

# **Increased Socio-economic Fish Farmers Group through Technology Use Variations: Fermented Feed**

Hatta Ridho<sup>1</sup> and Muryanto Amin<sup>1</sup>

<sup>1</sup>Departement of Public Admininitration, Universitas Sumatera Utara, Jl. Dr. A Sofyan No.1 Medan 20155 ,Indonesia,

Keywords: Breeders. Empowerment, Alternative Feed.

**Abstract:** Empowerment programs in Indonesia manifested in various aspects that touch the basic services, such as the development of agricultures, livestocks and community empowerment. The social realities need to be followed by performing community service programs for the group empowerment. Together, communities learn to explore the potential in doing alternative work to other sectors. Socio-Economic Empowerment of Fish Breeders Group Through Agricultural Waste Management As an Alternative Feed, encourage fish farmers group to be able to increase their family income, the ability to organize and foster the values of togetherness in the spirit of developing alternative energy sources. Socio-economic empowerment activity is an activity that is urgent for the moment, because the issues of livelihoods that arise is a powerlessness of breeders group in small scales. Particularly in developing the potential of accesssing various resources. Achieving that goal then the method used in this activity is through FGD, agricultural waste management training as an alternative for fish feed.

## **1 INTRODUCTION**

Diverse necessities of life continues to increase causing the public must always be creative in finding alternative productive activities. The main obstacle that is often found is the inability of villagers to identify a potential source of social and natural resources owned. It takes the intervention of outsiders to encourage people to identify potential sources of social and natural resources available so that communities can make a map of a potential source of social and natural resources potential. One way to explore the available resources is by occupational diversification to another sector. According to Mubyarto (2002) occupational diversification is one of adaptation strategies that can be done by poor communities to cope with their powerlessness.

The powerlessness condition experienced by the people in the Sei Mencirim village, District of Sunggal, of Deli Serdang. For the people in the Sei Mencirim village, District of Sunggal, the main obstacles found in the society is the ignorance of the community to build the strength of the group into a powerful social energy in solving social problems in society. Besides, it is also the ignorance of the public of using agricultural waste which is commonly found

in Sei Mencirim in order to solve the economic problem in the community.

A very spacious agricultural land with lots of plant varieties can be found in the village of Sei Mencirim. In general, in the village of Sei Mencirim found farmers growing rice, maize, cassava, yams and other young plants. At the present time when the farmers community of Sei Mencirim enter the harvest season, the problem encountered are agricultural wastes. Agricultural wastes, before entering the new planting season are usually left alone until the next planting season. Besides, the farmers are also set fires to agricultural wastes.

Creating a prosperous society through the empowerment of socio-economy encouraged should be oriented on the utilization of nearby resources. By utilizing social resources and the natural resources that exist will result in a strong community socially and economically. So the socio-economic problems faced will be easily solved, which is based on the implementation of the people's economy through socio-economic empowerment of catfish breeders group through variation of feed technology (fermented feed). Fermented feed is more digestible so nutrient absorption can be optimal. With this pattern, the need of nutrients in the feed is met so that livestocks growth will be faster when compared with

normal feeding (grass), growth is usually 2-4 times increased compared to normal feeding (grass). Livestocks meat does not contain much fat because of an ideal feed composition. Feed nutrients such as vitamins fulfilled by the HCS SOC contents in the feed. Manure waste does not smell as if eating regular feed or grass and eliminates the habit of looking for grass or ngarit and angon. Ngarit or angon is sometimes very dangerous like finding wild animals such as snakes while mengarit take place.

Increased livestock reproduction capability of catfish due to fermented feeding will eventually be able to increase the population of catfish breeding more quickly, because the catfish will be efficient in reproductive activities. Increasing the efficiency of reproduction is clearly going to increase livestock numbers quickly and more efficiently, as well as an increase in breeders income.

Table 1.

	Name of Material	Amount
1	Agricultural wastes	100 kg
2	probiotics	10 liter

## 2 RESEARCH METHODOLOGY

Related by the issues and programs that will be done to overcome the problems mentioned above and in line with the concept and the theory of empowerment, the solutions proposed to address and solve these problems conducted by the method:

### 1. Focus Group Discussion

In group discussions, Focus Group Discussion (FGD) method is used. This method is done so that the subject of group discussions covered is focused on brainstorming about socioeconomic and environmental problems they face. Their views also need to be considered in order to cope with problems that share togetherness values, equitable, transparent, friendly environment, gender equality and participative. In this discussion, it is also expected to produce a map of social potential and natural resources potential.

### 2. Training of Alternative Feed Production For Fish

Training is conducted on the group of fish breeders of Sei Mencirim village interactively and participatively about the increased

production by alternative feed technology implementation. The stages of the training is to give an understanding to the group of fish breeders about the potential of natural resources that can be managed into livestock feed and preparation materials of Alternative Feed Production.

3. Preparation Tools of Fermented feed production  
Tarp, mixing materials tool, scales, plastic measuring cups, shovels, sprayer, a capacity of 5 liters. Already equipped with a pump, so that HCS SOC solution can be spread evenly, plastic barrel, for the materials to be fermented , machete, knives and chopper for chopping agricultural wastes.
4. How to manufacture the Alternative Feed
  - a) Spread a tarp in the shade, to let us not overheat during the work;
  - b) On top of the tarp, with the bed of wood, agricultural wastes started to chopped;
  - c) Then mix the agricultural waste with probiotics that have been provided before. Then cover tightly for 10-12 days;
  - d) Open the lid within a period of 3 days to remove the gases of fermentation;
  - e) After 10-12 days, the alternative feed can already be used with comparisons of 1-2kg for 1000 fish hatchlings.
5. Benefits of alternative feed  
Alternative feed is more digestible so nutrients absorption can be optimal, with this pattern, the need of nutrients in the feed is met so that livestocks growth will be faster when compared with normal feeding (pellets), usually 2-4 times increased growth compared with the normal feeding (pellets), livestocks meat does not contain much fat because of an ideal feed composition and minimizes the cost of fish feed that has been dependent on pellets.

## 3 RESULTS AND DISCUSSION

Community service activities of "Socio-economic Differences of Fish Breeders Group Through Variations of Use Technology (Fermented Feed)" implemented in several phases of activities, which are Seed Selection, program socialization in this community service activity is an effort of the service team to align time and perception of the team and the participants of community service in the program

implementation later. In this event, the team also distributed a variety of supporting pond facilities such as water wheels. Given the location of the former service is a swamp, therefore the team chose to use the water wheel as a means to regulate the circulation of oxygen in the pond.

After the elections and the process of planting parrot fish seeds into plastic bags have been carried out, the team moved to a shared pool that is used by a group in various means which previously was prepared and submitted symbolically to Bapak Sutikno as the head of community service participants group. In an effort to maximize the adaptation process of fishes at the new place, it would not be fed over a span of two days in a row.

Later, the team is done training to the participants and during the training process, the team also viewed the assembly of water wheel made by the participants of community service. Service continued until seven in the evening. It is triggered because the spirit of the participants in preparing a variety of means that will be used in future breeding activities. The team then undertakes to provide guidance to the water wheel until it is installed perfectly. After the training and installation of the wheel is completed, the activities continued with having a meal together with participants of service.

Some of the training carried out are as follows:

- Provide insight to groups of farmers about natural resources potential that can be managed into livestocks feed.
- Preparation Tool of Fermentation feed production

The evaluation phase done by the service team to ensure the activities of community service to be run continuously then the team compiled some aspects that will be the element to be evaluated of the implementation of the training program which are:

1. Implementation of the fermented feed production method.

The process of making the feed is the most vital activities in the implementation of parrot fish breeding business. This then make the implementation of feed production to be the focus of evaluation for the team in the future.

2. Networking

In this case the team will monitor how the group's ability to establish cooperation with the

distributor or the seller of parrot fish. This will facilitate breeders group in the execution of the sale of livestock products after harvest later.

3. Activeness

The implementation of the breeding business requires discipline of the executor. This then requires the group to impose the presence system during the service performed. It will also train the group to be professional and discipline when the service program is completed.

## 4 CONCLUSION

Community service activities with the title " Socio-economic Differences of Fish Breeders Group Through Variations of Use Technology (Fermented Feed)" received a great attention from the group of service participants. It can be seen from the number of members of the group's participation in any training activities where this is a place for them to broaden and enhance their capacities.

The author sees the government today should be able to see the opportunities that can be used as an attempt to increase the local economy by establishing creative efforts. As well as the use of fermented feed that will cut the cost of fish feed for parrot fish breeders.

## REFERENCES

- Kartasasmita, Ginandjar, 1996. Pembangunan Untuk Rakyat- Memadukan Pertumbuhan dan Pemerataan. Penerbit PT. Pustaka CIDESINDO, Jakarta.
- Khairuddin, 2000. Pembangunan Masyarakat., Tinjauan Aspek: Sosiologi, Ekonomi dan Perencanaan. Liberty, Yogyakarta.
- Hasbullah, Jousari. 2006. Social Capital, Menuju Keunggulan Budaya Manusia Indonesia, Jakarta: MR- United Press, 5.
- Moeljiarto. dkk. 1997. "Bidang Pendidikan dan Kesehatan dalam Pembangunan Sosial" Dalam Analisis CSIS Pemberdayaan Masyarakat Lapis Bawah", Jakarta: CSIS.
- Mubyarto. 2002. Pemberdayaan Ekonomi Rakyat dan Peranan Ilmu-Ilmu Sosial,Yogyakarta: Aditya Media. 13.
- Suparjan. dkk. 2003. Pengembangan Masyarakat Dari Pembangunan Sampai Pemberdayaan Yogyakarta: Aditya Media.
- Prayitno, gending, 1990, pemberian ransum pakan ternak, neraca.