

SOCIALIZATION OF SEAWEED (*Kappaphycus alvarezii*) CULTIVATION TECHNIQUE IN TAMARUPA VILLAGE, PANGKEP REGENCY, SOUTH SULAWESI

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Abstract

Kappaphycus alvarezii seaweed is one of the main aquaculture commodities which is widely cultivated because the production technology is relatively cheap and easy and post-harvest handling is relatively easy and simple. This type of seaweed is able to produce carrageenan which is widely used in various industries. High demand, high prices, easy to obtain seeds and short harvest period make *K. alvarezii* one of the leading commodities in the aquaculture sector. This socialization was carried out on September 24 2024 with the aim of increasing knowledge and technology for cultivating *K. alvarezii*, one of which is through increasing the participation of seaweed cultivators in outreach activities aimed at facilitating the community (target) in implementing production and marketing strategies as well as providing assistance. stretching ropes to accelerate changes in social, political and economic conditions so that they can (in the long term) improve the personal and community standards of living of *K. alvarezii* cultivators in Tamarupa Village, Pangkep Regency, South Sulawesi Province. The impact and benefits of this activity are increasing the knowledge, skills and attitudes of seaweed farmers.

Keywords: *Kappaphycus alvarezii*, Seaweed, Tamarupa Village

INTRODUCTION

Indonesia as an archipelagic country with a coastline of 81,000 km is a coastal and marine area that has very large and diverse biological resources. These various biological resources have very important development potential as sources of new economic growth (Ridwan, 2012).

Pangkajene and Islands Regency is located in the western part of South Sulawesi Province, with an area of 12,362.73 km² consisting of a land area of 898.29 km² and a sea area of 11,464.44 km². Pangkep Regency has a coastline of 45 km. One of the villages is Tamarupa Village, Mandalle District, Kab. Pangkep. One of the villages in Pangkajene Islands Regency is Tamarupa Village, Kec. Mandalle is a coastal area where most of the population depends on seaweed cultivators for their living. In this village there is a farmer group "Bahari Sejahtera" which will be a partner in this community service activity (Saenong, 2022).

In fact, seaweed cultivation can increase fishermen's income continuously due to several favorable factors, namely: (1) cultivation techniques are simple and easy, (2) the capital required is relatively small, (3) the maintenance period is relatively short (45 - 50) days. harvested, (4) seeds are only needed once during the first planting, the rest can be taken from harvest time, (5) post-harvest technology is simple and easy (only drying in the sun). The problem that often occurs is seaweed productivity and unstable marketing results, which until now have only relied on factory

needs. Price fluctuations are generally related to the very diverse quality of the product (dried seaweed), which has not received attention from producers (seaweed farmers). The production, quality and marketing of grass need attention and a priority scale for handling. Even though the cultivation business can be developed with relatively small capital per unit compared to other mariculture businesses, if the price is too low, the producers (seaweed farmers) will stop their cultivation business. The low price of seaweed in farming apart from external factors also includes internal factors including the quality and quantity of seaweed available. The quality of seaweed at the farmer level is determined by the high water content, the age of the harvested seaweed and the dirt in the seaweed. Meanwhile, the quantity of seaweed available is the non-continuous production of seaweed, even though seaweed exporters and factories need raw materials that are available at all times. This decline in production is a result of unstable seaweed prices and proper management of seaweed cultivation. Therefore, efforts are needed to improve seaweed cultivation management (Kusriani *et al.*, 2018).

Seaweed farmers have limitations such as knowledge about seaweed cultivation and post-harvest. Seaweed farmers rely more on the experience of a seaweed farmer, followed by other seaweed farmers. Likewise, management issues are also considered lacking so that seaweed production fluctuates. This can be seen in Bahari Sejahtera's seaweed partners, namely post-harvest handling and unstable seaweed production. Poor post-harvest handling can cause the price received by seaweed farmers to be low. This can be seen in Figure 1, where the partner is still drying the seaweed on the ground so that the dried seaweed will be mixed with sand and other dirt on the ground which can cause the quality of the seaweed to be low.



Figure 1. Post-treatment of seaweed

Partner Issues

Partner problems in the seaweed cultivation business are (1) management problems starting from planning, organizing, implementing, evaluating and controlling; (2) Cultivation Technology Issues; (3) Post-Harvest Handling Problems and (4) Price Stability Problems. Another problem often experienced by seaweed farmers, including seaweed farmers in Tamarupa Village, is the problem

of price stability. Because at one time the price of seaweed was quite high, but the next moment it fell quite drastically.

Activity Objectives

- Conduct outreach to cultivator groups to provide knowledge, understanding and skills in seaweed cultivation techniques.
- Provide assistance regarding the application of group cultivation techniques in their implementation so that in the future it can be strengthened by the support of related agencies, especially the Fisheries and Maritime Service.

RESEARCH METHOD

Time and Place of Implementation

The location of the activity is in Tamarupa Village, Kec. Mandalle, Pangkajene Islands Regency is a coastal area where the majority of the population depends on their livelihood as pond farmers, on September 28 2024.

Socialization to the Community

In order to increase the knowledge and skills of seaweed farmers, outreach activities will be carried out to provide understanding and knowledge to seaweed farmers about how to cultivate seaweed well. In relation to aspects of seaweed cultivation, knowledge about various things needs to be conveyed to seaweed farmers. Things that seaweed managers or entrepreneurs need to pay attention to and know about are the influence of environmental factors that influence the growth of other grasses. Another thing that seaweed farmers need to understand is the correct selection and management of seeds, because these seeds are a determinant of the success of cultivation. Socialization is an effort to transfer knowledge to the community. The counseling participants are members of the "Bahari Sejahtera" farmer group.

Mentoring

Cultivation assistance activities are carried out by providing assistance in the form of cultivation ropes to the "Bahari Sejahtera" farmer group.

RESULTS AND DISCUSSION

Socialization

Extension activities have been carried out to increase the knowledge and skills of seaweed farmers, this training activity involves elements of experts, namely fisheries instructors. According to (Abdullah & Nasionalita, 2018) socialization has a very large role in supporting the success of a program.

Training using the presentation method begins by presenting material related to seaweed cultivation, by explaining various cultivation models of *Kappaphycus alvarezii* seaweed cultivation technology. This can be seen in Figure 2. Furthermore, it also explains how to care for and post-harvest, up to sales that benefit the group. The seaweed farmers involved in this activity are the "Bahari Sejahtera" farmer group.



Figure 2. Socialization to the community

Mentoring

Assistance for cultivation groups begins with providing assistance with cultivation packages in the form of span ropes with the cooperation of the Pangkep Regency fisheries department. This can be seen in Figure 3.



Figure 3. Delivering aid

Tying Seaweed Seeds

Tying seaweed seeds is carried out on one stretch of rope 30 meters long with a distance of 10 cm between one tie and another with a system of tying one rod in one knot of seaweed seeds; so that in one stretch of rope there are 30,000 bundles of seaweed seeds tied (Figure 4). The technique of tying seaweed seeds with only one stem in one bundle can produce a lot of seaweed with good quality because seaweed growth is maximized in the stretch of seaweed bundle; so that it can provide good seaweed results for seaweed production (Abriana *et al.*, 2017).



Figure 4. Tying seaweed seeds activity

This can encourage the development of science, technology and the arts and science and technology to continue to study techniques for tying seaweed seeds for the development of quality seaweed businesses according to standards; and the application of seaweed seed tying techniques is a form of utilizing science, technology and art in improving the quality of seaweed according to standards. The application of the seaweed tying technique has been able to change the mindset of the seaweed farmer group, where previously in producing seaweed they tied two or three seaweed seeds; I want to tie seaweed seeds to just one stem.

Drying

Drying seaweed that has been harvested is mostly done on a plastic bed rather than on a para (Figure 5). This is because drying the seaweed requires a large area of land; while their land is narrow or small; and drying on a plastic bed makes it easier to collect and transport dried seaweed. Drying is done in the yard of the farmer group's house and there are also those who dry it on the river bank because the land is wider and it is easier to transport harvested seaweed from the sea to land. to dry.



Figure 5. Drying seaweed

CONCLUSION

The implementation of the PKM activities of the Bahari Sejahtera seaweed farmer group has gone according to the plan in the form of; socialization, counseling and training on the correct way to cultivate seaweed. From this community service activity, it can be concluded that the partner group has actively participated in cultivating seaweed seeds.

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