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Development of Telang Flower Management for PKK Empowerment at Perum Puri Cempaka Putih 1 RT 04 RW 05 Malang City Guan Economic Improvement

Artiyani A[1]*, Roostrianawaty N[2], Dwiratna C[3], Andjar S[4], Ibrahim M[5]
Institut Teknologi Nasional Malang
Corresponding Author: Artiyani A Anisartiyani@ymail.com

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A B S T R A C T
Butterfly pea flower (Clitoria Ternatea) is a vine that can be planted in the yard of the house or yard. The method used in implementing this program is a learning by doing system with the help of teaching media in the form of material modules. The counseling technique was carried out by gathering several residents in one of the local residents' houses and giving them an explanation in a direct approach. Considering that the provision of funds for butterfly pea flower cultivation and community empowerment activities has not been optimal, this community service program focuses more on introducing butterfly pea flowers for their benefits and management.

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INTRODUCTION

Butterfly pea flower (*Clitoria ternatea*) is a large vine plant planted in the yard or page house could seen in Figure 1 below this :

Figure 1. Telang Flowers Planted in the Yard House becomes Fence Life

Leguminous plants (*Papilionaceae or Febaceae*) from tropical Asia. Flowers that are bright blue and purple are distinctive, and have funnel-shaped petals, with a crown shaped like a butterfly, have various names. In Sulawesi it is called Talang flower, Raleng Temen flower, and in Maluku it is called Bisi, Seyamagulele (Dalimartha (2008). The taxonomy of the butterfly pea plant quoted from Budiasih (2017) is as follows:

Kingdom : Plantae
Division : Tracheoohyta
Genus : Clitoria L
Infrodivisi : Angiospermae
Class : Mangnoliopsida
Order : Fabales
Family : Fabacea
Species : Clitoriaternatea

Monocot flower this own color three type blue , brown and white . Butterfly pea has stamens (male genitalia) and pistils (female genitalia) so it is often called a perfect flower or complete flower. Leaves do not have leaf spurs but only petiole (*petiolus*) and leaf blade (*lamina*) . Telang flower roots are taproot types and the color is white. The root of the butterfly pea flower is the root neck (*Colum radisi*), root stem or main root (*Corpus radisi*), root tip (*Apeks radisi*), root fibers (*Fibrila radicalis*).

Flowers which are considered just ordinary plants have properties such as containing natural antioxidant compounds as an alternative to antioxidants , one of them Flavonoids as potential antioxidant as compounds with anti-radical activity (Suharto, 2004). Flavonoid content (20.07 ± 0.55 mmol/mg flower) in addition to anthocyanins (5.40 ± 0.23) mmol/mg flower), flavonol glycosides (14.66 ± 0.33 mmol/mg flower), kaempferol glycosides (12.71 ± 0.46mmol/mg

flower), quercetin glycosides (1.92 ± 0.12 mmol/mg flower) and myricetin (0.04 ± 0.01 mmol/mg flower) (*Kazuma, 2003*) .

The butterfly pea flower can also regenerate cells so that someone who regularly drinks it can be more youthful. Therefore, in our service activities, we will conduct counseling regarding the benefits and uses of the butterfly pea flower as well as conduct training to the public on how to cultivate the butterfly pea flower.

The potential of a butterfly pea flower own potency in field phytochemicals as medicinal ingredients among other things active as phenol , plobatin , oil volatiles , saponins, tannins , triterpenes , flavonoids, steroids, alkaloids, glycosides , anthraquinones , anthocyanins, flavonoids Alcohol and stigma-6-4-diketone-3, and stigma -4-diketone-3. As biomaterials, leaves hair and roots plant potentially for oppose radical free . In industry food , flowers egg used as dye natural , give color blue-purple . The resulting color more beautiful , solid and durable frozen compared diamond blue synthetic food grade Cl 42090 . Natural food coloring can be used for blue rice, pudding, cakes, ice cream, and made into drinks such as cocktails. Traditional food in the market, such as Roti Bere, Putu, Barongo Ondeonde, and so on, if added with butterfly pea flower extract the color is more attractive and when processed into snacks for children it can be given a unique color, making it easier for children to increase their appetite for fun like.

There is one study in Switzerland which says that consuming butterfly pea flower extract for 20 weeks can cure diabetes. Butterfly pea flowers themselves contain anthocyanins (Suebkhampet and Sotthibandhu, 2011) so that flowers dissolved in water will turn blue. While the chemical compounds that were successfully studied by Kazuma *et.al* (2003) in butterfly pea crowns contain 14 types of flavonol glycosides and 19 types of anthocyanins. One of them is phenol and delphinidin which, according to Hutajulu *et al* . (2008) can cure inflammation of the eye. In addition, not many understand the benefits contained in butterfly pea flowers. They think that the butterfly pea is just an ordinary vine, therefore it is necessary to carry out counseling about the butterfly pea flower and training on butterfly pea cultivation.

One of the housing that has the potential to develop Telang flower is the Puri Cempaka 1 Housing Complex, which is located in the Kedungkandang sub-district, Malang City. As said by the Head of TP PKK Malang City, in our community service activities we will conduct counseling on the uses and efficacy of butterfly pea flowers, as well as inform about the huge business potential of cultivating butterfly pea flowers which will improve the economy of local residents. This is done so that PKK women and local residents are interested in participating in butterfly pea flower cultivation activities.

IMPLEMENTATION AND METHODS

The method used in implementing this program is a learning by doing system with the help of teaching media in the form of material modules. The counseling technique was carried out by gathering several residents in one of the local residents' houses and giving them an explanation in a direct approach.

Because in this way it is easy for residents to understand in delivering the material provided, and residents will later distribute modules that contain objectives, benefits to ingredients and how to process products. In this activity, an explanation was also given about the stages of butterfly pea flower cultivation which had been successfully planted by one of the local residents. the stages are as follows:

1. The first step is to prepare butterfly pea seeds which can be purchased directly at the seed shop.
2. To find out the butterfly pea seeds are suitable for planting, soak the seeds in water and let stand for about 5 minutes. If any seeds float, they are not suitable for planting.
3. Furthermore, the seeds are placed in the ground, routinely watered in the morning and evening.
4. If the flowers have grown, the flowers are picked in the morning and taken those that still have dew on them. Place the butterfly pea flowers in a container such as a tray and then dry them in a place that is far from dust and not exposed to direct sunlight.

Plant image flower ready eggplant _ moved to land from polybag can seen in Figure 2 below this

Figure 2. Newly Growing Butterfly Flower

And Plants the already existing Telang flower grow easy creeping can be seen in figure 3.

Figure 3. Flowering Butterfly Plants

Training is the process of implementing the material that has been provided in counseling activities. Training was conducted for PKK women and local residents regarding how to process butterfly pea flowers and plant butterfly pea flowers.

The service team involved the community of Perum Cempaka Putih 1 RT 04 RW 05 Malang City because this area is densely populated and the availability of large land and lots of vacant land has been planted with butterfly pea flowers, but there is still little knowledge about the cultivation and benefits of butterfly pea flowers and awareness independence from an economic and health standpoint, especially for mothers where preparations from butterfly pea flowers are more organic, safe and easy to process. The harvesting of the butterfly pea flowers scattered throughout the Cempaka Indah Perum Puri is carried out every day, as shown in the example in Figure 4 below:

Figure 4. Harvesting of Butterfly Pea Flowers is Done Every Day

Figure 5. The Process of Drying Butterfly Pea Flowers

One of the uses of flowers by the residents of Perum Puri Cempaka Putih 1 at home is as a rice coloring agent, as shown in Figure 6:

Figure 6. Utilization of Telang Flowers as Natural Dyes

RESULTS AND DISCUSSIONS

The freshness of the butterfly pea flowers and the beautiful colors that were picked by the residents can be seen in Figure 7 below

Figure 7. Results of Picking Butterfly Pea Flowers

Butterfly pea flowers have a high selling value. Per kg in dry conditions, the price of butterfly pea flowers starts from IDR 150,000 to IDR 500,000, but the management of marigold cultivation at Perum Puri Cempaka Putih 1 is still very simple and is still managed by each existing RT. RT Fund. Details of the operational costs of telangiecta cultivation can be seen in Table 1 below:

Table 1. Details of the Operational Costs of Telangiecta Cultivation

No.	Name	Task	Nominal
1	Mama(Mr. Gun's mother)	Telang flower picker	50,000
2	Mr. Yusuf	Caring for Telang flowers	50,000
3	Craftsman	Clean up	50,000
5	Miss Slamet	Telang flower manager	50,000

Considering that the provision of funds for butterfly pea flower cultivation and community empowerment activities has not been optimal, this community service program focuses more on introducing butterfly pea flowers for their benefits and management. The butterfly pea flower cultivation at Perum Puri Cempaka Putih 1 is still in a growing population of butterfly pea flowers, so as to empower residents who are not yet independent in their management. Figure 8 Community activities of the tela flower at Perum Puri Cempaka Putih 1.

Figure 8. Telang Flower Community Activities at Perum Cempaka Putih 1

CONCLUSIONS AND RECOMMENDATIONS

The development of butterfly pea flower cultivation at Perum Puri Cempaka Putih 1 in the empowerment of the PKK is assessed based on the performance of the community, especially the beneficiaries of the development program. The obstacle is superior understanding and creativity in obtaining information from program recipients. Several cases show that the weakness of the manager is the understanding of the philosophical and other technical aspects of the eggplant floriculture development program.

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