

## Empowerment of KWT Roay Lestari through Drip Irrigation, Digital Marketing and Harvest Processing

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### Abstract

Women Farmers Group (KWT) plays an important role in supporting the progress of the agricultural sector. KWT Roay Lestari is a farmer women's group in Kahuripan Village, Tawang Subdistrict. KWT Roay Lestari focuses on processing and marketing processed agricultural products. However, limited resources and knowledge hinder the optimization of KWT's role. This empowerment aims to improve the welfare of KWT through better processing and marketing of farm products. The holistic approach to implementing empowerment includes skills development, working capital support, and marketing capacity building. Based on the results of the activities, a positive impact was obtained through increased skills and independence of KWT members in product processing and marketing. This program can be a replicated empowerment model in other areas to encourage food security and community economic welfare.

**Keywords:** Women Farmer Groups; Drip Irrigation; Digital Marketing; Crop Processing

### Abstrak

*Kelompok Wanita Tani (KWT) berperan penting dalam mendukung kemajuan sektor pertanian. KWT Roay Lestari adalah kelompok wanita tani yang berada di Kelurahan Kahuripan Kecamatan Tawang. KWT Roay Lestari berfokus dalam mengolah dan memasarkan hasil olahan pertanian. Namun, keterbatasan sumber daya dan pengetahuan menghambat optimalisasi peran KWT. Pemberdayaan ini bertujuan untuk meningkatkan kesejahteraan KWT melalui pengolahan dan pemasaran hasil tani yang lebih baik. Pendekatan holistik dalam pelaksanaan pemberdayaan mencakup pengembangan keterampilan, dukungan modal kerja, dan peningkatan kapasitas pemasaran. Berdasarkan hasil kegiatan, diperoleh dampak yang positif melalui peningkatan keterampilan dan kemandirian anggota KWT dalam pengolahan dan pemasaran produk. Program ini dapat menjadi model pemberdayaan yang direplikasi di daerah lain untuk mendorong ketahanan pangan dan kesejahteraan ekonomi masyarakat.*

**Kata Kunci:** *kelompok wanita tani; irigasi tetes; digital marketing; pengolahan hasil panen*

## INTRODUCTION

Women Farmers Group (KWT) is important in Indonesia's agricultural development (Nurmayasari & Ilyas, 2014). KWT contributes to increasing food production and the welfare of farming families (Teddu et al., 2024). KWT also provides opportunities for women to participate in advancing the agricultural sector. Women will learn agricultural product management with various developments according to market needs and their potential (Gunawan et al., 2021).

One of the KWTs located in Kahuripan Village, Tawang Subdistrict is KWT Roay Lestari. Kahuripan Village has abundant natural resources and vast and fertile land. However, not a few residents do not have a stable economy due to low knowledge of utilizing agricultural products. KWT Roay Lestari contributes to the production of agricultural products. The development of agricultural land through KWT has been going on for a long time. Nevertheless, there are still many limitations in practice. KWT Roay Lestari experiences challenges in product diversification and marketing. In addition, limited resources and knowledge hinder optimizing KWT's role. Improving skills and knowledge in processing and marketing agricultural products is very important to increase the competitiveness of local products in the current era of globalization (Elizabeth, 2019).

This study empowers KWT Roay Lestari through three integrated approaches: drip irrigation, digital marketing, and crop processing. First, drip irrigation is a potential solution to overcome water limitations and improve resource use efficiency (Yang et al., 2023). Drip irrigation can save up to 50% of water use and increase agricultural productivity (Sidhu et al., 2021). Drip irrigation is widely regarded as the most promising irrigation system (Karlberg et al., 2007). Thus, KWT Roay Lestari is expected to increase its members' crop production and income. Second, digital marketing is an important strategy in the modern era. Utilizing digital platforms can expand the marketing reach of KWT Roay Lestari's crops. Through training and mentoring, KWT members are expected to be able to market their products online, reach a wider range of consumers, and increase their income (Dwivedi et al., 2021). Third, crop processing is a crucial aspect of post-harvest. Proper handling of crops can reduce losses and increase selling value. Training and mentoring in crop processing are expected to increase KWT Roay Lestari's product variant's shelf life and member income (Hodges et al., 2011).

This study aims to analyze the effectiveness of the integrated approach of drip irrigation, digital marketing, and crop processing on the empowerment of KWT Roay Lestari. The findings of this study are expected to contribute to developing an effective and sustainable KWT empowerment model in Indonesia.

## **IMPLEMENTATION METHOD**

The empowerment was conducted in Tasikmalaya City, with KWT Roay Lestari as the main subject. The method used in the activity is skill provision and training. For the smooth running of the program, appropriate preparations were made. The steps in the implementation of the program are:

1. Identification stage

The implementation of empowerment begins with identifying the problems or needs of the community, including the types of plants cultivated, land conditions, and the members' level of knowledge. The identification stage involves observations, interviews, and discussions with relevant parties to obtain the necessary information.

2. Planning stage

Once the problems or needs of the community have been identified, the next step is to plan and develop an empowerment program that suits the community's needs. The empowerment activities are planned to be implemented from May to June 2024.

3. Implementation stage

After the program was developed, the next step was to implement the program by involving the community as the main subject. The implementation methods were socialization, farm product processing workshops, social media marketing, land management, and drip irrigation counseling. In addition, working capital and legality support were provided to support product processing and marketing. This method aims to have a significant direct impact, increase economic independence, and encourage the application of environmentally friendly agricultural technology.

4. Evaluation stage

Evaluate empowerment outcomes and problem-solving progress.

## **RESULT AND DISCUSSION**

The community empowerment program was carried out in collaboration with KWT Roay Lestari. The involvement of lecturers, students, and various parties' support plays a key role in the program's success. This empowerment program focuses on improving the community's economy through entrepreneurship. The activities include socialization, farm product processing workshops, marketing through social media, and counseling on land management and drip irrigation.

The empowerment activities began with socialization on May 29, 2024. The socialization involved all KWT members introducing the program objectives, benefits, and implementation steps. The importance of self-reliance in food security and economic welfare was conveyed at this stage. This empowerment is implemented based on the problems experienced by KWT Roay Lestari.



**Figure 1 Introduction of Service Activities**

Source: Implementation Team Documentation (2024)

On June 8, 2024, a farm processing workshop focusing on Moringa was held. Moringa was chosen for its high health benefits and economic value (Mastuti et al., 2023). The workshop covered various ways of processing Moringa into value-added products such as moringa pudding and roulade. KWT members were taught hygienic and standardized processing techniques to ensure high-quality products. Thus, KWT members gained new skills in processing farm produce into value-added products with high economic potential.

On the same day, a workshop on marketing through social media followed. The workshop was conducted to increase the visibility of KWT products in a wider market. The training taught KWT members how to take product photos and videos, create attractive content, manage social media accounts, and effective marketing strategies in the digital era. This marketing training provides knowledge and skills in promoting products digitally, which is very relevant in the current technological era (Setiawan & Fadillah, 2020).



**Figure 2 Farm Product Processing and Marketing Workshop**

Source: Implementation Team Documentation (2024)

On June 13, 2024, counseling on effective and efficient land management techniques was conducted. KWT members were taught to select superior seeds, proper planting techniques, and good crop maintenance. These are crucial agricultural steps that can increase crop yields and quality (Farhan & Baihaqi, 2024). With quality cultivation and processed products, KWT members can sell their commodities optimally and become a source of income. Thus, this extension program has a positive impact on more sustainable agriculture.



**Figure 3 Farmland Management**

Source: Implementation Team Documentation (2024)

As a form of support for KWT, various working capital equipment such as drip irrigation, cooking utensils, vegetable seeds, and photography equipment were handed over to support product processing and marketing. Working capital equipment support helps KWT members increase efficiency and productivity (Afifah & Ilyas, 2021).



**Figure 4 Working Capital Support**

Source: Implementation Team Documentation (2024)

In addition to working capital support, KWT Roay Lestari provides halal certificate facilities to fulfill the legality aspect. A halal certificate recognizes halal products issued by the Halal Product Guarantee Agency based on a halal fatwa written by the Indonesian Ulema Council (Ningrum, 2022).



The figure displays three official Indonesian government documents. The top two are Halal Certificates (LAMPIRAN SERTIFIKAT HALAL) issued to TATUN QONITATUN, a bakery product manufacturer. The bottom document is a Risk-Based Business License (PERIZINAN BERUSAHA UNTUK MENUNJANG KEGIATAN USAHA) issued to the same company, authorizing its production activities. The documents include details such as company name, address, and product types, all in Indonesian.

**Figure 5 Legality Support**

Source: Implementation Team Documentation (2024)

The program was closed with an evaluation of the results and achievements achieved. During the extension activities, participants showed interest and actively participated by interacting and asking questions through intensive discussions. The program also received support from various parties, including the local RW heads and Field Agricultural Extension Officers, who ensured the smooth implementation of the activities. High enthusiasm is a positive indicator that the activities attracted attention and motivated participants to apply the material presented during the series of activities.

**CONCLUSION**

The empowerment activities of KWT Roay Lestari resulted in a positive impact. The program diversifies harvest products through skills provision and hands-on training and is

supported by working capital. The program begins with the socialization of the program objectives and the importance of self-reliance in food security and economic welfare. Furthermore, workshops focused on processing farm produce into value-added products and marketing through social media. In addition, counseling on land management techniques and drip irrigation was conducted. Support, equipment, and legalities were facilitated for product processing and marketing. As a result, participants were very enthusiastic and showed high interest. This program is expected to improve the welfare of KWT Roay Lestari. In addition, it is expected to be an example for other farmer groups to develop their potential through innovation and technology. The program positively impacts the environment by applying efficient tillage and drip irrigation techniques, which align with efforts to preserve the environment and support sustainable agriculture. With cooperation and the spirit of cooperation, this program is expected to continue and provide greater benefits to the community.

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