Breeders response to UPSUS Siwab’s efforts to increase cattle population

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Abstract. This study aims to determine the response of farmers to the Siwab Upsus Program in Efforts to Increase Beef Cattle Population and determine the response of farmers to counseling given. This study was carried out in Balang Tanaya Village, Polong Bangkeng Utara District, Takalar Regency, South Sulawesi. This study uses survey methods, and data collection conducted by filling out questionnaires, analysis tools used in the measurement of research indicators are carried out by applying a Likert Scale, by measuring the weight of the positive question score with an excellent response / very successfully given a score of 5 if the response categorized as not good/unsuccessful given a score of 1. As for the methods used in counseling, namely the method of individual approaches and group approaches. The response of breeders to the Upsus Siwab Program to increase beef cattle population in Balang Tanaya Village, Polong Bangkeng Utara District, Takalar Regency is in a suitable category (44%) with 11 respondents, in this case, beef cattle farmers can respond to the Upsus Siwab Program and can increase beef cattle population.

1. Introduction
The development of the livestock sub-sector is part of the development of the agricultural sector, where this sub-sector has a strategic value in meeting the needs of food, especially animal which continues to increase due to the increasing population of Indonesia, and an increase in the average income of the community [1,2]. Therefore, various efforts have been made by the government in order to improve the quality and quantity of animal food, one of which is through the Special Efforts to Accelerate the Improvement of Obligatory Cattle (Upsus Siwab). The Ministry of Agriculture launched a Special Efforts to Accelerate Increasing the Population of Obligatory Parent Cows (Upsus Siwab). Upsus Siwab includes two main programs, namely population increase through Artificial Insemination (IB) and Nature Mating Intensification (INKA). The program is outlined in the Minister of Agriculture Regulation No. 48 / Permentan / PK.210 / 10/2016 concerning Special Efforts to Accelerate the Increase in Parent Cattle Population Obligatory Pregnancy signed by the Minister of Agriculture on October 3, 2016.

Livestock development is closely related to the development of an area. South Sulawesi is one of the provinces in Indonesia which has considerable potential in animal husbandry development. This
province was once known as a livestock barn, with the ability to supply cattle to other areas in the context of national livestock procurement.

Upsus Siwab is a special effort to accelerate the increase in the population of pregnant cows and give birth properly. The success of Upsus Siwab is a new hope that food needs, especially animal food needs can be met so that our country is no longer importing, both in the form of feeder cattle and frozen meat from other countries. Therefore, a joint commitment between the central, provincial, and district/city governments is needed to jointly and work together to carry out this activity so that the hope for self-sufficiency in beef/buffalo in 2026 achieved [3].

Reported the results of studies in the Pesanggaran RPH (246 cows) and Mambal RPH (232 cows) in Bali, showing 81.7%, and 87.5% of Bali cows slaughtered in the two RPHs, respectively female [4]. Further characterization based on age, 99% of the number of female cattle slaughtered at Pesanggaran RPH, and 67.49% in Mambal RPH belong to the category of productive cows. Meanwhile, according to [5], in one of the official slaughterhouses it was found that 95% of cattle slaughtered every day are females, most are young females, and among them are cows in pregnant condition. Nationally, it is estimated that around 150-200 thousand productive heads of cattle are slaughtered each year. This number is huge and should be expected to disrupt the population and production of meat originating from local cattle.

Balangtanaya Village is one of the villages located in the Polong Bangkeng Utara District, Takalar Regency, which has a beef cattle population of ± 579 heads. Based on the results of the identification of the area, the Sikatutui Livestock Farmer Group located in Balangngasana Hamlet, Balangtanaya Village, Polongbangkeng Utara District, Takalar Regency is a target to measure the response, level of knowledge and attitudes of farmers towards the Upsus Siwab program to increase beef cattle population.

2. Methods

2.1. Research approaches and types
The research location is taken purposive sampling in consideration of the cattle farmers who participated in the study is 25 people who belong to a group of farmers in the village of Balangtanaya, district of North Bangkeng of Peas, Takalar district. The Upsus Siwab Program and did not participate in the Upsus Siwab Program.

2.2. Location and time of research
This research conducted in the village of Balang Tanaya, North Bankeng, Takalar District, South Sulawesi, for two months, starting from April to June 2019.

2.3. Types and data sources
The data sources used in this study are primary data and secondary data. Primary Data obtained through a live interview by completing a questionnaire. Secondary Data obtained from Takalar District Livestock Department and BPP North Polongbangkeng District, Takalar Regency.

2.4. Method of collecting data
The research method used in this research is the method of survey and data collection conducted by completing questionnaires. Gaining by doing an observation, interviews by using a list of the question as field guidelines and documentation. The documentation is related to the activities of Upsus Siwab that exist in the site of research, both from the village office, office of Camat, BPP, and other related institutions. Then it will be gathered to make a counseling design; the method that will use is the method of approach individuals and groups towards a target that is still lacking knowledge about the program Upsus Siwab to increase the population of beef cattle. Furthermore, the next step is by implementing counseling so as the evaluation on it.
2.5. Analysis techniques
The analytical tools used in measuring the research indicators are carried out by applying the Likert scale. The Likert scale with a measure is weighted positive question score with excellent response/very successfully awarded five scores; otherwise, if the response belongs to the category is not good/not successful given a score 1.

Evaluation methods used to determine the level of knowledge and attitudes of respondents by using Scale Rating or scale of values are then processed and stabbed using Continuum lines. The evaluation was conducted to determine the farmer's response to the submitted material. Preliminary evaluation (pre-test) to measure the level of knowledge and initial attitude of respondents to the results of studies conducted on the logging of respondents, the final evaluation (post-test) to measure the knowledge and attitude done at the end of the final counseling with Group method. The total number of questions asked by 10 out of two aspects to be measured (knowledge and attitude).

3. Results and discussion

3.1. Respondents' identity

3.1.1. Age. Age is one of the individual characteristics that contribute to the biological and physiological functions of a person. Age will affect someone in learning, understanding, and accepting the renewal. Age also affects the increase in the productivity of the work that a person does. In general, productive respondents have a high level of passion, including a passion for developing their land ventures. The classification of respondents by age showed in table 1.

| Age of respondent | Breeder (person) | Sample (%) |
|-------------------|------------------|------------|
| < 40              | 6                | 24         |
| 40-60             | 17               | 68         |
| >60               | 2                | 8          |
| Total             | 25               | 100        |

Table 1. Classification of respondents based on age.

Table 1 shows that the average farmer in Balangtanaya village, North Polongbangkeng District, Takalar District, is in the productive age group to do the job or run his business. The non-productive age is at a vulnerable age of 0-14 years, productive age 15 – 56 years, and advanced age 57 years and above. The higher the age of a person, then he is more inclined to think more mature and act wiser. Physically affects the productivity of the livestock business, where the higher the farmer's age, the ability to work relatively decreased.

3.1.2. Education. Institutional factors are certainly very in the hope of helping the community in efforts to increase the production of livestock that is maintained. An adequate level of education, Of course, will impact on the management of livestock farming. The classification of respondents in the level of education of farmers in Balangtanaya village of North Polongbangkeng district showed in table 2.
Table 2. Classification of respondents by education level.

| Education level     | Breeder (Person) | Sample (%) |
|---------------------|------------------|------------|
| Primary school      | 11               | 44         |
| Junior High school  | 8                | 32         |
| Senior High School  | 6                | 24         |
| Bachelor            | -                | -          |
| **Total**           | **25**           | **100**    |

Source: Primary Data that has processed in 2019

The results showed that most of the farmers were elementary school graduates (SD) as much as 11 people (44%), graduates (SMP) as many as eight people (32%), graduates (SMA) as much as six people (24%) and graduate (S1) 0 (0%). Education is influential in the way farmers think that will carry out their livestock business activities. Farmers whose formal education is more likely to be easier to receive innovations as well as changes in the case of cattle, especially the well-placed research. High-educated farmers are relatively faster to implement innovation adoption.

3.1.3. Raising beef cattle experience. Experience is the best teacher; the more experience that is owned by the farmer will be more skilled in managing a livestock business. Livestock experience obtained from someone based on their length on the struggle in a farm business. Experience livestock is the most crucial factor that a farmer must have to increase productivity and work in the livestock business. The length of the respondents in Balangtanaya village, North Polongbangkeng Sub-district, can be seen in table 3.

Table 3. Classification of respondents based on livestock experience.

| Breeding experience (years) | number of respondents (Person) | Percentage (%) |
|-----------------------------|--------------------------------|----------------|
| 1-7                         | 18                             | 72             |
| 8-14                        | 6                              | 24             |
| 15-20                       | 1                              | 4              |
| **Total**                   | **25**                         | **100**        |

Source: Primary Data that has processed in 2019

Table 3 showed the experience of livestock owned communities in Balangtanaya village; North Polongbangkeng district can be said to be quite experienced. It demonstrated by the number of farmers who have 1 – 7 years of livestock experience is 18 respondents with a percentage of 72%. The data shows that the majority of the respondents have sufficient experience and knowledge shown periods as farmers, the rising experience expected. [6] Knowledge gained more and more skill in running the livestock business is increasing.

3.1.4. Total livestock ownership. Beef cattle business in Balangtanaya village is generally a traditional farmer. Based on the results of the research and results that have been done, the ownership of cattle divided into three parts, which are 22 people (88%) which has (1 – 5) Oxtail, two persons (8%) which has (6 – 8) Oxtail and one person (4%) which has (> 9) Oxtail. Respondents maintain the classification of beef cattle in Balangtanaya village, North Polongbangkeng District, Takalar District showed in table 4.
Table 4. Classification of respondents based on the amount of livestock ownership.

| Number of Livestock ownership (head) | Total Respondent (Person) | Percentage (%) |
|--------------------------------------|---------------------------|----------------|
| 1 - 5                                | 22                        | 88             |
| 6 - 8                                | 2                         | 8              |
| >9                                   | 1                         | 4              |
| **Total**                            | **25**                    | **100**        |

Source: Primary Data that has processed in 2019

Table 4 shows that from the interviews of several ranchers, generally, most of the breeders have a livestock population ranging from 1 – 5 tails. According to Siregar (2009), that the farmer who owns 1 – 2 cattle cows, is a cattle business that is traditional.

3.1.5. Total family liabilities. The number of family members can influence the motivation of raising cattle. Classification of respondents based on the number of family liabilities in Balangtanaya village, North Polongbangkeng district, can be seen in table 5.

Table 5. Classification of respondents by a number of family dependents.

| Family liabilities (person) | Total Respondents (person) | Percentage (%) |
|-----------------------------|----------------------------|----------------|
| 1 - 3                       | 5                          | 20             |
| 4 - 6                       | 17                         | 68             |
| 7 - 9                       | 3                          | 12             |
| **Total**                   | **25**                     | **100**        |

Based on such data, it is possible to know that the majority of respondents have family and several different family liabilities. A large number of family dependents can affect farmers on their farms. the number of family members will affect the farmer in making decisions. [7] Because farmers will bear more family dependents, more and more life, the number of family liabilities is one of the economic factors to be considered in determining the income in meeting the needs.

3.1.6. Breeder's response to Upsus Siwab's efforts to increase the cattle population. Farmer's response to the Upsus Siwab Program to increase the cattle population in Balangtanaya, North Polongbangkeng District, Takalar District, can be seen in table 6.

Table 6. Category for breeders' answers.

| Score | Category    |
|-------|-------------|
| 46-50 | outstanding |
| 37-45 | good        |
| 28-36 | fair        |
| 19-27 | less        |
| 10-18 | bad         |

Source: Primary Data that has processed in 2019

Table 6 shows that the farmer's response to the score (10 – 18) is the category inadequate, score (19 – 27) in the category less, score (28 – 36) is the category fair, and the score (37 – 45) in the category good and if the farmer's response Score (46 – 50) then the score is an outstanding category.
Table 7. Farmer responses to the upsus siwab program.

| Category   | Number of respondents | Percentage |
|------------|-----------------------|------------|
| outstanding| 4                     | 16         |
| good       | 11                    | 44         |
| fair       | 7                     | 28         |
| less       | 3                     | 12         |
| bad        | -                     | -          |

Table 7 shows that the response of farmers to the Upsus Siwab Program in an effort to increase beef cattle population in Balangtanaya Village, Polongbangkeng Utara District, Takalar Regency is in a suitable category (44%) with 11 respondents. In this case, beef cattle farmers can respond to the Upsus Siwab program and can increase beef cattle population.

Balangtanaya Village is located in North Polongbangkeng Subdistrict, Takalar Regency, South Sulawesi, which consists of five hamlets, namely Je'e Dinging Hamlet, Maccini Baji Hamlet, Balangtanaya Hamlet, Balanggasana Hamlet, and Panaikang Lompo Hamlet. The total population of Balangtanaya Village is 2,256 people. In addition, Balangtanaya Village is also one of the villages located in the Polong Bangkeng Utara District, which has a population of ± 579 beef cattle.

Table 8. Classification of beef cattle populations in Balangtanaya Village.

| village     | Number of cattle |
|-------------|------------------|
| Maccini Baji| 56               |
| Balangtanaya| 72               |
| Je'e Dinging| 267              |
| Balangasana | 93               |
| Panaikang Lompo | 88          |
| Total       | 579              |

Table 8 shows the classification of beef cattle population in Balangtanaya Village, which is divided by hamlet. The number of beef cattle in the Maccini Baji sub-village is 56, the Balangtanaya sub-village is 72, the Je'e Dinging sub-village is 267, and the sub-village has the highest beef cattle population, the Balangasana sub-village is 93, and the 88-year sub-village is Panaikang Lompo, with a total of 579 cattle.

4. Conclusion
Breeder's response to the Upsus Siwab Program in the efforts to increase the cattle population in Balangtanaya village, North Polongbangkeng District, Takalar Regency is in good category (44%) with the number of respondents 11 people. In which case the cattle breeder can respond to the Upsus Siwab Program and can increase the population of beef cattle. Also, from interviews with breeders who do not follow the program Upsus Siwab, after the counseling activities, they become aware and interested in following the program under the direction of technical officers.

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