# Community Empowerment in The Making of Empo-Empon Towards the Achievement of Independent Villages Resistant to Covid-19

### Defirson<sup>1</sup>, Sabarudin<sup>1</sup>, Sugiarti<sup>1</sup>, Uce Lestari<sup>2, a)</sup>

<sup>1</sup>Departement Pharmacy, Poltekkes Kemenkes Jambi, Jambi, Indonesia <sup>2</sup>Departement Pharmacy, Faculty of Medicine and Health Sciences University of Jambi <sup>a)</sup>Corresponding Author: ucelestari@unja.ac.id

#### Abstract

In the village of Kumpeh Ulu, you can find various types of plants that are efficacious, one of which is spice plants such as ginger, turmeric, temulawak, galangal, and temu Kunci. The problem encountered in the village of Kumpeh Ulu is that there is limited knowledge regarding techniques for processing these spices into Simplicia, they do not yet know the innovation of food products into health drinks and snacks and the people's economy is still low. The use of medicinal plants there is still very simple, only carried out empirically based on the use and processing that has been passed down from generation to generation. Based on the above, the spice plants or Empon-Empon produced there can be processed into food products as a co-19-resistant immune system enhancer. Community Service (PKM) aims to process empon-empon which is commonly found in Kumpeh Ulu Village into effective innovations such as instant drinks, jelly candy, and marshmallows and can open employment opportunities for empowering and improving the economy of the Kumpeh Ulu Village community. The method in this PKM includes counseling regarding the benefits and nutritional content of Empon-Empon as well as demonstrations of making instant drinks, jelly candy, and marshmallows based on red ginger and areca nut. The PKM results obtained areca ginger instant drink products, areca ginger jelly candy, and areca ginger marshmallows which will be made into superior products of Kumpeh Ulu Village, Muaro Jambi. From the results of the monitoring and evaluation of PKM activities, it was found that the people of Kumpeh Ulu Village had produced jelly candy, instant drinks, and marshmallows in the joint business group in the Kumpeh Ulu village hall, Muaro Jambi Regency.

Keywords: empon-empon, immunity, innovation

#### INTRODUCTION

Empon – empon is a plant that is widely used as a health drink in the form of herbs such as ginger, turmeric, kencur, lemongrass, and temulawak. Herbal medicine empon-empon is made using materials that are often found by the community at an affordable price, making it easier for the community to make it independently. Daily use. The ingredients needed to make empon-empon are turmeric or red ginger, cinnamon, nutmeg, sugar and water (Sujarta et al, 2019). Red ginger contains high antioxidant compounds that can prevent free radicals. In addition, the anti-inflammatory content in red ginger can boost the immune system from viruses and bacteria during the Covid 19 pandemic (Harwati, 2009; Anggraini et al, 2019)

One of the ways to maintain and increase the body's immunity from the risk of disease is by consuming the spice herb empon-empon in the form of turmeric or ginger. Empon-empon such as turmeric or ginger contains secondary metabolite bioactive compounds and has antioxidant, antimicrobial, and anti-inflammatory activities. Empon-empon has the potential to ward off free radicals, increase the body's immunity, and inhibit molecules that trigger inflammation in body tissues (Kusbiantoro, 2018). These spice plants are often found in one of the villages in Muaro Jambi Regency, namely Kumpeh Ulu Village.

Spice plants that are commonly found in Kumpeh Ulu Village such as ginger, turmeric, temulawak, galangal, and temu Kunci. The problem encountered in the village of Kumpeh Ulu is that there is limited knowledge regarding techniques for processing these spices into Simplicia, they do not yet know the innovation of food products into health drinks and snacks and the people's

economy is still low. The use of medicinal plants there is still very simple, only carried out empirically based on the use and processing of hereditary (Zuhud et al, 2008). Based on the above, the spice plants or Empon-Empon produced there can be processed into food products as a boost to the immune system resistant to Covid-19 (BPS, 2018., Ismet et al, 2022).

In order to empower and increase public knowledge about the content of empon-empon which has the potential to increase body immunity, we, the Jambi Ministry of Health Poltekkes team, took the initiative to hold socialization on making product innovations from empon-empon, especially red ginger which is combined with areca nut to become effective innovations such as instant drinks, jelly candy, marshmallows and can open jobs for the empowerment and improvement of the economy of the people of Kumpeh Ulu Village (Ministry of Health, 2018).

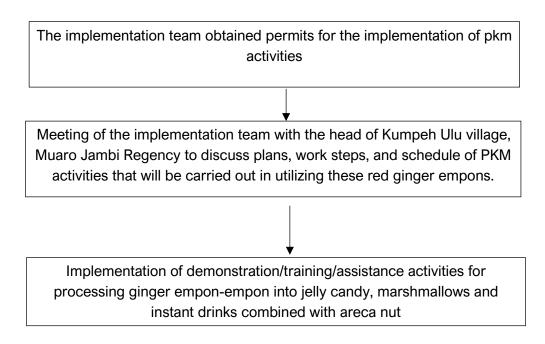
Jelly candy, marshmallows, instant ginger, and areca drink are loved by all groups, from children to adults. Jelly and marshmallow candies have a soft texture due to the addition of hydrocolloid components such as agar, gum, pectin, starch, carrageenan, and gelatin. Modification of the candy jelly texture produces a product that is chewy, easy to print, does not stick to the mold, and is easy to remove from the mold (Koswara, 2009).

It is hoped that the jelly candy, marshmallows, and areca ginger instant drinks will provide opportunities for entrepreneurship for the people of Kumpeh Ulu Village. Besides that, the production of jelly candy can increase the income of the community there with big profits. This innovative product has very good prospects in the future because it can increase the existence of empon-empon as a local plant in Indonesia and increase the added value of the Jambi people's economy, especially for the Muaro Jambi district and make it a superior product of Kumpeh Ulu Village.

### METHOD

The work procedures for implementing the Community Partnership Program in the framework of demonstration/training/assistance in the processing of ginger empon-empon into instant food and beverage innovation products in the form of sweet and sour jelly candy, marshmallows, and areca ginger granules as a booster for the body's immune system are as follows:

Flowchart the socialization of the benefits of empon-empon ginger as a functional food and beverage product combined with areca nut consisted of 4 stages.



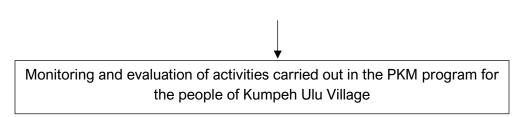


Figure 1. Flowchart the socialization of the benefits of empon-empon ginger

This participation included discussions with the PKM team and the Head of Kumpeh Ulu Village in the following activities: surveying locations where spices were planted, preparing proposals, determining participants to be trained, namely 30 people from Kuala Jambi Village, training in processing food products and health snacks in the form of jelly candy, marshmallows and areca ginger instant drink.

Evaluation of program implementation and program sustainability after the completion of the implementation of Appropriate Technology activities for the community in the field in the form of: community participation in program implementation, the strategic position of the community as implementing elements, integration, and togetherness with the local Kelurahan and Subdistrict while increasing regional potential is seen by the success of the program in utilizing the potential regions, compatibility of regional potentials, opening up employment opportunities and program activities, the accuracy of programs for regional problems (Elisma et al, 2020).

#### RESULT

The results achieved in this PKM activity were the implementation of counseling on the utilization of red ginger empons into innovative drinks and health snack products from red ginger empons such as jelly candy, marshmallows and red ginger instant drinks combined with areca nut as a booster for the body's immune system. have high economic value.

From the results of this socialization, it provided good benefits for the people of Kumpeh Ulu village, where they gained insight and knowledge about how to process innovative functional health food and beverage products as well as the benefits and nutritional content of red ginger root as an immune system booster during the Covid 19 pandemic.

From the results of monitoring and evaluation of PKM activities, it was found that the people of Kumpeh Ulu Village had produced jelly candy, instant drinks and areca ginger marshmallows in the joint business group in the Kumpeh Ulu village hall, Muaro Jambi Regency. Based on the above, the purpose of this Community Service has succeeded in making jelly candy, instant drinks and areca ginger marshmallows into the superior products of Kumpeh Ulu village and can open business opportunities for these communities related to increasing income and the economy for these communities by utilizing natural products that It is there.

#### DISCUSSION

This activity was initiated by coordinating with the head of Kumpeh Ulu Village regarding the implementation of PKM with the title "Community Empowerment in the Making of Empon-Empon Towards the Achievement of an Independent Village Resistant to Covid-19" to 30 people from the village of Kumpeh Ulu. The results of the coordination with the head of Kumpeh Ulu Village were that they were willing to become partners in implementing PKM activities as well as becoming related target villages from training in processing beverage products and health snacks from red ginger empon-empon and areca nut combinations.

The next PKM activity was to organize socialization by presenting the benefits and chemical content of empon-empon and explaining the importance of maintaining the body's immunity, how to consume herbal empon-empon which can be made independently, as well as the stages of how to make it. In addition to socialization, videos were also distributed to make it easier to understand the stages of making product innovation in the form of making jelly candy, marshmallows and red ginger instant drinks and combinations with areca nut (Lestari et al, 2022a; Lestari et al., 2022b).

The next stage is training and direct demonstration of the processing of red jaeh empon-emponempon-empon-jaeh merah, a combination of areca nut powder, into jelly candies, marshmallows and instant drinks. The demonstration begins with the manufacture of simplicia or red ginger empon-empon, where red ginger and areca nut powder are first made by taking fresh red ginger then peeling the skin and then thinly chopped red ginger drying in direct sunlight or in an oven at 50°C until it is dry and heavy. constant while for the young areca nut that has been taken, the skin is peeled and the seeds are taken, then chopped and dried in the sun until dry and constant. After drying, the red ginger and areca nut are then ground and sifted to produce fine powders of red ginger and areca nut simplicia (Lestari et al, 2021).

The community seemed very enthusiastic and active in participating in socialization activities, as evidenced by the questions asked. The community also agrees that these ingredients are cheap and easy to find, are also good for health, and are one of the right solutions for the community to increase their body's immunity with various forms of innovative products in the form of health drinks and snacks.

At the end of the socialization and demonstration activities, the Kumpeh Ulu village community expressed their gratitude for being given new knowledge by holding socialization and demonstrations on making instant drinks and healthy snacks as an effort to increase the body's immunity against Covid-19. The community feels very helpful and has more insight into optimizing natural materials around them to be used as health solutions and product innovations to increase income and economic value from spice plants that grow around the yards of the Kumpeh Ulu village community house. The hope of the community is that more and more Kumpeh Ulu villagers will be educated and care more about health and innovate creatively regarding the use of these spice plants to become effective innovative products, so that a healthy, independent and prosperous society will be realized.

After making innovative instant drink products and healthy snacks, a group photo was taken with the Kumpeh Ulu village community by displaying the products that had been produced. The community was very happy and found it useful to gain knowledge about how to process the red ginger root.

Evaluation of this socialization and demonstration activity were that although it could only be carried out for a short duration due to the busyness of the community, the PPM team was able to ensure that the knowledge transfer process in socialization and demonstrations went well so that its goal was achieved, namely community empowerment regarding the importance of maintaining increased body immunity by using appropriate innovative products that are self-processed which can not only be used alone but can improve the economy of the Kumpeh Ulu village community to open up employment opportunities and commercial marketing related to the products produced.

## CONCLUSION

From the results of the activity it can be concluded that this activity Training on the Utilization of Innovation of Red Ginger Empons into Instant Drinks, Jelly Candy, and Marshmallows as an Enhancer of the Covid-19 Resistance Immune System in Kumpeh Ulu Village can provide more knowledge about the benefits of red ginger empons which have value high economic value when combined with areca nut, produces innovative instant drink products and healthy snacks from red ginger empons as a booster for the body's immune system and increases the creativity of human resources around Kumpeh Ulu Village, East Tanjung Jabung Regency.

## ACKNOWLEDGMENTS

Acknowledgments to the parties involved in this PKM activity, especially the Ministry of Health who provided assistance and grants, and the Kumpeh Ulu village community who provided facilities during the implementation of the PKM. And thank you very much to the entire team of the Jambi Pharmacy Poltekes and related parties for financial assistance for the implementation of this PKM program.

### REFERENCES

- Anggraini MA, Purnama ER, Sulytiowati R, 2019. Application of Empon-empon Farmer Group Simplisia Production Technology, Trawas District, Mojokerto Regency, East Java. Surabaya State University.
- Muaro Jambi Central Bureau of Statistics, 2018. Kumpeh Ulu District in Figures. BPS catalog 1102001.1505020.
- Elisma, Havizur Rahman, Lestari U, PPM Community Empowerment in Processing Medicinal Plants as Traditional Medicine in Mendalo Indah Village, Jambi Outside the City, Selaparang Journal of Community Service for Progress 4(1) pp. 274-277.
- Harwati, C. T. (2009). Benefits of ginger for the health of the human body. INNOFARM: Journal of Agricultural Innovation, 8(1).
- Ismet Susila et al., 2022., Empowerment of Communities Affected by Covid 19 Through Strengthening Management and Technology Aspects Marketing For SMEs., Jurnal pengabdian pada masyarakat Abdimas Umtas vol 5 no 1 hal 1-8
- Koswara, S. 2009. Candy Manufacturing Technology. Ebookpangan.com.
- Kusbiantoro, D. (2018). Utilization of secondary metabolite content in turmeric plants to support increasing people's income. Cultivation, 17(1), 544-549.
- Ministry of Health Republic of Indonesia, 2018. Guidelines for Community Service at the Health Polytechnic of the Ministry of Health. Health HR Development and Empowerment Agency.
- Lestari U et al, 2021. Concoction of Oyster Mushroom Drink (Pleurotus ostratus) as a health enhancer. Your Service: Scientific Journal of Community Service 6(6) pp. 616-620.
- Lestari et al, 2022a. Innovation of Concoction of Butterfly Pea Flower Extract into Candy Milk, Jelly Rolls And Marshmallows As an Immune System Enhancer., proceeding national seminar UNIMUS vol 5 hal 2173-2180
- Lestari et al., 2022b. Innovation of Utilization of Butterfly Pea Flower Extract into Instant Granule Powder Products Processed with Spray Drying Technology to Increase the Body's Immune System., community service journal vol 6 no 2 hal 1-7
- Sujarta P, Dirgantara S, 2019. Training on Manufacturing Simplicia Products and Analysis of Standardized Traditional Herbal Medicine for Posyandu Cadres in the Waena Jayapura District Health Center, Department of Biology FMIPA Cenderawasih University.
- Zuhud, E.A.M, 2008. The Potential of Indonesian Tropical Forests as a Support for Natural Medicinal Materials for the Nation's Health. Faculty of Forestry, Bogor Agricultural University.

# APPENDIX



Figure 2. Dissemination of the benefits, content, and method of processing red ginger



Figure 3. Demonstration of making instant drink granules, jelly candy and marshmallows



Figure 4. Product innovation of instant drink granule powder, jelly candy and areca ginger marshmallows



Figure 5. Group photo of the PKM Poltekes team with the Kumpeh Ulu Village Community