JCSAS

Journal of Community Service and Application of Science

ISSN:xxxx, Vol. 1, No. 1, June, 2022

Utilization Of Waste From Vco Production As A Nata De Coco Stater To Increase The Income Of The People Of Kwt “Bengke Sakato”.

Pemanfaatan Limbah Pembuatan VCO Menjadi Stater Nata De Coco Untuk Meningkatkan Pendapatan Masyarakat KWT”Bengke Sakato”.

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Article History:
Received:
01-06-2022
Revised:
15-06-2022
Accepted:
28-06-2022
Published:
02-07-2022

Abstract

The service partner of KWT "Bengke Sakato" Sungai Sariak, Padang Pariaman Regency, chaired by Ermatius. So far, his line of business is manufacturing VCO with the brand "Amboko" and processing 2000 coconuts every month. With the number of members as many as 25 people, this income is not sufficient. Waste from the VCO manufacturing process has not been utilized such as coconut water, coconut fiber, and coconut shells are still wasted. Whereas coconut water can be made into the starter and Nata de coco, the coir can be made cocopeat and the shell can be made of ceramics or bags that can increase income. This service program aims to empower and improve the community's economy. Namely the community members of KWT "Bengke Sakato". The method of service is that it begins with socialization, then carries out a workshop, after which monitoring and evaluation are carried out, as well as mentoring. This activity can produce starter or nata de coco seeds from pineapple and coconut water, where every 3 liters of coconut water and one pineapple produces 5 starter bottles with a price per bottle of IDR 50,000. In addition, it can also increase the knowledge of partners from 29.3% to 87.3%. It can be concluded that this service activity can increase partner knowledge about the manufacture of nata de coco seeds from coconut water which is a waste of the VCO process. And can improve the partner's economy. Making Nata de coco starter from coconut water can increase family income or empower the community.

Keywords: coconut water, nata de coco, stater, empowerment, KWT"Bengke Sakato".

Abstrak

Mitra pengabdian KWT”Bengke Sakato” Sungai Sariak, Kabupaten Padang Pariaman, yang diketuai oleh ibu Ermatius. Selama ini bidang usahanya adalah pambuatan VCO dengan merek “Amboko” dan mengolah 2000 butir kelapa setiap bulan. Dengan jumlah anggota sebanyak 25 orang penghasilan ini belum memadai.Limbah proses pembuatan VCO belum dimanfaatkan seperti air kelapa, sabut kelapa, tempurung kelapa masih terbuang sia-sia. Padahal air kelapa dapat dibuat stater dan Nata de coco, sabut nya dapat dibuat cocopeat dan tempurung nya dapat dibuat keramik atau tas yang dapat menambah penghasilan. Program pengabdian ini bertujuan untuk pemberdayaan dan meningkatkan perekonomian masyarakat. Yaitu masyarakat anggota KWT “Bengke Sakato”. Adapun metode pengabdian nya adalah diawali dengan sosialisasi, kemudian melaksanakan Workshop, setelah itu dilakukan monitor dan evaluasi, serta pendampingan. Kegiatan ini dapat menghasilkan stater atau bibit nata de coco dari Nenas dan air kelapa, dimana setiap 3 liter air kelapa dan satu buah nenas menghasilkan 5 botol stater dengan harga per botol Rp.50.000. Selain itu juga dapat

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ISSN:xxxx, Vol. 1, No. 1, June, 2022

meningkatakan pengetahuan mitra dari 29,3 % sampai 87,3%. Dapat disimpulkan bahwa kgitan pengabdian ini dapat meningkatkan pemgetahuan mitra tentang pembutan bibit nata de coco dari air kelapa yang merupakan limbah proses VCO. Dan dapat meningkatkan perekonomian mitra. Pembuatan stater Nata de coco dari air kelapa dapat menambah pendapatan keluarga atau memberdayakan masyarakat.

Kata Kunci: air kelapa, nata de coco, stater, pemberdayaan, KWT"Bengke Sakato".

INTRODUCTION

Women Farmers Group (KWT) "Bengke Sakato" is located in District VII Koto Sungai Sariak, to be precise in Jorong Bengke where many coconut trees grow. We can see in the following photo, that the houses in Jorong Bengke are generally planted with coconut trees.

Figure 1. People's houses that always have coconut trees

In accordance with their natural conditions which are coconut producers, this farmer group is engaged in the business of making Virgin Coconut Oil (VCO), whose basic ingredient is coconut. Here you can see the Service Team from the Muhammadiyah University of West Sumatra posing in front of the Amboko VCO business nameplate which is the brand of this group's VCO business

Figure 2. Chairman and members of the PKM Team from the Muhammadiyah University of West Sumatra at the 'Amboko' VCO Production House

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The Women Farmers Group “Bengke Sakato” (1) was formed in 2018 with the Chairperson, Mrs. Ernatius, and the Secretary, Mrs. Arnita. There are 17 members, consisting of women who already have an organizational structure. There are already members who have served as Treasurer, namely Mrs. Jazimah Syadni, and who are in charge of Marketing are the following women, Atika Febri, Resti and Rezna Okti Y. In addition, there is also one who is in charge of the Production division, namely Desmiyanti..

The Head of the Service Team from the Muhammadiyah University of West Sumatra is a lecturer whose research is in the field of VCO and has published in several international and national journals such as (2–5) and is also engaged in VCO Production. From the experience of making VCO and analysis of the state of VCO production by KWT "Bengke Sakato", it turns out that VCO production waste has not been utilized. The waste that has not been utilized is coconut water, coconut fiber, and coconut shell.

Cocopeat can be made from coconut husk (6), where this cocopeat can be used as a plant media material. Apart from coconut coir, coconut water which is a waste of VCO production has not been utilized. Whereas coconut water can be made Nata de coco (7). Likewise, other waste that has not been utilized, namely coconut shells. Coconut shells can be turned into charcoal (8–11) and tiles or ceramics and bags.

The Community Service Program regarding training in making nata de coco, many have done it, even at KWT "Bengke Sakato" it has been done. (12). But training on making a starter or nata de coco seeds has not been done by many. The process of making Nata de coco requires seeds or starters, which usually only need to be purchased and used. Not many people use seeds that are made by themselves using pineapple and coconut water. So this Community Service Program conducts training on making seeds or Nata de coco starters using coconut and pineapple water.

METHODS

The implementation of community service activities at KWT "Bengke Sakato" is carried out by the following methods:

a. **Socialization.**

In this socialization activity, knowledge was given about seeds or starter nata de coco, how to make it, what can be made or what ingredients, and so on. At the time of this socialization, a PreTest was given to measure the knowledge of partners with nata de coco seedlings, and after the socialization, a post-test was carried out again. Pre-test and post-test are given with the same questions. So that later the increase in partner knowledge can be measured in a measurable or percentage manner.

b. **Workshop or training**.

The workshop activity is the practice of making starter nata from pineapple and coconut water. The manufacturing scheme is as follows in Figure 3,

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NATA DE COCO SEEDS/STATER PRODUCING SCHEME

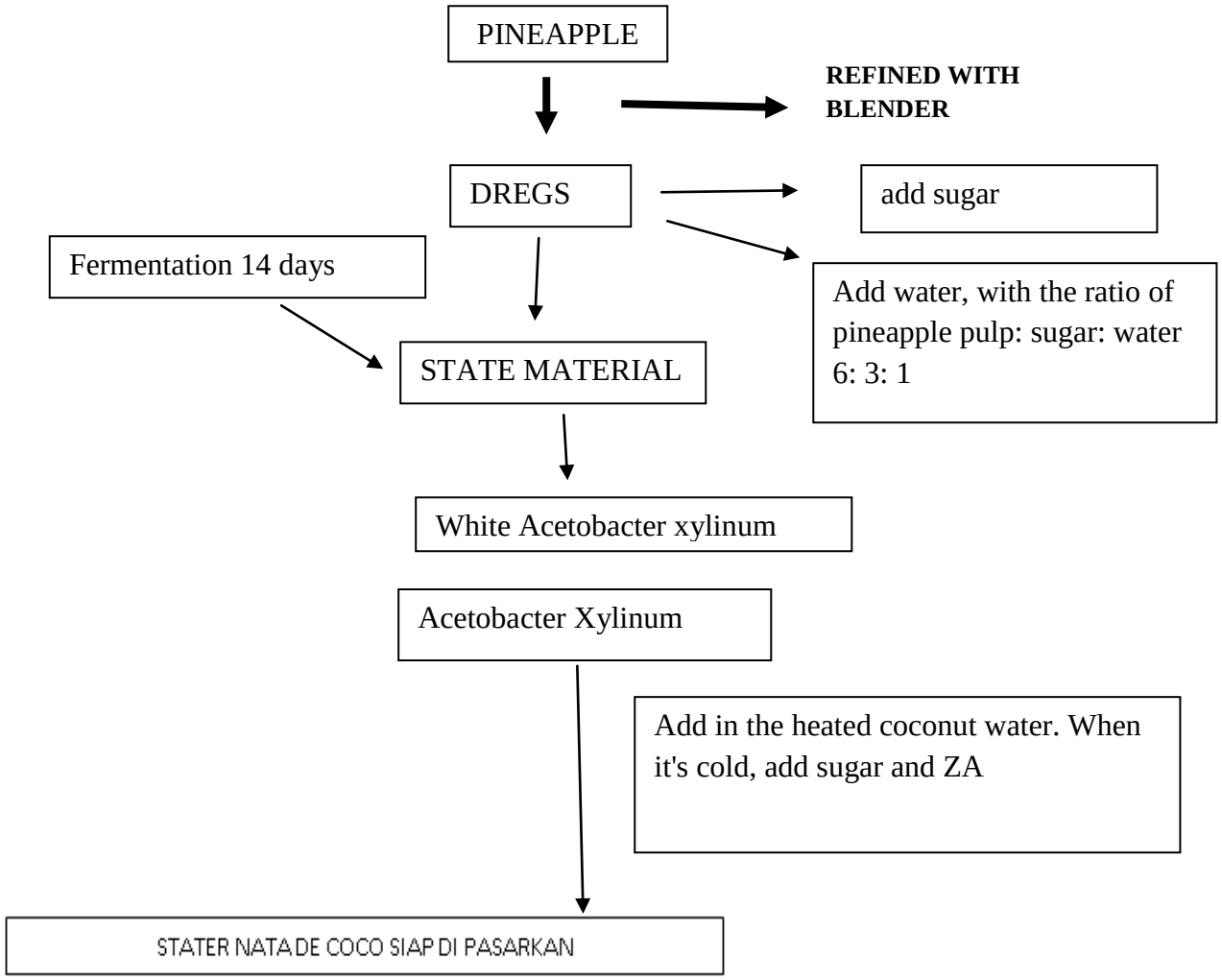

Figure 3. Schematic of Making nata de coco Seeds

c. **Assistanc**e.
Mentoring Activities are the PKM Team assisting Partners in making nata de coco starters many times until partners can and are proficient.

RESULTS AND DISCUSSION

Service Program carried out at the "Bengke Sakato" KWT by the Service Team from the Muhammadiyah University of West Sumatra resulted in the following,
the community follows,

Socialization.
The socialization activity was attended by 15 KWT members. The atmosphere of socialization activities can be seen in Figure 1, below

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Figure 1. Socialization atmosphere for making Nata de Coco seeds or starters at KWT "Korong Bengke"

To see the partners' initial knowledge, an initial test or pre-test, which contains 10 questions about seeds or nata de coco starters, is given, before being given an explanation about the socialization material. The percentage of initial knowledge from partners can be seen from the number of questions that can be answered correctly from the 10 questions given. The results can be seen in Table 1 below

Table 1. Percentage of partners' initial knowledge.

No.	Name	Number of correct
1	Ermatius	4
2	Arnita	2
3	Jazimah Syadni	3
4	Atika Febri	1
5	Resti	4
6	Rezna Okti Y	4
7	Desmiyanti	3
8	Yuni Rismawati	2
9	Jusmanidar	4
10	Masni	2
11	Ermawati	3
12	Saribulan	4
13	Zuraida	2
14	Nursam	2
15	Murdiati	4
	Jumlah	44
	Rata-Rata	2,93
	Persentase	**29.3 %**

From Table 1, it can be explained that the initial knowledge of partners is only 29.3%. This means that partners do not yet know that coconut water can be used to make nata de coco seeds. Besides partners, they also do not know that coconut water can also be made into Nata de coco and various types of health drinks made from nata de coco (13)(14).

At the end of the socialization activity, a final test or post-test was carried out with the same 10 questions. The difference in the percentage of correct answers from partners is an increase in the partner's knowledge of the material presented. The results of increasing partner knowledge can be seen in Table 2 below,

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Table 2. Increased partner knowledge

No.	Name	Number of Correct
1	Ermatius	9
2	Arnita	10
3	Jazimah Syadni	7
4	Atika Febri	9
5	Resti	8
6	Rezna Okti Y	10
7	Desmiyanti	8
8	Yuni Rismawati	9
9	Jusmanidar	10
10	Masni	9
11	Ermawati	7
12	Saribulan	8
13	Zuraida	10
14	Nursam	8
15	Murdiati	9
	Jumlah	131
	Rata-Rata	8,73
	Persentase	**87.3 %**

Training on making nata de coco starter

Partners take training on making nata de coco starter seriously.

Generated starter

In this training, the results of the Nata de coco starter were obtained as follows, which can be seen in Figure 3,

Figure 3. The starter or seeds are produced.

The resulting state is the same as the one generated (12.15).

The results according to the stages of getting it

The results of making nata de coco starter according to the stages are as follows,

Stage 1.	Preparation of the ingredients, namely Pineapple.
Stage 2.	Pineapple is blended or mashed
Stage 3.	Pineapple that has been mashed is filtered using a cloth, and the pulp is taken. The pulp is added with water and sugar with the ratio of pulp: sugar: water is 6: 3: 1.
Step 4. The	pineapple is fermented. After 9 days it appears white on its surface. That's what Acetobacter Xylinum bacteria.. These bacteria are the seeds for nata de coco.
Stage 5. The	pineapple is fermented. After 9 days it appears white on its surface. That's what Acetobacter Xylinum bacteria.. These bacteria are the seeds for nata de coco.

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One bottle of stater nata de coco can be sold for Rp. 50,000. in 3 liters of coconut water can be 5 bottles of starter.
So 5 x IDR 50,000 is IDR 250,000. While the capital is only 1 pineapple fruit 10,000. and sugar, ZA, and vinegar Rp. 5,000. So there are quite a few advantages. Can increase income for the family members of KWT "Bengke Sakato", Sungai Sariak Padang Pariaman.

Mentoring.

The mentoring process is carried out for 2 months, that is until the partners can and are proficient at making nata de coco starters until the results can be sold or marketed. The following can be seen in the development of partner skills in producing Nata Coco seeds or starters in Table 3,

No	Time of manufacture	Results
1,	First	Of the 4 bottles of nata seeds made with the basic ingredients of mashed pineapple pulp, 2 bottles of Acetobacter xylinum are good for growth. The 2 bottles again contaminants or fail. When acetobacter xylinum was added with coconut water, of the 6 bottles made, 3 bottles were successful . Which 3 bottles of contaminants or unsuccessful
2.	The second	Of the 4 bottles of nata seeds made with the basic ingredients of mashed pineapple pulp, the good ones grow Acetobacter Xylinum, there are 3 bottles. The 21 bottles were contaminated or failed . When the acetobacter xylinum was added with coconut water, out of the 6 bottles made, there were 4 bottles that were successful
3.	The third	of the 4 bottles of nata seeds were made with the basic ingredients of mashed pineapple pulp, the good ones grew Acetobacter Xylinum 3 bottles. One more bottle of contaminants or failure. When acetobacter xylinum was added with coconut water, from 6 bottles made, there were 5 bottles that were successful . Which 1 bottle of contaminants or does not work
4.	Fourth	Of the 4 bottles of nata seeds made with the basic ingredients of mashed pineapple pulp, the good ones grow Acetobacter Xylinum, there are 4 bottles. It means you can make it well. When acetobacter xylinum was added with coconut water, from 6 bottles made, there were 5 bottles that were successful . Which 1 bottle of contaminants or does not work
5. Fifth	Of	the 4 bottles of nata seeds made with the basic ingredients of mashed pineapple pulp, the good ones grow Acetobacter Xylinum, there are 4 bottles. It means you can make it well. When acetobacter xylinum was added with coconut water, from 6 bottles made, 6 bottles were successful . This means that everything is successful or in other words, partners have been able
6.	Sixth	Of the 4 bottles of nata seeds made with the basic ingredients of mashed pineapple pulp, there are 4 bottles that grow good for Acetobacter Xylinum. It means you can make it well. When acetobacter xylinum was added with coconut water, from 6 bottles made, 6 bottles were successful . This means that all are successful or in other words, partners are able

From Table 3, it can be seen the development of partners' skills in making nata de coco starters, where in the first, second to fourth manufacturing there are still contaminants or failures. At that time, he was always accompanied and given input and trained again while still diligently making it. In the end, all the starters that were made nothing failed. Everything can be sold and make money.

CONCLUSION

Training on making seeds or starter nata de coco using pineapple and coconut water from VCO processing waste can improve knowledge and the economy of the family members of KWT "Bengke Sakato".

ACKNOWLEDGMENTS

activity was financed with a PKM Service Grant with the title "Various Processed Products of VCO Manufacturing Waste in the Women Farmers Group (KWT) "Bengke Sakato", Sariak River, Padang Pariaman Regency" with Contract No. from Dikti to LLDIKTI X is NUMBER 098 /E5/RA.00.PM/22 May 10, 2022. With a Derivative Contract from LLDIKTI X to LPPM Muhammadiyah University of West Sumatra Number 002/ LL10/AM-PKM/2022 dated 8 June 2022. Contract from LPPM Muhammadiyah University of West Sumatra to each lecturer or Service Team, namely Number 25/LPPM.UMSBSK.PPM/06/2022 dated June 20, 2022. For that, I would like to thank

1. DRTPM for funding
2. LLDIKTI X which has facilitated this activity
3. LPPM Muhammadiyah University of West Sumatra which has facilitated this activity.

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