

## **Differences in Characteristics of Farmers who Adopt and Who Do not Adopt a Cattle Business Insurance Program**

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### **Abstract**

One of government programs through the Ministry of Agriculture of the Republic of Indonesia was insurance for cattle business as a manifestation of the government's partisanship in an effort to protect cattle farmers from the risk of death and loss of cattle. To support the program, Gowa Regency has implemented a cattle business insurance program. Farmers were a very influential factor in the adoption of cattle business insurance program that have different characteristics to adopt so as to minimize the risk of their livestock business. This study aimed to determine the differences in characteristics of farmers who adopt and who do not adopt a cattle business insurance program. This research was conducted in Bungaya District, Gowa Regency from February to March 2019. The method used was descriptive research using 98 farmers as a sample consisting of 63 people who adopted and 35 people who did not adopt, data were collected through interviews and analyzed descriptively statistically. The results showed that differences in the characteristics of farmers who adopted and did not adopt a cattle business insurance program consisting of: (a) the age of farmers was mostly 38 to 54 years with those adopting 35 people and those who did not adopt 16 people; (b) most of them were male, where 51 farmers adopt and 28 farmers who do not adopt; (c) the last level of education of the farmers were mostly from elementary school/equivalent who adopted as many as 25 people and those who did not adopt 14 people; (d) the total number of family members of farmers was 4 to 6 in which 29 people adopt and 22 people do not adopt; (e) the scale of the business of most 1 to 7 cattle owned by farmers as many as 54 people who adopted and 32 people who did not adopt; and (f) the experience of raising was mostly in the range of 10 to 23 years where those who adopt as many as 40 people and those who do not adopt 24 people.

**Keywords** : Beef Cattle, Characteristics of Farmers, Cattle Business Insurance.

### **INTRODUCTION**

The development of beef cattle in Indonesia at this time is very promising with the increasing number of requests or needs of the community towards consumption of animal protein sourced from meat. Therefore, farmers and beef cattle entrepreneurs and government agencies are highly required to increase the quantity and quality of beef cattle to meet consumer demand. The quantity and quality of beef cattle in this case beef cattle need to get serious attention and handling,

because there are many factors that influence their development such as genetics, risk of death and the environment. Livestock businesses generally have a variety of risks that cannot be properly mitigated due to death, accidents, theft, natural disasters including disease outbreaks and price fluctuations. The impact of this failure was the disruption of the livestock farming system and reduced production. Therefore, a program from the government is needed to minimize the risk of losses received by farmers.

Government programs have developed a lot in the community, therefore in order to achieve their goals, management and management needs to be done well. Regular evaluation such as whether programs can produce an increase in production, farmers' income and absorb labor is very important to know the level of achievement of goals, because often programs like this experience failure in achieving goals. One measure is that a program or project can meet the empowerment target if it meets the requirements technically and financially for farmers, meaning that it is technically feasible and financially profitable for farmers (Kusnadi, 2008).

One of the government programs through the Ministry of Agriculture of the Republic of Indonesia is Cattle Business Insurance (AUTS) as a manifestation of the government's partiality in an effort to protect cattle farmers from the risk of death and loss of cattle. AUTS is expected to provide protection to cattle breeders if a cow occurs due to illness, childbirth and accident and /or loss by transferring losses to other parties through insurance coverage.

Implementation of socialization and advocacy for officers and breeders has begun since the drafting of the AUTS to date. Since the AUTS program is new, it still needs to intensify the provision of understanding and benefits of AUTS for farmers. Gowa Regency is one of the districts in South Sulawesi Province which makes beef cattle as one of the regency's leading commodities. To support the development of the current beef cattle business through the Animal Husbandry and Plantation Agency, the AUTS program has been implemented. The eighteen sub-districts in Gowa Regency, only four districts have implemented the AUTS program namely Bungaya, Bontonmpo, Bajeng, and Biringbulu districts. In the four districts, Bungaya District has a large number of farmers who carry out the AUTS program.

Farmers as recipients of innovation are very influential factors in technology adoption. Because technology adoption is said to be successful when farmers are able to apply what they get through the information / material they receive. It is expected that this AUTS program is perceived by farmers to be very good so that farmers want to adopt the AUTS program so they can minimize the risk of their livestock business (Sulaiman, *et al.*, 2017). The purpose of this study was to determine the differences in characteristics of farmers who adopted and not adopt a cattle business insurance program.

## **MATERIALS AND METHODS**

This research was conducted in Bungaya District, Gowa Regency from February to March 2019. The method used was descriptive research using 98 farmers as a sample consisting of 63 people who adopted and 35 people who did not adopted, data were collected through interviews and analyzed using statistics descriptively (Sugiyono, 2014).

## RESULTS AND DISCUSSION

### Age of Beef Cattle Farmers

Age was one of the factors that greatly influences the work productivity of farmers. Age was related to work ability and mindset in determining the style and form and pattern of management that was appropriate in managing beef cattle breeding business. As with farmers in Bungaya District, Gowa Regency, they have different age levels, ranging in age from 20 years to 71 years. The Table 1 presented more detail of the result.

Table 1. Age Group and Percentage of Age of Beef Cattle Breeders in Bungaya District, Gowa Regency

No.	Age Classification (year)	Adopt AUTS (person)	No Adopt AUTS (person)
1.	20 – 37	11	10
2.	38 – 54	35	16
3.	55 – 71	17	9
<b>Total</b>		<b>63</b>	<b>35</b>

Source: Research result data after processed, 2019

Table 1 showed that the majority of respondents still in productive age in the Bungaya district, Gowa Regency were in the age range of 38 - 54 years, both farmers who adopted AUTS and farmers who did not adopt AUTS. In addition, there are still elderly farmers who are still conducting cattle business because this is a cattle business that has been a hereditary endeavor so that older farmers feel that they are still quite capable and it has become a long habit to manage cattle business. This situation illustrates that respondents in general are still very active, both physically and thoughtfully in developing their businesses. The age of the farmer is closely related to the innovation adoption process which is very important in an effort to increase productivity.

There were breeders who are still young and adopted, and there were also those who have recently adopted. Generally at a young age farmers have a high enthusiasm for adoption compared to older people who prioritize traditions that have long been carried out. According to Mardikanto (2009), that the older a person is, the slower it is to adopt innovations and tend to only carry out activities that are commonly applied by residents of the local community.

### Gender

Beef cattle farming does not only involve men, but women can also do various business activities. In this livestock business women are still lacking but participation in livestock business is not inferior to men. The classification of respondents by gender in beef cattle farming in Gowa Regency presented in Table 2.

Table 2. Classification of Respondents by Gender in Beef Cattle Farmers in Bungaya District, Gowa Regency

No.	Gender	Adopt of AUTS (person)	No Adopt AUTS (person)
1.	Men	51	28
2.	Women	12	7
<b>Total</b>		<b>63</b>	<b>35</b>

Source: Research result data after processed, 2019

The number of male respondents was higher than the number of female respondents. The large number of men compared to women showed that in conducting animal husbandry business, mostly done by men, as well as in adopting AUTS, it is also done by farmers, the majority of whom are male, but it is possible for women to do so. This is in accordance with Wahyono (2013) opinion, that proper handling and placement of the right work position will also increase effectiveness and productivity as a trigger for the success of a business.

### Education Level

The level of education of a person is an indicator that reflects the ability of a person to be able to complete a certain type of work or responsibility given to him. The classification of respondents based on the number of family dependents presented in Table 3.

Table 3. Classification of Respondents by Level of Education in Bungaya District, Gowa Regency

No.	Education Level	Adopt of AUTS (person)	No Adopt AUTS (person)
1.	Elementary School	25	14
2.	Junior High School	16	8
3.	Senior High School	20	13
4.	Bachelor Degree	2	0
<b>Total</b>		<b>63</b>	<b>35</b>

Source: Research result data after processed, 2019

Table 3 illustrated that level education in Bungaya District, Gowa Regency is only in low education. Low education started from those who did not go to school to those who graduated from junior high school. It can be seen that the average education of the respondents is only from elementary school, while the respondents who continue their education to tertiary education only 2 (two) people.

One factor that caused the low level of education obtained by farmers was the lack of educational facilities located in Bungaya District, Gowa Regency. Although the majority of respondents were still in low education level, but they were not limit them to adopt innovations. Farmers in Bungaya District, Gowa Regency who adopted the AUTS program thought that adopting innovation did not have to go through high education, just by relying on experience and seeing from cattle raising so far. This can be describe from the existence of farmers who adopt innovation without going through a high education bench. However according to Soekartawi (2008), that farmers who have higher education are relatively quick to implement adoption of innovations than those with low education.

### Number of Family Members

The number of family members is the total number of family who are borne by the family head. Family members consist of family heads, wives, children and other family members who are the responsibility of the family head. The number of dependents owned by respondents of beef cattle farmers in Bungaya District, Gowa Regency presented in Table 4.

Table 4. Classification of Respondents Based on the Number of Family Members in Beef Cattle Farmers in Bungaya District, Gowa Regency

No.	Number of Family Members	Adopt AUTS (person)	No Adopt AUTS (person)
1.	1 – 3	28	11
2.	4 – 6	29	22
3.	7 – 8	6	2
<b>Total</b>		<b>63</b>	<b>35</b>

Source: Research result data after processed, 2019

Table 4 indicated that the number of dependents of farmer families in Bungaya District, Gowa Regency is in the range of 4 - 6 people, this means that each family member has a number of family dependents of 4-6 people. The large number of family dependents can affect farmers in carrying out their livestock business. The number of family dependents can also help farmers in terms of labor, because if there are many family members, the farmers will be lighter in conducting livestock business because they are assisted by family workers.

According to Sumbayak (2006), the number of family members would influence farmers in making decisions. Because the more the number of dependents on the family, the more the burden of life must be borne by a farmer. The number of family dependents is one of the economic factors that need to be considered in determining income in meeting needs.

### Business Scale

Beef cattle farming is quite developed in Bungaya District as well as being a main business as a side business. Even among the breeders the respondents were only at the beginning of their business as a side business, gradually becoming the main business along with the development of their livestock business. Regarding the number of beef cattle owned by farmers presented in Table 5.

Table 5. Business Scale of Farmers in Bungaya District, Gowa Regency

No.	Business Scale (Tail)	Adopt AUTS (person)	No Adopt AUTS (person)
1.	1 – 7	54	32
2.	8 – 14	8	3
3.	15 – 19	1	0
<b>Total</b>		<b>63</b>	<b>35</b>

Source: Research result data after processed, 2019

Table 5 showed that in general, beef cattle business in Bungaya District, Gowa Regency was a people's farm. The results showed that in Bungaya District, Gowa Regency, most farmers had 1-7 cattle which were traditionally maintained with food crops. Traditional livestock care was characterized by a small scale of business, simple technology, simple feed and was a side business so that the productivity of beef cattle was still low. In the opinion of Tandi (2010), that raising cattle in Indonesia was managed by various forms of business. In general, cattle were owned and

cultivated by people on a small scale. Public livestock farming was difficult to develop into a profitable cattle farm because it is a side business, if the farmer needs cash then the livestock will be cashed so that the farmer's bargaining position was very weak.

### Farming Experience

The experience of raising livestock was the length of time someone is engaged in beef cattle farming business which is stated in years. The experience of farming greatly determines the success rate of farmers in managing their business because the longer the farmer manages his farm business, the more experience he gets in getting to know things related to beef cattle business, especially in terms of maintenance, disease prevention, treatment of diseases and in terms of decision making for policies. Thus the success rate was greater because experience was the best teacher. The experience of raising breeders of respondents presented in Table 6.

Table 6. Classification of Experiences in Raising Cattle Breeders in Bungaya District, Gowa Regency

No.	Farming Experience (year)	Adopt AUTS (person)	No Adopt AUTS (person)
1.	10 - 23	40	24
2.	24 - 37	21	8
3.	38 – 50	2	3
<b>Total</b>		<b>63</b>	<b>35</b>

Source: Research result data after processed, 2019

Table 6 showed that most of the experiences of raising farmers in Bungaya District, Gowa Regency have experience in farming, namely 10-23 years. The experience of raising livestock also affects the scale of livestock business, because the longer the experience of raising a person, the more knowledge is known by farmers that can encourage the development of livestock business. This is because most farmers prioritize traditions that they have long lived in raising beef cattle, so that farmers are difficult to let go of the tradition and adopt accepted innovations. So whether or not the farmer is following the livestock business does not guarantee that the farmer will adopt the innovation offered. According to Murwanto (2008), that the experience of raising cattle for a long time, farmers will be more careful in trying and can correct shortcomings in the past.

### CONCLUSION

The characteristics of farmers who adopt and did not adopt a cattle business insurance program consisting of: (a) the age of farmers was mostly 38 to 54 years with those adopt was 35 people and those who did not adopt was 16 people ; (b) most of them were male, where 51 farmers adopt and 28 farmers did not adopt; (c) the last level of education of the farmer was mostly from elementary school / equivalent who adopted as many as 25 people and those who did not adopt was 14 people; (d) the total number of family members of farmers was 4 to 6 in which 29 people adopt and 22 people did not adopt; (e) the business scale most 1 to 7 cattle owned by farmers as many as 54 people who adopted and 32 people who did not adopt; and (f) the experience of raising was mostly in the range of 10 to 23 years where those who adopt as many as 40 people and those who did not adopt was 24 people.

## REFERENCES

- Kusnadi, U. 2008. Livestock technology innovation in plant-livestock integration systems to support beef self-sufficiency. *Development of Agricultural Innovation*, 1(3): 189-205.
- Mardikanto, T. 2009. *Building Modern Farms*. UNS Press, Surakarta.
- Murwanto, A. G. 2008. Characteristics of Breeders and Input Level of Beef Cattle Technology in Prafi Valley, Manokwari Regency (Farmer Characteristic and Level of Technology Inputs of Beef Husbandry at Prafi Valley, Regency of Manokwari). *Journal of Animal Husbandry*, 3(1): 8-15.
- Soekartawi. 2008. *Basic Principles of Agricultural Communication*. UI Press. Jakarta.
- Sugiyono. 2014. *Statistics for Research*. 24th print. CV Publisher. Alfabeta, Bandung.
- Sulaiman, A.A., Syahyuti, Sumaryanto, I. Inounu, S. Kuntarsih, Sumarmi, dan Siswoyo. 2017. *Farmer Protector Insurance*. Secretariat General of the Ministry of Agriculture of the Republic of Indonesia, Jakarta.
- Sumbayak, J.B. 2006. *Material, Method, and Media Extension*. Faculty of Agriculture. University of Northern Sumatra. Field.
- Tandi, I. 2010. Economic Analysis of Bali Cattle Livestock Maintenance with Pastoral Systems in Pattalassang District, Gowa Regency, South Sulawesi Province. *Journal of Agrisystem*, 6(1): 43-50.
- Wahyono. 2013. Differences between Men and Women at Work [http // www-. Puncakbukit. blog. com./ difference-men-and-women-at work. html](http://www.blog.com./difference-men-and-women-at-work.html). Accessed on June 20, 2019.