OPEN ACCESS

International Journal of Accounting, Business, and Economic Policy | Vol. 1 No. 3 (2025)

Research Article

Identification of Leading Agricultural Commodities in Sedong District, Cirebon Regency, West Java, Indonesia

Mutia Intan Savitri Herista[1*], Dinda Ayu Sekarnurani[2]
[1,2]Department of Agriculture, Agribusiness Study Program, Faculty of Animal and Agricultural Sciences, Universitas Diponegoro, Indonesia
Email: [1)] mutiaintan@live.undip.ac.id, [2)] dindaayusekarnurani@live.undip.ac.id

Received:	Revised:	Accepted:	Online:
November 02, 2025	December 04, 2025	December 08, 2025	December 10, 2025

Abstract
Agricultural productivity plays a crucial role in regional economic development, particularly in areas where agriculture remains a primary source of livelihood. Understanding the distribution and competitiveness of agricultural commodities is essential for designing effective development strategies at the local level. This study aims to identify the leading agricultural commodities of food crops sub sectors in Sedong district, Cirebon Regency, West Java, using the Location Quotient (LQ) method. The background of this research is based on the increasing number of farmers shifting from mango farming to rice farming despite its agroecological potential. The data used include agricultural sub sectors production statistics of food crops, horticulture and herb plants sourced from official publications of BPS and agricultural agencies for the year 2018 – 2024. The LQ method measures the comparative advantage of a commodity by comparing its share of production at the district level with that at the regency level. The results reveal that mango emerged as the most potential leading commodity in Sedong District considering both LQ values and production consistency. Mango also has the second largest contribution to the overall agricultural production in the area. In the food-crop subsector, rice was the only commodity categorized as a base commodity based on its LQ value. Rice production also demonstrated consistent annual output and accounted for more than 70% of Sedong's total agricultural production, making it the dominant contributor in this subsector. In the seasonal horticulture subsector, there are 2 commodities with LQ values greater than 1 so they can be categorized as basic commodities, namely melon and watermelon.

Keywords: Location Quotient, Regional Development, Agricultural Specialization

1. Introduction

Agricultural productivity is an important central issue in economy, because it is the main determinant of economic welfare. Agricultural productivity analysis has a special place in agricultural economy due to: (1) the dependence of the agricultural sector on natural resources, (2) Limited availability of natural resources for supports agricultural production, and (3) In the long term productivity. Agriculture has implications for reducing poverty in developing countries and global environmental challenges such as climate change (Lamichhane et al., 2022). Agricultural sector holds significant potential and contributes significantly to the development of Cirebon Regency, despite the region's primary economic shift toward industry and services. According to data from the Cirebon Regency Central Statistics Agency (BPS), the agricultural sector's GRDP in 2023 was approximately IDR 9.16 trillion, the largest after the processing industry.

Sedong District is one of the areas reliant on the agricultural sector as its primary economic driver. This district's geographic and socioeconomic conditions have enabled it to develop into a production center for various horticultural commodities and food crops. Lowland rice, mangoes, and free-range chickens are the three leading commodities produced in this region. Lowland rice production in 2023 reached 20,328 tons (BPS, 2024).

The increase in rice production is partly due to the shift from mango farming to rice farming. Farmers who switch to wet-rice farming are generally small-scale mango farmers (Saefudin et al., 2019). Although, in terms of profitability, the mango agribusiness should provide substantial benefits and enable farmers to survive and increase production, this situation indicates inconsistent development of superior commodities in the region, especially since 2022, Sedong District was recognized as the largest mango center in Region III Cirebon (Pedekawati et al., 2020); Cirebon, Indramayu, Majalengka, and Kuningan, as well as a mango nursery center (cirebonkab.go.id).

The results of this study are expected to serve as a basis for formulating more targeted agricultural sector development policies, both in terms of improving productivity, marketing, and infrastructure support. In addition, this study can also provide recommendations for local governments and other stakeholders in designing strategies to strengthen an agriculture-based economy in order to improve farmers' welfare and promote sustainable local economic growth.

2. Literature Review

Over the past decade, quantitative methods have remained central in identifying leading agricultural commodities across regions. For instance, the Location Quotient (LQ) method continues to be widely applied to assess commodity specialization: an LQ > 1 indicates that a commodity constitutes a base commodity with relative comparative advantage, warranting prioritization. This approach has been employed in multiple recent studies to identify leading commodities in various districts and regencies (Azhari et al., 2019; Qomariyah et al., 2018).

The LQ technique, frequently based on frameworks by Miller et al. (1991), measures the intensity of particular economic activities in a specified area compared to a larger reference area, serving as a crucial first step in grasping economic catalysts (Rifani et al., 2021). Implementation of the LQ method goes beyond just identification, often providing essential information for comprehensive agricultural land-use planning by uncovering specialized production areas (Widiatmaka et al., 2019). For instance, it has played a key role in determining priority agricultural products for food crops, horticulture, and plantation categories in different regions (Yanti et al., 2023).

A study in the food crop and horticulture subsectors in West Java Province used LQ to determine superior commodities and analyze their structural and growth patterns (Rudani et al., 2023). Similarly, a study in West Sumatra province employed LQ to identify base agricultural commodities at the distric level, highlighting LQ as a reliable tool for regional agricultural planning (Azhari et al., 2019; Ronaldo et al., 2024). In the cultivation of mangoes in Jember Regency, the LQ method has been utilized to pinpoint high-quality varieties that deserve further advancement and investment (Abdurahman et al., 2023). This analytical framework enables the categorization of products into leading and non-leading sectors, recommending specific products for focused growth based on their regional concentration and comparative advantage (Anshar et al., 2022).

3. Methods

This study adopts a quantitive approch using the Location Quotient (LQ) method to identify leading agricultural commodities with comparative advantages in Sedong District, West Java. The analysis focuses on key agricultural commodities such as rice, mango, ginger and native chicken. The LQ method serves as an analytical tool to measure regional specialization by comparing the relative contribution of each commodity at the district level with its contribution at the regency level. An LQ

value greater than 1 indicates that the commodity has a relatively higher significance in the district and can therefore be classified as a local leading commodity.

The objective of this approach is to determine which commodities are most suitable for further development based on naturally existing advantages and community cultivation practices. The findings from the LQ analysis provide an empirical foundation for regional agricultural policy formulation, particularly in designing strategies to strengthen leading commodities in accordance with local potential. Moreover, the results may guide investment decisions and support government programs in the local agribusiness sector (Pranadi et al., 2022).

This research relies on secondary data obtained from the Central Statistics Agency (BPS), the Cirebon Regency Agriculture Office, and annual agricultural production reports. The primary dataset consists of harvested area statistics for major agricultural commodities, which are available comprehensively and updated for 2024. Harvested area is selected as a representative indicator for assessing each commodity's contribution to the agricultural sector in Sedong District and is considered suitable for applying the LQ method in identifying regional leading commodities.

Data collection was conducted through documentation of official reports, agricultural statistical publications, and relevant literature. To enhance the robustness of the analysis, interviews were carried out with key stakeholders, including agricultural extension officers and local farmers, to obtain deeper insights into the potential and challenges associated with leading commodity development in the region. The analysis was carried out using the following LQ formula:

$$LQ = \frac{(\frac{Xi}{Xt})}{(\frac{Yi}{Yt})}$$

where:

Xi = production of agricultural commodity i in Sedong district

Xt= Total production of (particular type of agricultural commodities) all agricultural commodities in Sedong district

Yi= production of agricultural commodity i in Cirebon regency

Yt = Total production of (particular type of agricultural commodities) all agricultural commodities in Cirebon Regency

Interpretation of LQ results:

If LQ > 1, the commodity is considered a leading commodity in Sedong District because its contribution is greater than the average contribution at the Cirebon Regency level.

LQ = 1, the commodity has the same proportional contribution as the reference area and does not exhibit a specific comparative advantage.

If LQ < 1, the commodity is not a regional advantage because its contribution is lower than that of the reference area (Jumiyanti, 2018).

4. Results and Discussion

4.1. Identifying the Potential Commodities

The data employed in this study comprise production records from three agricultural subsectors namely food crops, perennial horticulture, and seasonal horticulture covering the period from the year 2018 to 2024 in Sedong District. The identification of commodities with the potential to serve as leading food commodities was conducted through a selection process based on the annual production volume

of each commodity within the three food crop subsectors. The corresponding data are presented in Table 1.

Table 1. Average Production of Food Crops Sub Sectors in Sedong District for 2018 – 2024

No	Commodity	Production (quintal)							Total	Average	Contribution
		2024	2023	2022	2021	2020	2019	2018			
						Perennial Horticulture					
1	Avocado	78	48	48	63	250	175	175	837	120	0.06%
2	Starfruit	140	0	0	0	75	107	125	447	64	0.04%
3	Durian	538	0	0	20	200	90	165	1,013	145	0.03%
4	Rose Apple	31	43	27	42	50	35	0	228	33	0.01%
5	Guava	61	100	112	101	98	164	122	758	108	0.06%
6	Tangerine	6	0	0	2	10	34	15	67	10	0.01%
7	Mango	73,737	31,524	17,175	13,600	97,750	73,800	106,049	413,635	59,091	26.46%
8	Jackfruit	2,062	932	1,630	810	1,641	3,650	4,750	15,475	2,211	1.31%
9	Papaya	522	470	440	155	235	1,120	810	3,752	536	0.40%
10	Stink Bean	4,589	1,297	452	360	1,810	3,535	4,328	16,371	2,339	1.27%
11	Banana	2,135	155	4,925	1,740	1,790	5,588	1,324	17,657	2,522	2.00%
12	Rambutan	1,044	0	21	450	0	2,000	200	3,715	531	0.72%
13	Sapodilla	85	0	229	119	145	175	12	765	109	0.06%
14	Soursoup	561	36	0	367	210	625	365	2,164	309	0.22%
15	Breadfruit	40	15	38	0	90	332	507	1,022	146	0.12%
						Food crops					
16	Rice	182,880	203,280	235,530	208,160	213890	203850	194870	1,442,460	206,066	73.08%
17	Maize	1,240	0	100	0	250	0	1120	2,710	387	0.00%
						Seasonal Horticulture					
18	Shallot	822	932	210	180	0	0	0	2,144	306	0.00%
19	Melon	1030	0	1680	80	510	0	0	3,300	471	0.00%
20	Watermelon	90	0	660	800	606	0	0	2,156	308	0.00%
21	Chilli	15	42	40	0	0	0	0	97	14	0.00%

Source: Processed Secondary Data, 2025

A total of 57 commodity production records were compiled for analysis. From these, commodities that demonstrated production in at least four observation years within Sedong District were selected. This screening process yielded 21 commodities with consistent production over the specified minimum duration. Of these, 15 commodities belonged to the annual horticulture subsector and exhibited stable output levels. Within the food crops subsector, two commodities which are rice and maize fulfilled the criteria. While four commodities from the seasonal horticulture subsector which are shallots, melon, watermelon, and chili were identified as potential comodities. The data presented in the table indicate that rice, classified under the food crops subsector, contributes the largest share to total agricultural production, accounting for 73.08%. The second-highest contributor is mango, a perennial horticulture commodity, with a contribution of 26.46%.

4.2. Location Quotient Analysis

4.2.1. Perennial Horticulture Sub Sector

The commodities identified as potential leading products were subsequently examined using the Location Quotient (LQ) analytical method. This approach was employed to determine which commodities function as base commodities within Sedong Subdistrict. The results of the LQ analysis are presented in Table 2.

Table 2. LQ Analysis for Perennial Horticulture Sub Sector Commodities in Sedong District

Commodity	LQ Value	Decision
Avocado	1.308	considered a leading commodity
Starfruit	1.005	considered a leading commodity
Durian	0.577	not a regional advantage
Rose Apple	0.039	not a regional advantage

Commodity	LQ Value	Decision
Guava	0.060	not a regional advantage
Tangerin	0.503	not a regional advantage
Mango	1.291	considered a leading commodity
Jackfruit	1.947	considered a leading commodity
Papaya	0.088	not a regional advantage
Stink Bean	3.448	considered a leading commodity
Banana	0.228	not a regional advantage
Rambutan	2.938	considered a leading commodity
Sapodilla	0.384	not a regional advantage
Soursoup	3.953	considered a leading commodity
Breadfruit	0.651	not a regional advantage

Source: Processed Secondary Data, 2025

The LQ analysis identified seven commodities with potential to serve as leading products in Sedong Subdistrict. These commodities exhibit LQ values greater than 1, thereby qualifying as base or superior commodities. This result is consistent with Sanjaya et al. (2019) who assert that an LQ value exceeding 1 indicates development potential. Ranked from the highest to the lowest LQ values, the identified commodities are soursop, stink bean, rambutan, jackfruit, avocado, mango, and starfruit. Soursop recorded the highest LQ value (3.953), indicating a strong relative advantage compared to other commodities. Nevertheless, the LQ value alone cannot be used as the sole determinant of commodity superiority. Production volume must also be considered, in line with Putra et al. (2021) who emphasize that annual production levels are essential for assessing a commodity's competitive strength. When examined alongside production data from the annual horticulture subsector, soursop shows substantially lower output relative to mango. Although mango has a smaller LQ value, namely 1,291.

Soursop contributes 0.22% to the total agricultural output in Sedong district, whereas mango ranks first within this subsector with a production contribution of 26.64%. Mango also demonstrates consistent annual production, in contrast to soursop, which recorded no output in 2022. Although mango exhibits fluctuations in production, its overall pattern indicates an upward trajectory. During the initial three-year period, mango production showed a declining trend, followed by a positive trend in the subsequent three years. This pattern is characteristic of biennial bearing, in which crops alternate between high-yield (on-year) and low-yield (off-year) cycles. During high-yield years, trees may produce an abundant harvest; however, fruit quality and quantity tend to vary annually. As a result, the year following a heavy crop typically shows a significant reduction in fruit production, which impacts total yield. Such characteristics have also been observed in other annual horticultural commodities, as reported by Syafitri (2020) in mangosteen and by Shivran et al. (2020) in mango.

4.2.2.Food Crops Sub Sector

The food crops subsector is a staple food source for the Indonesian people, including those in Sedong District. The results of the LQ analysis for the food crops subsector are shown in Table 3 below.

Table 3. LQ Analysis for Perennial Food Crops Sub Sector Commodities in Sedong District

Commodity	LQ Value	Decision
Rice	1.064	considered a leading commodity
Maize	0.026	not a regional advantage

Source: Processed Secondary Data, 2025

The LQ analysis for the food crops subsector indicates that rice has the highest LQ value at 1.064, whereas maize records an LQ value of 0.026. The higher LQ value of rice, compared to maize, signifies that rice functions as a base or leading commodity within this subsector. This finding aligns with

Niyimbanira (2018) who states that a location or commodity may be classified as a base sector when its LQ value exceeds 1. Leading commodities are those capable of meeting local demand while simultaneously supplying markets outside the region, thereby positioning the sector to engage predominantly in export-oriented activities (Fimbriata et al., 2020).

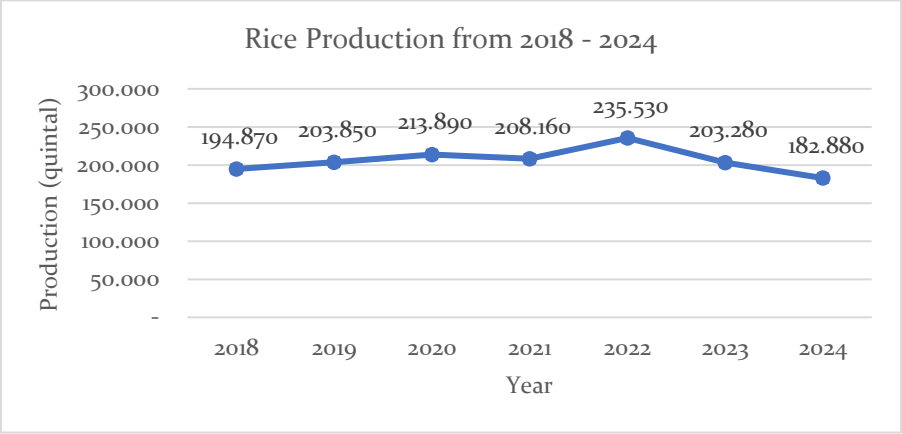

Figure 1. Trend Production of Rice in Sedong District
Source: Processed Secondary Data, 2025

These findings are further supported by the consistently high annual rice production in Sedong District. Rice constitutes the largest contributor to the region's agricultural output, accounting for 73.08% of total agricultural production. This dominance is attributable to rice being the primary staple food for the local population, leading many farmers to cultivate it widely. Food crops play a critical role in maintaining regional food security (Haile et al., 2016). The production trend for rice also shows a positive trajectory, with output increasing from year to year, as illustrated in Image 1. A positive trend generally reflects an upward movement in the production graph (Fadhilah et al., 2022).

4.2.3.Seasonal Horticulture

The commodities within the seasonal horticulture subsector identified as having the highest and most consistent production volumes include shallots, melons, watermelons, and chilies. These commodities were subsequently examined using the Location Quotient (LQ) analysis, following the same procedure applied in the other two subsectors. The results of the LQ analysis are presented in Table 4 below.

Table 4. LQ Analysis for Seasonal Horticulture Sub Sector Commodities in Sedong District

Commodity	LQ Value	Decision
Shallots	0.180	not a regional advantage
Melon	47.300	considered a leading commodity
Watermelon	4.267	considered a leading commodity
Chilli	0.076	not a regional advantage

Source: Processed Secondary Data, 2025

Based on the LQ analysis, only melons and watermelons were identified as leading commodities, as both recorded LQ values greater than 1. According to Qomariyah et al. (2018) an LQ value exceeding 1 indicates that a commodity has a competitive advantage and can be further developed within the region. Melons exhibited the highest LQ value at 47.3. However, when examined from the perspective of annual production, melon output showed considerable inconsistency. For example, during the 2018–2024 period, there were three years in which Sedong Subdistrict reported no melon production at all.

This inconsistency underscores the need for further analysis to determine the feasibility of promoting melons as a leading commodity within the seasonal horticulture subsector. Such efforts are essential to enhance production stability and ensure that market demand for the commodity can be consistently met (Azmi, 2025).

5. Conclusion

Based on the findings of this study, 21 commodities across three food crop agricultural subsectors were identified as having potential to serve as leading commodities. Within the perennial horticulture subsector, 7 commodities were classified as base commodities according to the Location Quotient (LQ) analysis. Considering both LQ values and production consistency, mango emerged as the most potential leading commodity in Sedong District. Mango also has the second largest contribution to the overall agricultural production in the area. In the food-crop subsector, rice was the only commodity categorized as a base commodity based on its LQ value. Rice production also demonstrated consistent annual output and accounted for more than 70% of Sedong's total agricultural production, making it the dominant contributor in this subsector. In the seasonal horticulture subsector, there are 2 commodities with LQ values greater than 1 so they can be categorized as basic commodities, namely melon and watermelon. However, both commodities exhibited relatively small and inconsistent production. Therefore, further analysis, consideration and strategic planning are needed to be able to strengthen their potential as leading commodities in Sedong District.

5.1. Author Contributions

The authors contributed equally to this work.

5.2. Conflicts of Interest

The authors declare no conflict of interest.

6. References

Abdurahman, A., Subagiyo, A., Mayasari, F., & Anrosana Pongoh, I. A. (2023). Penerapan Metode Location Quotient dalam Penentuan Komoditas Pertanian Unggulan di Kabupaten Jember: Application of Location Quotient Method in Determining Leading Agricultural Commodities in Jember Regency. *Jurnal Ilmiah Inovasi*, *23*(1), 92–96. https://doi.org/10.25047/jii.v23i1.3885

Anshar, M., Siradjuddin, I., Rezki, M., & Kusmiran, A. (2022). Land Suitability and Potential Agriculture Analysis to Regional Development Based on Agro-Tourism. *Jurnal Pembangunan Wilayah Dan Kota*, *18*, 112–127. https://doi.org/10.14710/pwk.v18i2.37531

Azhari, I., Hasnah, H., & Oktavia, Y. (2019). Analisis Penentuan Komoditi Unggulan Berbasis Sektor Pertanian Dalam Mendorong Perekonomian Wilayah Di Kabupaten Lima Puluh Kota. *Journal of Socio-Economics on Tropical Agriculture*, *1*(2), 130 – 143. https://doi.org/10.25077/joseta.v1i2.141

Azmi, Z. (2025). Strategi Peningkatan Total Factor Productivity Padi melalui Perbaikan Infrastruktur Pertanian. *Jurnal Perencanaan Pembangunan Pertanian*, *2*(1), 1–21. https://epublikasi.pertanian.go.id/berkala/index.php/jp3/article/view/4082

BPS. (2024). *Sedong District in Figures 2024*.

Fadhilah, Z., Suroso, S., & Anggela, F. P. (2022). Peramalan Jumlah Produksi Buah Mangga Di Kecamatan Tegalwaru Dengan Menggunakan Metode Least Square. *Jurnal Mahasiswa Manajemen Dan Akuntansi*, *2*(1), 6–12.

Fimbriata, F. A., Budiraharjo, K., & Mukson, M. (2020). Analisis Potensi Pengembangan Kubis Organik Pada Kelompok Tani Bangkit Merbabu Kecamatan Getasan Kabupaten Semarang. *Jurnal Ekonomi Pertanian Dan Agribisnis*, *4*(2), 258–267. https://doi.org/10.21776/ub.jepa.2020.004.02.4

Haile, M. G., Brockhaus, J., & Kalkuhl, M. (2016). Short-term acreage forecasting and supply elasticities

for staple food commodities in major producer countries. *Agricultural and Food Economics*, *4*(1), 17. https://doi.org/10.1186/s40100-016-0061-x

Lamichhane, P., Hadjikakou, M., Miller, K. K., & Bryan, B. A. (2022). Climate change adaptation in smallholder agriculture: adoption, barriers, determinants, and policy implications. *Mitigation and Adaptation Strategies for Global Change*, *27*(5), 32. https://doi.org/10.1007/s11027-022-10010-z

Miller, M. M., Gibson, L. J., & Wright, N. G. (1991). Location quotient: A basic tool for economic development analysis. *Economic Development Review*, *9*(2), 65.

Niyimbanira, F. (2018). Comparative advantage and competitiveness of main industries in the north-eastern region of South Africa: Application of location quotient and shift-share techniques. *International Journal of Economics and Finance Studies*, *10*(1), 96–114.

Pedekawati, C., Karyani, T., & Sulistyowati, L. (2020). Uji Beda Pendapatan Usahatani Mangga Gedong Gincu Pada Saat On Season dan Off Season. *Composite: Jurnal Ilmu Pertanian*, *2*(2), 82–89. https://doi.org/10.37577/composite.v2i02.239

Pranadi, B., Darsono, D., & Ferichani, M. (2022). Pendekatan Location Quotient Dan Shift Share Analysis Dalam Penentuan Komoditas Sayuran Unggulan Di Kabupaten Wonogiri. *Prosiding Seminar Nasional Hasil Penelitian Agribisnis*, *6*(1), 49–55. https://jurnal.unigal.ac.id/prosiding/article/view/7385

Putra, K. S., Noer, M., & Hariance, R. (2021). Analisis Komoditas Unggulan Pertanian Subsektor Tanaman Pangan dan Tanaman Perkebunan di Kabupaten Pesisir Selatan. *Journal of Socio-Economics on Tropical Agriculture*, *3*(3), 397–407. https://doi.org/10.25077/joseta.v3i3.430

Qomariyah, S., Mustapir, M., & Supriono, A. (2018). Analisis Potensi Wilayah Berbasis Komoditas Pertanian Tanaman Pangan Serta Kontribusinya terhadap Perekonomian Kabuapten Bondowoso. *JSEP (Journal of Social and Agricultural Economics)*, *11*(1), 66–72. https://doi.org/10.19184/jsep.v11i1.6883

Rifani, A., Nugroho, A. D., Winaryo, Tyas, D. W., Masduqi, E., Topo, A. H., Hidayanti, R., Masithah, R. A., Romadhon, R. D., Sulissetiyo, T., & Reniningsih. (2021). Spatial distribution of agriculture commodity in Cilacap Regency. *IOP Conference Series: Earth and Environmental Science*, *686*(1), 12050. https://doi.org/10.1088/1755-1315/686/1/012050

Ronaldo, S. D., Ibrahim, J. T., & Agustina, Y. (2024). Analisis Komoditas Unggulan Sub-Sektor Perkebunan Di Provinsi Jambi. *Jurnal Ekonomi Pertanian Dan Agribisnis*, *8*(3), 1027–1037. https://doi.org/10.21776/ub.jepa.2024.008.03.17

Rudani, A., Mulyo, J. H., & Sugiyarto. (2023). Leading Commodities of Food Crops and Horticulture in West Java Province. *Journal of Agribusiness Management and Development*, *4*(1), 1–8. https://doi.org/10.22146/jamadev.v4i1.9981

Saefudin, B. R., Rasmikayati, E., Dwirayani, D., Awaliyah, F., & Rachmah, A. D. R. A. D. (2019). Fenomena Peralihan Usahatani Mangga Ke Padi Di Kecamatan Sedong, Kabupaten Cirebon, Jawa Barat. *Paradigma Agribisnis*, *2*(2), 21–33.

Sanjaya, B., Ginting, R., & Effendi, I. (2019). Identifikasi Potensi Pengembangan Dan Kelayakan Usaha Komoditi Buah-Buahan Unggulan Agribisnis Di Kota Binjai. *AGRISAINS: Jurnal Ilmiah Magister Agribisnis*, *1*(2), 109–118. https://doi.org/10.31289/agrisains.v1i2.240

Shivran, J. S., Jat, M. L., Jat, R. K., & Jat, A. (2020). Adoption of Regular Bearing in Mango over Biennial Bearing. *International Journal of Current Microbiology and Applied Sciences*, *9*(5), 149–154. https://doi.org/10.20546/ijcmas.2020.905.016

Syafitri, N. (2020). Pengaruh penggunaan Paclobutrazol, KNO3 dan Etefon pada pemacuan pembungaan tanaman manggis (Garcinia mangostana L.). *AGRTOTROPIKA*, *19*(2), 87–95.

Widiatmaka, Mulya, S. P., Panuju, D. R., Ambarwulan, W., & Hamzah, U. (2019). Multicriteria land index for determining primary commodity in agricultural landuse planning. *IOP Conference Series: Earth and Environmental Science*, *284*(1), 12006. https://doi.org/10.1088/1755-1315/284/1/012006

Yanti, D., Stiyanto, E., Yanti, N. R., Batubara, C., & Ariyadi, F. (2023). Identification of Leading Commodity Areas in the Agricultural Sector Based on Historical Data and Land Suitability. *Jurnal Teknik Pertanian Lampung (Journal of Agricultural Engineering)*, *12*(3 SE-Articles), 698–709. https://doi.org/10.23960/jtep-l.v12i3.698-709