

***Clitoria ternatea* L (Butterfly Pea) Making Education in Banangkah Village (Benangkah), Burneh District, Bangkalan, East Java**

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ABSTRACT

Among the numerous scientific publications that affirm the advantages of butterfly pea blossoms. The inhabitants of Benangka Village, Burneh District, Bangkalan City, among others, do not appear to be familiar with this information to a large extent, according to community facts. Despite the fact that they have a butterfly plant in their yard. Based on this, we believe it is essential to hold educational activities for the residents of Benangka Village regarding the potential and benefits of the butterfly pea flower as well as suitable processing techniques, in order for the benefits of the butterfly pea flower to be felt by the larger community as fully as possible. The method used in this PKM activity was socialization and a demonstration of how to make butterfly pea flower herbal drink using a simple technique, namely brewing. The community responded positively to the activities that were carried out, as evidenced by the enthusiasm displayed during the activity.

INTRODUCTION

People from many countries, including Indonesia, use the butterfly pea flower. The chemical composition of the butterfly pea flower has been studied. Flavonoids, anthocyanins, alkaloids, ternatin, saponins, tannins, taraxerol, and taraxeron have all been found in butterfly pea flowers (Ezzudin, M and Rabeta. 2018). According to other sources, pea flowers contain bioactive ingredients such as flavonol glycosides, anthocyanins, flavones, flavonols, phenolic acids, terpenoid and alkaloid compounds, and cyclic peptide or cyclotide compounds. (AM, Marpaung. 2020).

Several *in vivo* and *in vitro* studies have shown that the bioactive compounds found in butterfly pea flowers provide health benefits. Telang leaf extract has been shown to inhibit the proliferation of MCF-7 breast cancer cells. (Neda, et al. 2013).

Marpaung butterfly pea flower has been demonstrated to have antioxidant, antiidiabetic, antiobesity, anticancer, anti-inflammatory, and antibacterial activities *in vivo* and *in vitro*, per AM's analysis of the literature. It has also been found to protect liver tissue. 2020 (AM, Marpaung). The butterfly pea flowers is antioxidant, antidiabetic, antibacterial, antihelmintic, liver tissue protector, and antiasthmatic, according to M, Ezzudin, and Rabeta. (M, Ezzudin dan Rabeta. 2018)

If the public is to complete the research indicated above, a difficult process must be followed. The active ingredient content that can be obtained from this straightforward method can be equivalent to 2.16 mg of delphinidin 3-glucoside per serving, according to research from Chusak C, et al. (2018), and can be processed into a blood pressure-lowering drink by soaking 10-15 butterfly pea leaves in 250 ml of hot water.

The findings mentioned above offer encouragement and proof that butterfly pea flower may one day be a promising therapeutic candidate, even though more research on the plant needs to be done at the clinical trial level.

The highest antioxidant activity was found in flowers that were boiled for 30 minutes, with an inhibition percentage of 94%, according to Ukradiyah, Kamaratih, and Sulistia's research on the antioxidant activity of butterfly pea flower (*Clitoria ternatea* L.) extract in inhibiting lipid peroxidation in 2022.

IMPLEMENTATION AND METHODS

Time and Place of Service

The date January 26, 2023, has been set for the implementation of this initiative. The service will take place at the Burneh District, Banangkah Village Hall, and East Java.

Planning Phase and Method

In order to provide insight into the potential and benefits of flowers as well as a direct demonstration of how to make herbal drinks with the proper techniques to reap the benefits of butterfly pea flowers to the fullest, the implementation of this dedication uses the lecture method and active discussion. This activity's design is broken down into various stages, including: (1) Program socialization stage: At this point, scientific journals are used as the

basis for education about the advantages and possibilities of the butterfly pea flower. (2) Interactive discussion stage: At this level, activities are allowing the public to ask questions about the advantages and preparation techniques of the butterfly pea flower herbal beverage. (3) Stage of herbal drink demonstration: In this activity, we show exactly how to make telang herbal drinks properly so that the greatest advantages are realized. (4) Evaluation stage: To assess the effectiveness of the activity, we perform an evaluation in the form of descriptive interviews at the final stage.

Tools and Materials

- a) Activity banner, containers, plastic bottles, pans, stoves, and LCD projectors
- b) Hot water, butterfly pea flower , sugar, lime, and sticker

RESULTS AND DISCUSSION



Picture 1. Outreach Initiatives and How-to Videos for Creating Herbal Drinks with Butterfly Pea Flowers

On January 26, 2023, the community service project was completed at the Banangkah Village Hall (Benangkah), Burneh District, Bangkalan, East Java. 25 members of the Threadkah community, of which we had originally aimed for 30 participants, took part in this activity. The strategy adopted in this community service program is direct demonstration of how to make herbal drinks properly based on our scientific journal searches, as well as socialization of the potential and benefits of butterfly pea flower. Additionally, we conducted interviews with a few of the participants who were representative of the group in order to evaluate the activities that had been carried out. The results showed that the participants were happy with the instructional and demonstration activities. This was also evident when we started community conversations that were interactive, and throughout the question-and-answer period, there was energy from the queries made.

CONCLUSIONS AND RECOMMENDATIONS

There were 25 residents of Benmakah village present. The intended aim of 30 attendees was not met by the actual number of attendees. However, judging by how animatedly the information and drink-making demos were presented, it appeared that the attendees were fairly passionate about the lectures and demonstrations.

We see that after providing education about the benefits and how to make telang herbal drink, this activity can be a source of inspiration for the people of Berliankah, particularly housewives, to turn it into an entrepreneurial opportunity that they can do from home by utilizing herbs that grow in their yards. Each becomes a more appealing herbal drink in terms of taste and packaging.

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