



UTILIZATION OF GOAT MANURE TO MAKE LIQUID ORGANIC FERTILIZER (POC)

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Abstract:

The majority of people in Ranugedang village, Tiris sub-district, own goat farms. The problem faced by goat farmers is the difficulty in processing goat manure. The community needs assistance to find the right solution in making efforts to process livestock waste so that it does not pollute the environment and can become a useful business product for the community. This community service aims to foster community awareness of creative living by processing animal waste into products of economic value. The community service method carried out with ABCD optimizes the potential from within and the physical assets of the environment. The potential is agriculture and animal husbandry as a learning environment and environmental physical assets as learning resources. The stages in the ABCD Method are; discovery, dream, design, define, destiny, and reflection. The results of the activity are an increase in the ability of goat farmers as the target of the activity to process goat manure into fertilizer. The conclusion of community empowerment activities through the manufacture of liquid organic fertilizer by utilizing animal manure can overcome the problems faced by goat farmers in processing manure that is not limited to producing fertilizer but has economic value.

Keywords: Utilization, goat manure, liquid organic fertilizer.

INTRODUCTION

Ranugedang Village is located in Tiris sub-district of Probolinggo Regency. The geographical condition of Ranugedang Village is hilly due to the many uphill, downhill and winding roads. The northern border is Pesawahan village, the southern border is Ranuagung village, the eastern border is Jangkang village and the western border is Pedagangan village. The total population is around 4,706 people. The majority of the population are farmers and breeders, especially goats. The reason why people choose gardening and farming is the geographical conditions that support the economy.

When it comes to livestock ownership, the negative impact is the pungent smell of manure. Livestock manure has dangerous contents if not processed first, the dangerous contents are ammonia gas, methane gas, and carbon monoxide gas. Livestock manure when used to make fertilizer will be a fortune because it produces economic value for the community. Therefore, people use goat manure to make liquid organic fertilizer.

The toxic substances in ammonia gas can enter through the respiratory tract, mouth, and skin layer which can be harmful to health. Methane gas in livestock

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manure is also the main gas produced by the decomposition process, so it can cause an explosion if disposed of carelessly. Methane gas can also reduce oxygen levels, so it can cause symptoms of oxygen deficiency. Carbon monoxide gas is also a gas object that is harmful to health and environmental sustainability. This gas object is odorless, colorless, and tasteless because of the incomplete combustion of carbon-containing materials. Therefore, people process goat manure waste into liquid organic fertilizer.

Goat manure has high nutrients, namely $N = 50.6 \text{ kg / t}$, $P = 6.7 \text{ kg / t}$, and $K = 39.7 \text{ kg / t}$ so that when fermented into liquid organic fertilizer (POC) can be used as an organic fertilizer to replace chemical fertilizers that have a good impact on plant growth and good for land quality and crop yields. POC is a fertilizer made from basic ingredients derived from animals and plants that have gone through a fermentation process in the form of a liquid with little chemical content in it.

The community makes Liquid Organic Fertilizer (POC) by utilizing goat manure and applying the results of POC making to agriculture and community plantations continuously because the community believes in the benefits of POC compared to chemical fertilizers. For the community in Ranugedang Village, making POC from livestock manure or goat manure is very easy and does not require a lot of money. The utilization of making fertilizer from goat manure is very useful and has economic value. As well as to reduce the use of chemical fertilizers and chemical pesticides.

RESEARCH METHODS

The community service method used is the Asset Based Community Development (ABCD) approach. The ABCD approach optimizes assets, potential, and strengths. The ABCD approach focuses more on optimizing assets such as willingness, skills, and resources to provide solutions to problems. This community service activity is more focused on the processing and assistance in making liquid organic fertilizer with the basic ingredients of goat manure from community farms. Because in Ranugedang village there are still few who use POC, therefore this assistance wants to invite more people to utilize goat manure waste so that it becomes POC for their plantation crops so that the yields are better and of higher quality. The ABCD approach is considered very suitable for the majority of farmers and breeders in Ranugedang Village so that it is right on target for the needs of farmers and breeders as well as the community in the area. It can be understood that the ABCD method optimizes the inner potential and physical assets of the environment. The potential is the plantation and animal husbandry as the learning environment and the physical assets of the environment as the learning resources. There are six stages in the ABCD Method, namely; discovery, dream, design, define, destiny, and reflection.

Discovery. The discovery process is carried out through an inventory of assets in the farm environment through the adjustment of natural resources and potentials in the environment. This discovery stage is carried out through a process of interviews and conversations with the object of service, both community leaders, breeders, and the community.

Dream or dreaming. Seeing the future that might be realized based on the potential within oneself and the physical assets owned by using creative and collective ways. Exploring the dreams and hopes of the Ranugedang Village community through exploring the potential for progress and improving the community's economy through interviews.

Design. Farmers and communities are involved in exploring their potential and assets in order to utilize them creatively and collectively to achieve their goals. This design process aims to find out the assets that exist in the Ranugedang Village environment, namely the waste produced from livestock, which will later be processed into POC. The first design of processing livestock waste is to prevent environmental pollution and invite the community to be more creative.

Define or affirm (action). The define stage needs to be done based on the assets owned. The first action before carrying out the training is to invite the community to see firsthand the application of POC products that have been made by servants by spraying POC on agricultural land and community plantations. The training process is said to be successful if the agreement of the community that has been agreed together is implemented properly.

Destiny or the doing stage. This stage carries out activities to process animal waste into liquid organic fertilizer using other materials. This stage also invites other residents who do not understand how to utilize and process animal waste (goat manure) to become something useful such as POC.

Reflection to determine the impact of changes on the community. Observations using interviews, observations and documentation. The final results of the activity will be assessed by interviews that focus on the variables of motivation and community interest in processing the utilization of goat manure waste which will be used as liquid organic fertilizer (POC).

RESULTS AND DISCUSSION

After exploring the potential of the village through document study, observation and interview methods, the village potential was obtained as described in the previous chapter. This chapter will present the activity programs that have been implemented during the KKN activities. All of these programs were prepared based on the results of the exploration of village potential, the following is a description of the activity program of the Ranugedang Village KKN group, Tiris, Probolinggo.

One of the activities that we raise is religious moderation and can overcome the problems that have been experienced by the community, but what is more interesting about this activity is the development of the ABCD (asset based community development) approach as a community service approach.

The process of community assistance does not always run smoothly according to the agenda and expectations aspired to in the mentoring proposal submitted, although there are already expectations of changes to be achieved, although they are still very general. Because often what is in the field does not match the theories that have been studied in college. Because in the field after mentoring, all the potentials of the community will appear, along with the obstacles that accompany it.

For the success of the assistance carried out, the facilitator uses a *pertis* approach strategy, in order to further convince the community of what is being done so that it can bring up the potentials that they have not realized besides that the facilitator here is positioned as a partnership for the community. the community itself is the subject or main actor of this empowerment.

The activity of utilizing goat manure waste to make POC has an initial stage, namely before processing, the core activity carried out is testing products that have been made by several people who have long used homemade POC, by spraying POC on residents' land to test product safety. Product testing is the first step to determine the feasibility of products that will be used by the community. After the test is safe, other people will believe that this self-made POC is even better than chemical fertilizers.

Most of the community has a good understanding in following the processing of making POC from goat manure. The implementation of community service through goat dung waste processing activities is to provide an understanding of how to raise more profitable livestock, and not only breed superior goat breeds, but also provide an understanding of processing goat farm waste so as not to pollute the environment and can also be processed which later the product can be marketed and can help the community's economy. There are at least two supporting factors both internally and externally. Internal factors are the seriousness of community members to increase their understanding and experience of modern farming in terms of processing livestock waste. The external factor is that the community has the enthusiasm to process livestock waste products for their own use and as business results.

The livestock assets owned by the villagers form the basis of Ranugedang Village's large livestock farms. Every ten families have at least two goats. Farmers have been very successful in breeding superior goats, but there are still shortcomings, namely the lack of understanding of some farmers in processing waste, namely goat manure. Empowerment for farmers is needed in processing livestock manure that is useful for natural fertilizer materials. Analyzing this condition, the right solution has been found in making efforts to process livestock waste so as not to pollute the environment and can become a useful business product for the community. Because the goat KOHE produced from the farm is very much, after being processed into POC products, it can later become a field of income and can fertilize the agriculture and plantations owned by the community.

With the assistance to invite all goat breeders in Ranugedang village, the results of this assistance are enough to help the community to make more profit from goat manure waste that pollutes the environment into something useful, namely Liquid Organic Fertilizer (POC).

CONCLUSION

Asset-based Community Development (ABCD) is one approach to community development. The greatest strength in supporting the welfare of the community is the potential within themselves, the community has been born, lives and develops so that it has assets. ABCD is a service method that seeks to develop Asset-based

Communities (potential), such as developing educational, economic, and other communities.

This mentoring program is carried out to explore the assets in the village so that they are better utilized and developed to make the community more prosperous and improve the economy in the village.

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