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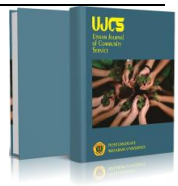

Diversification of Taro Commodity-Based Derivative Products To Increase Community Income in Gunajaya Village, Tasikmalaya District

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Abstract: The constraints of local food development are the lack of derivative products that are easily accepted, accessible to the community and the implementation is not optimal. The purpose of Community-Based empowerment with the scope of Community Partnership Empowerment (PbM-PkM) is to empower the community through partners KWT Teratai and Poktan Kertaraharja III Gunajaya Village, Manonjaya District, Tasikmalaya to increase the diversification of derivative products from Talas Pratama to increase community income. This activity was carried out from May to December 2024. Gunajaya Village is the centre of Talas Pratama producers with productivity/ha around 30-40 tonnes, but most of it is sold raw so that the added value is low. There is an effort to diversify Talas Pratama into several derivative products, but until now it is still constrained by limited knowledge and skilled personnel to process products. This activity uses methods of socialisation, counselling, product processing diversification training, evaluation, grant assistance and mentoring. This activity has had an impact on the socio-economic conditions of the participants in the form of psychological assets, informational assets, organizational assets, material assets, financial assets, and human assets. Partners have produced various taro derivative products including taro flour which is processed into Cilok, Crackers, Bolu, Perkedel.

Keywords: Diversification; Empowerment; Local food; Derived products.

Introduction

The threat of a global food crisis has hit all countries, including Indonesia. The paradigm of food policy implemented must change from food security to food independence so as not to depend on other countries. One of the appropriate policies is local food diversification, which is a process of food diversification or efforts to increase the consumption of a variety of local foods with balanced nutrition principles. One of the obstacles to local food development is that derivative products that are easily accepted and accessible to the community have not been developed and the implementation of policies to increase local crop production based on local wisdom is not optimal so that there is still a large gap between production and the potential of local food crops (Dewi and Ginting, 2012; Sulaiman et al., 2017).

In order to accelerate food diversity based on the potential of local resources and pay attention to local wisdom, the government has issued Presidential Regulation No. 81 of 2024 (JDIH BPK, 2024) which essentially contains a national strategy for accelerating Food Diversity based on local resource potential consisting of: 1) strengthening policy/regulation support for local food development; 2) mainstreaming local food production and consumption; 3) optimising land use, including yard land; 4) strengthening and developing local food industries, especially MSMEs and/or small and medium industries; 5) increasing the range of distribution and marketing of processed food products based on the potential of local resources efficiently; 6) increasing public knowledge, awareness, and attitudes regarding the need to consume B2SA food; 7) developing technology and incentive systems for local

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food businesses; and 8) strengthening the economic institutions of farmers, fish farmers, and fishermen.

In accordance with the national strategy, various implementative programmes must be pursued in the field that aim not only at food fulfilment and security, but also at poverty alleviation and increasing people's income/welfare. According to Dewi and Ginting (2012), the development of food diversification towards local food ingredients can contribute greatly to increasing and equalising income and expanding employment opportunities because it involves most household, small and medium-scale industries.

As of 2022, Tasikmalaya Regency holds the title as the poorest regency/city ranked number seven (7) out of 10 regencies/cities in West Java Province with a poor population rate of around 10.73 per cent or around 194.10 thousand people with a poverty severity index of 0.28 (BPS Kota Tasikmalaya, 2022). This unfavourable situation requires empowerment measures to improve the welfare of the community. In its implementation, it is carried out by utilising the participation and capabilities of the local community and relying on local wisdom products carried out in groups (Kriska, 2017).

Food diversification can provide alternative food sources and reduce dependence on rice. Efforts can be made to increase food diversity by utilising other food sources including taro.

Taro (Colocasia esculenta) is a carbohydrate producer (23.78%) so that it can be processed as a substitute for rice which is also rich in protein (1.9%) (Suriati et al., 2023). Talas Pratama is one type of taro that is now widely cultivated, in addition to its high productivity, all parts of the plant can be used from tubers, midribs and leaves can be used as food ingredients. It is also one of the raw materials for medicine, namely its starch modified with pentanol and acetylation can be used for excipients in the manufacture of slow-release tablets (Kurniadi et al., 2023).

Talas Pratama cultivation must continue to be developed in order to utilise and implement food diversification programmes in order to strengthen food security. Food diversification is one of the efforts to diversify food availability and ensure the establishment of a resilient agricultural system that can make a significant contribution to household food security (Mango, et al., 2018; Sudrajat, 2022). The pillars of food security need to be strengthened and complemented by the expansion of the food spectrum. One feasible way is to develop diversification based on local food ingredients (Sumaryanto, 2009; Priantoro, 2015), which currently the implementation and results of this policy are still not optimal and have experienced ups and downs (Wijayati et al., 2019).

The use of local food ingredients, especially Talas Pratama, is also done to maintain food security, reduce the dependence of community consumption on rice and increase people's income. Gunajaya Village in Manonjaya Sub-district, Tasikmalaya Regency has an area of about 2.67 ha, a population of 3,452 people with a population density of 1,293 per square kilometre (BKT Kec. Manonjaya Kab.Tasikmalaya, 2023). Since 2022, Gunajaya Village has started a taro cultivation development programme in the context of the food security programme using the Village Fund. Planted in an area of 1 hectare with a population of 10,000 taro trees. After 8 months, the harvest was done and produced 35 tonnes of taro per hectare. Since then, taro plants, especially the Talas Pratama type, have become the mainstay commodity of Gunajaya Village and are planted by most of the community.

However, in its development, the harvest of Talas Pratama plants is only intended to be sold to several markets and consumers around the location in the form of raw materials and has never utilised it to make derivative / processed products so that the economic added value cannot be enjoyed and has not affected food security and the welfare of the local community. In fact, taro tubers have great potential when processed into other products including flour as a source of carbohydrates to replace rice, chips, wet cakes and other processed products (Sutanto and Ambarsari, 2015).

Utilising grant funds from DRTPM Kemdikbudristek, Siliwangi University conducts Community-Based Empowerment with the scope of Community Partnership Empowerment inviting partners to the Teratai Women Farmers Group (KWT) and Kertaraharja III Farmers Group of Gunajaya Village, Manonjaya District, Tasikmalaya Regency to carry out diversification of derivative products from Talas Pratama which until now the development is still constrained. The agreed solutions include socialisation, counselling, training, transfer of appropriate technology, provision of equipment grants, evaluation and mentoring programmes to ensure the sustainability of the programme.

The purpose of this PbM-PKM is to empower the community through KWT Teratai and Poktan Kertaraharja III partners to improve the diversification of primary taro-based derivative products to increase the economic added value of products in the context of food availability and security as well as increasing the income of the Gunajaya Village Community, Tasikmalaya Regency.

Method

This Community-Based Empowerment activity with the scope of Community Partnership Empowerment (PbM-PKM) is carried out starting in May 2024. The partner institutions in this activity are the

Teratai Women Farmers Group (KWT) and the Kertaraharja III Farmers Group of Gunajaya Village, Manonjaya District, Tasikmalaya Regency. The total number of programme participants is 40 people who are members of the two selected partners.

In order to solve the problems of the PbM-PKM partners, several methods were implemented as follows: a) Socialisation, to bring together perceptions between partners and implementers, b) Counseling aimed at increasing understanding and awareness of the potential that can be developed from Talas Pratama, c) Training, through demonstrations of product processing made from Talas Pratama to improve product processing skills, d) Assistance on various matters related to Talas Pratama commodities to partners and, e) Delivery of asset grants in the form of complete production equipment to start a business including Oven, Taro Slicer, Blender, and other equipment, f) Evaluation and g) Assistance to ensure the sustainability of the programme.

At the end of the activity, an analysis of the benefits of implementing the PbM- PKM programme for partners, namely KWT Teratai and Poktan Kertaraharja III Gunajaya Village, Manonjaya District Tasikmalaya.

Result and Discussion

In general, the implementation of Community-Based Empowerment with the scope of Community Partnership Empowerment (PbM-PKM) initiated by LPPM Universitas Siliwangi in collaboration with DRTPM Kemdikbudristek is running well and smoothly. In addition, this PbM-PKM activity has also had an impact on the socio-economic conditions of PbM-PKM participants. After an evaluation through a questionnaire distributed to the participants of partner members on several indicators adapted from Khurriyah, Inten Dewi (2015) in the form of psychological assets, informational assets, organizational assets, material assets, financial assets, and human assets, the results were obtained as can be seen in the next section.

Psychological assets

Characterised by behavioural changes that show social impact for partner members as PbM-PKM participants related to the growing interest in learning new knowledge and skills.

Table 1. Socio-economic impact on PbM-PKM participants: Psychological assets

Description	Yes		No	
	Number (people)	%	Number (people)	%
So far, you have learnt knowledge/skills about Primary Taro Processing	10	25.00	30	75.00
After the counselling, training and mentoring PbM-PKM is interested in learning / adding skills about the utilisation and processing of the Primary Taro plant.	38	95.00	2	5.00

Based on Table 1, it can be seen that there are 10 people (25 per cent) of partner members who have learned the knowledge/skills about Primary Taro Processing before this PbM-PKM activity, while the rest (30 people) have never known the ins and outs of Primary Taro management. After the PbM-PKM counselling, training and mentoring as many as 38 people (95 per cent) participants were interested in learning / adding skills about the use and processing of the Pratama taro plant, while 2 people (5 per cent) others already knew before. According to the results of previous research, it is known that there is a socio-economic impact related to the Psychological assets indicator in the Farmer Empowerment Program through Agricultural Technology and Information (P3TIP) in Kranggan Temanggung, namely a change in behaviour that shows the social impact for farmers, namely the growth of a learning culture in the lives of target group farmers and an increase in the quality of human resources of farmers (Khurriyah, Inten Dewi, 2015).

Table 2. Socio-economic impact on PbM-PKM participants: Informational assets

Description	Yes		No	
	Number (people)	%	Number (people)	%
Have special communication channels in the group to discuss things	7	17.50	33	82.50
After the counselling, training and mentoring of PbM-PKM, the social media channel in the form of WaG was made more efficient and very useful for the members and the development of the Group members and the development of the Group	36	90.00	4	10.00

Furthermore, the socio-economic impact in connection with the Informational assets aspect, it can be seen that 7 people (17.50 per cent) participants already have a communication channel in the group that is only followed by the core management to discuss something in the form of Whatsapp Group (WaG), but have not

been connected to their respective group members as stated by 33 people (82.50 per cent). During the PbM-PKM activities, the existing WaG was optimised to be utilised by all members of the Partner Group and used to facilitate various information that must be conveyed to members. Most of the partner members stated that the existing WaG was very useful. As stated by Sitompul (2021), the use of social media makes it easier for individuals to interact with each other with no distance, time, or cost limits and it becomes easy to share information, communicate with each other.

Table 3. Socio-economic impact on PbM-PKM participants: Organisational assets

Description	Yes		No	
	Number (people)	%	Number (people)	%
Have been involved in the management of the Group	7	17.50	33	82.50
After the counselling, training and mentoring of PbM-PKM, they are interested to be involved in the management of the group in the management of the Group	20	50.00	20	50.00

In relation to the impact on organizational assets, 7 people (17.50 per cent) have been involved in group management, the remaining 33 people (82.50 per cent) have never been involved in group management. After the counselling, training and assistance of PbM-PKM, 20 people (50 per cent) were interested in being involved in the management of the Group and the rest were not willing to join for various reasons and limitations including still actively serving, limited time available due to caring for children/grandchildren/elderly parents. Handayani et al. (2019) stated that involvement in the group can actually be used as a learning vehicle, in order to receive the latest agricultural information and technology delivered by extension workers through the extension process.

Table 4. Socio-economic impacts on PbM-PKM participants: Material assets

Description	Yes		No	
	Number (people)	%	Number (people)	%
So far, the group has equipment/equipment for joint productive business activities	5	12.50	35	87.50
After the counselling, training and mentoring of PbM-PKM, the Group has additional complete equipment for joint productive business activities productive business activities together	37	92.50	3	7.50

Table 4 shows the impact of PbM-PKM especially on material assets, that participants stated that so far the Group already has equipment for joint productive business activities (5 people/12.50 per cent), but 35 people (87.50 per cent) stated that the diversity of tools still does not meet the needs. After the PbM- PKM counselling, training and mentoring, 37 people (92.50 per cent) of Group members have additional complete equipment for joint productive business activities. This is also because most of the PbM-PKM activity budget must be submitted to partners in the form of equipment/technology grants, so the equipment that is granted is very complete to start and continue the Group's business. In this activity including taro drying rack with 5 complete shelves, taro slicing machine, mixer, blender, knives and other equipment. This is in accordance with the opinion of Herlina, Hena (2019) that the obstacles faced by the Group in increasing empowerment, one of which is the lack of facilities provided and owned by the Group.

Figure 1. Implementation of Counselling, Training and Delivery of Equipment Assistance for Diversification of Primary Taro Derivative Products

Table 5. Socio-economic impacts on PbM-PKM participants: Human assets

Description	Yes		No	
	Number (people)	%	Number (people)	%
Group members often utilise their knowledge and skills	6	15.00	34	85.00
After counselling, training and PbM-PKM, there are activities to utilise the knowledge/skills provided	33	82.50	7	17.50

Table 5 shows that most of the participants, 34 people (85.00 per cent), rarely used their skills, with only 6 people (15.00 per cent) using them. This was due to limited time availability and limited activities managed by the group. However, after the PbM-PKM counselling, training and mentoring, 33 people (82.50 per cent) expressed interest in utilising the knowledge/skills gained. Usually after empowerment, participants will experience behavioural changes in utilising the knowledge provided during agribusiness learning, so as to improve their business (Khurriyah, Inten Dewi, 2015).

In addition to these socio-economic impacts, after the training the participant members have been able to produce various diversified derivative products from Talas Pratama including taro flour which is then processed into types of food including Cilantro which is then processed into types of food including Cilok, Crackers, Bolu, Perkedel and currently being tried to produce other types of processed food.

Conclusion

In general, the implementation of Community-Based Empowerment with the scope of Community Partnership Empowerment (PbM-PKM) initiated by LPPM Universitas Siliwangi in collaboration with DRTPM Kemdikbudristek is running well and smoothly. Activities have had an impact on the socio-economic conditions of PbM-PKM participants in the form of psychological assets, informational assets, organizational assets, material assets, financial assets, and human assets. Also, partners have been able to produce various diversified derivative products from Talas Pratama including taro flour which is then processed into types of food including Cilok, Crackers, Bolu, Perkedel and are currently trying to produce other types of processed food.

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