

TRAINING ON MAKING FUNCTIONAL FOOD PRODUCTS BASED ON GLUTINOUS CORN FLOUR

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Abstract

The Women Farmers Group (KWT) Forum in Tangerang Selatan is a community group that engages in cultivating spices and other food crops like chilies, cauliflower, tomatoes, cucumbers, Pok Choy, and red spinach. Since the beginning of 2023, the Tangerang Selatan KWT Forum has been cultivating glutinous corn, which is a food crop with the potential to provide health benefits and added economic value for the community. The Tangerang Selatan KWT Forum has limited knowledge about the health benefits and how to process glutinous corn plants into functional food products. Community Service Activities (PkM) of the UPH Food Technology Study Program in the form of training in making functional food products based on glutinous corn flour can be a solution to overcome this condition. This training activity is carried out through the preparation and implementation stages. In the preparation stage, a trial process was conducted to determine the best preparation procedure and formulation for the instant glutinous corn soup product at the Food Processing Laboratory of the UPH Food Technology Study Program. The final preparation stage consists of preparing a training video. The training was conducted on September 21 2023 and was attended by 35 participants. The results of the evaluation of the implementation of training activities based on filling out questionnaires showed that all (100%) participants stated that this activity was well attended, useful, and very interesting. As a result of the training, making instant glutinous corn soup can become an alternative daily activity for members of the KWT Forum in Tangerang Selatan, providing health and economic benefits for the community.

Keywords: Functional Food, Glutinous corn flour, Instant Soup, Women Farmers Group

Abstrak

Forum Kelompok Wanita Tani (KWT) Tangerang Selatan merupakan kelompok masyarakat yang melakukan kegiatan budidaya tanaman rempah-rempah dan tanaman pangan lainnya seperti cabe, kembang kol, tomat, timun, pokchoy dan bayam merah. Sejak awal tahun 2023 Forum KWT Tangerang Selatan melakukan budidaya jagung pulut yang merupakan tanaman pangan dengan manfaat kesehatan dan nilai tambah ekonomi. Forum KWT Tangerang Selatan memiliki keterbatasan pengetahuan tentang manfaat kesehatan dan cara mengolah tanaman jagung pulut menjadi produk pangan fungsional. Kegiatan Pengabdian Kepada Masyarakat (PkM) Program Studi Teknologi Pangan UPH berupa pelatihan pembuatan produk pangan fungsional berbasis tepung jagung pulut dapat menjadi solusi dalam mengatasi kondisi ini. Kegiatan Pelatihan ini dilakukan melalui tahap persiapan dan tahap pelaksanaan. Pada tahap persiapan dilakukan proses uji coba untuk menentukan prosedur pembuatan dan formulasi terbaik produk sup jagung pulut instan di Laboratorium Pengolahan Pangan Program Studi Teknologi Pangan UPH. Tahap persiapan akhir berupa pembuatan video pelatihan. Pelaksanaan pelatihan dilakukan pada tanggal 21 September 2023 dan diikuti oleh 35 orang peserta. Evaluasi berdasarkan pengisian kuesioner menunjukkan seluruh (100%) peserta menyatakan pelatihan dapat diikuti dengan baik, bermanfaat dan sangat menarik. Pelatihan, pembuatan sup jagung pulut instan dapat menjadi alternatif kegiatan harian para anggota Forum KWT Tangerang Selatan yang berdampak terhadap aspek kesehatan dan ekonomi masyarakat.

Kata kunci: Pangan Fungsional, Tepung Jagung Pulut, Sup Instan, Kelompok Wanita Tani

INTRODUCTION

Redemptive participation in the development of individuals and communities for the glory of God is the mission of Universitas Pelita Harapan (UPH). The UPH Food Technology Study Program

in implementing this mission, periodically carries out community service through outreach and training activities with topics that cover the application of Food Science and Technology (Siregar et al., 2021).

Tangerang Selatan is one of the cities in the Banten Province that still has land available to be utilized in food crop cultivation activities by its people. One element of society in the city of Tangerang Selatan, whose activities have so far utilized land for food crop cultivation, is the Women Farmers Group (Kelompok Wanita Tani (KWT)). In order to utilize this land, various Women Farmers Groups (KWT) have been formed, such as KWT Dumay in Ciputat District, KWT Nusa Indah in Ciputat Timur District, and KWT Good Farm in Serpong Utara District. Currently, throughout the city of Tangerang Selatan, which consists of 7 districts, 60 KWT have been formed (Siregar et al., 2021). In general, the main activities of KWT in Tangerang Selatan are cultivating spices and other food crops such as chilies, cauliflower, tomatoes, cucumbers, pok choy, and red spinach. The results of this cultivation activity are expected to support the fulfillment of daily nutritional needs and can be processed into food products that provide added value to the community. With the increasing activities of KWT and in order to be in line with the work program of the City government of Tangerang Selatan, all existing KWTs agreed to form an organization, namely the Tangerang Selatan Women Farmers Group (KWT) Forum.

In early 2023, the Tangerang Selatan City Government Food Security, Agriculture, and Fisheries Service (Dinas Ketahanan Pangan, Pertanian dan Perikanan) launched a program encouraging the community to utilize available land for planting Pulut Corn (Glutinous Corn) by providing free seeds. Cultivating Glutinous Corn not only has potential health benefits but also offers added economic value to the community. This initiative was positively received by the Tangerang Selatan KWT Forum, which actively participated in growing Glutinous Corn in various spaces, including yards and gardens.

Glutinous corn is a special type of corn that has a delicious taste, is more savory, more sticky and soft. The savory taste is related to the very high amylopectin content in glutinous corn, ranging from 90-99% (Suarni et al., 2019).

During the development and implementation of this program, information gathered from the Tangerang Selatan KWT Forum Management revealed that most members had limited knowledge and skills regarding the health benefits of glutinous corn and how to process it into functional food products. As a result, the potential of cultivating this Glutinous Corn commodity was not being fully optimized.

In the development of the implementation of this program, information obtained from the Tangerang Selatan KWT Forum Management showed that there were limited knowledge and abilities about the health benefits and how to process glutinous corn plants into functional food products from most members so that the utilization of the results of cultivating this Glutinous Corn commodity could not be carried out optimally.

Functional food is food that, because of its active component content, can provide health benefits beyond the benefits provided by the nutrients contained in it. Functional food is not in the form of capsules, tablets or powders that contain active components, although they are beneficial for health. Active components are active compounds in functional food that are responsible for the ongoing metabolic reactions that are beneficial to health, such as preventing the onset of disease and increasing body resistance (Astawan M, 2011 and Subroto, 2008).



Figure 1. Cultivation Activities of Glutinous Corn Commodities by the Tangerang Selatan KWT Forum.

Based on the description of the situation that occurred at the Tangerang Selatan KWT Forum, the UPH Food Technology Study Program took the initiative to provide a solution by conducting Community Service (PkM) activities in the form of Training on Making Functional Food Products Based on Glutinous Corn Flour.

The Community Service (PkM) activity began with a preparatory stage in the form of a discussion with the Chairperson and administrators of the Tangerang Selatan KWT Forum and one of the staff representing the Tangerang Selatan City Food Security, Agriculture, and Fisheries Service in July 2023. The discussion aims to determine and ensure the form, topic, place, and time of the activity in accordance with the conditions, potential resources, and needs of the Tangerang Selatan KWT Forum members. As a result of the discussion, it was agreed that the form of activity would be training with the topic of Making Functional Food Products Based on Glutinous Corn Flour, which would be held in the Hall of the BPP (Balai Penyuluh Pertanian) Building, Jombang, Tangerang Selatan on September 21, 2023.

The implementation of this training activity is expected to increase the knowledge and ability of the Tangerang Selatan KWT Forum in processing Glutinous Corn commodities into functional food products that provide health benefits and added economic value for the community.

METHOD

In this Training Activity, it is carried out through the preparation stage and the implementation stage. In the preparation stage, a trial of making and determining the formulation was carried out until a functional food product of Instant Corn Glutinous Soup was obtained which was recorded into a video in the Food Processing Laboratory of the UPH Food Technology Study Program. This video will later be used in training activities, where this video is in the form of a description and explanation of the ingredients, tools, preparation of ingredients including drying and flouring of glutinous corn, the process of making and determining the formulation of Instant Corn Glutinous Soup. The trial process carried out is also a form of implementation of knowledge and experience from lecturers of the UPH Food Technology Study Program in the field of food processing and safety (Smith, 2011).

In the preparation stage, training materials were also prepared in the form of presentation slides (ms-powerpoint), flyers, provision of training media in the form of examples of ingredients, namely glutinous corn flour, powdered milk, and spices, examples of Instant Corn Soup products, and coordination with the team from the Tangerang Selatan KWT Forum and the Tangerang Selatan City Food Security, Agriculture and Fisheries Service regarding the training program schedule. In the implementation stage of the training, the PkM Prodi team. UPH Food Technology presented, explained and demonstrated the training materials that had been prepared to all participants at the Balai Penyuluh Pertanian (BPP) Building - Jombang, Tangerang Selatan.



Figure 2. Flyer for the UPH Food Technology Study Program PkM activity on September 21, 2023

RESULT AND DISCUSSION

The trial process carried out in the Food Processing laboratory of UPH Food Technology Study Program during the period of July-August 2023 has resulted in the procedure for making glutinous corn flour, formulation and making of Instant Glutinous Corn Soup and examples of Instant Glutinous Corn Soup products (Suarni et al., 2019). Figure 3 below shows the procedure for making glutinous corn flour.



Figure 3. Preparation of Glutinous Corn Flour

Instant Corn Glutinous Soup is made using the main ingredient of Glutinous Corn flour and other ingredients, namely powdered milk and spices, as can be seen in Table 1 below.

Table 1. Formulation of Instant Glutinous Corn Soup

Material	Jumlah (gram)
Glutinous Corn Flour	15
Milk Powder	10
Onion Powder	0,2
Garlic Powder	0,2
Pepper Powder	0,2
Nutmeg powder	0,1
Broth Powder	1

The preparation of Instant Glutinous Corn Soup is carried out based on the formulation in Table 1, where the process sequence can be seen in Figure 4 below.

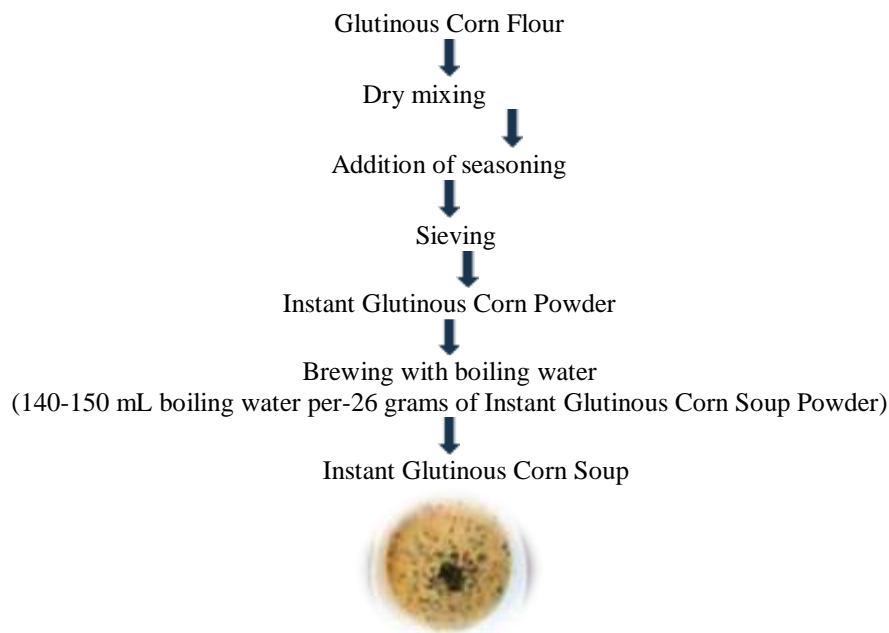


Figure 4. Preparation of Instant Glutinous Corn Soup

Community Service (PkM) Activities of the Food Technology Study Program of Universitas Pelita Harapan (UPH) with the Tangerang Selatan Women Farmers Group Forum (KWT) were held at the Balai Penyuluh Pertanian (BPP) Building-Jombang, Tangerang Selatan. The PkM activity was held on Thursday, September 21, 2023 at 09.00-12.00 AM. This activity was attended by 35 participants who were representatives from each Women Farmers Group (KWT) that is member of the Tangerang Selatan KWT Forum. The training team consists of 4 lecturers, 1 teaching assistant and 2 students of the UPH Food Technology Study Program.



Figure 5. Opening of the Training by the Head of the Food Security, Agriculture and Fisheries Service of Tangerang Selatan City Government (Ir. Yepi Suherman, MM)

The PkM activity in the form of training in making Instant Glutinous Corn Soup is divided into 2 sessions, namely presentation and demonstration on how to make instant glutinous corn soup and discussion on the ingredients used and the stages of the process of making instant glutinous corn soup. The materials presented in the training are general knowledge about glutinous corn and its nutritional content, drying methods for glutinous corn, the advantages of instant glutinous corn soup products, as well as the ingredients used and how to make instant glutinous corn soup. All information on this training material is summarized in the form of a demonstration video.



Figure 6. Explanation of the Training Material for Making Instant Glutinous Corn Soup

After the presentation of the material in the form of a demonstration video was completed, discussion and question and answer activities were carried out directly to determine the participants' responses and understanding of the nutritional content and health benefits of Glutinous Corn and the Process of Making Instant Glutinous Corn Soup.



Figure 7. Discussion and Q&A with Training Participants regarding the Instant Glutinous Corn Soup Making Process

In this training activity, each participant was given the opportunity to try the Instant Glutinous Corn Soup product and taste it, so that participants are expected to be able to understand things related to the ingredients used and the process of making instant corn glutinous rice soup, as can be seen in Figure 8 below.



Figure 8. Instant Corn Glutinous Rice Soup Product and Product Trial by Participants

At the end of the training activity, the UPH Food Technology Study Program PkM Team handed over equipment assistance including a sieve, flour maker, digital scales, and measuring cups to the Tangerang Selatan KWT Forum. This equipment assistance is expected to support the KWT Forum's work program in utilizing food crop commodities into functional food products that are beneficial for health and provide added economic value to the community.



Figure 9. Handover of Equipment Assistance to the Tangerang Selatan KWT Forum

The results of the evaluation of the implementation of training activities based on filling out the questionnaire showed that training participants gave a positive response to the implementation of training at the Tangerang Selatan KWT Forum. All (100%) participants stated that this activity could be followed well, was interesting and useful. Most participants (87%) also stated that the practice of making products and demonstration videos were easy to understand. A total of 55% of participants stated that they were motivated to practice making Instant Corn Soup products, while 45% of participants stated that they would pass on information about making Instant Corn Soup products to others.

CONCLUSION

Community Service (PkM) Activity “Training on Making Functional Food Products Based on Glutinous Corn Flour” has been carried out well. The training activity was carried out on September 21, 2023 and was attended by 35 participants from the Tangerang Selatan KWT Forum and 7 PkM teams consisting of 4 lecturers, 1 assistant lecturer and 2 students of the UPH Food Technology Study Program. The form of this PkM activity is in the form of presentations, explanations and trials of making Functional Food Products Based on Glutinous Corn Flour, namely Instant Glutinous Corn Soup and discussions related to the training topics presented to the participants. The evaluation results based on filling out the questionnaire showed that all (100%) participants stated that the training activities could be followed well, were interesting, and very useful. Making Functional Food Products

of Instant Glutinous Corn Soup can be an alternative daily activity that can be carried out by members of the Tangerang Selatan KWT Forum which provides health and family economic benefits.

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