
Support for The Use of Vacant Land for Catfish Farming with Simple Media as an Effort to Increase Community Food Security

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Abstract

Community support activities in using vacant land for catfish farming using simple media in Genengan Hamlet RT.06 / RW.04, Sambiresik Village make it a community opportunity to improve food security and economic improvement. Catfish farming was chosen because it has several advantages including a quick harvest period, catfish are resistant to disease and the culture media can be varied. The purpose of this service is to educate and guide the community in Genengan Hamlet RT.06 / RW.04, Sambiresik Village to overcome the problem of vacant and narrow land for catfish farming using simple media that is effective and efficient. This service uses five methods including socialization, training and practice, mentoring, monitoring and evaluation, which through direct involvement in the community will provide solutions and training steps in detail so that they are easily understood. The results of this service are that the community is increasingly improving their skills in using vacant land, so an increase in food security and community income is expected from this activity to create new jobs and develop local industries through catfish farming.

Keywords: Vacant Land, Catfish, Food Security

INTRODUCTION

In this age of modernization, there are still many suitable areas, but the problem that arises is who can manage them properly and be able to increase the economic value of the area (Aprudi, 2022). The issue of a global recession in 2023 has prompted many stakeholders, including governments and the private sector, to take preparatory measures to estimate the potential impact of the recession, which is expected to affect many industries, including the food security sector (Latifah et al., 2023). A country's economic and political stability can be at risk from social and political unrest as a result of food issues (Dika et al., 2023).

Food security is a state in which all households are safe from harm and have access to sufficient food for all members, both physically and financially (Chaireni et al., 2020). Reduced prosperity, disease, famine, and even disaster will result from a region's inability to meet its food needs (Indrayani et al., 2023). The ability to provide food for each household member is a key component of food security; as households grow, food needs increase (Pujiati et al., 2020). It can therefore be concluded that availability, affordability and price stability are important factors in ensuring people's well-being. It is clear that the issues of inflation and food security are closely linked. What's more, ensuring food security is essential to ensuring that everyone's nutritional needs are met.

The issue of food security, sovereignty and self-reliance is related to the aspect of food sovereignty in Indonesia (Sari & Irawati, 2020). Simply put, Indonesia is still struggling with food security and self-sufficiency. Because the food policy has not been optimally implemented

to uphold the constitutional rights of citizens guaranteed by the Constitution, self-sufficiency and food security are still weak.

Genengan Hamlet, Sambiresik Village is one of the villages in Gampengrejo District, Kediri Regency. In Sambiresik village, there are several people who have vacant land but have not used it optimally. Even if the vacant land is used, the vacant land can help the household economy, for example, to maximize income and minimize expenses. Most of the people in Sambiresik village work as farmers and cattle breeders. In Genengan Hamlet RT.06 / RW.04, Sambiresik Village, there is an empty yard that can be used as land for catfish farming. Based on this, the service team took the initiative to use the vacant land for catfish farming.

Bukdidamber is an effort to use limited yard space for containerized fish and vegetable farming, which can be a way to maintain family food security (Prabawa et al., 2021). Budikdamber has several advantages, including the ability to provide food security and healthy nutrition for families, while creating new business opportunities where production does not require much land or cost, and finding the necessary tools and materials is not difficult (Suryana et al., 2021). A possible solution to develop fisheries in small areas with more economical use of water is to raise fish in buckets or budikdamber, which is easy to implement at home, requires little initial investment, and can ultimately meet the nutritional needs of the community (Fauzana et al., 2021).

The choice of catfish farming is based on several advantages of catfish, namely the growth of catfish, which tends to be fast, has resistance to several fish diseases, and can be cultivated in various culture media. This is also supported by the interest in different locations for cultivation. The interest of the community in consuming catfish is quite high because catfish has very good benefits in the aspect of food ingredients where catfish is because catfish has a high source of animal protein so that these benefits are sought by the community. In addition, some of the advantages of catfish compared to other fish are in terms of, catfish also has a price where catfish is quite affordable. The ease of processing catfish compared to the price of other fish, catfish is also easy to process, and has a good taste is also part of the advantages possessed by catfish quite suitable for the tongue of all people ranging from children to parents. In order for catfish to be farmed more optimally, feed efficiency can also be done so that it can support or increase the production of catfish itself.

In the economic sector, the cultivation of catfish, now widely applied in the environment, can be an inspiration for other communities to inspire the creation of new jobs for the community. The existence of fish farming. Catfish farming is expected to generate profits that will be satisfying at the same time can help the people of Sambiresik village to increase their income and can be used as a means to increase the income of the community, especially the people of Sambiresik village. The benefits of this catfish farming can help entrepreneurship education. In addition, this catfish has its own advantages while improving and promoting the development of expertise in catfish farming. Therefore, as an effort to ensure the success of catfish farming to succeed in efficiency, efficiency and effectiveness of catfish farming business must be carefully examined. The proteins contained in catfish farming must interact with each other to support catfish growth and marketing. This can be done by sharing knowledge on superior seed, healthy feed and marketing.

Catfish that are ready to harvest are very beneficial to the food security of the local community to have a source of food protein for the family. The existence of food protein sources prepared in the neighborhood will at least contribute to the food security of the family. The outward orientation of the community service activities carried out at this time is not part of the interest to develop commercial businesses, but is more oriented towards promoting

family food security. However, we do not rule out the possibility that this community service activity will be an inspiration for creative partners who have the desire to further develop this catfish farming to be more commercially oriented.

Based on this, the community service team from the Economic Education Study Program of Universitas Nusantara PGRI Kediri intends to help the residents of Genengan Hamlet RT.06 / RW.04 by providing assistance in using vacant land as a place for catfish farming to improve food security. In this way, the community is expected to increase its income and reduce its expenses in carrying out economic activities. By using vacant land to grow catfish in buckets, this community service project aims to improve local food security. The goal of improving community food security is to reduce the problem of stunting and hunger. In addition, the use of buckets as a medium for catfish culture has other benefits, namely, the bucket can be used as a medium for growing vegetables that can be used by the community.

From the results of interviews with the community, namely the leaders of Genengan Hamlet, Sambiresik Village, Gampengrejo District, Kediri Regency, several problems were found in the implementation of distance education, including 1) Residents of Genengan Hamlet RT.06 RW.04 have vacant land that has not been maximally utilized, and 2) Family farmers and cattle breeders in Genengan Hamlet RT.06 RW.04 residents do not have productive activities in utilizing existing vacant land because most of them rely only on income from agriculture and cattle breeding.

Problem formulation in this community service, among others: 1) How to educate about the use of vacant land to improve food security? and 2) How to provide assistance to the community of Genengan Hamlet RT.06 RW.04 in the use of vacant land for the cultivation of catfish using simple media from seed until the catfish are ready for harvest?

The objectives of the community service activities include: 1) To provide education on the use of vacant land to improve food security, and 2) To assist the community of Genengan Hamlet RT.06 RW.04 in the use of vacant land for catfish culture using simple media from seedlings to harvestable catfish.

RESEARCH METHODS

The implementation of community service was carried out in Genengan Hamlet RT.06 / RW.04, Sambiresik Village, Gampengrejo District, Kediri Regency for six months, starting from July to December 2023. The implementation activities use the following methods: 1) Observation, where the observation method is carried out to get more information before starting the service activity. Information to find out how the circumstances and conditions in the environment in Dusun Genengan RT.06 / RW.04, Sambiresik Village are still a lot of empty land or yard and the families of farmers and cattle breeders in Genengan Hamlet RT.06 RW.04 residents do not yet have productive activities in utilizing existing empty land because most of them rely only on income from agriculture and cattle breeding. Based on these observations, the service team took the initiative to use the vacant land as a catfish farm. 2) Discussion, where the solutions to the problems faced by the residents of Genengan hamlet are discussed in order to get a meeting point and approval from related parties. The service team conducted interviews with the community, namely the leaders of Genengan Hamlet, Sambiresik Village, Gampengrejo District, Kediri Regency, several problems were obtained. The results of the interview will be discussed to find common ground to get the right solution to overcome the problems of Genengan Hamlet Community in Sambiresik Village. 3) Simulation, where the

simulation of the process of making simple media as a place for catfish farming as an opportunity to use an empty yard as an effort to increase community food security (Solikhah et al., 2018).

To achieve the goal according to the proposed solution, the following steps are taken to implement the solution, including:

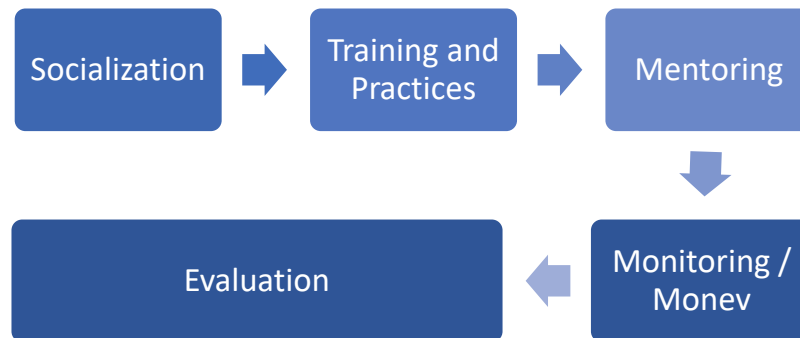


Figure 1. Steps to Implement Socialization

1. Socialization

Communication is the key to interaction; as social creatures, humans need to be in touch with each other and with others (Nurdianti, 2014). Invite the community to socialize the use of their vacant land to be used as a place to cultivate catfish. Interacting with the community to familiarize themselves to gain acceptance before carrying out service tasks, in their role we provide assistance to the community of Genengan Hamlet RT.06 RW.04, Sambiresik Village, Gampengrejo District so that they can do catfish cultivation independently at home. Using simple tools that can be easily found around the house, it is hoped that the community will accept our intention to promote the achievement of food security.

2. Training and Practices

Conduct a training session using bucket media that will be planted with plants on top, similar to the use of hydroponic media (Juniarti et al., 2020). This medium was chosen because it is easy to obtain and easy to use by the community, the use of buckets as a cultivation medium was also chosen because of our focus on maximizing vacant land as an increase in the quality of community pangan to support activities. The training was accompanied by practice witnessed by residents, which from the service team itself was high, all residents who attended could participate in the implementation of activities and were expected to be able to make it.

3. Mentoring

Assistance is provided during the activity to ensure that the training conducted by the service team goes well (Haidiputri & Elmas, 2021). Accompanying local residents in carrying out empowerment activities to use vacant land as a medium for catfish farming using simple media as an effort to increase community food security.

4. Monitoring / Monev

Periodically observe the development and the extent to which the community is using vacant land as a medium for growing catfish using simple media, namely buckets, as an effort to increase the community's food security. This monitoring activity will be considered successful if the community is able to utilize the media that has been made and practiced properly and is able to develop it to at least meet their daily food needs.

5. Evaluation

In this service activity, the evaluation is based on how the community responds to the empowerment activities that we carry out, how the community develops during the training and mentoring activities. The goal of this service is that every household that has empty land can use it as a place to grow catfish using simple media to improve food security (Heri, 2011)

RESULTS AND DISCUSSION

This community service on catfish farming was conducted in Genengan Hamlet RT.06 / RW.04, Sambiresik Village, Gampengrejo District, Kediri Regency. This service is aimed at the community as a form of effort to increase community understanding and skills in using vacant land for catfish farming using simple media. This is intended to be an effort to increase the food security of the Genengan Hamlet community, specifically in the RT.06 / RW.04 community. Socialization is the beginning of this service activity that will be carried out in stages to the people of Genengan Hamlet. Certainly, in this socialization phase, it was delivered by experts who had already explored catfish farming using simple media, namely buckets (Anifah et al., 2022). The socialization aims to provide information on materials and tools used, types of catfish, and includes implementation steps as well as the benefits of this catfish culture. The service team also conducted direct demonstrations in this socialization activity, including how to oxygenate catfish seeds, how to distribute catfish seeds, how to maintain pH levels in buckets until later harvest, and many more.

Then the next step is to provide assistance that includes training from sowing to harvesting in Genengan Hamlet RT.06 / RW.04, Sambiresik Village, Gampengrejo District, Kediri Regency. Here, the team is providing catfish culture facilities that aim to maximize this service activity so that the community can follow the entire series of service activities so that they can gain experience in practicing the process of cultivating catfish using simple media in the form of buckets properly and correctly.



Figure 2. Socialization and Mentoring Activities

The next activity carried out in this service is the process of monitoring the growth of catfish, which is carried out in stages, which is the next action carried out in this service activity (Nursandi, 2018). This catfish culture uses an 80 liter bucket filled with 60 liters of water. As for the maintenance of the catfish itself includes feeding regularly, changing the water when it

turns green, and always observing the development of the catfish and the appetite of the catfish. For catfish, feed every 2-3 times with a routine time. Also, the water that turns green must be replaced immediately. The purpose of this water change is to prevent the water from smelling, which can later affect the catfish's appetite, causing a significant decrease in appetite. This water change is done by sucking out the dirt at the bottom of the bucket through the faucet that has been installed on the bucket, then using a hose as a means of removing the dirt. This is usually done every 10-14 days. Vacuuming can be done with just a few gallons of water, or a full water change can be done if necessary.



Figure 3. Monitoring and Harvesting Activities

After going through the maintenance in stages by performing each series of stages regularly and periodically, catfish are ready for harvesting after one to two months, with a record of catfish that can be harvested around 15 cm - 20 cm in size. When maintaining for one month, catfish harvesting cannot be done simultaneously. This is because each catfish in the bucket has a variety of sizes. Based on the monitoring phase carried out by the service team, catfish are usually harvested several times with a different number of results, which can be three or more catfish. Therefore, in order to find out the overall growth, the service team must conduct regular monitoring to find out the development of catfish farming from seedlings to catfish harvests in the next few months (Febri et al., 2019).

CONCLUSION

This community service was conducted in Genengan Hamlet RT.06 / RW.04, Sambiresik Village, Gampengrejo District, Kediri Regency. Here, lecturers and students from Universitas Nusantara PGRI Kediri are conducting community service with the theme of assisting in the use of vacant land for catfish farming using simple media as an effort to increase community food security. This activity is not only carried out to utilize empty land around the house, but also used as a weapon to improve food security and community income. By using vacant land as a site for catfish culture using bucket media, this community service seeks to improve food security to reduce the problem of stunting and hunger. Catfish care that is carried out optimally from seedling to harvest will produce catfish that are ready to harvest, of course,

have many benefits for the local community because catfish are basically rich in protein sources. The existence of protein source food prepared in Genengan Hamlet RT.06/RW.04, Sambiresik Village, Gampengrejo District, Kediri Regency, will at least contribute to the aspect of family food security. The community is expected to increase employment and local economic activities through the development of catfish farming.

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