



Socio-Economic Characteristics, Income, and Feasibility Analysis of Cabbage Farming in Sudajaya Girang Village, Selabintana District, Sukabumi Regency

Nurul Annisa Syam^{1*}, Endang Tri Astutiningsih¹, Neneng Kartika Rini¹

¹ Faculty of Agriculture, Universitas Muhammadiyah Sukabumi, Indonesia

 nurulannisasyam04@ummi.ac.id

Received : May 07, 2026

Revised : June 04, 2026

Accepted: June 22, 2026

Corresponding Author: Nurul Annisa Syam, Universitas Muhammadiyah Sukabumi, Indonesia. Email: nurulannisasyam04@ummi.ac.id

ABSTRACT

This study aims to analyze the socio-economic characteristics of cabbage farmer households in Sudajaya Girang Village, Selabintana District, Sukabumi Regency. The research method used is a quantitative descriptive method with a purposive sampling technique to determine respondents of 30 cabbage farmers. The data used consists of primary and secondary data. Data analysis was carried out descriptively to describe the socio-economic characteristics of farmers, while agricultural analysis was carried out using cost analysis, income, revenue, and the Income Cost Ratio (R/C Ratio). The results showed that most farmers were in their productive age at 53.33% with formal education levels dominated by elementary school graduates at 56.67%. Farmers have quite long farming experience and most have a moderate number of family dependents. with an average land ownership of 0.18 hectares per farmer, and land ownership status is dominated by self-owned land at 63.33%. The average net income from cabbage cultivation is IDR 12,564,017 per planting season, or IDR 66,533,996 per hectare. The R/C ratio of 4.95 indicates that cabbage cultivation is feasible and income from cabbage cultivation also contributes significantly to the income of farmer households. The average net income from cabbage farming was IDR 12,564,017 per planting season. The farming activity was economically feasible, as indicated by an R/C ratio of 4.95 ($R/C > 1$), meaning that every IDR 1.00 of production cost generated IDR 4.95 in revenue. These findings support the notion that socio-economic characteristics and farm resource ownership influence farm performance and household income. Therefore, policies aimed at improving farmers' access to production inputs, agricultural extension services, and farm management training are needed to sustain farm profitability and strengthen the economic resilience of farming households.

Keywords: Socio-economic characteristics, farm household, income, cabbage farming, farm feasibility

INTRODUCTION

This study is grounded in farm household theory and farm production theory. Farm household theory views farming households as both production and consumption units, where decisions regarding resource allocation, labor use, and farm management directly influence household welfare and income. Household socio-economic characteristics, including age, education level, farming experience, family size, land ownership, and access to capital, play important roles in shaping farmers' production decisions and economic outcomes. Farmers with better education and longer farming experience are generally more capable of adopting innovations and managing production risks effectively. In addition, farm production theory emphasizes that agricultural output and profitability are determined by the efficient combination of production factors, namely land, labor, capital, and management. Variations in the ownership and utilization of these resources may lead to differences in farm performance and income among households. Therefore, analyzing the socio-economic characteristics of cabbage farming households is important not only for describing farmers' conditions but also for explaining variations in farm income, economic feasibility, and household livelihood sustainability.

RESEARCH METHODS

The aim of this study was to analyze the socio-economic characteristics, farm income, and feasibility of cabbage farming households in Sudajaya Girang Village, Selabintana District, Sukabumi Regency. The analysis included production costs, revenue, farm income, the Revenue-Cost (R/C) Ratio, Break Even Point (BEP), and the contribution of cabbage farming income to household income. The study was conducted in Sudajaya Girang Village, Sukabumi Regency, West Java, Indonesia. The location was selected purposively because the village is one of the cabbage production centers in the region. The research was conducted in 2026 using a descriptive quantitative approach.

The population consisted of 30 cabbage farmers in Sudajaya Girang Village. Since the total population was relatively small and accessible, all farmers were included in the study using a census (total sampling) approach. Therefore, the study covered the entire population of cabbage farmers in the research area. The inclusion criteria were: (1) farmers who had cultivated cabbage for at least two planting seasons, (2) farmers with a minimum cultivated land area of 0.1 ha, and (3) farmers who were permanent residents or had lived in Sudajaya Girang Village for an extended period. The exclusion criteria included farmers who were not actively cultivating cabbage during the study period and respondents who were unable to provide complete information during the interview process.

Data Analysis

The collected data will be analyzed using descriptive quantitative methods and farm business analysis. The analysis will be conducted systematically using the following steps:

Descriptive analysis

Used to describe the socioeconomic characteristics of farmers (age, education, experience, dependents). Data are presented in the form of frequency tables, average values (means), and percentages to provide an overview of the respondent profil

Farm Business Analysis

This analysis is used to calculate the cost and profit structure of a farming business. The formulas used refer to Soekartawi (2024) and Suratiyah (2015)

Total Cost

$$TC = TFC + TVC$$

Where :

- TC = Total Cost (Rp)
- TFC = Total Fixed Cost (Rp)
- TVC = Total Variable Cost (Rp)

Total Revenue

$$TR = P \times Q$$

Where :

- TR = Total Revenue (Rp)
- P = Selling Price (Rp/kg)
- Q = Production Quantity (Kg)

Farm Income

$$Pd = TR - TC$$

Where :

- Pd = Farming income (Rp)

Efficiency Analysis

The Revenue Cost Ratio analysis is used to measure farm efficiency. The formula is:

$$\frac{R}{C} = \frac{TR}{TC}$$

Decision Criteria :

- $\frac{R}{C} > 1$ = Profitable/ Feasible
- $\frac{R}{C} = 1$ = Break Even
- $\frac{R}{C} < 1$ = Unprofitable

Break Even Analysis

This analysis is used to determine the minimum production limit or selling price to ensure the farm avoids losses (recovers capital). The BEP calculation refers to Soekartawi's method:

BEP Production (Unit): Calculate the minimum amount of production (Kg) that must be produced.

$$BEP_{Unit} = \frac{TFC}{P - AVC}$$

Where:

- TFC = Total Fixed Cost (Rp)
- P = Selling Price per Kg (Rp)
- AVC = Average Variable Cost per Kg (TVC/Q)

RESULT AND DISCUSSION

Respondent Identity

Socioeconomic characteristics are a set of internal attributes inherent in farmers and their households, which directly and indirectly influence managerial behavior and decision-making processes in farming activities. In this study, the farmer characteristics analyzed included age, formal education level, farming experience, number of dependents, and land ownership status and extent.

Table 1. Distribution of respondents based on age group and formal education of cabbage farmers in Sudajaya Girang Village (2026)

Characteristic Category	Number (People)	Percentage (%)
Kelompok Usia		
Dewasa (36 – 45 Tahun)	16	53,33
Tua (46 – 64 Tahun)	14	46,67
Total	30	100,00
Tingkat Pendidikan Formal		
SD / Sederajat	17	56,57
SMP / Sederajat	5	16,67
SMA / Sederajat	8	26,67
Total	30	100,00

Source : *Processed Primary data 2026*

The majority of farmer respondents (16 people) were in the productive adult age group. This indicates that demographically, farmers in Sudajaya Girang Village still possess the physical capabilities to run a labor-intensive cabbage farming business, particularly during the land preparation and intensive maintenance stages. This finding is supported by Suratiyah (2015), who stated that farmers of productive age generally have higher work motivation and are more responsive to market dynamics compared to older farmers.

In terms of formal education level, the majority of respondents (56.67%) only completed elementary school. This indicates that the farmers' academic background is relatively low. However, this low level of formal

education is generally offset by strong non-formal education in the form of empirical field experience passed down through generations.

Tabel 2. Distribution of Respondents Based on Experience and Number of Dependents of Cabbage Farming Families in Sudajaya Girang Village (2026)

Characteristic Category	Number (People)	Percentage (%)
Farming Experience		
Very Experienced (≥ 22 Years)	11	36,67
Moderately Experienced (16–14 Years)	9	30,00
Less Experienced (≤ 15 Years)	10	33,33
Total	30	100,00
Number of Family Dependents		
2 People	11	36,67
3 People	2	6,67
4 People	9	30,00
5 People	8	26,66
Total	30	100,00

Source: *Processed Primary data 2026*

Theoretically, extensive cabbage farming experience provides farmers with an advantage in identifying symptoms of pathogen attacks—such as clubroot disease—earlier and determining input dosages more precisely. This aligns with Soekartawi's (2024) view, which asserts that empirical experience is directly proportional to the efficiency of production resource allocation.

Regarding the number of dependents in the family, field data shows that 36.67% of households have two dependents, and 30% have four. This large family size plays a dual role. On the one hand, it triggers economic pressure to increase productivity to meet subsistence needs. On the other hand, productive-age family members can be utilized as Domestic Labor (TKDK), reducing cash expenditures on outside labor.

Tabel 3. Distribution of Respondents Based on Area and Land Ownership Status of Cabbage Farmers in Sudajaya Girang Village (2026)

Characteristic Category	Number (People)	Percentage (%)
Land Area		
Large	11	36,67
Medium	9	30,00
Small	10	33,33
Total	30	100,00
Land Tenure Status		
Owned	19	63,33
Leased	11	36,67
Total	30	100,00

Source: *Processed Primary data 2026*

Land area is a fundamental physical capital base in the agricultural economic structure, determining the scale of production and the level of allocative efficiency of farming (Soekartawi, 2024). Based on field observations in Sudajaya Girang Village, the extent of land held by farmers varies considerably. The total land area sampled from 30 respondents was 5.48 hectares, with an average land holding of 0.18 hectares per farmer.

The relatively even distribution between large (36.67%), medium (30.00%), and small (33.33%) land indicates a socioeconomic stratification based on physical assets. Farmers with relatively small land holdings generally respond to these spatial limitations by implementing massive farming intensification to maximize the marginal product from each square meter of land managed.

Tabel 4. Average Use of Physical Inputs for Cabbage Farming Per Hectare/Season in Sudajaya Girang Village (2026)

Land Area Category	Unit	Average Use (0,18 Ha)	Average Use (1 Ha)
Seeds	Gram	52,10	325,10
Fertilizer	Kg	115,00	711,36
Pesticides	Liter	2,49	15,89
Labor	HOK	16,43	113,21
Total Land Area	Ha	5,48	

Source: *Processed Primary data 2026*

Based on Table 4, the intensity of fertilizer and pesticide use among respondents is quite extensive. The average physical fertilizer application reached 711.36 kg/ha, while the pesticide dosage reached 15.89 liters/ha. From an agribusiness perspective, this large volume of synthetic chemical use erodes real profit margins, but also represents a rational form of risk mitigation to reduce plant mortality from the threat of virulent soil-borne pathogens such as the cause of clubroot disease (Saputra et al., 2024).

Tabel. 5 Average Cost Structure of Cabbage Farming Production per Planting Season in Sudajaya Girang Village (2026)

Cost Component	Actual Average (Rp)	Normalized Average (Rp)	Proportion of Subtotal	Proportion of Total (%)
TFC				
Land Tax/Rent	596.667	3.919.834	82,03	22,48
Equipment Depreciation	130.667	713.719	17,97	4,92
Sum of TFC	727.333	4.633.553	100,00	27,40
TVC				
Seeds	309.800	1.876.890	16,08	11,67
Fertilizers	450.950	2.543.164	23,40	16,99
Pesticides	309.800	1.419.710	12,21	8,87
Labor	930.667	6.376.981	48,30	35,07
Sum of TVC	1.926.750	12.216.745	100,00	72,60
TC	2.654.083	16.850.298	-	100,00

Source: *Processed Primary data 2026*

The financing structure of cabbage farming in Sudajaya Girang Village is dominated by variable costs, which account for 72.60% of total production costs, while fixed costs account for only 27.40%. This high proportion of variable costs is a common characteristic of seasonal vegetable farming, which is highly responsive to daily input usage.

A closer look at the variable cost components reveals that labor and taxes/land rent are the two largest expense items, accounting for 48.30% and 82.03% of the subtotal variable costs, respectively (equivalent to 35.07% and 22.48% of total costs). Overall, the financing structure of this farming business is heavily dominated by two main expenses: taxes/land rent in the fixed cost section and labor in the variable cost section. The high proportion of land rental costs creates a binding initial burden, while the high labor costs emphasize the highly labor-intensive nature of cabbage cultivation, which minimizes the risk of crop failure. As explained by Soekartawi (2024), the high burden of fixed costs accompanied by high labor wages in horticultural farming requires farmers to have precise managerial skills; the slightest inefficiency in organizing labor on rented land will immediately erode profit margins drastically.

Tabel 6 Production and Income of Cabbage Farming in Sudajaya Girang Village (2026)

Description	Unit	Actual Average	Normalized Average
Total Production	Kg	4.570,00	25.040,33
Selling Price	Rp/Kg	3.330	3.330
Total Revenue	Rp	15.218.100	83.384.294

Source: *Processed Primary data 2026*

With an average price of Rp3,330/kg, farmers are able to earn Rp15,218,100 per planting season from their actual land. This high revenue is highly dependent on market momentum. According to Saputra et al. (2024), the success of cabbage farming is positively correlated with the visual quality of the crop and the farmer's ability to manage harvest schedules to avoid supply peaks that risk lowering local market prices.

Tabel 7. Analysis of Cabbage Farming Income Per Planting Season in Sudajaya Girang Village (2026)

Analysis Category	Actual Average	Normalized per Hectare
Total Revenue	15.218.100	83.384.294
Total Production Costs	2.654.083	16.850.298
Net Income	12.564.017	66.533.996

Source: *Processed Primary data 2026*

The analysis in Table 7 shows that cabbage farming in Sudajaya Girang Village provides strong financial returns for farming households. The actual net income of Rp12,564,017 (or Rp66,533,996 per hectare) demonstrates that cabbage has high profitability, even though farmers must bear the costs of external labor (TKLK), which significantly drains capital. This finding reinforces the research findings of Jayaputra et al. (2022), which confirmed that dryland leafy vegetable farming remains a rational choice for farmers because it can generate significant accumulated income, provided farmers can mitigate the risk of variable cost increases early in the planting season.

Tabel 8. Feasibility Analysis of Cabbage Farming in Sudajaya Girang Village (2026)

Feasibility Components	Average Values
Average Total Revenue (TR)	83.384.294
Average Total Costs (TC)	16.850.298
R/C Ratio	4,95
Break-Even Price (Rp/Kg)	673
Break-Even Production (Kg)	1.630,32

Source: *Processed Primary data 2026*

The R/C ratio of 4.95 indicates that cabbage farming in the study area was highly profitable and economically feasible. This value was obtained from an average revenue of IDR 83,384,294 per hectare and an average production cost of IDR 16,850,298 per hectare. The relatively high profitability may be associated with favorable selling prices and high production levels during the study period, where average production reached 25,040.33 kg per hectare with a selling price of IDR 3,330 per kilogram. In addition, production costs represented only a small proportion of total revenue, which contributed significantly to the high R/C ratio.

Compared with the findings of Zamrodah (2020), the R/C ratio obtained in this study was relatively higher, indicating better economic performance of cabbage farming in the study area. Differences in profitability may be influenced by variations in production costs, productivity levels, farm management practices, land ownership status, and market conditions. According to farm production theory, profitability is determined by the efficient utilization of production factors, including land, labor, capital, and management. Therefore, the high R/C ratio found in this study suggests that farmers were able to utilize production resources efficiently during the observation period. However, this result should be interpreted cautiously because cabbage prices are highly volatile and changes in market conditions may significantly affect farm profitability in future planting seasons.

Tabel 9. Average Household Income Contribution of Cabbage Farmers by Sector in Sudajaya Girang Village (2026)

Source of Income	Average Value (Rp/MT)	Percentage (%)
A. On-Farm Sector		
1. Cabbage Farming	12.564.017	77,74
2. Other Farming Activities	1.888.333	11,68
B. Sektor Off-Farm	560.000	3,46
C. Sektor Non-Farm	1.150.000	7,12
Total Household Income	16.162.350	100,00

Source: Processed Primary data 2026

The data in Table 9 shows that cabbage farming contributes the largest share of income, accounting for 77.74%. This dominance demonstrates that cabbage is the primary economic base for farming households in Sudajaya Girang Village. This high figure aligns with research by Saputra et al. (2024), which states that in horticultural centers, farmers tend to allocate their land and capital resources intensively to a single, leading commodity deemed most financially profitable.

In addition to their primary income, farming households also earn income from other farming activities (11.68%) through intercropping or crop rotation with commodities such as spring onions and rice. To strengthen family economic stability, some respondents (7.12%) engage in non-farm activities as stall owners, motorcycle taxi drivers, or construction workers. Involvement in the off-farm sector (3.46%) is the lowest. This is due to the significant time required to independently manage cabbage fields, which limits opportunities for employment as farm laborers on other people's land. According to Riani, Martina, et al., (2025), the income structure which is still dominated by the agricultural sector reflects that the area has the carrying capacity of land which is still productive, but at the same time holds the risk of economic vulnerability if there is a crop failure in the main commodity.

Tabel 10. Cross Tabulation Matrix: Land Area vs. Income Level of Cabbage Farming in Sudajaya Girang Village (2026)

Land Area Group (Ha)	Average Actual Revenue (Rp/MT)	R/C Ratio	Notes
Small	6.262.650	3,67	Low R/C Ratio
Medium	8.583.259	4,43	Average for respondents
Large	23.210.785	7,57	High Economies of Scale

Source: Processed Primary data 2026

Despite limited formal education, farmers' ability to manage production factors still results in a high R/C ratio (4.95). This indicates that local wisdom and practical experience are more dominant in determining the success of cabbage farming at the research site. However, the challenge of farmer regeneration remains a strategic issue. As stated in a study by Pasaribu & Istriningsih (2020), the low interest of the younger generation in entering the agricultural sector in the Sukabumi region is triggered by the perception that farming requires large capital with a high risk of failure due to plant diseases. Therefore, the implications of the aging characteristics of farmers in Sudajaya Girang Village require the digitization of agricultural information so that the current good production performance can be passed on to the younger workforce.

CONCLUSION

This study found that most cabbage farmers in Sudajaya Girang Village were of productive age, had relatively low formal education, and possessed considerable farming experience. The average revenue, production cost, and net income of cabbage farming were IDR 83,384,294, IDR 16,850,298, and IDR 66,533,996 per hectare per planting season, respectively. The R/C ratio of 4.95 indicates that cabbage farming is economically feasible and profitable. In addition, cabbage farming contributes significantly to the income of farming households in the study area.

Based on these findings, efforts to improve the sustainability and profitability of cabbage farming should focus on land intensification and labor efficiency. Farmers are encouraged to optimize the use of limited land resources through improved cultivation practices, balanced input application, and the adoption of high-yield

varieties. Furthermore, labor efficiency can be enhanced through better farm management and the use of appropriate agricultural technologies. Therefore, agricultural extension agencies and local governments should strengthen farmer training programs and technical assistance to improve productivity, reduce production costs, and increase household income.

REFERENCES

- Ananda, E. K., Uchyani, R., & Ani, S. W. (2019). Analisis Keuntungan dan Kelayakan Usahatani Kubis di Kecamatan Getasan Kabupaten Semarang. *Agrista*, 7(4), 92–100.
- Aprilliyanti, E., Suswadi, Arbianti, & Prasetyo, A. (2024). Peran Kelembagaan dalam Pengembangan Agribisnis Kubis (*Brassica oleracea*) pada Kelompok Tani Argoayuningtani di Kabupaten Boyolali. *Jurnal Ilmiah Agrineca*, 24(2), 35–46. <https://doi.org/10.36728/afp.v22i2.3889>
- Fadhilah, M., & Rochdiani, D. (2021). Analisis Pendapatan Petani Usahatani Manggis di Desa Simpang Sugiran Kecamatan Guguak Kabupaten Limapuluh Kota. *Mimbar Agribisnis: Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis*, 7(1), 796–804.
- Gusti, I. M., Gayatri, S., & Prasetyo, A. S. (2021). Pengaruh Umur, Tingkat Pendidikan dan Lama Bertani terhadap Pengetahuan Petani Mengenai Manfaat dan Cara Penggunaan Kartu Tani di Kecamatan Parakan. *Jurnal Littbang Provinsi Jawa Tengah*, 19(2), 209–221.
- Hapsari, H., Saidah, Z., Ghani, M. I., & Kartika, N. (2025). Hubungan Karakteristik Petani dengan Tingkat Adopsi Good Agriculture Practices (GAP) dan Pendapatan Usaha Tani. *Jurnal Pertanian Agros*, 27(1), 67–76.
- Hidayatulloh, M. J. S., & Mamilianti, W. (2026). Efisiensi Teknis Usahatani Kubis: Apakah Peran Anggota Keluarga Penting untuk Keberlanjutan Usaha? *Journal of Agribusiness and Community Empowerment*, 9(1), 1–13.
- Ihsan, C., Adawiyah, R., & Hasanuddin, T. (2021). Analisis Usahatani dan Ketahanan Pangan Rumah Tangga Petani Kubis di Kecamatan Sumberejo Kabupaten Tanggamus. *Jurnal Ilmu-Ilmu Agribisnis*, 9(1), 9–16.
- Irmayani, Raffi, & Arman. (2022). Analisis Kelayakan Usahatani Kubis di Desa Sumillan Kecamatan Alla Kabupaten Enrekang. *Jurnal Ilmiah Agrotani*, 4(1), 305–318. <https://doi.org/10.54339/agrotani.v4i1.423>
- Jasuli, Abadi, A. L., & Djauhari, S. (2024). Aplikasi *Trichoderma asperellum* dan Kapur Untuk Mendekomposisi Limbah Kotoran Sapi Segar serta Mengendalikan Akar Gada Tanaman Kubis. *Jurnal HPT*, 12(1), 51–63. <https://doi.org/10.21776/ub.jurnalhpt.2024.012.1.5>
- Jayaputra, Jaya, I. K. D., & Santoso, B. B. (2022). Pengembangan Hortikultura Lahan Kering dan Penerapan Teknologi Budidaya Ramah Lingkungan untuk Meningkatkan Pendapatan Petani di Desa Sukadana Lombok Utara. *Jurnal Gema Ngabdi*, 3(2), 262–272. <https://doi.org/10.29303/jgn.v4i3.291>
- Kolibu, G., Kapantow, G., & Mawaikere, A. (2024). Analisis Pendapatan Usahatani Kubis (*Brassica oleracea* L.) di Desa Tempok Kecamatan Tompaso Kabupaten Minahasa. *Agrirud*, 6(4), 233–240.
- Meiratania, M. (2025). Analisis Pendapatan Usahatani Sayuran Kebun Polikultur Kelurahan Siantan Hilir di Kecamatan Pontianak Utara. *Innovative: Journal of Social Science Research*, 5(4), 12208–12217.
- Nasution, A. H., & Harahap, S. P. R. (2025). Model Matematika Ekonomi pada Pengelolaan Hortikultura di Lahan Marjinal. *Jurnal Inovasi Pendidikan Sains Dan Terapan*, 4(2), 91–98.
- Pasaribu, M., & Istriningsih. (2020). Pengaruh Status Kepemilikan Lahan terhadap Pendapatan Petani Berlahan Sempit di Kabupaten Indramayu dan Purwakarta. *Jurnal Pengkajian Dan Pengembangan Teknologi Pertanian*, 23(2), 187–198.
- Putri, R. D., Prasmatiwi, F. E., & Haryono, D. (2025). Pendapatan Usahatani Kembang Kol Musim Kemarau dan Musim Hujan di Kabupaten Tanggamus. *Mimbar Agribisnis: Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis*, 11(2), 3376–3384. <https://doi.org/10.25157/ma.v11i2.19061>
- Riani, Martina, Salamah, Barmawi, & Zuriani. (2025). Strategi Bertahan Hidup Petani Padi Sawah Pasca Kerusakan Bendungan Irigasi Krueng Pase di Gampong Keutapang Kecamatan Syamtalira Aron. *Jurnal Agrifo*, 1(10).
- Salim, M. N., Susilastuti, D., & Setyowati, R. (2019). Analisis Produktivitas Penggunaan Tenaga Kerja pada Usahatani kentang. *AGRISIA: Jurnal Ilmu-Ilmu Pertanian*, 12(1), 1–16.
- Saputra, M. E., Mahananto, Prasetyo, A., & Arum, M. R. (2024). Analisis Usaha Tani Tumpangsari Kubis (*Brassica oleracea*) dan Cabai Merah (*Capsicum Annum* L) di Kelompok Tani Ngudi Mulyo Kabupaten Boyolali. *Jurnal Ilmiah Agrineca*, 24(2), 81–89.
- Scoones, I. (2009). Livelihoods Perspectives and Rural Development. *The Journal of Peasant Studies*, 36(1),

- 171–196. <https://doi.org/10.1080/03066150902820503>
- Sihotang, J. M., Tapi, T., & Nurhayati. (2025). Dampak Perubahan Iklim terhadap Usaha Tani Padi: Studi Adaptasi Petani Kampung Prafi Mulya, Distrik Prafi, Kabupaten Manokwari. *Journal of Sustainable Agriculture Extension*, 3(2), 107–119. <https://doi.org/10.47687/JoSAE.v3i2.1646>
- Soekartawi. (2024). Analisis Usahatani. UI-Press.
- Subaedah, Puspitasari, A., Agus, A., & Syamsari. (2024). Analisis Daya Tahan Usaha Hortikultura: Tinjauan Aset dan Ekosistem Kewirausahaan. *Journal of Agricultural and Rural Economy*, 1(2), 66–78. <https://doi.org/10.11594/agre.2024.v1i2.6678>
- Zamrodah, Y. (2020). Analisis Kelayakan Usaha Tani Kubis (*Brassica oleracea* L.) di Desa Beji Kecamatan Junrejo Kota Batu. *Agromix*, 11(2), 241–249. <https://doi.org/10.35891/agx.v11i2.2061>
- Zulfa, Q., & Yuswadi, H. (2021). Jaringan Distribusi dan Relasi Pasar Petani Kubis di Dataran Tinggi Ijen. *Jurnal Entitas Sosiologi*, 10(1), 16–33. <https://doi.org/10.19184/jes.v10i01.26952>