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The Community Service (PKM) Aloe Vera Products Processing at North-Serpong District, South-Tangerang City

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Abstract

This community service (PKM) shall focus on the economic affair, these are: first, aloe vera products processing such are hand-sanitizer and smoothing gel. Second, the management aspect by mentoring on packaging technique, market penetration, and business management. This activity introduced unassuming technologies such as automatic mixers, cookers, ordinary chemical compounds, and also digital business instruments. The program partner involved is the public unit Kampong Pancasila which was founded by Mrs. Hj. Muriah together with the PKM-UMT team. As long as, Mrs, Hj Muriah has been successful in developing the local aloe vera variety so that has owned the highest quality and has got worthiness to production. This program was conducted by using methods: a. Dialogue with the partner, b. workshop, c. Focus group Discussion (FGD), d. Program initiation, e. Activity method design, f. monitoring, and evaluation. Outcomes of this activity are management to the program partner and development to local-SME based on aloe vera product processing such are hand-sanitizer and smoothing gel. Therefore, the program partner and local society could be developed economic resilience and increase the prosperity of the local society.

Keywords: Community service, Processing, Aloe vera

INTRODUCTION

North-Serpong district is a developing territory from Serpong district in South-Tangerang city- province Banten. The district consists of 7 urban-village with a total population of 197.187 people (BPS, 2020). Pakujaya's village is a part of this district which has consist toof6 sub-village (RW) and consists 133 residents community (RT) with a total population of 24.568 people or 7.532 households (Faidah:2020). Referring to EKBANG department data of Pakujaya's village territory, this urban village has an area size of 98,52 Ha. Mostly, the land area of this village is utilized for public facilities and trading (including a conventional market and shopping area).

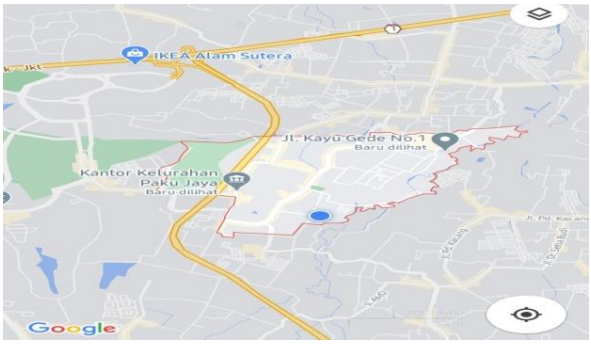

Figure 1. Position Mapping of Pakujaya's Village
Source: Google Maps. Accessed on March 27th 2021

During pandemic covid-19, this condition impacted to economic and social aspects of this region. In September 2020, the 22nd Sub-village was dedicated as "Kampung Pancasila" in an effort to countermeasure of covid-19 pandemic impact. Along with the increasingly stable situation and environmental conditions in January 2021, this area was also designated as "kampung Tangguh Jaya."

Public-unit "Kampong Pancasila" is one location inside the 22nd Sub-Village of Pakujaya's territory. This location was founded by Mrs. Hj. Muriah who was a local-public figure. Currently, she is active in farming and developing the Aloe vera variety by phylum Chinesis (Aloe barbadensis miller). Generally, a variety of this aloe vera is often consumed by a part of people and processed to become herbal medicine and cosmetics (Nasir: 2013). Mostly, this aloe vera variety was widely traded in the market. In addition to the thick flesh texture, this variety of aloe vera has a better gel extract concentration if compared to other varieties (Chriastia: 2015). Nowadays, Mrs. Hj. Muriah has been successful in cultivating aloe vera for this variety of more than 100 plants (excluding the superior seeds) with the cultivation method of using pots. Unfortunately, the local residents who plant and cultivate this aloe vera variety do not fully understand the efficacy of this plant. The major problems faced by local society are cultivating techniques, management, and marketing methods of aloe vera products. Based on dialogue results between local residents and PKM-UMT teams witnessed by Pakujaya's Village Official representative, there are some understanding and appointments, such: first, the local society and Pakujaya's village Official agree to support the above people empowerment through mentoring in aloe vera's product processing to become an ordinary cosmetic product and health support product. Second, PKM-UMT teams and local society agree to conduct training and workshop.

Figure 2. Situation and territory environment -Kampung Pancasila Pakujaya
Source: Activity documentation, 2021

Society's empowerment is an effort to serve society for growth in the social-politic transformation toward economic resilience and stability of stakeholder prosperity. So that, an empowered community can create an independent and participatory life that is increasingly prosperous in sustainable conditions. (Mardikanto and Soebiato: 2017). While processing means is produced aloe vera products such a: smoothing gel and hand sanitizer.

IMPLEMENTATION METHOD

Implementation methods in these activities include the following phase:

- Technical dialogue between the program partner and local residents supervised by PKM-UMT teams. This activity's purpose is to identify and mapping of some problems faced.
- Workshop by theme "Economic resilience raising through empowering aloe vera plants and its potential."
- FGD between the program partner and Pakujaya's village official teams. This activity's purpose is to analyze aloe vera potential and to measure local residents' wishes and readiness to implement this program including how to cultivate and how make product diversification.
- Initiation and declaration about local-society empowerment movement Head of Pakujaya's village (representative by EKBANG Department).
- Implementation designing and deciding activity steps (beginning from cultivation technique, and production method until marketing management).
- Monitoring and evaluation of management aspects and organization in order could gain a multiplier effect in microeconomics for the local society.

RESULTS

Currently, the program partner members have got better skills in cultivating the aloe vera Chinese variety just optimizing their house yard. The program partner member also gained results with the highest quality, and freshness has got worthiness to production. Generally, plants result that fulfill harvesting are an average size of 7-15 cm, 65 - 90 length, and an average of 2-3 cm thickness of leaves. The sizes are ideal for optimization and suitable for production to become several diversification products of aloe vera (Endi: 2021).

Figure 3. Self-cultivating aloe vera by a member of the program partner
Source: Activity documentations, 2021

These activities have given the grant to the program partner and its members in the form of equipment and several materials for supporting activities operational and production so that gained the expected product sourced aloe vera.

Table 1. Equipment and materials

No.	Technology/ implemented equipment, materials	Achivement
1.	 Aloe-Ground Fertilizer – local fertilizer	Stimulator material for seeds growth. Usage method by mixing on soil material.

No.	Technology/ implemented equipment, materials	Achivement
2.	  PCL- local liquid fertilizer – LOLIF	Stimulator material for plants, since buds until growing mature plants.
3	  Blending machine and Cool Box	Ordinary technological instruments are used to grind the peeled and sliced plant products for further processing.
	1  2  3  4  5  Che un aterial	Supporting materials, consist to: 1. Carbopol 940, chemical compounds to result the viscosity of the solution (liquid). 2. Methyl Paraben, chemical compounds to maintain adhesion and dispersion of gel concentrates. 3. Propyl Paraben chemical compounds to maintain the concentrated character of the gel. 4. Hydrolysed Collagen (Gelatine) is a hydrolysis compound that functions to result a basic gel concentrate. 5. Alcohol 70%, Acetone liquid that functions as a catalyst for the formation of changes in the properties of the solution.

These are the following result of diversification product sourced from aloevera:

Figure 4: Processing result of Aloe vera (basic gell).
Source: Activity documentation, 2021

Figure 5. Production result Hand sanitizer
Source: Activity documentation, 2021

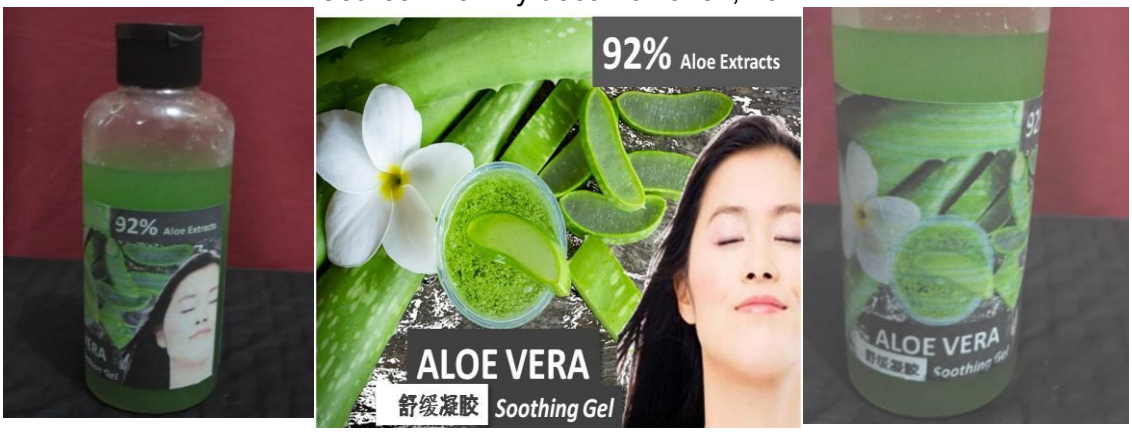

Figure 6. Production result *(Body Smoothing Gel)*
Source: Activity documentation, 2021

Evaluation of activity implementation conducted by sustainable improvement approach as an effort how to implement the method and technology to the program partner member as the local-society. This activity held by PKM-UMT teams.

CONCLUSION AND SUGGESTIONS

Referring to result above, it could take as conclusion that the Community service activity that conducted at Pakujaya urban-village, North Serpong-South Tangerang city focussed on aloevera product processing. This activity involves the program partner and its member to produce hand sanitizer and body smoothing gel. This activity purposed to support local-society in develop economic resilience.

The writer suggests to this activity in order to continued and could be improved by local-society and SME inside this region, so that increase economic potential post-pandemic covid-19.

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