

**DIVERSIFICATION OF PROCESSED AGRICULTURAL HARVEST
PRODUCTS IN CANGGAL CANDIROTO VILLAGE**

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Abstract

Canggal Candiroto Village is one of the areas in Indonesia that has great potential in the agricultural sector, especially in the production of chili and garlic. Diversification of processed products from agricultural crops is an important strategy in increasing added value for farmers, especially in villages with abundant natural resources. Diversification of processed products from chili and garlic, such as chili and garlic, can increase farmers' income and strengthen economic resilience in Canggal Candiroto Village. This work program is carried out to improve skills in MSMEs, increase income, expand marketing areas, register business permits, and provide halal certification. The results of this program activity show an increase in the knowledge and skills of Canggal Village PKK participants as well as an increase in income through offline and online marketing.

Diversification, Chili, Onion, Oil, UMKM, KKN

INTRODUCTION

Canggal Candiroto Village is one of the areas in Indonesia that has great potential in the agricultural sector, especially in the production of chili and garlic. These two commodities have become the main source of livelihood for many farmers in this village. However, challenges in maintaining price stability and overcoming market fluctuations are often obstacles faced by farmers. In addition, the limited diversification of processed products from crops is also one of the factors that affect their income.

Diversification of processed agricultural products is one of the important strategies in increasing added value for farmers, especially in villages with abundant natural resources. Canggal Candiroto Village is one of the villages in Indonesia that has great agricultural potential. However, like many villages. Other challenges faced by local farmers are not only limited to the production of harvests but also to the marketing and processing

of those products. Diversification of processed products can be a solution to address these issues while also improving the welfare of farmers. Various studies show that diversification of agricultural products has many benefits, including increased farmer income, reduced risk of loss due to crop failure, and improved skills in product processing.

In addition, diversification also contributes to local food security by providing a variety of more diverse and nutritious food options. To increase added value and address these issues, diversification of processed products from chili and garlic is a viable solution to consider. One effort that can be made is to process chili into chili oil and garlic into garlic oil. These processed products not only have a longer shelf life but also have a wide market potential both domestically and internationally.

With this diversification of processed products, it is hoped that it can increase farmers' income and strengthen economic resilience in Canggal Candirototo Village. This approach is also in line with efforts to develop village economies based on sustainable agricultural processing. Thus, the development of chili oil and garlic oil from the harvest of chili and garlic in Canggal Candirototo Village can become one effective strategy in improving community welfare and optimizing local agricultural potential.

However, diversification of processed harvest products requires more than just innovation in product creation. It also involves meeting relevant regulations to ensure that the products produced meet widely recognized quality and safety standards. In Indonesia, two important elements that need to be considered in this process are the registration of the business identification number (NIB) and the creation of halal certification.

The registration of the NIB provides legality and official identity for the business being run, facilitates access to various facilities and government support, and increases consumer trust. Meanwhile, halal certification becomes an important requirement for products that want to enter markets that require halal guarantees, especially in countries with a significant Muslim population.

This article will discuss how the diversification of processed harvest products in Canggal Candirototo Village can be optimized through the NIB registration process and halal certification. By focusing on strategic steps and the benefits of these two aspects, it is hoped to provide useful insights for business actors and related parties in efforts to develop the agricultural industry in the village.

Meetings conducted with the village PKK community are very interested in receiving training on the diversification of processed harvest products, as it can address the production problems they face as well as management training so that the businesses they undertake can advance and develop.

Table 1. Solutions and Problems in Society

No	Problems	Solutions
1.	Perishable raw materials	Processing raw materials into new products that can be long-term
2.	No product diversification yet	Making various processed onion and chili products such as garlic oil and chili oil
3.	The packaging of the product is very simple	Improved quality of packaging with unique designs, food grade packaging and attractive labels
4.	Limited marketing	Expansion of marketing levels and Online sales
5	Do not have a business license	Business license registration is carried out
6	There is no halal certification on each processed product	Registering processed products with halal certification bodies

Onion oil and chili oil products have several advantages over processed raw products:

- It is an innovation that is easy to use when cooking or practical
- Higher economic value
- It is a mixture that adds a distinctive taste to the processed food
- Has a longer shelf life (can last for 2-4 months with tightly sealed packaging).
- Raw materials are easy, cheap, and even free (own vegetable garden) to get.

The purpose of implementing this work program is so that village residents, especially PKK, can improve their skills in MSMEs, namely enhancing the management of

agricultural commodity products and their diversification, increasing income, improving packaging quality, expanding marketing areas, registering business licenses, and providing halal certification for each of their processed products.

The packaging of various processed agricultural products is made hygienic, unique, and attractive to attract consumer interest. Packaging can be made from plastic in the form of standing pouches or uniquely designed plastic jars to maintain the quality and durability of the products. Marketing can be enhanced to various stalls or offline stores and also through digital platforms or online stores. Product introduction can also be done through exhibitions or providing product samples to consumers.

METHODS

The stages of activity methods that will be applied for the success of these service activities include

a. Counseling and discussion

Providing counseling on the importance of diversifying processed vegetable products, namely chili oil and garlic oil, the importance of hygienic, food grade and attractive product packaging, as well as counseling on business licenses and halal certification registration in each processed product.

b. Training

Providing training on the production of diversified agricultural products, namely chili oil and garlic oil processing. Packaging training using hygienic and attractive packaging. Marketing training for chili oil and garlic oil products through social media platforms as well as registration of business licenses and halal labels.

c. Evaluation

Monitoring and evaluation are carried out from the time the program is implemented until it is completed.

RESULTS AND DISCUSSION

a. Preparation

Preparation begins with the design of the work program from the KKN team, which is then submitted to the LPPM. The design of this work program is carried out by observing complaints and potential that can be developed in Canggal village. Furthermore,

implementation strategies, targets, identification, inventory of materials and equipment, as well as the distribution of job desks among KKN members are carried out. The preparations can be outlined as follows:

1. Notification to the head of the PKK of Canggal village
2. Determination of the date and time of the seminar and training, namely on July 23, 2024, at 13:00, located at the house of Mrs. Kenti, Dusun Cepoko, Canggal village
3. Notification in the form of an invitation for the implementation of the seminar and training on Product Diversification of Agricultural Harvest Processing in Canggal Candiroto village to the members of the PKK of Canggal village.

All preparations went well where the PKK was very enthusiastic about this work program and could not wait to gain training knowledge to address complaints and provide updates in the future.

b. Extension

This counseling activity was enthusiastically attended by the PKK, so the counseling was divided into 2 meetings due to limited seminar space. In this counseling, information was provided regarding the diversification of processed agricultural products in the form of explanations, raw materials, quality of materials, production processes, and attractive product packaging. Counseling was provided on the importance of creating business permits and halal certification to ensure sustainability at the marketing stage. This counseling aims to provide information related to the business identification number that can facilitate business owners in online buying and selling activities. Meanwhile, for marketing, a seminar was provided regarding account and product registration on the e-commerce platform Shopee.

Participants who attended actively asked questions during the discussion session. The questions related to agricultural products, material management, the registration process for halal certification, and how online shops work. About 75% of the participants present actively raised various questions, such as regarding the equipment needed, preparation of raw materials, business opportunities, and the processing process. Their enthusiasm was clearly visible, showing a high interest considering the many complaints regarding the spoilage of excess commodity results.

The knowledge of participants who attended experienced an increase after following the counseling on agricultural product diversification, with an increase reaching 85%, showing very good results. The increase in knowledge of the PKK of Canggal Village after the counseling activity can be seen in the table below.

Table 2. Increase in Knowledge of PKK of Canggal Village After Counseling Activity

Knowledge	Before (%)	After (%)	Information
Knowledge of diversification of processed vegetables	35 %	90%	Increased
Knowledge of how to process onions and chili peppers	65%	90%	Increased
Knowledge of hygienic and attractive packaging techniques	40 %	85%	Increased
Knowledge of marketing techniques	20%	80%	Increased
Knowledge of halal certification	0%	95%	Increased



Figure 1. Counseling Activity

c. Training

During the training on diversifying agricultural products into garlic oil and chili oil, the training on halal certification registration, and online marketing training ran effectively. The participants were very interactive in trying to make the products. The majority of the participants were able to practice well. Then, after the products were successfully made, they were packaged using attractive and hygienic packaging to maintain product quality. Furthermore, the method of halal certification registration through the

Halal Product Assurance Agency (BPJPH) was practiced, which will then issue a Business Identification Number (NIB). This halal certification is important as it can be used on product labels that will support online marketing later.

In the online marketing training session, the participants were created E-Commerce accounts (Shopee) and then taught the product registration mechanism up to the shipping process. In these three training sessions, the participants followed the training until completion and paid close attention, as well as tried it without hesitation. The KKN Team 4 accompanied and happily provided examples, directions, and guidance.



Figure 2. Training Activities

The increase in skills after the training activities can be seen based on the following table.

Table 3. Increase in Skills of PKK Canggal Village After Training Activities

Skills				Before (%)	After (%)
Information					
Skills in processing agricultural commodities	35%			85%	Increased
Processed product packaging skills	25%			90%	Increased
Skills to register for halal certification	0%			95%	Increased
Marketing skills with online media	20%			85%	Increased

PKK participants successfully produced the products that were taught, and then these products began to be sold during the expo or exhibition events held in Canggal village. The products taught have also been marketed traditionally through word of mouth at PKK events. Furthermore, the results of online marketing training also yielded results where PKK members began to register other MSME products such as coffee, tobacco, seblak, etc., through Shopee, WhatsApp, and Facebook. After this training, monthly income also experienced a significant increase.

CONCLUSIONS

The results of this community service create the following conclusions :

1. PKK participants from Canggal Village have experienced an increase in knowledge of the diversification of processed local agricultural products by 90%, knowledge of processing garlic oil and chili oil by 90%, knowledge of packaging techniques by 85%, knowledge of halal certification techniques by 95%, and knowledge of online marketing by 80%.
2. PKK Desa Canggal experienced an increase in skills in processing agricultural commodity 85%, an increase in skills in packaging processed products 90%, an increase in skills in registering halal certification 95%, marketing skills with online media 85%.

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