Design And Construction Of Fish Seed Grading Tools As An Early Introduction To Entrepreneurship At SMKN 1 Meureubo, West Aceh

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Abstract.

This research-based community service aims to develop several research results from research teams and other researchers who are in the same field of science, namely the field of aquaculture or aquaculture, to overcome the problems faced by partners. This service was motivated by the partner's problem at SMK Negeri 1 Meureubo, West Aceh, namely that the results of raising catfish were less than optimal because catfish have cannibalistic characteristics so that in making a catfish grading tool, partners were able to increase the results of cultivating catfish. This is also supported by the absence of manufacturers making catfish grading equipment in West Aceh in particular and Aceh in general. Apart from that, making this grading bucket can also provide additional income for students at SMKN 1 Meureubo school through early introduction to entrepreneurship for students at school as well as to develop an entrepreneurial spirit and improve students' skills in making useful products in the field of Aquaculture. The method used in this service is through a direct approach and active participation of students in making catfish seed grading buckets. Activities include outreach in the form of lectures and discussions, practice of making grading buckets directly at school as well as mentoring the service team in developing the entrepreneurial spirit of students at partner schools. The output of the service that has been carried out is a draft article to be published in a national journal. Output also produces products that can be marketed online and offline.

Keywords: *:Ember Grading, SMKN 1 Meureubo, Entrepreneurship and Fish seeds.*

I. INTRODUCTION

State Vocational High School (SMKN) 1 Meureubo is one of the schools in the Paya Peunaga area, Meureubo District, West Aceh. Most of the residents in this area work as fishermen/fish cultivators, farmers, traders, casual laborers and entrepreneurs, only a small number are civil servants [1]. during the pandemic, most students were quite affected from an economic perspective because they came from poor families, with parents who worked odd jobs to earn their daily living [2]. In conditions like this, the role and contribution of higher education academics, especially Teuku Umar University (UTU), is very important needed to support the surrounding community. This form of concern for others and the surrounding environment can be realized by stimulating teenagers to become more skilled and productive, so that it can help increase additional income.

According to information from the Principal of SMKN 1 Meureubo, in fact the students who are majoring in fisheries already have a basic understanding of fish cultivation, but to carry out cultivation, students need a large amount of capital and land, whereas to meet daily needs, students have very minimal income, so student creativity is needed. in making products that have value so that they can help parents in fulfilling their daily living needs and there are difficulties for catfish farmers in sorting fish to prevent cannibalism due to the lack of continuously available grading tools in Aceh Province, so there is a need for buying and selling from Java Island[3]. This moment reminds us of the importance of the presence of academics as a form of community service to increase the ecological intelligence of students at SMKN 1 Meureubo through the transfer of agro and marine-based science and technology which has a positive impact on food security and improving the family economy.

II. METHODS

The mapping of the problem description of the target audience has been successfully conceptualized, through discussion activities with several teachers at Fisheries Vocational Schools in July 2023 and has been agreed to be carried out during Research-Based Community Service Activities (PkMBR).The implementation method is field practice and open discussion between the proposing team and the target audience.To support community service activities through discussion, work procedures have been agreed and determined for solving target audience problems, namely:

1. Lectures and Discussions

The Service Team prepares materials and demonstration materials that will be delivered to students in the form of

- Provides information and advantages of using fish seed grading tools.
- Providing technical management of fishery equipment businesses, especially fish seed grading equipment, which can later be turned into a sustainable business
- This activity is carried out to agree on important matters in the form of place, time, preparation of tools and materials during the activity as well as work steps/procedures for service activities.

2. Field practice

In field practice, making fish seed grading tools. The education referred to here is providing training in making fish seed grading tools by assembling the prepared tools and materials until vocational school students are able to make them independently [4]. This education was carried out once using the lecture method, and was equipped with audiovisual aids. There were 15 participants involved in this activity, who were vocational school students

The steps in making a fish seed grading tool are as follows [5]; [6]:

- Preparation of tools and materials
- Setting the drill tool for various drill bit sizes adjusts to the desired grading hole size
- The bucket drill that will be used as a drilling tool has uniform drill bit sizes on the bottom and walls of the bucket.
- Sand the bucket with sand paper that has been perforated to prevent injury to the fish seeds when passing through the grading holes.
- Carry out uniform perforation activities on 15 buckets for 1 set of grading tools in various sizes from smallest to largest.

III. RESULT AND DISCUSSION

Fish seed grading bucket design

Socialization (Lecture and Discussion) Making Designs for Fish Seed Grading Buckets. Socialization is carried out in the form of an introduction aboutbenefit, how to design a grading bucket, sales strategies and materials used to make fish seed grading buckets. At the beginning of the socialization, a lecture was held to obtain information from students about understanding how to make fish seed grading buckets. This activity was carried out in a classroom attended by 9 people. Students looked very interested and played an active role during socialization activities.

Then at the end of the activity there was a discussion with the students which showed that the students already knew about making grading buckets, but the students stated that the process of making grading buckets was done manually so it required more energy and time. The manual manufacturing process also poses risks to the manufacturing process. is easily damaged/cracked so that the bucket can no longer be used and cannot be used again. As a result of this failure, further discussion is needed regarding the use of the latest technology to make it easier for students to make grading buckets so that sales are easy.

Fig 1. Lecture and discussion on design and construction of fish seed grading buckets

Field Practical Training

Field practice in making seed grading tools is carried out by providing training in making fish seed grading tools by designing, assembling the tools and materials provided until vocational school students are able to make them independently. This training is carried out several times until the specified grading bucket size is obtained. This training was carried out in the Hatchery laboratory room at SMKN1 Meureubo with a total of 12 students.

The steps in making a fish seed grading tool are as follows:

1. Preparation of tools and materials to be used

2. Setting the drill tool for various drill bit sizes adjusts to the desired grading hole size

3. The bucket drill that will be used as a drilling tool has uniform drill bit sizes on the bottom and walls of the bucket.

4. Finishing by lining the grading bucket with sand paper, a bucket that has been perforated to prevent fish seeds from getting injured when passing through the grading holes.

IV. CONCLUSION

Making fish seed grading buckets using appropriate technology can make it easier for students to produce aquaculture products and provide benefits in meeting the demand of fish seed cultivators in West Aceh and surrounding areas and can be used as additional income for students through entrepreneurship at school..

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