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Training on Making Virgin Coconut Oil (VCO) to Increase Income in Friwen Village, Raja Ampat Regency

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Abstract

In Friwen Village, there is no VCO production yet, even though this village has great coconut potential. Therefore, it requires socialization in the community on how to process coconut into VCO. This activity aims to increase the income of the village community, namely the community in Friwen Village, South Waigeo District, Raja Ampat Regency, West Papua Province. The method used is counseling and the practice of processing diversified coconut-based products. The method for making VCO is fishing, namely by adding some of the finished VCO, which separates the cream of coconut milk from the resulting VCO oil. The results obtained are that partners can produce VCO independently and have knowledge of natural potential that can be utilized to make VCO. After this service, the village community realizes the importance of processing agricultural products to increase income and market their products around the Raja Ampat area.

Keywords: *Community Empowerment, Tourism Product, Virgin Coconut Oil*

1. INTRODUCTION

Coconut is one of the most widely cultivated plantation crops in Raja Ampat Regency. Based on BPS data for 2022, it is known that coconut is the primary commodity of the plantation sector in Raja Ampat, with a harvested area of up to 11,000 hectares compared to other plantation crops such as cocoa, nutmeg, coffee, areca nut, and sago (Statistik, 2020). Outside the plantation area, it can produce up to 10,000 tonnes per year with an average production rate of 90%. This figure shows that coconut can be a significant potential for the people of Raja Ampat to improve their welfare if it is processed and utilized as well as possible (Statistik, 2020)

Nevertheless, the increase in the coconut plantation area is different from the level of production and productivity. BPS data for 2017-2022 shows an increase in plantation area, especially in 2021, up to 11,000 hectares (Statistik, 2020). However, in the same year, there has been a decrease in production levels, with a productivity level of only 76%, which is the lowest percentage for the last five years. It indicates an ineffective head processing since 2021(Statistik, 2020) (Atmojo & Rajab, 2019).

Table 1. Coconut Productivity Trends in Raja Ampat

Year	Harvest Area (Ha)	Production (Ton)	Productivity (Ton/Ha)
2017	10.352	9.445	0,91
2018	10.369	10.108	0,97
2019	10.940	10.310	0,94
2020	10.970	10.860	0,99
2021	11.000	8.382	0,76
2022	10.981	8.779	0,80
Total	**64.612**	**57.884**	**0,90**

Friwen Village is one of the areas in Raja Ampat where many people work as farmers, fishermen, and traders. In Friwen Village, there is no VCO production yet, even though the potential for coconut in this area is excellent. Therefore, it requires outreach to the community to process coconut into VCO. The community usually sells directly to traders for Rp. 1000/item,

whereas if the coconut is processed into other food products, it can increase the local community's income(Statistik, 2020).

VCO has an immense added value because it can be used as a raw material for various products such as cosmetics, soap, food, and medicines. Virgin Coconut Oil (VCO) costs three to four times the price of regular coconut oil (Rohman et al., 2021). In the VCO market, prices vary between Rp. 35,000 up to Rp. 50,000 per 350 ml depending on the soluble acid content (Suryani et al., 2020). VCO is one of the products that can be developed because VCO has derivative products that the community can utilize (Chew, 2019). VCO functions for hair, skin, and body care and is drunk for body health. VCO is safer for consumption than cooking oil currently circulating in society (Chew, 2019; Rohman et al., 2021; Suryani et al., 2020).

Pure coconut oil, often known as Virgin Coconut Oil (VCO), is very beneficial for health (Rohman et al., 2021; Wiyani, Aladin, & Juniar, 2020). The current trend of society that is returning to food patterns for health from nature is increasingly making VCO popular. The uses of VCO include reducing fat in the body, counteracting free radicals, lowering cholesterol levels, as an antioxidant reserve in the body, and reducing the risk of heart disease and cancer (Chew, 2019; Wiyani et al., 2020). VCO is oil made from old coconut, which is processed, is resistant to heat, light, and oxygen, and is not easily degraded because its chemical structure does not have double bonds. VCO has almost 90% unsaturated fatty acids, and the rest is saturated fatty acids so that they can be digested properly by the body. Another characteristic of VCO is that it has a transparent color, has a distinctive aroma, and tastes delicious. The many benefits of VCO make this oil a business opportunity that can be used to increase the family economy (Wiyani et al., 2020). The problem is that the Friwen area requires training efforts to make VCO increase people's income (Rohman et al., 2021).

The objectives to be achieved from this activity include:

1. Providing knowledge to the public about the use of coconuts as a raw material for making VCO
2. Guiding the community about the benefits of VCO
3. Providing skills to the community on how to make VCO a healthy food product
4. Produce VCO products
5. Provide discourse on the establishment of VCO small businesses and how to manage their marketing

The targets to be achieved in this activity are:

1. Inviting the Friwen Village community to be able to use coconut as a raw material for making VCO,
2. Providing an overview of the benefits of VCO for health and reducing dependence on the use of chemical drugs,
3. Generating diversification innovations processed coconut products into pure coconut oil (VCO), which hopes to increase the income of the Friwen Village community,
4. Provide business opportunities for the community, and
5. Provide an overview of how the VCO business is managed, starting from planning, production, product management, and marketing.

This community service will help Friwen villagers increase the economic value of coconuts and increase people's income (Azizah, Pramono, & Fauzan, 2020). In addition, the simple, cheap, and easy manufacturing process makes this activity possible on a household scale (Totok & Siti Nur, 2021). The manufacturing process, which also requires simple equipment, produces low operational costs and relatively large profits. In this community service, training was conducted on making VCO using fishing (Suryani et al., 2020).

2. METHOD

This community service is located in Friwen village, Raja Ampat, West Papua Province on 1 to 4 February 2022. The parties involved in this service are the people of Friwen Village, Raja Ampat Regency. To increase the income of the people in Friwen Village who lack an

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entrepreneurial spirit this is done by providing training on making VCO from coconut (Chew, 2019). Community service methods include direct approaches, presentations, and demonstrations of making VCO. The steps taken include:

1. The preparation stage is in the form of socialization and selecting service participants.
   At the time, the socialization was carried out by asking permission from the local officials, then selecting some Friwen villagers who had met the criteria of having a high enthusiasm for work and learning, not working, and were willing to participate in training and mentoring until it was finished. Participants were formed into several groups, each comprising five people. The formation of groups aims to facilitate transferring information, communication, and learning. The objectives of the process of outreach and selection of participants include:
   a. Providing information to village officials and training participants about the purpose and intent of the VCO-making training.
   b. Collecting data on the problems faced by the Friwen regional community in VCO processing
   c. Conducting discussions on the utilization of the increased added value of coconut as a raw material for making VCO
   d. Discuss the location and schedule for implementing this community service activity program.
2. Presentation
   The community service team prepared materials and demonstration materials for making VCO which were then presented to the training participants. Materials presented during the presentation include:
   a. The benefits of VCO as a healthy food product
   b. Utilization of coconut as a raw material for making VCO
   c. Stages of the process of making VCO
3. Demonstration of making VCO
   The demonstration of making VCO includes several process stages, including:
   a. Making coconut cream from coconut oil
      The coconut is peeled, the flesh is taken. Then the grated coconut flesh is added to water in a 1:1 ratio, then pressed and squeezed. After that, it is squeezed until the water runs out. The filtrate from the coconut milk juice is put into a jar and tightly closed for 2 hours until two layers are obtained: the top layer, cream, and the bottom layer, called skim. The layers are separated, and the top layer (cream) is taken (Figure 1).

Figure 1. Making Coconut Cream

   b. Making VCO with fishing method
      At first, cream that has been separated is added to the finished VCO about 5 ml. Then, stir until smooth, then store in a closed, clear jar then cover with a dark cloth so that it is not exposed to the sun. Let stand for approximately 24 hours. After three layers are formed, separate the oil and then filter it. Finally, put it in a clear bottle.

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Figure 2. Oil extraction

c. Program Evaluation

Evaluation of activities is carried out during the delivery of materials and demonstrations, as well as the number of products produced.

3. RESULT AND DISCUSSION

This program has the theme of training in making VCO which is a derivative of coconut processing products, VCO is a processed coconut product that is sought after by the public, especially those who are health conscious because its content is very good for health and beauty, so this program will contribute to improving the economy of the local citizens. In the early stages of this activity, observations were made and requests for permission from related parties regarding the activities to be held through the Friwen village head. Information was obtained that in this village, no BUMDES guidance would process coconuts into products that have a selling value so that this program can increase local people's income (Azizah, Pramono, & Ikhsani, 2022).

The training stages include the training focusing on the participants' cognitive abilities in the form of the provision of material related to the production of VCO and the nutritional content contained in the VCO, as well as an introduction to tools and supporting materials in its manufacture. Team practice to make VCO and share the methods used to make VCO. The method for making VCO is fishing to separate the coconut cream and the resulting VCO.

Socialization begins with the selection of participants according to the specified criteria. The training on making VCO was held on February 5, 2021, in one of the houses of the Friwen village residents, South Waigeo District, Raja Ampat Regency. The target of this training is 20 homemakers divided into four groups. Socialization and screening, and training went well. It can be seen from the positive response of the participants and village officials and enthusiasm when participating in the VCO-making training. At first, the participants needed help understanding what VCO meant. This training teaches participants that coconut has added value and benefits. Namely, it can be used to make VCO which is healthy for consumption and prevents various diseases.

The results achieved in the service held are as follows:

This training adds insight and information about the method of making good quality VCO

1. The community knows the natural potential that can be utilized to make VCO, Virgin Coconut Oil (VCO) is a modification of the process of making coconut oil to produce products with low water content and free fatty acid levels, smells good, is evident in color, and has a long shelf life, namely more than 12 months (Mohammed, Samir, Jassim, & Saeed, 2021).
2. The technique of processing coconut oil into VCO is carried out using the fishing method with several stages: extraction of coconut milk from coconut meat. The coconut milk extraction process starts with peeling old coconuts, splitting them, and removing the flesh from the shell. The coconut flesh is still grated manually. Crushed fruit flesh is then added to water with a ratio of 1:1. Furthermore, the extract is pressed manually, then filtered to obtain coconut milk. The coconut milk obtained is poured into a transparent plastic bucket, then allowed to stand for 2 hours (Ng et al., 2021). During standing, the coconut milk separates into three layers. Namely, the top layer is cream which is rich in oil. The middle layer is skim, rich in protein,

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and the bottom layer is sediment. The cream is separated and used as raw material for VCO. In addition, the team also mixed the VCO into the coconut cream and left it for 24 hours. Mixing these enzymes aims to provoke the separation of oil and coconut until finally they are easily separated from the oil (Soo et al., 2020).

3. This training and mentoring results in processing coconut oil into a VCO product that smells good, is evident in color, and has a longer shelf life.
4. The evaluation in the first stage with the indicators and evaluation design is obtained as follows:
   a. The number of participants who attended were all homemakers who are currently concerned with processing coconut into oil
   b. The enthusiasm of the training participants was apparent when all participants were actively involved during the activity
   c. Evaluation of the product according to the indicators and benchmarks of the resulting product has a level of clarity
   d. Evaluation of the participants' liking level. Almost all participants liked the products produced.
   e. Evaluation of training activities generally went well and satisfied the participants and the implementing team. Participants hope they will be given the opportunity to receive similar training in later years.

Figure 3. Program Documentation

CONCLUSSION

By providing training and practice on making VCO at the service location, the village community becomes more knowledgeable and understands how to process coconut into a more helpful product so that partners can produce VCO independently. The conclusions that can be obtained from the implementation of community service activities for making VCO include the level of participation of participants who are enthusiastic about this training program has a positive impact on the community service program. Then the implementation of the service program can produce product innovations for diversified coconut processed products in the form of VCO, which have high selling values so that they can improve the community's economy.

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