

## PROSPECTS OF AGRIBUSINESS AS SUPPORTING FOOD SECURITY IN THE SEMARANG CITY

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### ABSTRACT

This study aims to elaborate on the potential of urban agricultural agribusiness in Semarang City and identify development sectors that can receive/provide co-benefits from urban agricultural development. The research method used is mixed, with primary and secondary data obtained and analyzed using quantitative and qualitative descriptive methods. The results of the study indicate that there is potential for agribusiness in Semarang City to support national food security. Agribusiness development can be carried out in accordance with the national agricultural development master plan, in order of priority, in accordance with the mapping of potential in the city of Semarang, and guided by the medium-term and long-term development plans of the city of Semarang.

**Keywords:** Agribusiness; Urban Farming; Food Security

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### INTRODUCTION

Agribusiness is a business activity based on agriculture or other fields that support it, starting from the procurement and distribution of production facilities to the marketing of the products produced which are interrelated with each other (Maulidah, 2012). The agribusiness sector has an important role in the Indonesian economy by absorbing 75% of the workforce, involving 21.3 million small-scale businesses or households, and 80% of the population depend on it for a living (Hikmah, 2021). Agribusiness has urgency in national food security, along with the population growth rate of around 1.4% per year, and is followed by increasing food needs (Wijayati, 2018). The island of Java plays an important role as a major food producer in Indonesia (Prasada et al., 2022).

Population growth is the main cause of increasing food demand and all countries have the same challenge in ensuring food security (Ramaloo et al., 2018). In Indonesia, food security and sustainable agriculture are important issues and priorities in development planning and implementation (Handayani et al., 2018). This matter in accordance with the global commitments stated in the *Sustainable Development Goals* (SDGs) to encourage the implementation of development sustainable. One of 17 The strategy in the *SDGs* is to end hunger, achieve food security and improving nutrition, and promoting sustainable agriculture (FAO, 2015). The *SDGs* explicitly support sustainable development in the agricultural sector by producing more and minimizing production costs and emissions. The goal is to continue to innovate to develop better agriculture around the world (SAMI, 2019). On the other hand, the threat to food security worsens with the increasing conversion of agricultural land to non-agriculture.

For this reason, urban agricultural innovation can be a solution to food security threats (Sumardjo et al., 2019).

Agriculture Urban areas have become a solution for food supply in developed countries (Handayani et al., 2018). Fresh, organic produce adds to the quality of urban agricultural products. However, considering the very limited land conditions in urban areas, there are many challenges in applying the concept of urban agriculture. Because although agricultural intensification can be carried out, the amount of agricultural production in urban areas are still unable to meet the city's food needs independently. Besides Therefore, the application of urban agriculture in Indonesia still has challenges such as public awareness and knowledge about the concept of agriculture urban areas and food security (Fauzi et al., 2016). The existence of conventional agricultural lands that are still quite a lot in Indonesia can also be one of the reasons why urban agriculture in Indonesia, especially in the city of Semarang has not been able to achieve The main objective is to increase food security.

Pluralism in Semarang City shapes people's lifestyles and influences them on the level of consumption. In 2015 the average per capita expenditure was at the value of Rp. 1,297,895,-, this can mean that every individual in the city of Semarang in 2015 the average cost of Rp.1,297,895,- for a month for consumption, both in the form of food and non-food (clothing, housing, education, health, etc.). The value of the expenditure continues increasing every year and in 2019 the average consumption per capita reached IDR 1,648,489,- (BPS Semarang City, 2020). The development of consumption spending that continues to increase influenced by several things including the development of information technology, changes in income, changes in the pattern of supply and demand for goods/services, changes in quality and quantity and changes in people's attitudes themselves.

Food is the main need of society that must be met, therefore as the population increases, the fulfillment of needs will also increase increasing (Khairati et al., 2016). However, this need has a saturation point, so that at higher level of income expenditure will be diverted for fulfillment other needs. The amount of consumption for food indicates that most of the people are still concerned with basic needs. In addition to food as primary consumption of society to maintain its survival, Individual expenditure also cannot be separated for secondary and tertiary fulfillment. This is because each individual always consumes to meet various types of life needs, both food and non-food consumption. The amount of individual expenditure for certain types of consumption is strongly influenced by related individual income, the higher the income, the proportion of expenditure for food consumption will tend to decrease and the proportion of expenditure for non-food consumption will increase.

Urban agriculture is a process of growing, developing and distributing various agricultural products with the use of human resources, land and water, products and services found around the urban area (FAO, 2015). This program was initiated to improve the quality of life by consuming healthy food by cultivating vacant land in urban areas (Santoso & Widya, 2014). Urban agricultural activities also have many other benefits (co-benefits), in terms of meaning is not focused on food availability only (Handayani et al. 2018).

A previous study on agribusiness by Aji et al. (2014) concluded that the strategy that became the main priority in food security was the rice farming intensification strategy. Soetiono et al. (2020) in the study showed the pattern of commodity agribusiness economic institutions consisting of production facilities, cultivation, post-harvest and product processing, marketing, and institutional support services, proved to be profitable, efficient, and had good prospects. The study of Prasada et al. (2022) also shows that the availability of agricultural land and the level of farmers' income simultaneously influence each other positively, so that it

becomes the main focus of improvement. However, previous research has not focused on the potential of agribusiness in urban areas on national food security.

This study focuses on the prospects of agribusiness as a supporter of food security in the city of Semarang. This study is expected to be a solution for efforts to ensure food availability for the population. However, activity development urban agriculture in big cities such as Semarang City needs to be directed at utilization in other aspects so that its benefits become more optimal. This study aims to elaborate on the potential of urban agricultural agribusiness in Semarang City and identify development sectors that can receive or provide benefits (benefits) from urban agricultural development.

## **LITERATURE REVIEW**

The agricultural sector is one of the primary sectors that provides basic materials (production goods) and direct consumption goods (foodstuffs). Agriculture is not just planting rice and gardening. Agriculture has a very broad scope, including the fisheries, plantation and forestry sectors, from upstream to downstream activities, converting inputs into outputs in the form of clothing, food, shelter and a comfortable environment for living beings (Mattjik, 2006). In general, the agricultural sector consists of several sub-sectors such as food crops sub-sector, livestock sub-sector, fishery sub-sector, plantation sub-sector and forestry sub-sector. Therefore, the agricultural sector is expected to be able to carry out its role in development, namely: providing food for the community, providing job opportunities, saving and collecting foreign exchange and providing support for the development of other sectors (Sumodiningrat, 1990).

The agricultural sector occupies an important position as a contributor to Gross Domestic Product and a relatively large contributor to foreign exchange and is quite flexible in the face of monetary turmoil and economic crises. Because production is based on domestic resources, exports of agricultural products are relatively more resilient and relatively stable with export revenues increasing during the economic crisis. Moreover, the agricultural sector has distinctive advantages over other sectors of the economy, among others, agricultural production is based on domestic resources, has a low import content and is more resilient in the face of external economic shocks, thus efforts to maintain and increase the role of the agricultural sector are an effective way to effective in increasing economic resilience. This is evident from empirical facts, when Indonesia faced a crisis and nationally experienced a negative economic growth rate of around -13.6% according to BPS calculations in 1998, only the agricultural sector grew positively, namely 5.32% in the first quarter of 1998 (Solahuddin, 2018).

The agricultural sector in Indonesia is still relatively underdeveloped. The agricultural sector will still play an important role in the industrialization process of Indonesia's economic development, because the agricultural sector can be a supporting and supporting sector in the development of the industrial sector. By knowing which sectors have a high linkage to the agricultural sector, the development of the agricultural sector can be directed to create intersectorial integration. The hope is that it can create synergy between these sectors and ultimately increase economic growth (Widyawati, 2017).

## **RESEARCH METHODS**

The study method used is the mix method (Arikunto, 1998)) by combining quantitative data and qualitative data (Azwar, 2001). The stages of work implementation in the implementation of research preparation work on agribusiness prospects as a support for food security in Semarang City are survey to get data.

Primary data aims to formulate Agribusiness Prospects to Support Food Security in Semarang City. Primary data was obtained by conducting interviews with all stakeholders. Secondary data is also carried out to support research and compare problems that have been extracted from empirical sources. This is to clarify the problems that occur in the field.

The data obtained were then analyzed using quantitative and qualitative descriptive methods. Quantitative descriptions are presented in the form of frequency and percentage tabulations. SWOT analysis is chosen to formulate a strategy to get priority for the development of urban agriculture. In addition, SWOT use to develop an appropriate agribusiness policy strategy, it is necessary to analyze factors in internal conditions that can be strengths and factors that become weaknesses that need to be eliminated. In addition, it is necessary to analyze external factors that can be opportunities and challenges that need to be resolved.

## **RESULT AND DISCUSSION**

### **The Role of Agribusiness in Supporting Food Security in Semarang City**

The food security system relates to aspects of production, distribution, food supply, and food access to the household level. Based on BPS data in 2020, more than 40 percent of the population of Semarang city spends more than 1 million rupiah per month, with a total expenditure per capita per month of 1,648,489 consisting of food expenditure of 650,330 and non-food expenditure of 998,159. From these data, it can be seen that household food consumption is quite large, almost 40 percent of per capita expenditure per month. When viewed from the composition of the type of food spent, the largest household consumption is on processed food and beverages, which is 239,039, followed by consumption of grains at 48,498. Seen from the percentage of per capita expenditure by commodity group in Semarang City, 45.06 percent is dominated by prepared food and beverages, and 7.46 percent is grains. This shows that the food consumption of each individual has not met the adequacy of balanced nutrition, because it is still dominated by the largest consumption of prepared foods and beverages. This phenomenon is a challenge and a great opportunity for the Regional Government of Semarang City, to improve the food security system, including providing food consumption that meets balanced nutritional adequacy through agribusiness development.

### **Land Use**

Based on the land cover mapping as stated in the revised RTRW of Semarang City, it shows that the largest land use in Semarang City is used for housing with an area of 14,813.60 Ha or 37.58 percent of the land cover area which reaches 39,416.84 Ha. The next largest land use is agricultural land covering an area of 7,877.54 Ha or 19.99 percent. While the land use with the smallest proportion is local protection area of 0.07 ha and IPAL land use of 0.41 ha.

The encouraging thing in the implementation of agricultural affairs is the increase in the area of organic food crops which in 2019 was 10 hectares, in 2020 increased by 40% to 14 hectares. This indicates that public awareness for the consumption of organic plants is increasing, even though the economic value is higher. On the other hand, sustainable food agricultural land can still be maintained in an area of 2,251.41 Ha. In the field of animal husbandry, infectious animal disease cases can continue to be suppressed, where in 2019 there were 27 cases, but in 2020 it decreased to 14 cases. This is supported by the maintenance of health and prevention of livestock infectious diseases as well as the control of infectious animal diseases through biosecurity, vaccination, and surveillance.

**Table 1.** Seasonal Vegetable and Fruit Crops in Semarang City, 2017-2019 (tons)

Plant Type	2017	2018	2019
Spinach	5.2	2	3.8
Big Chili	0.7	3	0
Cayenne pepper	9.9	4.7	0
Chili	8	7	0
Mold	6,105.1	2,963.9	2,975.9
Long beans	2.4	1.7	0.6
Water spinach	18.8	16.1	6.4
Eggplant	3.1	1.7	0

In solving problems in the agricultural sector, the strategy that needs to be developed by the city of Semarang, must be in line with the vision Ministry of Agriculture in 2020-2024, namely: "Advanced, Independent and Modern for the realization of a Sovereign, Independent and Advanced Indonesia Personality based on Gotong Royong", with a vision: The realization of Food Sovereignty and Farmer Welfare. In the direction of strategy development developed by the City of Semarang, must also be aligned with the mission Ministry of Agriculture in accordance with the efforts of the City of Semarang in achieving The vision of the City of Semarang in terms of strengthening the community-based economy local excellence and build a conducive business climate, especially in Goal 6 Increasing Local Economic Productivity, precisely in Target 2 Increasing Regional Leading Products. The mission is to realize food and nutrition security, increasing added value and competitiveness of commodities agriculture, and realizing the welfare of farmers.

Several programs that can be pursued are increasing availability and diversification, increasing added value and product competitiveness food and agriculture, so that it will realize food sovereignty, increase farmers' income and welfare. A few things need to achieve this, is self-sufficiency in rice, corn, soybeans, and sugar. However, the current food supply is directed at increasing horticultural products. This is done to increase food diversification, so that not dependent on rice. In addition, the development of agribusiness is also directed on increasing value-added and competitive commodities, by taking into account the declining production of vegetables and fruits in 2017-2019, as shown in the graph, namely spinach, cayenne pepper, long beans, water spinach, and eggplant. Various efforts to be made must remain pay attention to the potential of the Semarang City area, so that it will help in achieving food self-sufficiency in accordance with the superior products of the City of Semarang, increasing added value and competitiveness of agribusiness commodities; as well as improvement farmer family income, and local income. In addition to the vision of the ministry of finance, the Semarang City Government also needs to align with the Strategic Plan of the Department of Agriculture and Plantation of Central Java during the 2018-2023 periods, namely strengthening the production of plant commodities food, horticulture and plantations as a form of contribution to food sovereignty in Central Java. To support the realization of increased crop production food, horticulture, and plantations; and the realization of capacity building agricultural and plantation human resources, Semarang City needs to various strategic steps. This is necessary to support the improvement production of food crops and horticulture, in Central Java.

Local government The city of Semarang needs to pay special attention to the main commodities or main potential in Semarang City, and set boundaries or priorities the main development first, namely the development of horticulture, especially vegetables and fruits. This is necessary so that the city of Semarang can support the improvement of the agribusiness sector in Central Java. In developing agribusiness, especially horticulture, agricultural

resource capacity is needed including improving the quality of the resources of farmers and agricultural extension workers.

### **Agribusiness Development Efforts to Support Food Security Semarang city**

Agribusiness development must be carried out as a whole, system food availability, distribution, consumption, and nutritional status. the system, must cover aspects of production, distribution, food supply, and food access household, to achieve social welfare. Agribusiness system that aimed at supporting food security must be supported by policies and the performance of the economic, social and political sectors. Supporting policies the development of the agricultural sector, especially agribusiness in the city of Semarang is very important needed as a stimulus for industry players in the agribusiness sector, farmers, and agricultural extension workers. The system development that needs to be built is as follows:

#### **Food Availability Subsystem**

Efforts to develop a food availability *subsystem* that built must be integrated with the farming subsystem (*On-farm*) in the agribusiness system. There needs to be a stimulus for agribusiness actors to want to develop or cultivate various kinds of food crops that can be used as an alternative to food diversification. This is necessary to meet the availability of food in the city of Semarang.

#### **Food Absorption Subsystem**

The food absorption subsystem (*food utilization*) can be integrated with downstream agribusiness subsystem (*down-stream agribusiness*). The integration is done in the main agricultural product processing activities into processed products, both intermediate products and final products. This subsystem will support the industry processing or agro-industry. With the processing, the product will be produced ready for consumption that has added value, both economically and financially Public health, namely from the nutritional content.

#### **Food Access Subsystem**

The food *access* subsystem can be integrated with the subsystem downstream agribusiness (*down-stream agribusiness*). The integration is carried out with distribution activities or trading activities in the domestic market. As is distribution activities, the public as consumers can access products needed for consumption. In the development of agribusiness in the Semarang City area, it is necessary to considering the Semarang City Regional Regulation on Spatial Planning and Semarang City Area. The potential for regional development can be seen from: Semarang City Spatial and Spatial Planning. Based on a review of Perda Number 14 of 2011 concerning Spatial Planning for the City of Semarang in 2011–2031, agricultural cultivation activities are in the cultivation area, contained in articles 89-91. In Article 89, it is stated that the designated area plan agriculture includes areas designated for agriculture for food crops and horticultural agricultural use. The allotment area for food crop agriculture covers the District of Genuk, Pedurungan, Tembalang, Ngaliyan, Mijen, and Tugu. Plan development of the area is directed at the cultivation of food crops, improvement of the irrigation system, and the exploitation of water sources for paddy fields that prone to drought during the dry season through the improvement of irrigation channels.

Meanwhile, the horticultural agricultural designation area covers the District of Tembalang, Gunungpati, Mijen, and Ngaliyan. Development plan includes the development of productive annual crops as well as the development of agroforestry. For the development of productive annual crops is carried out through the cultivation of fruit crops that have high economic value such as durian, longan, crystal guava, mango, and orange. Whereas agroforestry development is carried out by cultivating perennials such as sengon, mahogany, and others. In

addition, by using plants food, such as corn as an intercrop in community forests and production forests.

In addition, to develop appropriate agribusiness policy strategies, analysis of factors in internal conditions that can be strengths and weaknesses that need to be eliminated. Besides that, analysis of external factors that can be opportunities as well as challenges that need to be resolved by the Kendal district government. The following is an analysis of the internal and external conditions of agribusiness development in Indonesia Semarang city.

This study also uses SWOT analysis to identify and prioritize urban agricultural development strategies. SWOT helps planners to manage urban agriculture to achieve food security in the Semarang City area. The results of the SWOT Matrix analysis in Table 3 are used to identify agribusiness development strategies for urban agriculture, prioritized into finance, infrastructure, environmental and social, and marketing. In a marketing strategy, digital marketing can be considered through an online store. The Semarang City Government already has an online shopping store application called "Tumbasin" which makes it easy for housewives to shop for food needs.

**Table 2.** Prospects of Agribusiness Development with Agro Tourism and Urban Farming Concepts in Semarang City

Sub district	Land area not yet cultivated (Ha)	Draft	Opportunity
Candisari	17.21	Agro tourism Village / Agribusiness Area	Vegetables and Fruits
Tembalang	40	Agro tourism Village / Agribusiness Area	Vegetables and Fruits
Gayamsari	3.5	Agro tourism Village / Agribusiness Area	Vegetables and Fruits
West Semarang	8	Agro tourism Village / Agribusiness Area	Vegetables and Fruits
Central Semarang	5.44	Agro tourism Village / Agribusiness Area	Vegetables and Fruits
Amount	74.15		

**Table 3.** SWOT Analysis of Urban Agricultural Agribusiness in Semarang City

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Availability of large enough farm land</li> <li>• High level of community participation in government programs</li> <li>• There is land that is temporarily not used</li> </ul>	<ul style="list-style-type: none"> <li>• A relatively small number of farmers and farm laborers</li> <li>• The number of agricultural instructors is relatively small</li> <li>• The conversion of rice fields into housing and industry</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Population growth continues to increase</li> <li>• The people's basic food needs continue to increase</li> <li>• Application of modern agricultural technology</li> </ul>	<ul style="list-style-type: none"> <li>• Plant pest outbreak attack</li> <li>• There are substitutes for imported farm products</li> <li>• the existence of extreme climates such as floods and landslides</li> </ul>

## CONCLUSION AND RECOMMENDATION

Based on the results of the description of the results of the analysis of the discussion on the potential of agribusiness in Semarang City, agribusiness development can be carried out following the national agricultural development master plan, in order of priority, in accordance with the mapping of the potential in the City of Semarang and guided by the medium-term and long-term development plans of the City of Semarang. In the agribusiness development plan in Semarang City, a stimulus is needed for agricultural extension workers and the community, as well as the agriculture and food security department of the city of Semarang in several aspects, namely legal aspects in the form of related regulations and supporting infrastructure for agribusiness development. Fulfillment and compliance with applicable laws and regulations related to the development of agribusiness areas must also be adjusted to the Spatial Planning of the City of Semarang. Semarang City Government has the potential of natural resources, and the availability of Human Resources according to the needs of agribusiness development that will support the development of agribusiness. The aspect of the need for large food also shows the potential for agribusiness development in the city of Semarang. The opening and development of agribusiness areas, especially in areas that have unused land, is expected to be able to create new food sources for the community.

Based on the results of the analysis, as an effort to follow up on the results of research on the potential of agribusiness in supporting food security, it is necessary to prepare planning documents for the provision of supporting infrastructure for agribusiness areas in Semarang City. Furthermore, it is necessary to make adjustments to the settings at the technical level, and to mobilize agricultural extension workers outside of their main duties as agricultural extension workers who already have a fostered area or village to mobilize the community in urban agriculture, as well as massive socialization, especially to the RT/RW level. Technical studies for the development plan of the agribusiness area in each cluster, and the order of priority of the development area, improving governance in the food security organization of the city of Semarang, the development of supporting infrastructure in the agribusiness development area, and the development of supporting infrastructure in the agribusiness area, also need attention.

## REFERENCES

- Aji, A. A., Satria, A. & Hariono, B. (2014). Strategi Pengembangan Agribisnis Komoditas Padi dalam Meningkatkan Ketahanan Pangan Kabupaten Jember. *Jurnal Manajemen & Agribisnis*, 11(1), 60-67.
- Arikunto, S. (1998). *Prosedur Penelitian : Suatu Pendekatan Praktek*. Jakarta: Rineka Cipta.
- Azwar, S. (2001). *Metode Penelitian*. Yogyakarta : Pustaka Pelajar
- BPS Kota Semarang. (2020). *Kota Semarang Dalam Angka 2020*. Semarang.
- FAO, (2015). *Conservation Agriculture*. Available online at: <http://www.fao.org/ag/ca/index.html> (Accessed November 11, 2015).
- Fauzi, A. R., Ichniarsyah, A. N., & Agustin, H. (2016). Pertanian perkotaan: urgensi, peranan, dan praktik terbaik. *Jurnal Agroteknologi*, 10(01), 49-62.
- Handayani, W., Nugroho, P., & Hapsari, D. O. (2018). Kajian potensi pengembangan pertanian perkotaan di kota semarang. *Jurnal Riptek*, 12(2), 55-68.
- Hikmah, S. P. (2021). Peranan Agribisnis Dalam Perekonomian, dalam *Manajemen Agribisnis*. Bandung: Penerbit Media Sains Indonesia.
- Khairati, R., & Rahmat, S. (2016). Respons permintaan pangan terhadap penambahan penduduk di Sumatera Barat. *Jurnal Pembangunan Nagari*, 1(2), 19-36.
- Langi, D. C., Rumapea, P., & Dengo, S. (2015). Analisis Strategi Dalam Meningkatkan Pembangunan Pada Sektor Pertanian Di Desa Tondegesan Induk Kecamatan Kawangkoan Kabupaten Minahasa. *Jurnal Administrasi Publik*, 2(029), 1-8.



- Mattjik, A. A. (2006). *Pertanian dan Dialog Peradaban. Revitalisasi Pertanian dan Dialog Peradaban. Penerbit Buku Kompas. Jakarta.*
- Maulidah, S. (2012). *Pengantar Manajemen Agribisnis. Universitas Brawijaya Press.*
- Prasada, I. Y., Dhamira, A., & Nugroho, A. D. (2022). Ketersediaan lahan pertanian dan pendapatan petani di Pulau Jawa, Indonesia, 1990-2018. *Statistik Daerah*, 12 (3), 85-103.
- Ramaloo, P., Siwar, C., Liong, C. Y., & Isahak, A. (2018). Identification of strategies for urban agriculture development: A SWOT analysis. *Planning Malaysia*, 16(7), 320 –331.
- SAMI. (2019). *Sustainability Challenges in the Agrifood Sector and Management. Bogor: PT Penerbit IPB Press.*
- Santoso, E. B., & Widya, R. R. (2014). Gerakan pertanian perkotaan dalam mendukung kemandirian masyarakat di kota Surabaya. In *Seminar Nasional Cities*, 16(11), 1-11.
- Soetriono, S., Soejono, D., Hani, E. S., Suwandari, A., & Narmaditya, B. S. (2020). Challenges and Opportunities for Agribusiness Development: Lesson from Indonesia. *The Journal of Asian Finance, Economics and Business*, 7(9), 791–800. <https://doi.org/10.13106/JAFEB.2020.VOL7.NO9.791>
- Solahuddin, I. H. S. (2018). *Pertanian: Harapan Masa Depan Bangsa. PT Penerbit IPB Press.*
- Sumardjo, S., Firmansyah, A., & Manikharda, M. (2019). Community adaptation on ecological changes through urban farming innovation for family food security. In *Rural Socio-Economic Transformation: Agrarian, Ecology, Communication and Community Development Perspectives. CRC Press.*
- Sumodiningrat, G. (1990). Potensi Pertanian Dan Prosper Agroindustri Di Jawa Tengah. *Journal of Indonesian Economy and Business (JIEB)*, 5(1), 1-20.
- Widyawati, R. F. (2017). Analisis keterkaitan sektor pertanian dan pengaruhnya terhadap perekonomian Indonesia (analisis input output). *Jurnal Economia*, 13(1), 14-27.
- Wijayati, P. D. (2018). *Agribisnis Dalam Urgensi Ketahanan Pangan Nasional. dalam Indonesia 2045. Jakarta: Mizan Digital Publishing.*