

# Empowerment Of Salak Farmers Through Fruit Canning With Hermetical Technology Applications In The Village Of Karangany, Trenggalek Regency

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## SUMMARY

*Fresh fruit trade is a trade that has many risks for MSME-level businesses where the ability to extend the period of consumption is limited, due to a lack of knowledge and technology that allows it to be traded in the long term and a wide market reach.*

*For this reason, the purpose of this study is to describe and analyze community empowerment programs through the dissemination of technology products to the community of salak farmers in improving their business through canning salak fruit with the application of hermetic technology, in Karangany Village, Trenggalek Regency.*

*The method used in this research is descriptive qualitative research in implementing the application program of salak canning technology with the application of hermetic technology to increase the economic added value of salak fruit sales and increase the consumption period of salak fruit in order to reach a wider market.*

*The results of the study show that the program of implementing technology products that is disseminated to the public can increase the economic added value of zalacca fruit by packaging in cans, because of the longer consumption period, wider sales range and higher economic value added. T.*

**Keywords:** *Dissemination, Technology, Canning, Salak, Trenggalek.*

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## I. Introduction

In an effort to realize the government's efforts to advance public welfare and educate the nation's life, as stated in the preamble to the 1945 Constitution, it is hoped that the community economic empowerment program can be reformulated in poverty reduction that involves elements of the community, starting from the planning, implementation, to monitoring stages. and evaluation. The process of community empowerment is expected to directly involve the community, and theoretically through this participatory development pattern it will be able to foster participation, critical awareness and community independence in efforts to reduce poverty, which they experience.

The production process of food processing products which should be standardized and able to penetrate a wider modern market, and even to be able to penetrate the export market amidst the trade competition of the Asean Economic Community, is still far from expectations. This is because there are still many productive business institutions processing local food products that are still developing on a traditional home industry scale and do not have sufficient knowledge of the production process with certain standard technology applications, certified with registered trademarks and packaged in certain production qualities that can be reach a wide market.

For this reason, the dissemination of technology products from the results of previous research, namely development research on fish canning in Prigi, in the form of a fish canning machine on a household scale with the application of hermetic technology will be disseminated in this program to be able to answer the needs of local communities for their business interests, so that more empowered and able to compete in a modern market full of stringent quality standards to be able to compete in a wider market. Fruit Canning with the application of hermetic technology, is designated as a way out for the local community, especially the Bina Sejahtera Desa Farmer Group, towards a more modern production system, with post-harvest processing technology whose members are local natives with food processing businesses that have been going on in the region. Karangany Village.

## II. Formulation Of The Problem

The problem faced by the Bina Sejahtera farmer group in Karangany village is how to empower the economy of the community group, so that their efforts in developing and selling salak fruit products can increase and be able to reach a wider market, can produce zalacca fruit crops with hygienic processing and have value added high economy and longer consumption period.

### **III. Literature Review.**

Implementation of the dissemination program for appropriate technology products that can be used by the economic class of Small and Medium Enterprises is very important to empower them to be able to compete in modern markets and to be able to reach a wider market, in order to increase their sales turnover. Implementation explicitly includes actions by individuals or groups of private (private) and public directly on the achievement of a continuous set of goals in predetermined policy decisions. Furthermore, van Metter and Van Horn provide an understanding of implementation as actions taken by individuals / officials or government or private groups that are directed at achieving the goals outlined in policy decisions. (Ekowanti, 2012)

Empowerment programs will be very appropriate if they are carried out by involving the local community, in a flexible and flexible manner by introducing appropriate technology that can be reached and operated by the local community. On the other hand, community development as put forward by David Corten (1986) in his book "Community Development (Asia Experience)". It was explained that: Community Based Development must be able to develop socio-culturally compatible, where the social process of society will be developed more productively and economically be able to develop itself into a social fabric that is efficient, effective and economical for the development of prosperity with the community.

Empowerment is a development concept that is driven by the community itself with local potential, as well as decision control and resource utilization (Lestari and Rianto, 2016). In addition, groups in this community pair up with support organizations that pay deep attention to community needs. . Community development, must include the following three things:

#### **a. Holistic**

Is a program plan with a focus on total community / holistic needs. The holistic element is reviewed and linked to the respective roles of the governance pillar, namely the Government, society and related parties.

#### **b. Technical assistance**

The technical assistance provided can be in the form of physical and training, namely rawon canning machines with the application of hermetic technology, accompanied by technical assistance elements that are reviewed and linked to the respective roles of empowerment pillars, namely the government, community groups and universities, in this case the Hang Tuah University Research Team, Surabaya.

#### **c. Integrating various specialties**

Comdev focuses its activities on the potential of the community to meet their needs, so that the principle of to help the community to help them self can become a reality. The elements of Integrating various specialties are reviewed and linked to the respective roles of the Geluran village government, the Geluran Cemerlang business group, and the technology product dissemination party from Hang Tuah University, Surabaya.

### **IV. Research Methods**

The research method used is the action research method in the implementation of the zalacca fruit canning technology program (Kemmis & Taggard, 1988). In addition, the analysis also uses qualitative research methods with a descriptive approach. As stated by Bogdan and Taylor (Moleong, 2007: 5) states that qualitative is a research procedure that produces descriptive data in the form of written or spoken words from the people and actors being observed. The focus of this research is the implementation of the Technology Product program which is disseminated to the village welfare farmer groups in Karanganyar village, Trenggalek Regency.

Data collection can use primary and secondary sources, primary sources directly provide data and information to the data collectors, while secondary sources are sources that do not directly provide data and information to data collectors, for example through other people or through documents.

Qualitative data analysis in this study was used, the pattern of Miles and Hubberman (2014), namely data analysis which was carried out interactively and continuously at every level or stage of the research until the data obtained was saturated. Miles and Hubberman state that there are three flow of analysis activities that occur simultaneously, namely Data Reduction, Data Presentation, Condensation and Conclusion Drawing or verification.

### **V. Research Results**

Karangan Village is a village in the Karanganyar District, Trenggalek Regency, East Java Province. which borders Kerjo Village to the north, Kedung Sigit, Jati Village to the west, and Mlinjon and Kedungsifit to the south. Various production of plantation products in Salak, Rambutan, Pineapple etc. in the Karanganyar Village environment in particular and Trenggalek in general are managed by local residents, many of which are trapped in traditional production and business management systems and are based on home industry.



Figure 1: Karangany Village, Karangany District, Trenggalek Regency

The development of the salak canning industry in the village of Karangany, Trenggalek Regency, is the implementation of the Technology Products Disseminated to the Community (PTDM) program. The Community Service Team from the University of Hang Tuah Surabaya, which received an assignment from the Ministry of Research and Technology / National Research and Innovation Agency (BRAIN) in the 2020 fiscal year, was to disseminate PTDM to its community partners in Trenggalek Regency, namely the Bina Sejahtera Desa Farmer Group and UD. Widodo in Karangany, Trenggalek Regency. The purpose of disseminating the use of a prototype canning machine with the application of hermetic technology is to empower the economy of the fruit merchant community to be able to make fruit canning in Karangany village, Karangany District, Trenggalek Regency, East Java. By disseminating a prototype canning machine from the results of research on Fish Canning Development in Bengkorok Prigi, Trenggalek Regency. The head of the PTDM team from Hang Tuah University, as a research member, has produced a transformable fish canning machine prototype for fruit canning in the area, where observations and surveys in the community are found in Trenggalek Regency, East Java, in general. There are many people who are unable to compete in the market with salak pondoh from Central Java and Bali. Salak fruit that is produced from the area of Trenggalek Regency and its surroundings are generally not good enough to be served directly on the table as a Fruit Table that is ready to be consumed directly. So that the PTDM team then disseminated canning technology products with the application of hermetic technology to make barking in cans.

The pattern of fruit production and trade in Trenggalek Regency in general is still direct agricultural products to be traded on the market. So that it has the endurance of consumption in a short time and a very limited market reach, and is still in a household business scale with traditional agricultural production and trade methods, with traditional business management systems as well as financial management such as managing household businesses. From the aspect of the production process, because it is done in a traditional way, the quality of production cannot be guaranteed either from the aspects of quality, nutritional content and hygiene of the fruit production. For this reason, it is necessary to have a touch or transformation of new technology so that the production of the fruit can have a wider market reach by being packaged in cans, so that it can enter the modern market, and compete with other food productions, which have standardized and certified sales permission from official institutions. government. For this reason, a new breakthrough is needed, namely the diversification of post-harvest fruit processing by packaging in cans through the application of hermetic machine technology which can produce fruit in the form of cans whose hygiene is more guaranteed and the consumption period is longer and can be marketed in various regions.

To be able to produce good packaging for salak fruit in cans, a canning machine set is needed consisting of:

1. Boyler machine whose function is to generate heat to be transformed into a cooker in the form of an auto clave.



**Figure 2: Boyler 4 bar heat generating engine.**

2. Auto Clave machine that functions to cook fruit in cans using hermetic technology applications, to produce hygienic fruit packaging with a longer shelf life (approximately 1 year).



**Figure 3: Autoclave machine with a capacity of 100 cans**

3. Semi-automatic double seamer machine, as a can cover with guaranteed density to maintain the quality of fruit products in cans.



**Figure 4: Automatic seamer machine, capacity 120 cans per hour**

In order to obtain a sales permit in the form of a distribution permit certification from the BPOM, the team also provided guidance and consultations on the development of a production house in the form of a product process layout design at a production house that was determined at the partner of UD. Widodo, in Karanganyar Village, Trenggalek Regency.

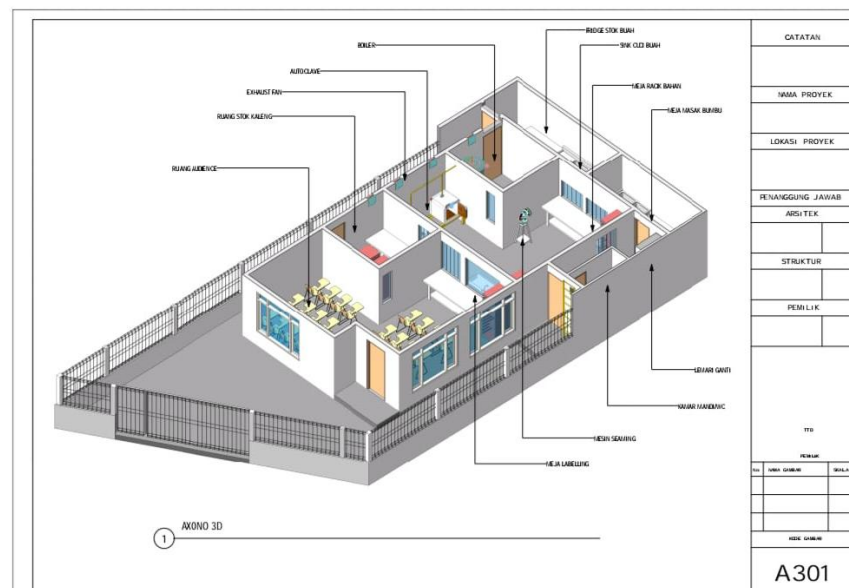


Figure 5: Lay Out Design of Production House OF UD. Widodo in Trenggalek

Through the technology product dissemination program, the team leader of PTDM UHT Surabaya Ir. Aniek Sulestiani, M.Kes hopes that the salak canning in Karanganyar Trenggalek Village can be a solution for empowering community groups of fruit traders, especially the Bina Sejahtera Desa Farmer Group, which is engaged in agriculture and fruit trade, where salak is one of the regional superior products. Because salak packaged in cans can provide economic added value for zalacca, the consumption period is also longer so that by being packaged in cans its marketing reach can be further and even has the potential to be exported overseas. In addition, it can also be argued that with this home-scale canning machine the price is quite cheap and can be reached by MSME actors, so that the dissemination of these Technology Products can be reached by the wider community.

## VI. Conclusions And Suggestions

### 6.1. The conclusions that the team can convey are as follows:

1. There is little understanding of salak farmers about the application of hermetic technology for fruit canning.
2. There is a need for continuous assistance for institutional development, licensing and product certification from the authorized agency in the farmer group.
3. There must be training and assistance regarding legal provisions concerning production systems and distribution permits that apply in modern trade which has a wide market reach and high economic value.

### 6.2. The suggestions that the team can convey are as follows:

1. This activity needs to be followed up with a multi-year program, either in the form of applied research or in the form of community service, due to the prolonged management of business legal entities.
2. Activities should also be continued with applied research and / or multi-year service so that the prolonged processing of BPOM certification permits can be completed so that the value of economic benefits is actually realized.
3. There must be a strong commitment from the local government for the certification of UMKM products in Trenggalek Regency, so that local products can go global or at least penetrate modern markets in cities throughout Indonesia.

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