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IbM of Integrated Farm by Making of "POC-FISH" as an Economical Alternative Efforts for Coastal Communities

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Abstract

Coastal communities play an important role in marine and fisheries development, as well as forming a culture in coastal areas. The socio-economic life of coastal communities in Kolakaasi Sub-District of Kolaka District is far from prosperous as the data obtained from BPS of Kolaka, in which the number of poor population in Kolaka in 2015 reached 27,210 with the percentage of 14.68%. Partners in this IbM activity are teenagers who drop out of school environments and groups of housewives living in coastal areas. The problem of partners in the activities of IbM is the number of teenagers dropping out of school in the partner environment due to the low level of welfare of coastal communities so that the average level of the highest education is junior high school where the young women have to help the family economy by working as laborers in traditional markets of Kolaka or only help parents at home while the men work at sea. Fishing is highly dependence to the nature, so that if the weather is bad then the fishermen cannot gain income. IbM-Integrated Farm by making "POC-FISH" is the manufacture of liquid organic fertilizer that combines agricultural activities with fisheries. POC-FISH is mad of small fish, commonly called lure fish (teri) by Kolaka community. This type of fish is abundant in Kolaka and sold cheaply (R.p 5,000/Kg). The purpose of this IbM activity was the empowerment of coastal communities through the transfer of science and technology by utilizing local potentials so that the partners involved can begin to be productive and economically independent by conducting business on a household scale. The method of making POC - FISH will be carried out simply so that technology transfer can be easily understood by partners. The process of transfer of science and technology was carried out with the pattern of 1) the education of the partner group on the importance of technology adoption by utilizing the potential and local wisdom that will be able to produce a product with higher economic/selling value 2) POC-FISH making training 3) mentoring partner group in marketing 4) monitoring and evaluation. The outgoing plan of this IbM activity is the publication of the ISSN national journal published in 2017 and POC-FISH Products.

Keywords: coastal community, fish, liquid organic fertilizer (LOF)

A. Introduction

The poverty level of coastal communities in Indonesia is still very worrying. In fact, Indonesia is a country with great natural and marine resources. However, the potential of marine has not been fully utilized. Villagers of Kolakaasi Sub-district, Kolaka District, Southeast Sulawesi Province who live on the coastal area depend their lives on the sea. Socio-economic life of coastal communities in Kolakaasi Sub-district is far from prosperous. As the data obtained from BPS of Kolaka, it was reported that the number of poor population of Kolaka in 2015 reached 27,210 with the percentage of 14.68%.

The great dependence on nature makes coastal communities generally have no other activities. If bad weather comes, coastal fishermen do not go to sea. To fill the leisure time people prefer to improve their net. Others prefer to repair their boats to fill their spare time as long as they do not go to sea. Although in certain seasons fishing income is very hig, however, income is very small in subsequent seasons fishing. Another characteristic of the coastal community of Kolakaasi Sub-district is the activity of women and children. There are many teenagers dropping out due to economic limitations so that generally coastal children only finish school up to high school level (SMP). Meanwhile, male teenagers have often been involved in fishing activities.

Development programs in coastal areas do not significantly contribute in improving the economic condition of coastal communities. The failure of the program is due to the fact that development projects within the context of coastal communities in Indonesia are not based on community empowerment and the utilization of local potentials. The introduction of various development programs is more laden with the content of a political bureaucratic approach than attempting to empower and utilize and local potential. Whereas, community empowerment and utilization of local potency can give big contribution particularly in encouraging social learning process so that integration of project mission or program with value of utilization of local resources, knowledge, ability, requirement of coastal community can be achieved (Masterson et al 2000).

Science and Technology Program for the Community "IbM-Integrated Farm by Making 'POC-FISH' as an Economical Alternative Efforts for Coastal Community" is a partnership program between the academics of Universitas Sembilan Belas November (USN) Kolaka with the community. The target partner of the IbM activity program is a group of drop out teenagers with age between 15-20 years and groups of housewives living in coastal area.

IbM-integrated farm by making POCH-FISH program is a community empowerment program for coastal communities to be able to have other business alternatives by utilizing the local potential of lure fish (teri) which has a cheap selling value into a product with a higher selling or economic value. The ultimate goal of this IbM program is to help improve the welfare of the people in coastal communities of Kolaka District.

B. Methodology

POC-FISH is chosen as a partner problem solution with some considerations: Fish used as main raw material of organic fertilizer is lure fish/teri which is a fish species that is very easy to be found in Sulawesi and sold at cheaper price than other fish species (Rp .5000/kg). Utilization of lure fish in the community is still limited to be processed into driedfish or used as live bait, so the availability of raw materials is no longer a consideration for increasing the amount of production at any time. A figure of lure fish can be seen in Figure 1.

Figure 1. Lure fish of Kolaka District

The approaches offered to solve partner problems in the IbM program are:

a. Determination of partners
   Partners of IbM-Integrated Farm by making "POC-FISH" as an Economical Alternative Efforts for Coastal Communities, in which group of drop out of school teenagers who do not complete their secondary education obligations over 15-20 years of age living in coastal areas. The second partner in this a program is a group of housewives who have no permanent job whose husband is a captive fisherman who fully depends on the family's economy from catching at sea. The consideration of choosing these two partners is that the two groups of partners are the groups that most need coaching, mentoring, and training the creative economy by utilizing the abundant natural potentials, so that the future can be economically independent.
b. Persuasive Approach
   The first step of the implementation of this IbM program is to conduct persuasive approach to the two groups of partners who do not open access to the input of external innovation on their custom, where coastal communities are known as a society that does not adaptive with other environment outside of their community. The persuasive approach is aimed to change the partner mind set that by applying science and technology plus the utilization of local wisdom/potency can produce a simple product with higher economic value rather than selling raw materials without any diversification or innovation process. In a persuasive approach, the partner education stage is done through meetings and socialization forum.
c. Active approach
   The active approach is carried out with the field practice of POC-FISH fertilizer, preparation of tools and materials, implementation of activities, and packaging.
d. Marketing
   POC-FISH product marketing is done by mapping the target market. The main target market is the local market. Another target market is the online market to reach the national market. At this stage, partners will be introduced to online marketing media. Training on making and using social media (Facebook, Whatsapp, BBM) as a marketing tools. Designing process of POC-FISH product package will be accompanied by the proposing Team. POC-FISH products will be packaged in ½ and or 1 L bottles.

C. Result and Discussion

Meetings and socialization between USN academics with both partners of IbM program. In this forum, the presentation of the purpose of the activity as well as the partner education stage about the existence of the economic value of a product with the innovation and diversification and is expected to be an economic alternative effort for the improvement of their welfare.

After the socialization stage, the activity continued with the stage of POC-FISH fertilizer preparation in the form of preparation of tools and materials, making POC-FISH, and packaging. The materials used in making POC-FISH are 10 kg of lure fish, 10 liters of water, 1 kg of tomatoes, 1 kg melted Javanese/aren sugar. Equipment required is a pot or 10 liter capacity pot, 5 liter drum capacity of 4 pieces and 1 pieceof pH meter. How to make: (1) 10 kg lure fish is washed, boiled until it half cooked, lifted and then cooled, then the fish is pressed, put the water together with the cooking water (2) After really cold and then filtered with a soft cloth and measured the pH. Neutralize the pH by inserting the filtered grated tomatoes until they become neutral in pH (pH 7). (3) Entering 1 kg of liquid sugar in the solution, stirring until the sugar is dissolved. Prepared drums that have been washed (4) Place the solution into the drum and close it tightly (5) Stored in a shady and cool place protected from sunlight/rain (6) Left for 12-15 days. Check the drum, if there is a bubble, immediately open the lid cover so the gas can come out and close ittightlyagain. If the process runs then the solution will be the typical fresh natural scent, not fishy/foul (7) multi purpose Liquid Organic Fertilizer made from lure fish (POC-FISH) is ready for use (8) POC-FISH products are packed in bottles ½ and or 1 L . POC-FISH is presented in Figure 2.

Figure 3. POC-FISH Products

D. Conclusion

1. There are understanding and skill improvement of coastal community of Kolakaasi Village, Kolaka District
2. There are POC-FISH products produced by the coastal community of Kolakaasi Village, Kolaka District

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