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IMPLEMENTATION OF GOOD AGRICULTURAL PRACTICES (GAP) IN IMPROVING THE QUALITY AND SAFETY OF AGRIBUSINESS PRODUCTS

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Abstract

Implementation of good agriculture or Good Agriculture Practices (GAP) from the producer's perspective is a concept that guarantees the welfare of farmers, their families and workers, while from the consumer's perspective they get products of high quality and safe nutritional value. The GAP concept also guarantees environmental sustainability, so that the implementation of GAP can restore the condition of agricultural land which is increasingly damaged due to the use of chemical inputs. Demands for environmental sustainability will become increasingly stringent, even though at the same time population pressure on land resources will also become stronger. Facing these challenges and consumer demands, and in order for agricultural products to be more globally competitive, agricultural practices need to be perfected, so that they are more productive and efficient and more responsible to consumers, farm workers and the environment. These agricultural practices are Good Agricultural Practices (GAP). GAP covers the product certification process from before the seeds are planted until they leave the farm. Implementation of Good Agriculture Practices (GAP) is a holistic approach with an emphasis on activities that can affect production quality, the environment and occupational health and safety. Sustainable management of GAP is not just for market interests but has become a national commitment that long-term sustainable development is determined by a balance of attention between humans and the environment, in other words the agricultural sector is expected to be able to produce products with positive benefits in the environmental, social and economic fields.

Keywords: Good Agricultural Practices, Quality, Agribusiness Products

INTRODUCTION

The increasingly open world market, which in principle is aimed at increasing trade between countries, has actually given rise to new ways of protecting the domestic market. Many countries set strict requirements for a product to be imported. For agricultural products, these requirements include: (1) sanitary and phytosanitary and other quarantine requirements, (2) safety

requirements, (3) quality requirements and other technical requirements, (4) plantation registration, (5) implementation of good agricultural practices (GAP) all of these things are regulated in regulations, standards, certifications, brands, labels, and so on by international bodies, countries, as well as companies and associations (Cherotich & Kaur, 2023). At the same time consumer demands for agricultural products are increasing. Consumer awareness of the importance of food safety, quality of products consumed, responsibility for the environment and social responsibility of consumers has increased their demands. Consumers' desire for honest and trustworthy business practices is expressed in demands for traceability of the agricultural products they buy (Adhikari & Thapa, 2023).

Good Agricultural Practices is the answer to consumer demands. The character of this agricultural practice is the responsibility of food producers (farmers) towards (1) consumers (the products produced are quality and safe, and the production method can be traced/there is traceability); (2) himself (high productivity); (3) social (safety, security and welfare of agricultural workers), (4) environmental (wise use of pesticides, fertilizers and agricultural business facilities) (Ojha et al., 2023).

In Indonesia, there is competition between domestically produced tropical fruit and imported fruit. The position of domestic fruit is increasingly under pressure, due to the high quality of imported fruit. On the other hand, exporting agricultural products is also increasingly difficult, due to increasing requirements set internationally and by importing countries (Putri et al., 2024).

Implementation of good agriculture or Good Agriculture Practices (GAP) from the producer's perspective is a concept that guarantees the welfare of farmers, their families and workers, while from the consumer's perspective they get products of high quality and safe nutritional value. The GAP concept also guarantees environmental sustainability, so that the implementation of GAP can restore the condition of agricultural land which is increasingly damaged due to the use of chemical inputs. Mayrowani (Bajgain et al., 2024), said organic farming is an agricultural system that applies the GAP concept, where organic farming cultivation techniques rely on natural ingredients without using synthetic chemicals. The main goal of organic farming is to provide agricultural products (especially food) that are safe for the health of producers and consumers and do not damage the environment because nowadays people are increasingly concerned about nature and health.

The agricultural pattern used by the participating farmers was initially conventional farming, therefore moving from conventional farming to organic farming was certainly not easy. The habits that farmers have had for a long time certainly influence the behavior of individual farmers in implementing their agricultural patterns (Yuliana et al., 2022). This has resulted in organic farming being understood and implemented in various ways. Different levels of awareness and understanding in this environment influence the consistency of farmers' decisions in pursuing organic rice cultivation.

Demands for environmental sustainability will become increasingly stringent, even though at the same time population pressure on land resources will also become stronger. Facing these challenges and consumer demands, and in order for agricultural products to be more globally competitive, agricultural practices need to be perfected, so that they are more productive and efficient and more responsible to consumers, farm workers and the environment. These agricultural practices are Good Agricultural Practices (GAP). GAP covers the product certification process from before the seeds are planted until they leave the farm. Once agricultural products leave the farm, they are subject to the relevant codes of conduct and certification schemes for food packaging and processing. GAP is a means of combining Integrated Pest Management (IPM) and Integrated Crop Management (PTT) practices in the context of commercial agricultural production (Utomo & Febrianto, 2023).

RESEARCH METHOD

The study in this research is qualitative with literature. The literature study research method is a research approach that involves the analysis and synthesis of information from various literature sources that are relevant to a particular research topic. Documents taken from literature research are journals, books and references related to the discussion you want to research (Earley, M.A. 2014; Snyder, H. 2019).

RESULT AND DISCUSSION

Good Agriculture Practices (GAP)

The rules of Good Agriculture Practices (GAP) are guidelines for implementing cultivation in the agricultural sector. The application of Good Agriculture Practices (GAP) principles reflects the three pillars of sustainability (economically feasible, environmentally friendly and accepted by society) including food safety and quality; related to mandatory and/or voluntary

requirements, focusing on primary production and taking into account institutional context incentives (Kharel et al., 2022). It is hoped that Good Agriculture Practices (GAP) rules can be created for specific commodities so that they become a reference standard in the development and management of these commodities in other places. The rules of Good Agriculture Practices (GAP) include the suitability of commodities with the suitability of existing climate and land, land and water conservation efforts for environmental sustainability, appropriate fertilization according to nutrient, soil and plant needs. Integrated and environmentally friendly pest and disease control as well as harvest and post-harvest processes that guarantee product cleanliness and quality (Ryosuke & Susumu, 2022).

Implementation of Good Agriculture Practices (GAP) is a holistic approach with an emphasis on activities that can affect production quality, the environment and occupational health and safety. Sustainable management of GAP is not just for market interests but has become a national commitment that long-term sustainable development is determined by a balance of attention between humans and the environment, in other words the agricultural sector is expected to beableto produceproducts with positive benefits in the environmental, social and economic fields. (Safadi et al., 2022). In order to achievethis challenge, it is necessary to change the paradigm of agricultural development which pays attention to aspects: people-profit-planet, not just profit oriented.

According to the Ministry of Agriculture (2014), the rules of Good Agriculture Practices (GAP) are a collection of specific methods which, when applied in agriculture, will produce products that are in line with the values expected from the practices carried out. The rules of Good Agriculture Practices (GAP) are guidelines that include the application of environmentally friendly technology, maintaining health and improving worker welfare, preventing the transmission of OPT (Plant Pest Organisms) and the principle of Traceability, namely that a product's origin can be traced from the market to the garden (Hasnarty et al. ., 2023).

Implementing the GAP system in agricultural cultivation is certainly beneficial for both humans and the environment. It's just that because the process is so strict with a high level of regularity, GAP products havea higher price than ordinary cultivated products. Products that are GAP certified certainly have their own guarantee for consumers if discrepancies are discovered becausethrough GAP, everything is recorded and recorded from the time the land is selected until the product is produced (Nonga et al., 2023).

GAP certificates are issued by central and regional food safety authorities. If you already have a GAP certificate, a producer can get a prime certificate for fresh food products by completing the SOP and garden registration. This certificate is useful for competing with products from abroad in free trade. If you want your product to penetrate free trade, then the product must have a global GAP certificate (Putri et al., 2024).

The Role of GAP in Agricultural Cultivation in General

GAP is a certification system for good plant cultivation practices in accordance with specified standards and applies the principle of traceability, that is, the origin of products can be traced, from consumers to business areas. Implementation of good agriculture or Good Agriculture Practices (GAP) from the producer's perspective is a concept that guarantees the welfare of farmers, their families and workers, while from the consumer's perspective they get products of high quality and safe nutritional value (Shao et al., 2024). GAP covers pre-planting activities to post-harvest handling in an effort to producefresh fruit and vegetableproducts that aresafeto consume, of good quality, environmentally friendly, sustainable and competitive.

There are ten (10) GAP components, namely: (1) production process certification system (quality assurance, traceable origins), (2) adoption of advanced technology, (3) environmentally friendly cultivation, (4) safe products for consumption, (5)) sustainable production system, (6) biodiversity is maintained, (7) workers' welfare is taken into account, (8) farming is profitable, (9) product quality is guaranteed, and (10) farming is beneficial to society. The application of GAP in agricultural businesses must be based on benevolent capital, responsibility and active participation between producers - traders - consumers by applying the concept of farming with the principle of a win-win solution (Chen & Yin, 2024).

GAP for food/horticultural/plantation crops is modern agricultural production system software, non-tariff barrier (NTB) requirements on global markets, requirements for export/import of agricultural products, legal guarantees of consumption safety and food quality (food safety and quality assurance) , bridging the gap between agriculturists (agriculture builders) and environmentalists (environmental observers) in a win-win solution, implementation (enforcement) of agricultural techniques with an ecological perspective and products that are safe for consumption, cooperation between producers, traders/processors and consumers, as well as consumer

participation in producing safe and environmentally friendly food (Pervushin, 2023).

Implementation of Good Agricultural Practices (Gap) in Agribusiness Products

Good agricultural practice (GAP) is a specific method that can be applied in agriculture to produce food for consumers or for further processing that is safe and healthy (MASPAN & HALIMOON, 2024). GAP is important to implement in partnerships because it can standardize herbal medicine ingredients from the start of business to obtain quality ingredients (meet standards). Documentation of business activities (especially the source of origin of herbal ingredients) can provide evidence to consumers of raw materials. GAP can fulfill legal aspects (especially export products), both meeting consumer and buyer demand (Olaniran et al., 2023).

GAP has obstacles in its implementation, including limited information, plantation registration (LU) in the form of status and planting patterns, knowledge and skills of actors, especially at the farmer (partner) level, which are still weak and there is no differentiating standard for the quality of GAP products (competition with conventional products or natural sources) (Akinmolafe, 2022). Therefore, there are several important things that need to be considered when cultivating medicinal plants, including determining and selecting suitable land, selecting correct and quality seeds, how to cultivate the land, use fertilizer, how to care for it, control pests and diseases, how and when to harvest. , and post-harvest.

A. Determination and selection of suitable land

   The land used is adjusted to the commodities planted. The land is adapted to be similar to its natural habitat. If introductions are made, it must be adapted to thesoil typeand agro-climate of the natural habitat. The plants cultivated do not conflict with other business interests. Plants are cultivated on sustainable land.

B. Selection of Correct and Quality Seeds

   The correct seed is the seed that matches the user's expectations. There is a common understanding before planting between producers (farmers) and users. The source of seeds can be an obstacle, so recommendations from research institutions (BALITTRO, B2P2TO-OT, universities, etc.) or collection from regional centers areneeded. Avoid using contaminated seeds, especially from pathogenic bacteria and disease.

C. Land Cultivation Methods

The land is cultivated according to the planting pattern applied (monoculture, intercropping, or rotational intercropping). Apart from that, the types of plants planted need to be adjusted to the land criteria.

D. Use of Fertilizer

The use of fertilizer is oriented towards organic farming. The recommended fertilizer is compost, manure, or bokashi. The organic fertilizer used is an industrial product (has been tested). The use of PPC and ZPT needs to be adjusted to the dose and given at the right time.

E. How to care

Maintenance includes plants during cultivation in the form of weeding, watering, mulching and pruning. Apart from that, it is necessary to adjust the characteristics of each commodity.

F. Pest and Disease Control

Pest and disease control prioritizes prevention. Early control and protection of plants from pests and diseases is better applied. It is better to use organic pesticides. Appropriate and fast application and action is more beneficial.

G. How and when to harvest

Each different type of plant has a different harvest method and time. Therefore it is necessary to understand the right harvest time. The right time to harvest is based on age and specific characteristics (indicators: large, small, young, old, texture, color, aroma and taste). How to harvest according to the part of the plant you want to take to avoid contamination or dirt.

H. Post-Harvest

Post-harvest activities are an important concern to determine the final quality of on-farm products. Attention starts from harvesting in the field to processing in the warehouse or processing. Post-harvest activities include wet sorting, washing, chopping (rhizomes), drying, dry sorting as well as packaging and warehousing

I. Administrative Aspects

Administrative aspects that need to be carried out include the implementation of good management (planning, organizing, actualizing and controlling). Apart from that, recording all lines of activity and orderly documentation also needs to be carried out (Liu et al., 2024).

Factors influencing the level of GAP implementation on different types of land

Influential factors such as land area are of course greatly influenced by farmers' perceptions and economics, as stated by the results of Thanh and Yapwattanaphun's research (Runowski & Kramarz, 2022) on farmers in a province in Thailand regarding the implementation of sustainable agriculture, only 35% were willing to adopt the principles good and environmentally friendly agriculture. Low perception from the start, the economic status of farmers, skills and education of farmers were the causes.

According to Poerwanto (Marasabessy et al., 2023), Good Agricultural Practice is a detailed explanation of a sustainable agricultural model, as a work standard in every agricultural business so that the resulting production meets international standards. This standard must be made in manual form which of course is continuously revised, which will be implemented by farmers. If the manual is followed correctly, agricultural production will be in accordance with theestablished standards. Quality control can bedoneby checking the production process. Every quality & productivity storage can be identified from process deviations. GAP is an agricultural practice that aims to (a) Improvethe quality of produce based on specific standards (b) Ensure high income (c) Ensure healthy production techniques (d) Maximize efficiency in the use of natural resources (e) Promote sustainable agriculture and (f) Minimize risks to the environment (Mim & Islam, 2022).

How farmers are able to implement GAP also depends on the characteristics of the farmer. Farmer characteristics are something that is inherent in farmers. Some of the characteristics possessed by farmers include age, education and land area. The older you get, the slower you are to adopt innovation. The level of education of farmers greatly determines the level of understanding, communication skills and attitudes of farmers. The area of land cultivated by farmers is generally relatively small, this is often an obstacle to implementing intensive farming because farmers have to allocate their time to carry out other activities outside of farming to obtain additional income needed to meet their family's needs (Abadi et al., 2023).

CONCLUSION

Implementation of Good Agriculture Practices (GAP) is a holistic approach with an emphasis on activities that can affect production quality, the environment and occupational health and safety. Sustainable management of GAP is not just for market interests but has become a national commitment

that long-term sustainable development is determined by a balance of attention between humans and the environment, in other words the agricultural sector is expected to beableto produceproducts with positive benefits in the environmental, social and economic fields. . Implementation of GAP is an effort to standardize and improve the quality of raw materials and ensure business continuity. Considering the importance of GAP for the environment and product quality, and the level of implementation is still within the medium criteria and the factors that influence it, suggestions that can be given include providing intensive counseling and assistance regarding the implementation of GAP and the formation of millennials as young farmers who can bring about change. in agriculture, especially rice farming.

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