

# **IMPROVING THE ECONOMY OF ARECA NUT FARMERS IN SIMPANG** JERNIH VILLAGE THROUGH INCREASING VALUE ADDED WITH POST-HARVEST PROCESSING OF ARECA NUTS

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# Faoeza Hafiz Saragih<sup>1</sup>, Haikal Fajri<sup>2</sup>, Andri Yusman Persada<sup>3</sup>

Programme Study Agribussiness, Agriculture Faculty, Universitas Samudra<sup>1</sup> Programme Study of Civil Engginering, Engginering Faculty, Universitas Samudra<sup>2</sup> Programme Study of Biology, Engginering Faculty, Universitas Samudra<sup>3</sup> E-mail Correspondence: hafizsaragih@unsam.ac.id

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#### Abstract

Areca nut is a commodity with high economic value, where Areca nut is used in industry as a food and textile colouring. However, many farmers do not cultivate Areca nuts specifically; they only plant them as a plant on the fence of the house or agricultural land. In Simpang Jernih Village, areca nut is still processed traditionally so that it gets an inappropriate selling value. The post-harvest process is not productive and the sale of areca nut is still round. Therefore, a tool technology is needed that can be used to increase productivity, such as peeling areca nuts and cutting areca nuts into slices so that they can increase the selling price. This community service activity will be carried out in Simpang Jernih Village, Simpang Jernih District, East Aceh. The result of this workshop that the areca nut farmer more efficiently in post-harvest and the price of slice areca nut more expensive then before.

#### Keywords: Areca Nut, Post-Harvest, Income

#### **INTRODUCTION**

Areca nut is one of Indonesia's agricultural commodities that must be developed sustainably. Agronomically, this plant is similar to coconut which can be used as a hedge and ornamental plant. However, this plant actually has a selling value that can benefit the national economy [1]. In Indonesia, the distribution of areca nut plants is in 14 provinces, including Aceh, North Sumatra, West Sumatra, Jambi, Bengkulu, Riau, West Java, Central Java, East Java, West Nusa Tenggara, West Kalimantan, South Kalimantan, Papua and West Irian Jaya [2]

The industrial world is currently seeing the potential of areca nut as a food and textile coloring agent [3] because this plant produces color pigments derived from tannin compounds that produce red color [4]. The processed areca nut is the seed containing 6.45% tannin from water solution extraction and 8.53% from ethanol solution extraction [5]. Where to get the seeds is done by peeling the skin first. Generally, people still use manual methods using knives so that it will take a long time so that productivity is low and selling is still in round form [6].

Aceh Province as one of the producers of areca nuts, in general farmers still use manual methods in the postharvest process. Simpang Jernih Village, East Aceh Regency has a large area of areca nuts where farmers sell this commodity to be used as a basic material for making batik in Batu Sumbang Village. Based on information obtained from the village apparatus, more than 50% of the population of Simpang Jernih Village cultivate areca nuts and carry out post-harvest processing manually. The level of farmer productivity is also still low because peeling areca nuts manually produces approximately 40 Kg/day.

Beside that areca nut is also sold in form round dry with relative price low at the moment This that is around Rp. 3,000 - Rp. 5,000/Kg depending quality. If done processing more carry on with do slicing for areca nut then price will increase with The price of sliced areca nut is Rp. 30,000 - Rp. 50,000/Kg. With improvement price sell This so income farmer will also increased which means level economy and welfare farmer will become more good. Therefore That required A technology It's simple to sell areca nut farmer own mark plus .



# METHOD

The Community Service Activity Plan regarding the Improving The Economy Of Areca Nut Farmers In Simpang Jernih Village Through Increasing Added Value With Post-Harvest Processing Of Areca Nuts in 14 August 2024, is outlined in the following stages:

## a) Coordination of Activities

At the beginning of the activity, the implementing team will coordinate with partners . This will make it easier for the implementing team to determine the location of Community Service , to know problems faced by partners, and provide alternative solutions to solve problems.

## b) Socialization

The socialization of activities is carried out in the form of lectures by presenting training materials face to face with the aim of providing clearer information and knowledge to partners about the aims and objectives of the community service team. to conduct training about processing post harvest areca nut.

## c) Training

Training activities will be held by practicing directly to partners about use tools for splitting and slicing areca nut.





Picture 1. Splitting And Slicing Areca Nut Prototype

# d) Mentoring

Mentoring will be carried out by the service implementation team by visiting the training location in Simpang Jernih Village, Sub-district of Simpang Jernih, East Aceh Regency once for monitoring and evaluation of the development of activities carried out. In sub-stages c and d, the service team, assisted by students, will prepare tools and materials first. Evaluation; The service team provides a post-test as a form of evaluation of whether partners understand the solution to the problem being offered. Success indicator: partners understand the methods of manufacturing, packaging and marketing chitin and chitosan as well as their applications with an average percentage of understanding >75%.

## d. Monitoring:

Monitoring activities ensure the sustainability of technology transfer results and the training that the team has provided.

# **RESULTS AND DISCUSSION**

This service has been carried out in stages consisting of the preparation stage, implementation stage and evaluation stage.

# a. Preparation Stages

The community service team made preparations starting from a location survey. Coordination that has been done with partner leaders have set priority issues to be addressed resolved and solutions offered to resolve problem The solutions offered is :



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- 1. Helping partners and the Simpang Jernih Village, Sub-district of Simpang Jernih, East Aceh Regency in increase productivity Work
- 2. Help increase mark sell from areca nut with give mark plus product increase income public.

## b. Implementation Stage

Before enter the stage socialization or counseling, then chairman executor give welcome, then welcome by the partners, namely Group Farmer Areca nut. Next team devotee give pretest to participants. Pretest consists of 10 items questions about partner knowledge regarding products produced used the machine. Pretest given in form questionnaire and its implementation guided by the service team because there were several participants who had difficulty in understanding, reading and writing the pretest question.



Figure 2. Socialization and Counseling

After delivery material, implemented ask answer around material training. Enthusiastic very high participant seen from the amount question. After given socialization then team devotion practice method used the machine.

# c. Evaluation Stage

At the evaluation stage, the service team gave a post-test to all participants. The posttest given still uses the same questions as the pretest which consists of 10 questions. Figure 3 shows a comparison of pretest and posttest scores for all activity participants.



Figure 3. Pre-Test and Post-Test Result

From the pre-test, and post-test given after and before the counseling and workshop, pre-test and post-test scores were obtained. The collected data was processed using the Wilcoxon Signed Test (non-parametric statistics). The software used to analyze the data is SPSS 16. This test is to analyze differences in the level of partner knowledge development before and after by-product development activities. From the table above, you can see the scores after



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and before the counselling and workshop. With  $\alpha$ =5% the service team wants to test the level of knowledge development of counselling and workshop participants. The level of knowledge referred to is the sample's knowledge regarding by-product development. So a hypothesis can be formulated as follows:

 $H_{0} = Median$  of the difference between the two variables = 0, there is no difference in the level of farmers' knowledge before and after the outreach activities and workshops were held.

 $H_(1)$  = Median of the difference between the two variables  $\neq 0$ , there is a difference in the level of farmers' knowledge before and after the extension activities and workshops were held.

After the data was processed with SPSS 16, the results in Figure 2 were obtained. From the results, the significance was  $(0.016) < \alpha_0.05$ . Thus, it can be concluded that H<sub>0</sub> was rejected and H<sub>1</sub> was accepted, meaning that there was a difference in the level of knowledge of service participants before and after the outreach activities and workshops were held.

# CONCLUSION

The results achieved in this activity are addition partner insights regarding improvement mark plus areca nut so activity post harvest more efficient and price sell will more Good so that income will increase.

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