value of $0.877 < t_{table} (2.018)$. From these results, it can be concluded that age does not significantly influence the farmer's motivation in raising cattle. Cattle farmers in West Waru Village are in the age range of 30-60 years. The age variable has no effect on motivation because the results in the field show that the motivation of each respondent varies, each breeder has different motivations and is not affected by age, younger breeders tend to be innovative, open to new knowledge and have more excellent physical abilities, while Older breeders have a lot of experience and are able to think more carefully. The results of this study are supported by research of Marak et al., (2021) which explains that the age variation of breeders has no effect on the motivation to breed intensively.

The education level variable (X2) obtains a significance value of $0.373 > 0.05$ with a t count value of $-0.903 < t_{table} (2.018)$, from these results it can be interpreted that the level of education does not affect the farmer's motivation in raising cattle, because the farmer's knowledge and motivation in Raising cows does not come from formal education. The knowledge and motivation of breeders in Waru Barat Village arises because of the influence of the surrounding environment and the culture of raising cows which has been passed down from generation to generation by their families. Most of the breeders are at a low level of education, that is, they only go to school up to the

elementary school level and have never even taken formal education at all. The results of this study are consistent with rHalim, (2017) which states that breeders are generally at a low and uniform level of education so that the variable level of education is not a factor that causes the high and low motivation of breeders.

The farming experience variable (X3) obtains a significance value of $0.321 > 0.05$ with a t count of $-1.006 < t$ table (2.018). This means that farming experience does not affect the motivation to raise livestock, because even though the average breeder has been raising livestock for decades, the business still cannot develop significantly and the results from farming cannot be used to meet their daily needs. A lot of experience does not guarantee high motivation. Different opinion from Nurdayati et al. (2020) which states that farming experience is one of the variables that plays a major role in determining the success and increase in the income of breeders.

The variable number of cows kept (X4) obtains a significance value of $0.000 < 0.05$ with a t count of $4.207 > t$ table (2.018). This means that the number of cows kept has a significant effect on farmer motivation, because the more number of cows kept, the more time must be devoted to caring for and raising cattle, so that the farmer's motivation will increase and they will be more motivated to seek information and innovation to streamline their business. Nurdayati et al. (2020) in his research stated that breeders who have a larger number of livestock have higher motivation than breeders who have a small number of livestock.

The variable number of family dependents (X5) obtains a significance value of $0.004 < 0.05$ with a t count of $3.114 > t$ table (2.018). This means that the number of family dependents has a significant effect on the farmer's motivation, this is due to the more family members who are dependents, the farmer will be more motivated to work harder, and take advantage of the free time they have for useful and productive activities to meet the needs of their family, including the needs of their families. child's school fees. Halim (2017) in his research also stated that the more dependents the family has, the higher the burden of meeting the needs of family life so that the motivation of farmers to raise cattle is higher.

The knowledge variable regarding AI technology (X6) obtains a significance value of $0.135 > 0.05$ with a t count of $1.530 < t$ table (2.018). This means that knowledge of AI technology has no effect on farmer motivation, because the goal or motivation that dominates breeders in raising cattle is to fill spare time and entertainment, not profit-oriented or breeding businesses, besides that the knowledge level of breeders is still in the medium category. Marak et al (2021) stated that the higher the farmer's knowledge of a technology, the easier it would be for the farmer to adopt it, knowledge is the result of thinking after the process of receiving information so as to increase one's motivation to implement innovation.

The communication intensity variable (X7) obtains a significance value of $0.000 < 0.05$ with a t count of $4.081 > t$ table (2.018). This means that the communication intensity variable has a significant effect on the motivation variable, because the communication intensity of Madura cattle breeders in West Waru Village is in the high category, motivation arises because farmers often hold discussions, share experiences and knowledge with fellow breeders in their environment, even though the intensity of communication with extension workers is still lacking, motivation and knowledge of farmers are mostly obtained from the results of communication between fellow breeders. Marak et al (2021) in his research stated that high communication intensity both with extension agents and fellow breeders can increase the motivation of farmers in running a livestock business.

CONCLUSION AND SUGGESTION

Most of the age of Madura cattle breeders in Waru Barat Village are in the productive age range of 30-40 years, elementary education level (6 years), the majority of breeders have 21-30 years of farming experience, the number of cows kept is between 1-3 heads, the number of On average, 3-4 people are dependent on the farmer's family, with the level of knowledge about AI technology in the medium category, and the intensity of communication in the high category. The motivation level of Madura cattle breeders in West Waru Village is in the very high category, that motivation driven by the need for existence by 15.12%, the need for relatedness by 21.02%, the need for growth by 31.55%, and the motivation for entertainment by 32.31%. Variable the number of cows kept, the number of family dependents, and the intensity of communication have a significant effect on motivational variables. Meanwhile, the variables of age, education level, farming experience, and knowledge of AI technology have no significant effect on motivational variables.

The recommendations given from the results of this study are that the Pamekasan Regency Government is expected to be able to encourage the maintenance of Madura cattle that have been carried out by the community into business-oriented activities that are carried out with good management by providing adequate facilities and infrastructure for livestock activities such as building a research and development center for Madura cattle, providing training on feed technology, crop and livestock integration training, and expanding the animal market network. Apart from that, the Pamekasan District Animal Husbandry Service must also conduct counseling more intensively and invite breeders to be more active in communicating so that the knowledge and insights of breeders can be broader and developed.

REFERENCES

- Abidin, J., L. Malesi, & H. A. Hadini. 2018. Breeder Motivation in Developing Bali Cattle Business in West Muna Regency. *Journal of Tropical Animal Husbandry Science And Technology*, 5(2), 17–23.
- Afriani, Idris, N., & Fatati. 2014. Interest and Motivation of Breeders to Develop Cattle in Oil Palm Plantation Areas in Jambi Province. *Scientific Journal of Animal Sciences*, XVII(2), 77–83.
- Central Bureau of Statistics. 2021. Livestock Population by Regency/City and Type of Livestock in East Java Province 2019-2020. In Central Bureau of Statistics of East Java. <https://jatim.bps.go.id/statictable/2021/09/06/2246/population-ternak-menurut-kabupaten-kota-dan-tipe-ternak-di-provinsi-jawa-timur-ekor-2019- and-2020. html>
- Caulton, J. 2012. The Development and Use of The Theory of ERG : A Literature Review. *Emerging Leadership Journeys*, 5(1), 2–8.
- Halim, S. 2017. The Influence of Breeder Characteristics on Beef Cattle Raising Motivation in Bangkala Village, Maiwa District. In Hassanuddin University (Vol. 01). Hasanuddin University.
- Husaini. 2015. Madurese Work Ethics in Sukadana District, North Kayong Regency. *Sociologique, Journal of Undergraduate Sociology*, 3(4), 1–19.
- Ihsannudin. 2015. *Quantitative Business Method 1*. Truniojoyo University, Madura.
- Ministry of Agriculture, Directorate General of Livestock and Animal Health. (2021). *Animal Husbandry and Health Statistics*. Directorate General of Livestock and Animal Health Ministry of Agriculture of the Republic of Indonesia.
- Luanmas, C. M., S. Nurtini, & F. T. Haryadi. 2011. Analysis of Beef Cattle Raising Motivation for Local and Transmigrant Farmers and Their Effect on Income in Kairatu District, West Seram

- Regency. *Livestock Bulletin*, 35(2), 113–123.
- Lutvanyah, S., D. Perwitasari-Farajallah, & A. Farajallah. 2017. Comparison of Morphological Characteristics of Madura Sonok and Madura Beef Cattle. *Indonesian Journal of Agricultural Sciences*, 22(1), 67–72. <https://doi.org/10.18343/jipi.22.1.67>
- Marak, J. H., N. W. Ingriati, & I. Suarta. 2021. Farmers' Motivation in Cattle Raising Intensively in Pandawi District, East Sumba Regency. *Journal of Tropical Animal Husbandry*, 9(1), 189–210.
- Nurdayati, Nadia Izzatu Fidin, & Supriyanto. 2020. The Effect of Breeder Characteristics on Dairy Goat Raising Motivation. *Journal of Agricultural Extension Development*, 17(32), 121–136.
- Nurlaila, S., & M. Zali. 2020. Factors Influencing the Increase of Madura Cattle Population in Sonok Cattle Centers, Pamekasan Regency. *Journal of Tropical Animal Husbandry Science And Technology*, 7(1), 21–28.
- Prihartanta, W. 2015. Motivational Theories. *Adabiya Journal*, 1(83), 1–11.
- Priyono. 2014. *Introduction to Management* (T. Chandra (ed.); 1st ed.). Zifatama Publisher.
- Rusdiana. 2018. *Entrepreneurship Theory and Practice* (1st ed.). Faithful Pustaka CV.
- Simamora, T., A. Fatchiya, D. Sadono, & P. S. Asngari. 2021. Characteristics of Beef Cattle Breeders in North Central Timor and Belu Regencies, East Nusa Tenggara Indonesia. *International Journal of Progressive Sciences and Technologies (IJPSAT)*, 30(1), 246–253.