



## **Community Empowerment through Cultivating Chili Trees as an Alternative Income Solution in Kramatwatu Village, Serang Regency**

Edward Fazri<sup>1\*</sup>, Esti Utami Pratiwi<sup>2</sup>, Nora Asriani<sup>3</sup>, Siti Sofiyah<sup>4</sup>, Ikbal Nidaudin<sup>5</sup>, Yeti Asnawati<sup>6</sup>

<sup>1,2</sup>Departement of Taxation Accounting, Piksi Input Serang Polytechnic

<sup>3</sup>Departement of Digital Business, Piksi Input Serang Polytechnic

<sup>4</sup>Departement of Secretary, Piksi Input Serang Polytechnic

<sup>5</sup>Departement of Information and Technology, Piksi Input Serang Polytechnic

<sup>6</sup>Departement of Accounting, Piksi Input Serang Polytechnic

edward.fazri@piksiinputserang.ac.id <sup>1\*)</sup> (corresponding author)

### **Abstrak**

Pemberdayaan Masyarakat melalui Budidaya Pohon Cabe desa kramatwatu bertujuan untuk memberikan alternatif sumber pendapatan dalam meningkatkan taraf kehidupan dalam menghadapi turbulensi ekonomi. Kegiatan ini dilaksanakan dengan metode pelatihan penanaman, perawatan dan distribusi hasil. Rangkaian kegiatan dimulai dari pemilihan potensi lokal, pemilihan dan pengadaan bibit cabai, pelatihan budidaya cabai, monitoring hasil, pelaksanaan panen dan distribusi. Kegiatan ini berdampak pada peningkatan masyarakat tentang alternatif sumber pendapatan melalui pengembangan tanaman pangan bahan lokal sehingga mampu memberikan semangat baru dalam meningkatkan taraf penghidupan..

**Kata kunci:** *Budidaya, cabai, kramatwatu, masyarakat*

### **Abstract**

*Community Empowerment through Chilli Tree Cultivation in Kramatwatu Village aims to provide an alternative source of income to improve living standards in the face of economic turbulence. This activity is carried out using training methods for planting, caring for and distributing the results. The series of activities starts from selecting local potential, selecting, and procuring chili seeds, chili cultivation training, monitoring results, harvesting and distribution. This activity has an impact on increasing the community's alternative sources of income through the development of local food crops so that they can provide new enthusiasm in improving the standard of living.*

**Keywords:** *Cultivation, chili, kramatwatu, community*

## **Introduction**

Kramatwatu Village, located in Sarang Regency, is an area with extraordinary potential in agriculture. However, rural residents often face economic challenges that limit their opportunities. To improve community welfare and overcome economic limitations, a promising alternative solution is empowerment through chili tree cultivation.

Chili is a very popular food ingredient and is often used in various dishes throughout the world. The high demand for chilies makes it a stable and promising



market. Chili trees have good tolerance to climate variations. Capable of growing in both tropical and subtropical areas, chilies can be adapted to different weather conditions. The chili growth process is relatively fast. In a relatively short time, chilies can be harvested, giving farmers the opportunity to produce crops in a relatively short time. Apart from being a direct food ingredient, chilies can also be used as raw materials for other products such as sauces, chili powder, or herbal medicines. This opens opportunities for product diversification and added value.

Chili trees can be planted on various types of land, from small plots in the yard to larger agricultural plots. This allows farmers with various sizes of land to engage in chili cultivation. In general, production costs for cultivating chili trees are relatively low. The seeds are easy to obtain, and care is not too complicated compared to other plants. In chili cultivation, there is an opportunity to apply innovation and more advanced agricultural technology. This includes the use of organic fertilizers, efficient irrigation techniques, and integrated pest control to increase crop yields. With stable demand and relatively low production costs, chili tree cultivation can provide quite high-income potential for farmers if managed well.

Kramatwatu Village is in an area with a tropical climate which is suitable for growing plants such as chilies. However, despite its rich natural potential, villagers still face difficulties in finding a stable source of income. This is related to limited land and the lack of diversification of agricultural products. Most of the village population depends on agriculture as the main source of income. Cultivating chili trees offers the opportunity to diversify sources of income, thereby reducing the financial risks associated with dependence on just one type of crop. Demand for chilies continues to increase both in local and regional markets. This creates promising opportunities for local farmers to expand production and increase their income.

Chili has the advantage of adapting to climate variations. Its ability to grow in a variety of conditions makes it an attractive choice amidst climate uncertainty. By empowering the community to cultivate chili trees, it is hoped that there will be a significant increase in income for local farmers. The growth of the agricultural sector, especially chili cultivation, can encourage the development of infrastructure in villages, such as processing, storage, and marketing facilities. This program can also open opportunities for women's participation in agricultural activities and business management, thereby increasing their participation in the village economy.

There are several challenges that need to be overcome in implementing this empowerment program, including access to capital, technical knowledge, and market access. However, with training, technical assistance and opening appropriate market access, village communities in Kramatwatu can optimize the potential of chili tree cultivation to improve their welfare.

Community empowerment through chili tree cultivation promises to be an alternative solution for increasing income and welfare in Kramatwatu Village, Serang Regency. With the right support, it is hoped that this program will provide significant benefits to local communities and drive sustainable local economic growth.

## **Literature Review**

Chili (*Capsicum annum*) is a plant that has high economic value and is an integral part of many cuisines throughout the world (Sulistiyowati, 2020). Chilies not only provide a spicy taste to dishes, but also contain important nutrients, including vitamin C, vitamin A and antioxidant compounds.

The literature describes that there are many different varieties of chili peppers, including varieties that differ in size, color, shape, and level of spiciness. Each variety

has its own advantages and adaptability depending on environmental conditions and market needs.

Chili growth is influenced by several environmental factors, such as temperature, air humidity, light intensity, and soil type. The literature states that chilies grow optimally at certain temperatures, usually between 20°C to 30°C, with moderate humidity.

Studies on the nutritional requirements of chilies show that these plants require certain nutrients, such as nitrogen, phosphorus, and potassium, for optimal growth. A lack or excess of certain nutrients can affect plant health and crop yields.

Various cultivation techniques are applied in chili farming, including seed sowing techniques, land selection, use of organic fertilizer, integrated pest, and disease control, and setting optimal planting patterns. The literature highlights the importance of sustainable and environmentally friendly agricultural practices in chili cultivation.

Farmers face several challenges in chili cultivation, such as pest and disease attacks, price fluctuations, unpredictable climate changes, and efficient resource management. Ongoing efforts to increase plant resistance to these factors are an important focus in the literature.

The literature highlights the latest innovations in agricultural technology that can be applied in chili cultivation, such as the use of efficient irrigation systems, the use of superior varieties that are resistant to disease, and the use of information technology in agricultural management.

Chili cultivation can provide significant economic benefits for farmers, including increased income and local employment opportunities. Apart from that, chili cultivation can also strengthen local food security and increase the economic resilience of rural communities.

To increase production and farmer welfare, it is important for the government, research institutions and related stakeholders to continue to support innovation in chili cultivation. Recommendations also include sustainable approaches to natural resource management and increasing farmers' access to the latest technology and knowledge.

### **Implementation Method**

Community Empowerment activities through Chili Tree Cultivation were carried out in July and August in Kramatwatu Village, Serang Regency, Banten Province. Participants in this activity were the Kramatwatu village community, assisted by the PKK women's group and Karang Taruna as field implementers and monitoring. Community selection is the result of deliberation and consultation with village officials so that there is no bias in the participants. Activities are carried out using chili planting training methods and monitoring chili seeds.

### **Results and Discussion**

#### *Kramatwatu Village*

Kramatwatu Village is one of the villages in Kramatwatu District, Serang Regency, Banten Province. This village is located on a strategic route connecting Serang City, Cilegon, and Pandeglang. The demographic, economic, and social conditions of Kramatwatu village have experienced rapid development in the last five years.

Based on data from the Central Statistics Agency (BPS) of Serang Regency, the population of Kramatwatu Village in 2023 is 10,983 people. This number has increased by 10.2% from 2018 which was recorded at 9,984 people. The population growth of Kramatwatu Village is dominated by productive age residents, aged 15-64 years. In 2023, the number of productive age residents in this village will reach 7,187 people, or around 65.7% of the total population.

The population structure of Kramatwatu Village based on gender shows that the male population is less than the female population. In 2023, the male population in this village is recorded at 5,480 people, while the female population is recorded at 5,503 people.

The economy of Kramatwatu Village is dominated by the agricultural sector. In 2023, the agricultural sector will contribute 35.2% of the village's total GDP. The agricultural sector in Kramatwatu Village includes food crops, horticulture, and plantations. Food crops cultivated in this village include rice, corn, and mung beans. Horticulture cultivated in this village includes chili, tomato, and shallots. Plantations cultivated in this village include coconut, durian, and mangosteen.

In addition to the agricultural sector, the economy of Kramatwatu Village is also supported by the trade and service sectors. In 2023, the trade and services sector will contribute 28.8% of the village's total GDP. The trade sector in Kramatwatu Village includes trade in goods and services. The service sector in Kramatwatu Village includes transportation services, financial services, and entertainment services.

The social conditions of Kramatwatu Village are relatively good. The education participation rate in this village is quite high. In 2023, the education participation rate of children aged 7-12 years will reach 99.3%. The education participation rate of children aged 13-15 years reached 98.5%. The education participation rate of children aged 16-18 years reached 89.7%.

Life expectancy in Kramatwatu Village is also quite high. In 2023, life expectancy in this village will reach 72.3 years. This life expectancy is higher than the national life expectancy recorded at 71.5 years. The poverty rate in Kramatwatu Village is still relatively high. By 2023, the poverty rate in this village will the demographic, economic, and social development of Kramatwatu Village in the last five years can be said to be quite rapid. The population growth of this village is quite high, which is dominated by productive age residents. The agricultural sector is still the main sector of the village's economy, but the trade and services sector has also experienced significant growth. The social condition of this village is relatively good, with a high education participation rate and life expectancy. However, the poverty rate in this village is still relatively high.

#### Community Empowerment

Based on the description of economic, social, and demographic conditions, it can be concluded that joint efforts are needed between the community, academics, and the government as a form of action to improve people's living standards. One form of activity that can be carried out is community empowerment in planting chilies as an alternative business to support the people's economy.





Figure 1. Activity

### Stages of Community Empowerment through Cultivating Chili Trees in Kramatwatu Village

#### Stage 1: Local Potential Assessment and Community Approach

First, the project team will carry out a comprehensive assessment of the local potential of Kramatwatu Village. This involves identifying potential land for chili cultivation, local and regional market analysis, as well as a community approach to understand the needs, knowledge, and skills of local communities.

#### Stage 2: Training and Counseling

The community will be involved in a series of training and outreach. This includes education about effective chili farming techniques, use of organic fertilizer, pest and disease control, land management, and sustainable agricultural practices. Local and external agricultural experts will provide technical guidance during this stage.

#### Stage 3: Selection of superior varieties and land preparation

The community will be guided in selecting chili varieties that suit local conditions and have high yield potential. Next, the land preparation stage will be carried out, including tilling the soil, selecting quality seeds, and planning optimal planting patterns.

#### Stage 4: Implementation of Plant Cultivation and Maintenance

Farmers will start planting chilies according to the techniques they have learned. They will be provided with assistance in arranging proper watering patterns, regular fertilizer application, and pest and disease management to ensure healthy and productive plant growth.

#### Stage 5: Mentoring and Periodic Evaluation

During the plant growth period, the accompanying team will continue to monitor cultivation progress and provide additional guidance if needed. Periodic evaluations will be carried out to assess the effectiveness of the agricultural practices implemented and provide feedback to farmers.

#### Stage 6: Harvest and Postharvest

When harvest time arrives, farmers will be guided in proper harvesting techniques to ensure maximum quality and quantity of produce. Furthermore, they will

be given information regarding harvest processing and marketing strategies to obtain higher added value.

**Stage 7: Partnership Development and Marketing**

The community will be encouraged to form partnerships or farmer groups to increase their power in marketing chili products. Support will be provided in negotiations with related parties such as local traders, traditional markets, or potential export markets.

**Stage 8: Establishment of a Sustainable Agricultural System**

After achieving successful results, the focus will be shifted to strengthening sustainable agricultural systems. This includes managing agricultural waste, reusing crop residues, and using environmentally friendly agricultural practices.

**Stage 9: Long Term Evaluation and Future Planning**

A comprehensive evaluation process will be carried out to evaluate the long-term impact of this empowerment program on community life, the village economy, and the environment. Based on this evaluation, plans will be made for further development or business diversification in the future.

Community empowerment through chili tree cultivation in Kramatwatu Village involves a series of sustainable stages, starting from assessing local potential to strengthening a sustainable agricultural system. This process emphasizes active community participation, a local knowledge-based approach, and ongoing support to improve the welfare and economic resilience of village communities.

## **Conclusion**

Community empowerment through chili tree cultivation promises to be an alternative solution for increasing income and welfare in Kramatwatu Village, Serang Regency. With the right support, it is hoped that this program will provide significant benefits to local communities and drive sustainable local economic growth.

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