

Efforts To Improve Alpinia Galanga Production Capability In The Prosperous Plantation Group In Red Mata Village, Banyuasin I Sub-District, Banyuasin District

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Abstract:

This study aims to determine and analyze the improvement of alpinia galanga production capabilities in the Makmur Sejahtera Plantation Group, Merah Mata Village, Banyuasin I District, Banyuasin Regency. This program is a flagship *Corporate Social Responsibility* (CSR) program of PT PLN Indonesia Power Merah Mata Generating Unit called Kampung Alpinia galanga, which raises the issue of community empowerment. This program aims to develop management activities, production, and distribution of Alpinia galanga agricultural products and support government programs regarding food security in the communities around PLTG Borang. The method used in this research is a qualitative approach with a descriptive method. The Alpinia galanga Village program has been running since 2021 by PT PLN Indonesia Power UP Merah Mata PLTG Borang. Initial planning was carried out to determine the program's roadmap to be implemented through collaboration between PLTG Borang and the alpinia galanga Village Group. The program scheme that is run together is a long-term empowerment program. After the development of alpinia galanga agricultural commodities and the manufacture of alpinia galanga derivative products, farmers are trained to market Alpinia galanga derivatives/product branding, one of the innovations of Alpinia galanga village. PT PLN Indonesia Power UP Merah Mata PLTG Borang runs the Kampung Alpinia galanga mentoring program for residents on an ongoing basis to encourage the economy of residents, as evidenced by the increase in average income from IDR 600,000 to IDR 3,438,679, which reduces poverty by 3.33% in Merah Mata Village in 2023.

Keywords: *CSR, Empowerment, Alpinia galanga Village*

1. Introduction

The Kampung Alpinia galanga program was formed as an effort to develop the agricultural program in Merah Mata Village to further develop the agricultural sector. The Kampung Loas group is an independent community self-help group. This group was formed at the initiation of the head of the farmer group with PT PLN Indonesia Power PLTG Borang. In 2020 the programme planning process was carried out through the preparation of a work plan between PT PLN Indonesia Power PLTG Borang and the Alpinia galanga Village Group. The empowerment program for farmer groups in Merah Mata Village from 2021 to 2022 focuses on developing agricultural commodities from Alpinia galanga farmers and also developing the manufacture of derivative products from Alpinia galanga. From 2023 to 2024, the focus is on helping facilities and infrastructure in the form of vehicle assistance and road improvements for the distribution of agricultural products, besides that farmers are also allowed to market their derivative products to a wider market or product branding.

Table 1: Number of Members of the Alpinia galanga Village Group

No.	Program Year	Number of Members	Member Increase (%)
1.	2021	32	0
2.	2022	40	25
3.	2023	53	32
4.	2024	72	36
Total Members		72 people	

Source: Author's Processed Data

Alpinia galanga, also known as galangal, is a spice plant that grows at various altitudes, both high and low. There are two main varieties: White Galangal (*Alpinia galanga var. galanga*), which is more commonly used as a culinary ingredient, and Red Galangal (*Alpinia galanga var. officinarum*), which is more commonly utilized in traditional medicine. Traditionally, galangal rhizomes have been used in herbal therapies to treat various conditions, such as indigestion, allergies, and fungal infections, as well as an anti-inflammatory agent and blood sugar controller. In culinary use, the rhizome is usually blanched before being added to dishes, while in medicinal use, the content is extracted for use in potions or supplements. Currently, Alpinia galanga village farmers have also made innovations in the form of Alpinia galanga derivatives in the form of chips, shredded, Lemper, and other snacks. The existence of these innovations is one of the movements and enthusiasm of farmers to develop their crops but still requires a lot of improvisation in terms of the production and distribution of these products.

Table 2: Total yield of Laotian village plants

Programme year	2021	2022	2023	2024*	2025 (forecast)
Yield of alpinia galanga (tonnes/year)	50	180	300	400	440

Source: Annual Bookkeeping Data of Alpinia galanga Village Plant Products

Notes: *) until August 2024

2. Research Methods

The research method used in this research is a qualitative approach with a descriptive method. Methodology is the process, principles, and procedures we use to approach problems and seek answers (Mulyana, 2008).

The research data was taken from the research area located by the program implemented by the company. The data used in preparing the research on the Alpinia galanga Village program are secondary and primary. Primary data in this study is data obtained directly from informants through face-to-face interviews or other media to obtain an overview of activities and achievements that have been obtained. Secondary data includes written data and information related to the planning, implementation (monitoring), and reporting of program results.

3. Results and Discussion

Kampung Alpinia galanga is one of PT PLN IP UP Merah Mata's flagship CSR programs. Kampung Alpinia galanga is a program initiated in 2020, the program starts in 2021 to 2025, this year entering the 4th year (2024) which was formed from the potential of existing local natural resources, namely galangal / alpinia galanga plants. Kampung Alpinia galanga is located at Jl.K.R.Rozali, Lr.Gotong Royong, RT.06-11, Dusun III, Merah Mata Village, Banyuasin I sub-district, Banyuasin district, South Sumatra province. This potential, if properly utilized, can be a solution to the food security and economic problems that occur in the community. Kampung Alpinia galanga is run by the Makmur Sejahtera Plantation Group, Merah Mata Village, utilizing the potential of all parts of the Alpinia galanga plant from flower bunches, fruits, seeds, leaves to Alpinia galanga stems, namely seasoning products, food derivative products, and waste from the process into fish feed. This potential can solve environmental problems that occur. Kampung Alpinia galanga utilizes the potential of local housewives so that they have more productive activities and increase their income. Kampung Alpinia galanga is expected to be a program that is by the potential and needs of the community, not just a program as a form of social and environmental responsibility. Kampung

Alpinia galanga also aims to be an iconic local flagship agro-tourism destination on par with the famous processed food products from South Sumatra province such as pempek.

The achievements of the Makmur Sejahtera Plantation Group in this program are as follows: (a) The Makmur Sejahtera Plantation Group succeeded in producing more innovative derivative products which could further increase the quantity of Alpinia galanga plant production; (b) The Makmur Sejahtera Plantation Group succeeded in producing refined Alpinia galanga seasoning that could be used by the community as a seasoning for cooking and traditional medicine; (c) The Kampung Alpinia galanga program succeeded in marketing products to the wider community by participating in activities carried out by related agencies or certain forums so that people knew and knew the products from Kampung Alpinia galanga.

Table 3. Land Requirement and Projected Income of Alpinia galanga Village

No.	Year	Land Area (hectares)	Land improvement (times)	Average Income/org/year (Rp)
1	2021	13	0	600.000
2	2022	30	1,31	2.400.000
3	2023	48	2,69	3.438.679
4	2024*	65	4	3.493.477
5	2025 (forecast)	Adjusting the land conversion from yam or rice to Alpinia galanga		3.700.000

Source: Data processed by the author

Notes: *) until August 2024

In the dry season, per day, alpinia galanga plants can be harvested between 0.7 - 1 tonne. However, in the rainy season, Alpinia galanga plants can be harvested between 1 - 1.5 tonnes/day. For the land area at the beginning of the program in 2021, Kampung Alpinia galanga had ± 13 hectares of land, experiencing an increase in the land to 30 hectares in 2022. It increased again to around 48 hectares in 2023 and overall until now (August 2024) has an area of 65 hectares. In current conditions, Kampung Alpinia galanga in particular has run out of vacant land for Alpinia galanga cultivation, it is possible to increase land due to land conversion from yam or rice crops to Alpinia galanga crops.

Table 4. Tools and materials for making Laotian Derived Products

No	Tools/Materials	Function
1	Cutter/knife, cutting board, sack/regen, blender/coffee grinder, sifter, and clean water	For cleaning, shredding, fining, sieving processes
2	10-12 months old white/red Alpinia galanga	To get the most out of Alpinia galanga, remove the blackened/damaged rhizomes and epidermis.
3	Oven (at 40 - 50°C)	Oven drying is more effective, taking 20 minutes, than drying in the sun for 2 - 3 days.
4	Clear plastic standing pouch measuring 10 x 17.6 x 0.10	For the packing process
5	Food additives	For product processing

Source: Field data

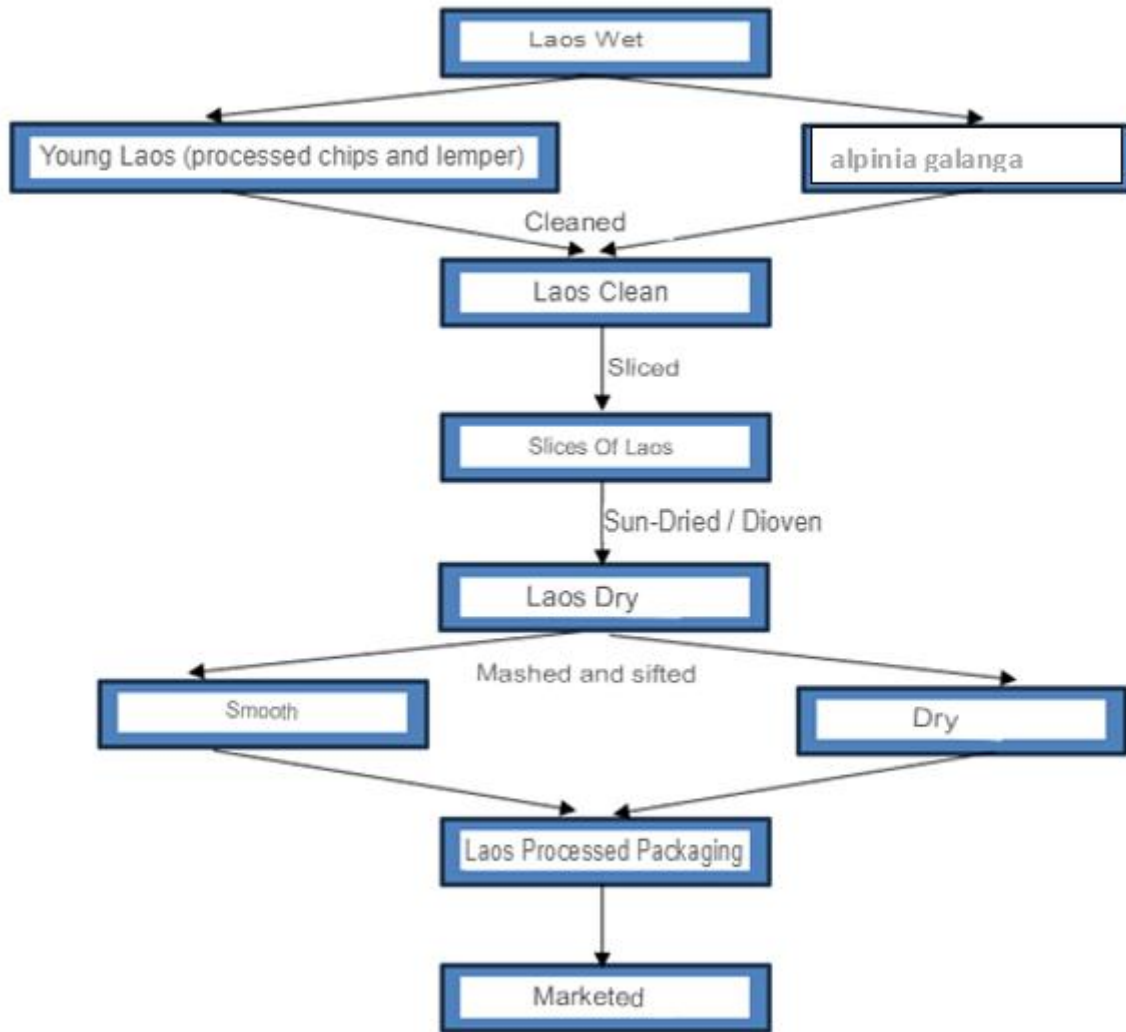






Figure 1: Manufacturing Process of Lao Derived Products

Table 5 Product Results of Alpinia galanga Village

No.	Image	Item Name	Benefit Value
1		Shredded Alpinia galanga	Maintains endurance, aids muscle development and building

2		Laotian Chips Rich in potassium, helping to keep blood pressure within normal thresholds
3		Lemper Alpinea galanga Energy intake
4		Alpinea galanga Waste for Fish Feed Bioactive components of Alpinea galanga can inhibit the growth of microorganisms in fish

Alpinia galanga, apart from serving as a medicinal plant, contains antimicrobial compounds such as diterpene and eugenol, which are effective in killing fungi and inhibiting their growth. Traditionally, Alpinia galanga rhizome is used to treat skin diseases caused by fungal infections, such as ringworm, boils, and others (IDNmedis Research Team, 2017). Research by Haraguchi et al. (1996) showed that the compound (E)-8 beta, 17-epoxylabd-12-ene-15, 16-dial isolated from Alpinia galanga seeds was able to increase antifungal activity synergistically. Alpinia galanga also contains vitamin C to boost immunity, as well as polyphenol antioxidants that support normal blood pressure, lower bad cholesterol, and maintain heart health (Haraguchi et al., 1996). Research by Ririn Retiani (2006) found that Alpinia galanga rhizome filtrate effectively reduces body temperature at a dose of 9 mg/gr BB, with an average temperature reduction of 1.87°C in 6.5 hours, comparable to the effect of paracetamol 0.2 mg/gr BB.

4. Conclusion

Based on the results of the research and discussion that has been carried out, it can be concluded that the Alpinia galanga Village Programme in addition to the Environmental Social Responsibility (TJSL) of PT PLN Indonesia Power UP Merah Mata also answers environmental and economic issues, namely the management of Alpinia galanga plants to make business opportunities and food security that have economic value. Derivative products from the Alpinia galanga Village Programme are present as an alternative to processed food that is healthy *and basic to nature*, the hope is that it can become a local iconic agro-tourism and *add value* to the PLTG Borang community empowerment program.

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