Government Strategy In Improving Agricultural Products

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Abstract: This literature review discusses the government's strategy in increasing agricultural yields so as to improve farmer welfare. The government's efforts include building infrastructure such as roads, irrigation canals and markets for agricultural products. The government also encourages improvement of farmer institutions both through farmer groups and organizations that overshadow farmers. Institutional improvements were also carried out by providing financial assistance through banks, cooperatives, and informal credit institutions. Improvements in agricultural systems are also continuously carried out by pressing the conversion of land functions so that agricultural production does not decrease. The government also encourages the use of technology that supports agriculture so that farmers can produce quickly and efficiently. Marketing of agricultural products has been pursued in various ways by the government, both regulating product quality, marketing networks and developing technology-based agribusiness marketing systems to facilitate the sale of agricultural products.

Index Terms: Agricultural Institutions; Agricultural Products; Government Strategy

1 INTRODUCTION

Agriculture is an important aspect that includes food production or security, improving farmers' welfare or poverty alleviation, and preserving the environment [1]. Agriculture is expected to be the production of foodstuffs capable of meeting the needs of a country so that food security can be realized. Agriculture must also be able to create better welfare for farmers so that the productivity of agricultural products can be increased which leads to a reduction in the poverty rate. Agriculture is also expected to be able to preserve the environment by minimizing the conversion of agricultural land functions. In this context, the government's role is needed to make this happen through policies or involvement in agricultural activities [2]. It has been more than two decades that the existence of the agricultural sector in Indonesia has declined. The production of main food commodities such as At the macro level, the contribution of the agricultural sector to gross domestic product (GDP) is also getting smaller. In 2018 the contribution of the agricultural sector to GDP was 12.81 percent, decreasing compared to 2017 which was 13.16 percent. In 2019 the contribution of the agricultural sector decreased to 12.71 percent [3]. The government as the holder of policy authority must immediately handle this problem. It is not only necessary to have a strong commitment from the government, but also to investigate the problems that occur in depth so that they can formulate the right concepts/policies to solve them.

Lack of agricultural production results in people's needs to be met from imports [4]. This is certainly sad because Indonesia is known as an agricultural country that should be able to produce food to meet the needs of its people. The increase in imports is due not only to the increasing demand for foodstuffs due to an increase in population, but also due to the reduced agricultural land as a result of conversion to other sectors [5]. Based on statistical data from [6] from 2015 to 2018, there has been a decrease in agricultural land in Indonesia from 8,092,907 hectares to 7,105,145 hectares. Meanwhile, in 2019 it increased by 5.05 percent to 7,463,948 hectares. The government has taken various efforts to increase agricultural output, such as the development of agricultural infrastructure, strengthening agricultural institutions, implementing agricultural systems, adopting technology and marketing agricultural products. It's just that these various efforts have not been running optimally [4]. An in-depth study is needed in order to find a solution to these problems. The need for further discussion in this article so that the policies and programs implemented by the government can increase agricultural output in the future. The infrastructure development policies that have been carried out by the government are oriented towards increasing agricultural output [7]. The construction of new roads and agricultural irrigation has been able to increase agricultural yields and the mobility of farmers on the island of Sumatra to bring their agricultural products faster [8]. Although the government has done a lot of infrastructure, the government must also pay attention to the quality of the infrastructure being built. So far, agricultural infrastructure development that does not pay attention to quality is often encountered which results in the price of agricultural products getting more expensive as a result of high production costs. The high cost of production and the helplessness of farmers in determining the yield of their agricultural sales are cliché problems that are always faced by farmers in their daily activities, which seem to have been overwhelming and farmers do not have bargaining power for their products [9]. The government also carried out institutional development in the financial sector to increase agricultural output. The financing programs provided in the agricultural sector are proven to be able to increase agricultural output [10]. The existence of a Village Financial Institution (LKD) that provides financial assistance has been able to improve the welfare of farmers [11]. The village unit cooperative financing program (KUD) has also been proven to have a positive impact on improving business and farmer welfare [12]. The financing program that has been implemented by the government so far has actually been very helpful to farmers. However, the knowledge and involvement of farmers in accessing the financing program still needs to be improved. The strategy to increase agricultural output is also carried out by intensification, extensification, diversification, agricultural mechanization, land rehabilitation, and subsidies for agricultural production. All the strategies that have been launched have been able to increase agricultural yields so far, although not yet optimal. Lack of ability to master technology in the agricultural sector in managing agriculture has resulted in less optimal agricultural programs launched by the government. Even though the application of agricultural
technology is not only targeting the production process to make it easier and more efficient, but also post-harvest [13]. In addition, mastery of technology can make it easier for farmers to sell their agricultural products. But unfortunately, the marketing system that is taking place in Indonesia has not been able to run effectively and efficiently [14]. In marketing activities, it is often encountered a long marketing chain so that many marketers are involved in it. This is what causes the high accumulated profit taken from each marketer. Prices received by farmers as producers and prices paid by end consumers will differ significantly!The government faces various challenges and problems in increasing agricultural output. Starting from the development of agricultural infrastructure, strengthening agricultural institutions, implementing agricultural systems, adopting technology, and marketing agricultural products. Quick and precise steps are needed so that the problem of decreasing agricultural production can be immediately resolved.

2 METHOD
This research is a systematic literature review, which explains that the research and development methodology is carried out to combine and assess research that is tied to the core of a particular topic. The purpose of a systematic literature review is to examine, identify, assess, and interpret all research related to the topic of an interesting phenomenon with various questions in certain appropriate studies [15], [16]. This research uses descriptive analysis, namely regular presentation related to the data obtained, then providing an understanding and explanation so that the reader can understand it. This research was conducted in five stages. First, reviewing data on agriculture. Second, identify problems related to agriculture and women. Third, formulating problems related to the focus of the problems being studied and analyzed. Fourth, collect data and material related to the focus of the problem in order to support the strength of the analysis of existing problems. Fifth, analyze and present strategies of government to improving agricultural product. Although in practice without applying it directly, because this research can be analyzed and reviewed from various journals and books.

3 RESULT AND DISCUSSION
Development funds for agricultural infrastructure are the largest component of the budget allocation for Food Security allocated to the Ministry of Agriculture, Ministry of Public Works and others. As much as 31.5 trillion or 43.5% of the total budget was used for infrastructure and facilities, of the budget allocation for Food Security allocated by the government in 2014 [6]. This number is actually even greater, because from the budget allocation for the Ministry of Agriculture in 2014 amounting to 15.5 trillion, a total of 3.195 trillion was allocated to the Directorate General of Agricultural Infrastructure and Facilities, where most of the mandate is related to agricultural infrastructure and facilities. Financing through the Ministry of Public Works is allocated for repair and construction of irrigation facilities in accordance with its authority (primary and secondary). Meanwhile, in the Ministry of Agriculture, irrigation is being repaired and constructed at the farm level (tertiary) as well as acting as a facilitator and regulator with main activities covering development, facilitation, coordination and monitoring and evaluation of activities throughout the Province. In the context of improving agricultural infrastructure and facilities, the government is making the following efforts. First, development and improvement of infrastructure needed by farmers in farming areas such as farm roads, production roads, level irrigation networks (JITUT), village irrigation networks (JIDES), tertiary and quaternary irrigation networks [17]. Second, collaboration of infrastructure development by the ministry of agriculture with other ministries. For this reason, good coordination efforts are needed so that the location is right and according to needs [18]. Improvement of agricultural facilities includes assistance for the production of organic fertilizer, biogas, cultivation, harvest, post-harvest, processing and marketing facilities. Third, strengthening of planting brigade institutions. Forth, strengthening the role of farmer groups in managing the Agricultural Machine Tools Service Business (UPJA). The increase in agricultural infrastructure development has had an impact on increasing agricultural yields and agricultural land area. Infrastructure development is able to make people expand their production capacity by opening new land [7]. Various existing farmer institutions such as Kelompok Tani (Farmer Groups), Gabungan Kelompok Tani (Farmer Group Association), Perhimpunan Petani Pemakai Air (Water User Farmer Association) and subak are faced with the challenge of revitalizing themselves from institutions that are currently more dominant only as a forum for technical and social guidance to become institutions that also function as a forum for developing business legal entity or can integrate in existing cooperatives in rural areas [19]. Market institutions that have been built so far, such as market institutions at Pasar Lelang (the Auction Market), Sub Terminal Agribisnis (Agribusiness Sub Terminal), Pasar Ternak (Livestock Market), Pasar Tani or Aspartan (Farmers Market Association) and institutions in the warehouse receipt system still have to be escorted to take advantage of market opportunities and improve the bargaining position of farmers who optimal [20]. Some areas that have developed their agricultural institutions properly can increase agricultural yields. The existence of farmer institutions is quite effective in playing a role in increasing agricultural production, especially farmers with small capacities [21]. Farmers’ institutions can be a place for farmers to get information and counseling on how to increase production capacity. This has proven to be effective as can be seen from the increasing yield of smallholder farmers [22].

The government also strives for institutional development from the capital side. So far, many farmers have been constrained by capital to produce. Capital or financing constraints often occur due to a lack of knowledge and access to finance owned by farmers. The better the pattern of agricultural financing carried out, the higher the agricultural productivity [23]. Various efforts have been made by the government by developing credit schemes with interest rate subsidies such as Food and Energy Security Credit (KKP-E), Bio-Energy Development Credit and Plantation Revitalization (KPEP-RP), Cattle Breeding Business Credit (KUPS) and credit schemes with guarantees; such as People’s Business Credit (KUR). However, the credit scheme has not been able to overcome farmer capital and banking support has not provided an optimal contribution for farmers. Another government strategy in helping finance in the agricultural sector is to encourage informal credit institutions. This institution was not built by the government but stood alone in line with growing demand from farmers [24].

Apart from credit assistance, the government has also provided assistance in the form of subsidies to farmers. There
is an allocation of subsidies in the agricultural sector consisting of fertilizer subsidies, seed subsidies and program credit interest subsidies [25]. In aggregate the total allocation for agriculture has increased from the previous year. The government has issued a large budget for the interests of the agricultural sector, of course the government hopes that this policy can have a positive and significant impact on the development of the agricultural sector in Indonesia. Based on data from the Central Statistics Agency (BPS) in 2019, of a total of 26.14 million farmer households, 56.12 percent are smallholders who do not own land or own land under 0.3 hectares. According to [26], in response to the problem of narrow agricultural land, the government has taken various efforts, one of which is intensification. Intensification is considered to be an absolute effort that must be made to maintain agricultural production. Agricultural intensification is an effort to increase agricultural yields by optimizing existing agricultural land. Agricultural intensification is pursued by the Panca Usaha Tani program, which is then followed by the Sapta Usaha Tani program which includes (1) selecting superior seeds, (2) good soil cultivation, (3) proper fertilization, (4) pest control, (5) good irrigation or irrigation (6) post-harvest (7) marketing of agricultural products. The government's strategy in increasing agricultural output is also carried out by implementing agricultural diversification. Agricultural diversification is the development of agricultural systems with various activities in one agricultural land. Some of the supporting policies needed are the provision of seeds, credit for development programs, labor-saving technology, coordination of irrigation water supply, and enhancement of extension performance [27]. At the macro level, the development of physical infrastructure and agro-industrial institutions (crops and vegetables) is needed as a strategic precondition for accelerating agricultural diversification [28]. This agricultural diversification program is quite capable of increasing agricultural output which is reflected in the increasing welfare of farmers [29]. In supporting the programmed cropping system, the government continues to increase the use of technology in agriculture. Through the Agricultural Technology Research Center in the region that produces location-specific agricultural technology, to encourage efficient agricultural systems and businesses, by optimally utilizing agricultural resources [6]. These technologies include the management of water resources such as water harvesting technology, efficient water utilization technology through drip irrigation, village level irrigation networks (JIDES) and farm-level irrigation networks (JITUT). The various kinds of technology packages are expected to be effective so that they can be used by farmers to increase the quantity, quality and productivity of various agricultural products. The marketing strategy is carried out by the government by setting quality standards for agricultural products. The goal is to produce quality products and be able to compete in the market. Several government steps in determining the quality of agricultural products are carried out by establishing 88 Indonesian National Standards (SNI) in the agricultural sector, cooperation and harmonization of both bilateral and regional standards, implementation of the Food Safety Quality Assurance System (SJMKP), quality assurance monitoring in the production and distribution chain, implementing Good Agricultural Practices (GAP) and Practices Good Manufacturing Practices (GMP), developing environmentally friendly agricultural products through Organic Certification Bodies (LSOs), improving food safety through the authority of the Ministry of Agriculture as mandated in PP No. 28 of 2004 concerning Food Safety, Quality and Nutrition of Food [6] In addition, the development of marketing networks for agricultural products has also been carried out by the government by increasing access to markets, developing domestic market networks, through the development of market facilities and institutions, Development of Market Information (PIP) through a marketing information system that is fast, precise, accurate, complete, and sustainable, domestic promotion through exhibitions, as well as developing international market networks to accelerate export value growth [30]. This marketing model approach will be able to absorb agricultural products produced so that farmers are more enthusiastic in increasing agricultural output [31]. Infrastructure and facilities have an important role in driving agricultural development. Infrastructure and facilities components covering land, water / irrigation, seeds / seeds, fertilizers, pesticides, agricultural machinery, investment and financing are elements. Important in the production process and as the main support for farming activities and its follow-up efforts. One of the agricultural infrastructure that is currently of great concern is the irrigation network. Lack of construction of new reservoirs and irrigation networks as well as damage to existing irrigation networks resulted in a greatly decreased irrigation capacity for agriculture. This damage is mainly due to flooding and erosion, damage to river basins, and lack of maintenance of irrigation to the farm level [32]. Other farming infrastructure that is needed by the community to drive the production and marketing process of agricultural commodities, but its existence is still limited, is farming roads, production roads, ports equipped with warehouses. The challenge that must be faced in the future is how to adequately provide all the infrastructure needed by these farmers to be able to reduce the high costs arising from the limited transportation and logistics infrastructure in the production centers of food crop agricultural commodities [1]. Infrastructure development is able to make people expand their production capacity by opening new land [7]. Indeed, not all infrastructure can affect the increase in agricultural output. Road construction does not fully increase agricultural production. However, the construction of irrigation canals has a significant effect on increasing agricultural production [8]. This happens because the construction of irrigation is used directly by farmers in helping the production process. Apart from road and irrigation construction, market development is also very important in increasing agricultural output [33]. A market close to farmers will make it easier for farmers to sell their agricultural products. This situation will stimulate farmers to increase their production. The proximity of the production site to the market will shorten the distribution time of agricultural products. So that farmers do not need to store their agricultural products for too long. In terms of quantity, infrastructure development in agriculture has been done a lot. However, it is necessary to pay attention to the quality of the infrastructure itself. The better the quality of infrastructure, the better the marketing system and prices for agricultural products [34]. The existing agricultural institutions can actually be a bridge for agricultural programs. Like Subak, which is an agricultural institution in the Bali region. Subak can become an intermediary capable of directing a better agricultural system from time to time so that it can continue to produce well. The subak can play a role in changing petrochemical-based agriculture to organic-based so
that it is able to preserve the environment. The strength of the subak is the existence of regulations governing the agricultural system (awig-awig), having a financial system in order, religious values and the attitude of farmers who obey the organization. The subak’s strength as local wisdom will greatly support the increase in agricultural production in its region [35]. This is also reinforced by research conducted by [36] which states that with its strengths, Subak has been able to regulate more regular agricultural patterns, divide good cropping patterns, and various problems that can be resolved so that it can continue to produce. maximally. Addressing the problem of agricultural financing, the Government issued Law number 19 of 2013 concerning the Protection and Empowerment of Farmers, mandating that the Government assigns State-Owned Enterprises (BUMN) in the banking sector and local governments assigns Regional Owned Enterprises (BUMD) in the banking sector to serve financing needs farming, by forming a special agricultural unit so that the service needs of financing with easy procedures and soft requirements [6]. One of the BUMNs that has helped finance agriculture is Bank Rakyat Indonesia (BRI), which in 2020 provides people's business credit (KUR) with an interest of 6 percent per year [37]. Farmers can pay off the credit within 3 months or after harvest. If calculated, the farmer only pays an interest of 0.2 percent in doing his business for 3 months. In addition, the government also encourages village unit cooperatives (KUD) to assist farmers with capital. KUD also acts as a credit provider to farmers who need business capital. The activities of this business unit will have a multiplier effect on the economy in people's lives [38]. At the beginning of the formation of the KUD, it actually really helped agriculture in increasing agricultural output. However, credit disbursement by KUD in recent years has decreased. One of the reasons for the low distribution of agricultural business credit (KUT) by KUD is structural congestion due to the fact that KUD is not allowed to take the next credit if the previous credit arrears exceed 20 percent [39]. Supervision of credit disbursement by KUD must be further improved so that it is not misused so that it is right on target. Encouraging informal credit institutions can be an alternative for farmers to obtain easier financing. The consideration in granting credit to this institution is the aspect of trust. Credit is given to farmers who are trusted to make fairly smooth payments. One of the credit institutions that aim to help farmers is the Village Credit Institution (LPD) in Bali. LPD was formed based on the Bali Regional Regulation Number 2 of 1988 concerning Village Credit Institutions. So far, the LPD has been able to play a role in maintaining agricultural land by providing credit loans to farmers who want to work on agricultural land owned by farmers [40]. In addition, LPD is also able to support agricultural credit needed by agriculture to increase agricultural output [41]. The existence of the LPD is highly perceived as an alternative to financing by farmers who experience difficulties in accessing financing from banks. The existence of LPDs has been able to improve the welfare of rural communities who are predominantly farmers [42]. Improving the institutional side is one of the ways used to connect the political and economic frameworks in making decisions [43]. The institutions represent a combination of a philosophical approach to solving problems (for example the implementation of government policies), bureaucratic institutions to deal with problems, cultural contexts for dealing with problems, and proposed solutions Chao (2012). Institutional innovation does not only occur in corporations or organizations, but also across institutions that will lead to institutional change [45]. Experience in China shows that institutional change and socio-economic development can increase agricultural output [46]. It is the same in several African countries where institutional changes are able to encourage increased productivity of agricultural products (Hounkonou, 2012). The strategy of increasing agricultural output through intensification has been proven to be able to increase agricultural output in developing countries. Small farmers who have little land, in collaboration with other farmers will be able to increase agricultural yields and can streamline production costs [48]. Nigeria is one of the countries that carries out agricultural intensification efforts by adjusting agricultural intensification policies with existing resources [49]. The limited agricultural land owned has forced the government to optimize the land it owns so that it can produce maximum agricultural production. The Nigerian government’s strategy to implement this intensification program is accompanied by close supervision from the government so that the implementation of this program can be carried out as expected. Apart from Nigeria, Kenya has also made various innovations in increasing agricultural output. Innovations in terms of technology and improvements in agricultural methods have enabled Kenya to increase agricultural output [50]. The agricultural diversification program that has been implemented has been able to increase agricultural output which is reflected in the increasing welfare of farmers [29]. A sustainable diversification program will greatly increase a variety of agricultural products and reduce shifting cultivation [51]. The government has implemented a diversification system by providing outreach to farmers. The government has trained extension workers who are involved in the field to provide farming techniques with a diversified system [52]. This has resulted in reduced damage to agricultural land due to the cultivation of one type of agricultural commodity. Increasing support for innovation and technology, carried out by increasing the capacity and facilities of researchers in the field of agriculture, increasing research that uses the latest technology in order to find breakthroughs in increasing the productivity of seeds / plant / livestock seeds, expanding the scope of research starting from production inputs, land effectiveness, cultivation techniques, post-harvest techniques, processing techniques to packaging and marketing techniques, increasing technology dissemination to farmers at large, fostering advanced farmers as patrons in the development and application of new technologies at the field level [53]. Through the development of technology, many kinds of prototypes and agricultural machines that are beneficial to farmers have been created. The prototype is the result of research and engineering activities of agricultural machinery, producing new varieties, other products, such as vaccines, livestock breeds, tool kits, maps, and so on. In addition, processing technology is also needed so that it can provide added value and quality of an agricultural product. Likewise, technology related to marketing, for example technology in packaging, storage, sorting and others, of course becomes a challenge for research institutions to produce applicable technology. The various kinds of technology packages are expected to be effective so that they can be used by farmers to increase the quantity, quality and productivity of various agricultural products. The development of the agricultural sector in a broad sense must be directed to the agribusiness or agro-industrial system, because this approach will increase
the added value of the agricultural sector, which in essence can increase income for agribusiness and agro-industry actors in the regions. The role of agribusiness in the Indonesian economy is very important, and even the degree of importance is expected to increase, especially after the mining and oil industry sectors experience a very alarming decline in production [54]. The movement of the agribusiness sector requires the cooperation of various related parties, namely the government, private sector, farmers and banks, so that this sector is able to contribute to the country's foreign exchange. To overcome the problem of agricultural marketing in Indonesia, agricultural products should be directed towards agribusiness and agro-industry, to support agribusiness, the government's concern through the Ministry of Agriculture to maximize Indonesia's agricultural agribusiness program and develop agricultural technology and market information on agricultural systems is one solution that can be developed by farmers in Indonesia.

4 CONCLUSION
The conclusions from the discussion are the development of infrastructure such as roads, irrigation canals, and markets has been oriented towards increasing agricultural output, although it has not been fully effective in increasing agricultural output. Agricultural institutional development has been carried out by the government by encouraging the existence of farmer groups and agricultural financing institutions to help increase agricultural output. The government will improve the agricultural system by implementing various cropping patterns and increasing innovation and technology adoption so that agricultural products can continue to be increased. Marketing of agricultural products has been pursued in various ways by the government, both regulating product quality, marketing networks and developing technology-based agribusiness marketing systems to facilitate the sale of agricultural products.

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