Participation of Sipakainge group members during Urea Molasses Block (UMB) production in Barru District, Barru Regency, South Sulawesi, Indonesia

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Abstract. This activity aimed to determine the participation of Sipakainge group members in the making of the Urea Molasses Block (UMB) in Barru District, Barru Regency. This activity was carried out on July 2020 in Seppee Village, Barru District, Barru Regency. The activity was attended by 20 members of the Sipakainge group, 5 extension officers in Barru sub-district, and Seppee village officials. The activity was carried out using the FGD (Focus Group of Discussion) method and the activity of making UMB together with group members. The results of the activity showed that the participation of group members was very high by actively discussing the process of making UMB and in making UMB actively.

1. Introduction
Feed factors affect cattle fattening, feed costs ranges from 60-80% of production costs. There are two feeding strategies for ruminants, the first is feeding that is directly used by the body of the livestock, and the second is to improve the balance rumen microbial nutrition [1].

The first strategy is to provide concentrate feed. Concentrate is a feed that is easy to ferment, thereby stimulating the growth of rumen microbes which accelerate the ability to digest crude fiber and increase levels of propionate which is useful in the formation of meat [2]. Concentrate is a feed ingredient or a mixture of feed ingredients that contains crude fiber less than 18 percent, TDN more than 6 percent, and plays a role in covering up the unfulfilled nutrient deficiency from forage [3].

The second strategy is by administering urea mineral molasses block (UMMB). Urea Molasses Blok (UMB) is one type of supplementary feed which is usually composed of various kinds of feed ingredients, both protein and NPN feed ingredients, energy source feed ingredients, vitamin and mineral source feed ingredients [4]. UMMB helps form amino acids needed by cows, increases palatability and feed digestibility [5].

There are several factors that cause mineral deficiency disease, and these are closely related to the maintenance system. Livestock is generally kept by releasing them in the pasture. In the morning the cattle are released into the pasture and in the afternoon are put into pens. The feed given to livestock is only modest. Various research reports indicate that the content of several types of mineral elements in field grass is relatively low. This low mineral content results in insufficient mineral need in the cow's body, causing a mineral deficiency [6-8]. Given the large losses caused when cows experience mineral deficiency, it is necessary to make efforts to handle and prevent mineral deficiency diseases in livestock.
Therefore, it is necessary to know the process of making UMB and group participation in Barru Regency, because Barru Regency is one of the cattle centers in South Sulawesi Province.

2. Materials and methods
This activity was held in July 2020 in Seppee Village, Barru District, Barru Regency. The activity was attended by 20 members of the Sipakainge group, 5 extension workers in Barru District, and Seppee village officials. The activity was carried out using the FGD (Focus Group of Discussion) method and the activity of making UMB with group members.

3. Results and discussion
This UMMB is also an additional feed (supplement) for cattle. This supplement material is obtained and formed in such a way that it becomes a hard and compact material. This UMMB is solid and hard, so to consume the livestock, it will lick the UMMB, so that the livestock will get food substances little by little but continuously. This UMMB is also commonly called the candy cow cattle. Benefits of UMMB for Livestock:

- To increase digestibility and consumption of dry matter, organic matter and crude protein in low quality feed.
- Gives stimulation results to consumption of straw-based feed without concentrated supplements and increases straw consumption by 25-30%.
- Improve the digestibility of food substances.
- The fulfillment of micro and macro mineral elements so that they can support reproductive appearance, the growth of the child in the womb, the production of more milk, the growth of children after birth (calf) is good, the time for lust after childbirth can be shortened
- Increase in birth weight for calves whose mother is given UMMB and daily weight gain.
- Giving UMMB to bull cattle has a good effect on the cement produced, which is able to increase the amount or volume of cement

The method of making UMB (Urea Molasses Block) is cold by mixing all the ingredients: molasses, urea’s, salt, bran, coconut cake, lime, M-Dec until an even dough occurs, then compacted with a mold. This method is done if there are not many molasses used in the composition of the UMMB. The activity of making UMB (Urea Molasses Block) in the Sipakainge group located in Seppee Village, Barru District, Barru Regency is quite enthusiastic to be followed by members of the group and even followed by existing agricultural extension agents in Barru District, Barru Regency. For details on the activities of making UMB in the Sipakainge group, it can be seen in the following Figure 1.

From the picture, it shows that in making UMB, the participation of members of the Sipakainge group is quite high because of the number of members of 20 people, all of them participate in the activity, and this is in accordance with the statement of [9], that livestock development is easier to be realized in groups. A group is a unit consisting of several individuals who have the ability to act on the basis of shared perceptions.
Livestock farmer groups must be supported by good member participation so that the programs given to the group can be carried out properly [11]. Participation of breeders in livestock farmer groups is one of the factors in realizing livestock development. According to Baba [12], the participation of members of livestock farmer groups is needed in counseling and training so that technology adoption can take place effectively. Farmer participation does not only take part in extension activities, but also participates in designing extension activities and has the opportunity to influence decisions in planning and implementing decisions [13]. Participation of breeders in groups is needed to increase group cooperation and improve farmer zoo technical behavior.

Participation of breeders in livestock farmer groups can be seen from the activeness and involvement of members of livestock farmer groups in participating in group activities. Member participation is the willingness of group members to provide ideas, thoughts, time, and materials for the benefit of the group. Member participation in thinking, implementing, and evaluating group performance has a role in the sustainability and success of the group [14]. The activeness of group members can be seen from how much group member contribute thoughts in solving problems faced by the group to decision making, while member involvement can be seen from the presence of group members in every routine meeting and outreach activities that in the group participates.

4. Conclusion
The participation of members of the Sipakainge group, Seppee Village, Barru District, Barru Regency in the making of the UMB (Urea Molasses Block) was quite high because it was attended by all group members, sub-district extension workers and village officials.

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References
[1] Preston T R 1995 *Tropical Animal Feeding* (Vietnam: Univercity of Agriculture and Forestry) pp 109-12
[2] Tillman A D, Hartadi H, Reksohadiprodjo S, Prawirokusumo S, Lebdosoekocojo S 1991. Basic Animal Food Science (Yogyakarta: Gadjah Mada University Press)
[3] Santosa S 1999) Group Dynamics (Surabaya: Earth Literacy
[4] Directorate General of Animal Husbandry and Animal Health 2012 *The Effect of Complete Feed on Blood Metabolite Levels of PO Cows*

[5] Syam J, Tolleng A L, Umar 2016 *The effect of concentrate feed and Urea Molasses Block (UMB) on hemoglobin in beef cattle*. *J. Teknosains*. **10** 103-10

[6] Prabowo A, Djajanegara and Diwyanto K 1997 *The effect of concentrate feed and Urea Molasses Block (UMB) on hemoglobin in beef cattle*. *J. Litbang Pertan*. **16** 53-64

[7] Little D A 1985 *The mineral content of ruminant feeds and potential for mineral supplementations in South-East Asia with particular reference to Indonesia*. *Ruminant Feeding Systems Utilizing Fibrous Agricultural Residues* R M Dixon (Australia: IDP) pp 77-85.

[8] Stoltz D R, Muhayan Z and Hidayat W 1993 *Small ruminant mineral nutrition in Indonesia*. *Proc. of Workshop Held* (Bogor: Central Research Institute for Animal Sciences)

[9] Ilmi, Widjatmiko, and Sumekar W 2015 *The relation of goat farmer participation to zootecnic behavior in Pringapus Semarang Regency*. *Agromedia*. **33** 113-22

[10] Muatip K, Purwaningsih H, Setianto N A, Sugiarto M, Widiyanti R, Safitri L, and Istiqomah W 2019 *Organizational commitment of members of the dairy farmer group in Banyumas regency*. *IOP Conf. Ser. Earth Environ. Sci.* **372**

[11] Hanifah A, Adi R K dan Rahayu F T 2013 *Strengthening the social economy of beef cattle farmers through the adoption of livestock waste processing technology into granular fertilizer*. Proceedings of the National Seminar Towards a Civil and Sustainable Society (Surakarta: Sebelas Maret University)

[12] Baba S 2012 *The level of participation of dairy farmers in counseling in Enrekang District*. *JITP2* 1 39-49

[13] Farid M 2012 *The Influence of Perceptions of Leader's Behavior on the Activity of Dairy Farmer Group Members in Enrekang Regency* (Makassar: Faculty of Animal S Science, Hasanuddin University)

[14] Prasetyo A S, Sumkar W, Kurniasari D A, Musabikin A 2020 *Activities and level of participation of members in dairy farming in the Rejeki Lumintu Gunungpati cattle farmer group, Semarang City*. *J. Agrinika* 4 186-96