



UDC 332

MANAGEMENT STRATEGY PLANNING AND IMPLEMENTATION OF ADVANCED TECHNOLOGY IN INCREASING AGRICULTURAL PRODUCTIVITY

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ABSTRACT

This community service is concentrated on implementing sustainable strategic management in the management of agricultural products in Jatiluwih village, Bali. Sustainable principles are supported by the use of appropriate and modern technology in managing rice mills, so that they do not have a negative impact on the natural environment, and provide high profits for farmers and rice mill entrepreneurs. Community service uses the Participatory Action Research method. Community service participants are farming communities, business people managing agricultural products, and local communities. The result is that Jatiluwih village still needs to use appropriate technology to manage agricultural products so that they do not pollute the environment and ecosystem. Sustainable strategic management from an economic aspect will increase profits for farmers. From a social aspect, local communities can be involved in managing harvests. As well as from the technological aspect, it is necessary to consider modern tools for agricultural sustainability and increasing farmer capacity. This community service contribution focuses on socializing sustainable management in the context of managing agricultural products and increasing farmers' awareness of using modern equipment.

KEY WORDS

Sustainable strategic management, appropriate technology, agricultural products, environmental impact.

Management strategies for implementing advanced agricultural technology are essential in overcoming barriers and boosting productivity. As the global population grows and consumption patterns evolve, the pressure to enhance agricultural output intensifies. Advanced technology holds immense promise in addressing modern agricultural challenges, yet its widespread adoption faces significant hurdles (Kulikov et al., 2019). Issues such as limited access to technology for smallholders, inadequate understanding of its benefits and financial constraints impede its implementation. To effectively harness the potential of advanced technology, robust management strategies are imperative. These strategies should prioritize aligning technological solutions with farmers' practical needs, facilitating accelerated adoption and delivering substantial productivity gains (Luo et al., 2023).

Key technologies such as sensors, IoT (Internet of Things) devices, and artificial intelligence (AI) offer solutions for optimizing resource utilization, monitoring crops, and selecting superior varieties. However, successful implementation hinges on meticulous planning and execution (Ogundari & Bolarinwa, 2018). This involves identifying technologies that are best suited to local conditions, providing comprehensive training for farmers, and conducting thorough assessments of the costs, benefits, and overall impacts (Laksmi, Arjawa, et al., 2023). By devising effective management strategies tailored to the planning and implementation of advanced agricultural technologies, significant strides can be made towards fostering productivity, sustainability, and resilience in agriculture (Laksmi, Putra, et al., 2023). These strategies enable the agricultural sector to better confront the challenges of the future



while maximizing its potential to meet global food needs (Lybbert & Sumner, 2012).

The implementation of Management Strategy Planning and Implementation of Advanced Technology in Increasing Agricultural Productivity is faced with a number of current issues that are the main problems in the development of modern agriculture (Lybbert & Sumner, 2012). One of the issues that arise is the gap in access to technology between large and small farmers. Smallholders often do not have the same access to advanced technologies such as sensors, monitoring tools, and automation systems that can increase productivity (Pamuk et al., 2014). In addition, aspects of education and understanding of technology are also important issues, because farmers' lack of understanding of how to use and benefit advanced technology can hinder the adoption of such technology (Laksmi & Arjawa, 2023).

Jatiluwih Village in Bali has garnered global attention for its sustainable traditional farming methods and cultural significance, earning UNESCO World Heritage status in 2012. While maintaining its time-honored agricultural practices, embracing modern technologies such as sensor-based irrigation systems can enhance resource management efficiency. Providing farmers with training to implement these technologies is vital for boosting productivity and resource optimization. Furthermore, diversifying agricultural products beyond rice, including organic vegetables and fruits, can elevate the village's economic value (Sayer & Cassman, 2013). Marketing these products with stringent quality standards can unlock broader market opportunities, both domestically and internationally (Sara et al., 2021). Additionally, fostering sustainable agritourism initiatives that immerse tourists in local agricultural activities can bolster village income while promoting environmental preservation and traditional culture. By harnessing its natural beauty, cultural heritage, and local expertise, Jatiluwih Village has the potential to remain a beacon of sustainable agricultural development on the global stage.

In the context of Jatiluwih, Bali, implementing advanced agricultural technology faces several key challenges. Firstly, ensuring equal access to and understanding of technology among farmers is crucial to bridge the gap between skilled and less skilled users (Liu et al., 2021). Secondly, the substantial initial investment and infrastructural requirements, such as internet connectivity and power sources, present significant barriers, particularly for resource-constrained farmers. Thirdly, adapting technology to local conditions, including geographical, cultural, and agricultural aspects, is essential for successful implementation. Overcoming farmer acceptance and understanding issues through effective communication and mentoring is also critical (Weyori et al., 2018). Lastly, evaluating the impact of advanced technologies on agricultural productivity requires a comprehensive assessment process to measure effectiveness and sustainability. By addressing these challenges, research in Jatiluwih can offer valuable insights into integrating modern technology with traditional agricultural systems, ultimately enhancing productivity and sustainability.

LITERATURE REVIEW

Strategic planning is the process carried out by an organization to determine strategy or direction, and make decisions to allocate its resources (including capital and human resources) to achieve this strategy. Various business analysis techniques can be used in this process, including SWOT (Strengths, Weaknesses, Opportunities, Threats), PEST (Political, Economic, Social, Technological), or STEER (Socio-cultural, Technological, Economic, Ecological, Regulatory) analysis (Smithers & Blay-Palmer, 2001). Strategic planning is a guide that an organization or company uses from the present to work towards the next 5 or 10 years. Strategic planning occurs both within organizations and in business matters. Because strategic planning is very important in determining future steps. The most competent leader or manager is the one who spends the most time thinking about what he will do in the future. Although it does not rule out the possibility that managers do not work alone (Sara & Saputra, 2021). Managers also need other staff to help them in making strategic plans. Planning in management is divided into 4 stages, namely: 1) Setting goals, 2) Formulating current problems or conditions, 3) Identifying opportunities and threats or obstacles that may occur, and 4) Developing plans or implementing plans that have been prepared to achieve desired results (Blakeney, 2022).



Agriculture is one of the important sectors in a country's economy. Human life is very dependent on agricultural products, such as rice, vegetables, fruit and meat (Saqib et al., 2016). However, agricultural productivity is often hampered due to various factors such as weather, pest and disease attacks, as well as limited natural and human resources. Therefore, the use of modern technology in agriculture is becoming increasingly important to increase agricultural productivity and sustainability. One of the modern technologies that can be applied in the agricultural sector is the use of modern rice milling technology. The rice milling system allows farmers or rice milling business owners to optimize their crop yields (Seijger & Hellegers, 2023). This means that the mechanism for milling rice into rice that is ready for consumption is better, takes less time and does not produce a lot of waste. With advanced technology in agricultural product productivity, farmers get maximum results.

In the 1980s, a concept of sustainable agriculture was formulated where the previous development strategy focused on high economic growth which caused degradation of production capacity and reduced environmental quality. The results of the UN World Commission on Environment and Development congress in 1987 formulated the concept of sustainable agriculture in the Bruntland Report (Mihailović et al., 2018). The report states that sustainable development is development that realizes current life needs without reducing the ability of future generations to realize their life needs. Viewed from an economic aspect, sustainable agriculture is intended as an agricultural system that is economically capable of providing adequate income for the labor investment and costs incurred by farmers in order to run their agricultural business (Saputra et al., 2021). At least the agricultural system run by farmers can support farmers' living needs such as food and other basic needs (Morán-Ordóñez et al., 2017). There is an unresolved issue of marketing agricultural products, namely the problem of the length of the market chain. Looking at the environmental aspect, the farming that is widely practiced now is farming that is oriented towards economic profit without paying attention to environmental aspects (Manurung et al., 2022). In fact, the environment is the container for agricultural activities themselves. The use of chemicals in agriculture is very dangerous for environmental sustainability (Samygin et al., 2019). Sustainable agriculture, where this system really pays attention to environmental aspects in its implementation, will really protect the environment itself (Mapp et al., 1979; Samygin et al., 2019).

METHODS OF RESERCH

Empowerment must always be fulfilled needs and solving problems that exist in society (Polyanin & Dokukina, 2016). Besides that, PAR is also oriented towards development and mobilization of knowledge in the center society so that society can become actors of change, not an object of devotion. In this PAR paradigm, society is the main agent of religious social change, so the lecturer/student implementing the service is the other party who facilitates the change process. The servants of higher education must place the community first as a major actor in development and change. The presence of lecturers and students as facilitators participatory empowering community members (Seijger & Hellegers, 2023).

Community Service approach with Participatory Action Research (PAR) is an approach whose process aims to learning in solving problems and meeting needs practical society, as well as knowledge production and processes socio-religious change (Mihailović et al., 2018). Hence, this approach is a means of raising critical awareness collectively regarding the shackles of the ideology of globalization neoliberalism and the shackles of the normative religious paradigm hinder the process of socio-religious transformation. Community Service with this approach can be said to be Transformative Community Service. This is because it is a research process that is oriented towards empowerment and change. This argument is based on the fact that a transformative research process means: 1) A process of growing the power and abilities of poor/weak, marginalized and oppressed groups of people. 2) Process of, by and for society. The position of the community is to be accompanied/facilitated in making decisions and taking initiatives to be more independent in developing the quality of their life. 3) Placing society and its institutions as the basic force for economic, political,



social, cultural and religious improvement. 4) Efforts to release various forms of cultural domination, political pressure, economic exploitation, and hegemony religious institutions that shackle and hinder efforts society determines the way of life and improves quality of life (Morán-Ordóñez et al., 2017).

This is used as the basis for how PAR works, especially are ideas that come from the people. Therefore, PAR researchers must work as follows. 1) Pay close attention to the ideas that come from people who are still fragmented and not yet systematic; 2) Learn the idea together with them so that become a systematic idea; 3) Unite with the people; 4) Review the ideas that come from them, so that they are aware and understand that the idea is theirs alone; 5) Translate the idea into action; 6) Test the truth of ideas through action; 7) and so on over and over again until the idea becomes more correct, more important and more valuable of all time (Sara et al., 2020).

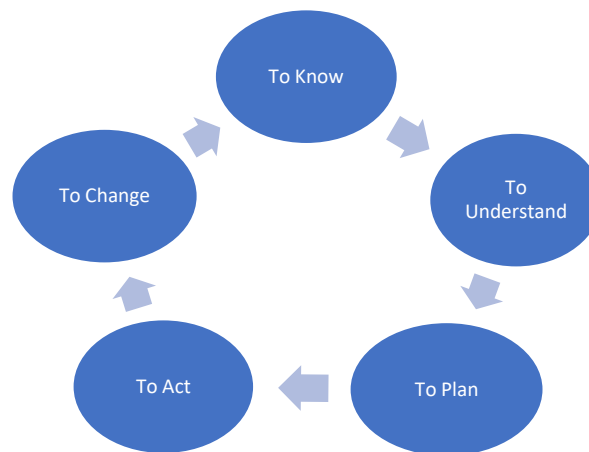


Figure 1 – Cycle of community service work steps using the PAR approach

This cycle takes place simultaneously and continues to rotate, so that the process of change and sustainability can continues confirmed (Sara et al., 2020).

RESULTS AND DISCUSSION

The target of the research on "Management Strategy Planning and Implementation of Advanced Technology in Increasing Agricultural Productivity in Jatiluwih, Bali" can be focused on the following:

1. Increasing Farmer Awareness and Understanding: The first target is to increase the understanding of farmers in Jatiluwih about the benefits, how to use, and the potential of advanced technology in increasing agricultural productivity. This target includes organizing regular training and workshops;
2. Adoption of Advanced Technology: The next goal is to increase the adoption rate of advanced technology among local farmers. This target can be measured by the number of farmers who are able to apply new technologies in their agricultural practices;
3. Increased Agricultural Productivity: The main target of this study is to increase overall agricultural productivity in Jatiluwih. This can be measured by the increase in crop yields, efficiency of resource use, and farmers' income;
4. Impact and Sustainability Evaluation: One of the important targets is to evaluate the impact of the implementation of advanced technologies on agricultural productivity and environmental sustainability. These targets will help in evaluating the effectiveness of the strategies adopted and identifying the necessary corrective measures;
5. Partnership and Collaboration: Another target is to develop strong partnerships between governments, research institutions, the private sector, and farming



communities. This target will help in creating a collaborative environment that supports sustainable agricultural development in Jatiluwih;

6. Documentation and Dissemination of Results: The last target is the documentation of research results and dissemination of information to the public, either in the form of scientific publications, seminars, or workshops. This objective is to share the knowledge gained and extend the influence of this research to other regions or related parties.

By identifying and setting these targets, the research can have a clear direction and provide a solid foundation for achieving positive change in agricultural development in Jatiluwih, Bali.

Problems with farmers' ability to process agricultural products. In the agricultural sector, the term post-harvest is defined as the action or treatment given to agricultural products after harvest until the commodities reach the hands of consumers (Polyanin & Dokukina, 2016). Scientifically, this term is more accurately called post-production, which can be divided into two stages, namely post-harvest and processing. Post-harvest handling is often referred to as primary processing, which is a term used for all treatment from harvest until the commodity can be consumed "fresh" or in preparation for subsequent processing. Generally, this treatment does not change the appearance or appearance; this includes various aspects of marketing and distribution. Processing is an action that changes plant products to another condition or form with the aim of making them last longer or preserving them, preventing undesirable changes or for other uses (Boyabatlı et al., 2019).

The main problem in managing rice yields is adequate technology to maximize productivity and efficiency of crop yields. The problem for farmers is limited tools for managing rice yields. Tools certainly function to process agricultural products into finished products (Ismanto et al., 2018). There are many types of processing equipment, from the cheapest ones which we can easily find in shops or markets and the most expensive ones which are usually used by large companies. Farmers are usually reluctant to use or still cannot afford to buy tools to process their agricultural products, so their agricultural products are sold at market prices, even below them. Another problem is that the information obtained by farmers is still minimal, namely information from the experiences of their neighbors or success stories from other people (Ragazou et al., 2022). Farmers need real field experience in order to get valid information, so that the information they get is not just stories (Abdolshah et al., 2018; Blakeney, 2022).

The rice grinding machine is a critical device in the rice production chain which aims to process rice from coarse rice to white rice that is ready for consumption (Seijger & Hellegers, 2023; Weyori et al., 2018). In facing the challenges of increasing production and efficiency in the agricultural sector, rice milling machines are tools that not only speed up the rice processing process but also improve the quality and final results. Let's examine more about the role, types and benefits of rice grinding machines. Rice milling machines have become the backbone in processing rice from harvest to rice that is ready for consumption. With its ability to increase efficiency, improve yield quality, and simplify the rice processing process, rice milling machines have had a positive impact on the agricultural sector. Through continued innovation, the future of rice milling machines may involve more sophisticated technology to support the sustainability of agriculture and food processing (Morán-Ordóñez et al., 2017; Samygin et al., 2019).

Even though rice processing entrepreneurs already know that modern technology will produce quality better rice with higher yield. However Thus, rice processing in Indonesia is still used simple technology (Mapp et al., 1979; Seijger & Hellegers, 2023). As a result, rice is produced has low quality with higher rice yield low too. Apart from that, by-products include broken rice, groats, bran and husks have not received serious attention so added value that can be obtained from the use of by-products of rice processing in Indonesia is not optimal. Increasing the quality of rice and the yield of processed products will result in increased profits obtained by rice milling entrepreneurs. These profits will increase increases if the by-products from rice processing are more utilized. Apart from that, efficiency in post-harvest processing activities it will also increase profits for rice processing entrepreneurs (Boyabatlı



et al., 2019; Ismanto et al., 2018).

Rice processing technology in Indonesia is still very advanced simple and most of them still rely on human power (threshing, drying, transportation processes) and resources nature (sunlight for drying). Only a few areas only those who have used power threshers, mechanical dryers, rice milling plant and silo for storage to ensure rice quality production is still very low (Mapp et al., 1979). A good management system has not been implemented most rice processing companies result in fragility the company's performance. Division of tasks and functions management has not been implemented seriously and firmly. The management of rice processing companies tends to be traditional, according to the level of mastery of the entrepreneur rice processing for capital, finance and banking, information management and marketing as well as science and technology. So far, almost all areas of managerial duties and functions have been carried out by an entrepreneur, without being accompanied by clear and firm company regulations. In most rice processing companies it has not yet been completed has a good administration system, so that there are weaknesses or strengths in the way of managing finances implementation is difficult to evaluate, for example the use of funds from both basic business capital and investments used for activities that have nothing to do with company (Boyabatlı et al., 2019; Mihailović et al., 2018).

In general, rice processing companies use labor-intensive technology, such as the rice drying process most of them still use natural resources in the form of sunlight and human power. Most of the goods are moved still using human power with limited means simple. They are not yet optimal in utilizing knowledge knowledge and technology so that rice processing production results lacks added value and competitiveness, even for the most part in the production process it is carried out without paying attention to standards specified quality (Ismanto et al., 2018; Smithers & Blay-Palmer, 2001).

With simple technology and management, rice produced by rice processing companies in Jatiluwih yet can compete with imported rice (Morán-Ordóñez et al., 2017). Domestic rice commodity which does not meet international quality standards either security requirements as well as quality requirements result it is difficult to compete both in local and world markets. Difficulty Domestic rice marketing is due to several factors such as: following: a) product quality is still relatively low, b) level of efficiency low production, c) consumer confidence in rice quality. In the agricultural sector, market chains are used to distribute agricultural commodity products from farmers to consumers. Usually farmers will sell agricultural products to middlemen. Middlemen will buy agricultural commodities from farmers at low prices (Smithers & Blay-Palmer, 2001). Then, the middleman will sell it to market traders by taking a profit so that the price offered is also higher. Furthermore, market traders also make more profits when selling their goods to consumers. In the end, consumers will buy agricultural products with a higher margin than the original price. One way that can be done is by utilizing market places selling agricultural commodities such as TaniHub, Agromaret, and the like (Luo et al., 2023). These applications can make it easier for farmers and consumers to monitor actual market prices so as to minimize unnecessary costs, both from the farmer and consumer side. If farmers get a decent purchasing price, then farmers can fulfill their daily needs better so that a sustainable agricultural system in the economic aspect can run properly. Viewed from a social aspect, a sustainable agricultural system can run smoothly if the social conditions of farmers are improved, especially in relation to human resources in the agricultural sector. There are various efforts that can be made to increase the human resource capacity of farmers, such as facilitating farmers by providing training (Lybbert & Sumner, 2012).

The common rice milling technology in Indonesia is small rice mills with varying milling process configurations and not in accordance with recommendations. Improvements to rice milling technology in Jatiluwih need to be carried out to produce premium rice of the best quality by using a milling configuration with double cleaning and water mist spraying. The aim of milling is to peel the grain to remove the rice. The majority of rice mills in Jatiluwih (85%) are small rice mills with varying milling process configurations and not in accordance with recommendations. As a result, the yield of rice produced is low, ranging from 50-60% with



varying quality. Farmers generally use two types of grain grinding equipment, namely a single-phase rice mill (single pass) and a two-phase rice mill (double pass). In single-phase milling, the process of breaking the grain shell is combined with polishing so that when the grain enters the intake hopper, it comes out as white rice. In two-phase milling, the skin breaking process is separate from polishing. The milling configuration used in Jatiluwih is generally a single pass or double pass which does not comply with recommendations (two times breaking the skin and two times polishing), without any subsequent cleaning so that the rice looks dirty. The milling configuration with two splits of the grain shell causes a lot of rice to crack/break. Improvements to rice milling technology in Jatiluwih can be improved to produce premium rice by using a milling configuration that starts with cleaning the grain (cleaner), breaking the husk (husker), separating the grain and broken rice (separator), and polishing (polisher) twice accompanied by fogging. water. This process produces a rice yield of 67.3% with a head rice percentage of 78.4%. The application of water mist spraying to the rice during the second polishing process resulted in cleaner and more transparent rice and the rice yield increased by 1.8%. The water misting process aims to remove the bran that sticks to the surface of the rice which causes the rice to look dull and dirty. Spraying rice with water mist produces clean and shiny rice so it is often referred to as ready-to-cook rice or premium rice (crystal rice). Improvements in milling technology with the addition of milling configurations are expected to comply with rice quality standards in Indonesia, namely premium rice, clean white rice with a rice head percentage of 100% and a rice degree of 100%.

The productivity of organic red rice produced by farmers in Jatiluwih is an average of 7,840 kg/ha or 7.8 tonnes/ha. This value is relatively high for the productivity of red rice cultivation. Jatiluwih's productivity for organic red rice is 55.97 kw/ha or 5.6 tonnes/ha. The high productivity of organic red rice in Jatiluwih is because the land that has been carried out on organic farming has experienced improvements in the condition of soil organic matter and nutrient content in the soil. Organic matter in soil is a key factor in determining soil quality and productivity because of its function in cycling nutrients and improving the physical, chemical and biological soil. So by providing organic materials in organic farming through compost and manure, the land becomes better and more fertile (Lybbert & Sumner, 2012; Pamuk et al., 2014).

Integrated rice processing technology consists of machines that are integrated into one complete unit and are integrated with drying machines and storage silos (Lybbert & Sumner, 2012). The movement of materials in the process uses a combination of conveyors, elevators and gravity. Rice processing using this technology is generally designed with a large capacity. RPC (Rice Processing Complex) and Country Elevator technologies fall into this technology category. Even though the principle of milling rice into *sosoh* rice is the same, each factory that makes RPC machines has a specific configuration with its own advantages. This means that the machine configuration on RPC is not the same as the machine configuration on Green Technology (Lybbert & Sumner, 2012; Ogundari & Bolarinwa, 2018).

The hierarchy of goals consists of three factors, namely the goal of increasing farmers' income, ease of operating tools and machines in rural areas and the third goal is the realization of a sustainable agro-industry. Then in the actor hierarchy, according to the results of the system analysis, it consists of seven actor components, namely suppliers of agricultural production facilities (*saprotan*), farmers, agro-industry investors, consumers, banks and government. Next, in the hierarchy of criteria, it consists of four criteria, namely investment level, ease of operation and maintenance of tools and machines, ease of obtaining supplies of tools and machines and their spare parts, and the fourth criterion is the performance criterion for the tools and machines (technology) to be selected. Finally, in the alternative hierarchy, there are three alternative technologies that can be chosen, namely conventional technology, green technology and integrated technology. To build or develop a rice-based agroindustry, it is necessary to select rice milling technology that has high performance and is suitable for field conditions so that it can operate smoothly and profitably (Sayer & Cassman, 2013). Green Technology is the best choice compared to Integrated Technology or Conventional Technology (Weyori et al., 2018).



Farmers who have skills in product marketing will not be left behind by current trends. Apart from being able to manage the farm until harvest time, farmers will also be able to market their products so that they can have a higher selling value than before. Effective marketing and promotions are very important in introducing agricultural products to consumers, increasing brand visibility and increasing sales. Several ways that farmers can do are as follows: 1) Strong branding, build a strong and consistent identity. For example, preparing their logo, design, packaging and messages which must reflect the values of agricultural products. 2) Digital marketing, is the use of the internet for marketing agricultural products. Farmers can create social media sites such as Instagram, Facebook, and Twitter to share photos, stories, and product-related information. 3) Enter local markets and communities. It is important for farmers to know the local target market and the community that is used as a promotional forum. By entering local or community markets, farmers can market their products with the opportunity to interact directly with consumers. 4) Building Business Partnerships. Form partnerships with other local businesses, such as restaurants or organic food stores. This business partnership can open up new sales opportunities by increasing the brand of agricultural products owned by farmers. Consistent marketing and positive interactions with customers can help build long-term, profitable relationships for agricultural businesses.

The main problem often experienced by Jatiluwih farmers in post-harvest handling of rice is the high loss of rice yield during post-harvest. Post-harvest activities include the process of harvesting rice, storing rice, threshing rice, drying grain, and processing paddy or unhulled rice until it becomes rice. Based on post-harvest data obtained by farmer groups in Jatiluwih, it shows that rice yield losses are still quite high, namely 15.47% which occurs during harvest (2.68%), threshing (2.55%), drying (2, 12%), processing paddy into rice (5.29%), storage (1.89%), and transportation (0.94%). The technology for processing rice still uses traditional machines driven by a waterwheel with an unsophisticated motor drive source. This process is inefficient because the yield is low and the resulting broken rice content is high, and it is also ineffective because the time used is long. So, the solution offered is to use a grinding machine with a modern motor drive.

CONCLUSION

In everything we do, of course, requires planning; especially in matters relating to the management of agricultural products in the form of rice. It is absolutely impossible to do anything in rice harvest management without prior planning. Planning is needed in every agricultural activity carried out. Without planning, something that is done will definitely not be structured and may become a messy activity because there is no preparation whatsoever. With planning, a detailed list of needs and concepts related to the activities to be carried out will be possible, including the use of appropriate technology. Careful planning is the key to the success of an activity. Planning is one of the tools in the management process that is used to manage current conditions to be carried out in the future or in the future. Strategic planning is very much needed in the planning process over a long period of time.

The Jatiluwih farmers' strategic plan is a comprehensive long-term plan, providing a formulation of where agricultural products will be directed, and how resources will be allocated to achieve goals over a certain period of time in various possible environmental conditions. Talking about the planning management of Jatiluwih farmers, the first thing that needs to be considered is whether the planning will run well or not. Jatiluwih rice management planning is a step that is systematically arranged to do something in the future or in the future with the support of appropriate rice milling technology. The common rice milling technology in Jatiluwih is a small rice mill with a variety of milling process configurations that do not comply with recommendations. Improvements to rice milling technology in Jatiluwih need to be carried out to produce premium rice of the best quality by using a milling configuration with double cleaning and water mist spraying. Farmers in Jatiluwih generally use two types of grain grinding equipment, namely a single-phase rice mill (single pass) and a two-phase rice mill (double pass). In single-phase milling, the process of



breaking the grain shell is combined with polishing so that when the grain enters the intake hopper, it comes out as white rice. In two-phase milling, the skin breaking process is separate from polishing.

In the end, in the context of community service with a critical analysis of post-harvest conditions in Jatiluwih village, a practical solution was provided to overcome the problem, namely the implementation of post-harvest planning strategy management, a qualified marketing strategy according to village conditions and harvest yields, as well as the use of rice milling equipment with motors, that are sophisticated and environmentally friendly, thus contributing to the principles of village-based sustainable development goals.

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