DIJEFA: Dinasti International Journal of Economics, Finance & Accounting
E-ISSN: 2721-303X
P-ISSN: 2721-3021
https://dinastipub.org/DIJEFA dinasti.info@gmail.com +62 811 7404 455
DOI: https://doi.org/10.38035/dijefa.v7i1

Economic Feasibility Analysis and Marketing Strategy of Broiler Chicken Farming at "AA Farm" Company in Tanggulun Village, Kadungora District, Garut Regency

Nugraha[1*], Yuda Dharma Putra[2], Ratih Hurriyati[3]
[1]Universitas Islam Bandung, Bandung, Indonesia, nugraha69@unisba.ac.id
[2]Universitas Islam Bandung, Bandung, Indonesia
[3]Universitas Pendidikan Indonesia, Bandung, Indonesia

[*]Corresponding Author: nugraha69@unisba.ac.id[1]

Abstract: Broiler farming is a strategically important sector within Indonesia's national food industry, driven by steadily rising per capita chicken meat consumption. This study aims to (1) evaluate the economic feasibility of the broiler farming enterprise "AA Farm" in Tanggulun Village, Kadungora District, Garut Regency, and (2) formulate a comprehensive marketing strategy to support its sustainable growth. A single-case-study design with a quantitative descriptive approach was employed. Primary data were gathered through in-depth interviews, direct field observations, and structured questionnaires, while secondary data were drawn from company financial records, market reports, and official government publications. Economic feasibility was assessed using Total Cost (TC), Total Revenue (TR), profit (π), Revenue–Cost (R/C) Ratio, and Break-Even Point (BEP) analyses. The findings reveal that "AA Farm" achieves its Break-Even Point at the 17th production cycle (≈17 months), with an annual Return on Investment (ROI) of 47% and an R/C Ratio of 1.40, confirming strong operational profitability. The marketing strategy, built on the Marketing Mix (4P) framework and SWOT analysis, encompasses targeted market segmentation across four consumer groups, cost-plus competitive pricing, a multi-channel distribution system, integrated digital and traditional promotion, and a customer relationship management (CRM) programme. These findings demonstrate that "AA Farm" is economically feasible and possesses substantial potential for sustainable growth when supported by disciplined marketing implementation and modern operational management.

Keywords: Economic Feasibility, Broiler Farming, Marketing Strategy, Market Segmentation, Distribution Channels.

INTRODUCTION

Achieving global food security requires the development of sustainable livestock farming systems capable of meeting the nutritional demands of rapidly growing populations (Waghmare et al., 2024). Accelerated urbanisation, rising disposable incomes, and shifting

dietary preferences have fuelled a sustained increase in global demand for poultry products, positioning the poultry industry as one of the fastest-growing segments of the agricultural sector (OECD & FAO, 2023). Broiler chicken farming, in particular, plays a pivotal role in supplying affordable, high-quality animal protein to consumers across both urban and rural settings.

In Indonesia, chicken meat occupies a dominant share of total meat consumption, owing to its affordability, wide availability, palatability, and superior nutritional profile relative to other protein sources (Abbasi et al., 2024). Per capita chicken meat consumption reached 7.46 kg in 2023, representing a 4.3% year-on-year increase (BPS, 2024). Looking further ahead, global chicken meat consumption is projected to grow by approximately 2.3 times by 2050 relative to 2010 levels, with egg demand expected to rise by 60% over the same period (Yitbarek, 2019). This trajectory underscores the immense long-term market potential for broiler farming enterprises in Indonesia.

Despite its promising prospects, the broiler farming industry faces a complex array of operational challenges. These include feed price volatility—feed constituting as much as 60–70% of total production costs—disease outbreak risks, dependency on external suppliers for day-old chicks (DOC) and specialised feed, and intensifying competition from large integrated corporations with significant economies of scale (Kementerian Pertanian, 2023). Additionally, evolving consumer preferences for food safety and traceability are increasing pressure on producers to adopt modern housing and management systems, necessitating higher capital investment (Yang et al., 2024).

In this competitive environment, marketing strategy has emerged as a critical determinant of business sustainability. An effective marketing approach enables enterprises to differentiate their products, build brand equity, expand market reach, and secure stable revenue streams (Armstrong & Kotler, 2022; Kotler & Keller, 2016). Nevertheless, the majority of smallholder and medium-scale broiler farms in Indonesia operate without a formalised marketing framework, relying instead on conventional sales channels and reactive pricing, which limits their growth potential and resilience against market shocks.

The existing literature on poultry farm feasibility tends to focus predominantly on large-scale commercial operations or addresses financial and marketing dimensions in isolation (Abbasi et al., 2024; Waghmare et al., 2024). There is a notable gap in integrated economic feasibility and marketing strategy studies for small-to-medium broiler enterprises operating within specific regional market contexts in Indonesia. “AA Farm,” located in Tanggulun Village, Kadungora District, Garut Regency, represents a typical small-to-medium broiler operation that has recently commenced production and seeks to establish a sustainable and profitable business model.

This study therefore addresses two interrelated objectives: (1) to conduct a rigorous economic feasibility analysis of “AA Farm” using established financial metrics, including TC, TR, profit, R/C Ratio, and BEP; and (2) to formulate a comprehensive, evidence-based marketing strategy using the 4P Marketing Mix framework and SWOT analysis. By integrating economic and marketing perspectives, this research contributes practical insights for farm owners, local investors, and agribusiness policymakers seeking to strengthen the competitiveness and sustainability of the small-to-medium broiler farming sector in West Java, Indonesia.

METHOD

Research Design and Location

This research adopted a single-case-study design with a quantitative descriptive approach, enabling an in-depth examination of the economic and marketing dimensions of a specific broiler farming enterprise (Creswell & Creswell, 2018). The study was conducted at

"AA Farm," located in Tanggulun Village, Kadungora District, Garut Regency, West Java, Indonesia. The research site was selected purposively, as the farm was actively operational, maintained detailed production and financial records, and typified the small-to-medium broiler farming enterprises prevalent in the region (Sugiyono, 2022). Data collection was carried out during the period of September–October 2024.

The unit of analysis is one complete broiler production cycle, lasting 28–35 days. Operational and financial parameters were projected on an annual basis (assuming eight cycles per year, after accounting for inter-cycle cleaning and preparation periods) to enable investment return analysis.

Data Collection

Primary data were collected through three complementary methods: (1) in-depth, semi-structured interviews with the farm owner, farm employees, distributors, market traders, and end-consumers; (2) direct field observations to assess housing conditions, operational workflows, and equipment; and (3) structured questionnaires distributed to key market actors to elicit data on consumer preferences, purchasing frequency, and willingness to pay. Secondary data were obtained from the farm's financial records and production logs, official publications of the Badan Pusat Statistik (BPS), the Kementerian Pertanian Republik Indonesia, and peer-reviewed literature.

Economic Feasibility Analysis

Economic feasibility was assessed using the analytical framework proposed by Kadariah (2001), encompassing the following metrics:

1. Total Cost (TC)
   Total cost represents all expenditures incurred during one production cycle:
   $TC = FC + VC$
   where FC = Fixed Cost (depreciation of facilities and equipment) and VC = Variable Cost (DOC, feed, medicines, and labour).
2. Total Revenue (TR)
   Total revenue is derived from broiler sales:
   $TR = P \times Q$
   where P = Selling Price per kg and Q = Total Weight of Harvested Chickens (kg).
3. Profit (π)
   $\pi = TR - TC$
4. Revenue–Cost Ratio (R/C Ratio)
   $R/C = TR / TC$
   Decision criteria: $R/C > 1$ indicates profitability; $R/C = 1$ indicates break-even; $R/C < 1$ indicates a loss.
5. Break-Even Point (BEP)
   $BEP\ (Units) = FC / (P - AVC)$
   $BEP\ (Revenue) = FC / (1 - VC/TR)$
   A BEP lower than actual sales volume or revenue confirms that the business is operating profitably above its minimum threshold.
6. Payback Period and Return on Investment (ROI)
   Payback Period (cycles) = Total Initial Investment / Net Profit per Cycle
   Annual ROI (%) = (Annual Net Profit / Total Initial Investment) × 100%

Market and Marketing Analysis

Market analysis was conducted through surveys and field observations involving market traders, distributors, restaurant operators, and end-consumers to identify market segmentation,

consumer preferences, purchasing behaviour, and competitive dynamics. The marketing strategy was formulated using the Marketing Mix (4P) framework—Product, Price, Place, and Promotion—integrated with a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis to determine optimal product positioning within the regional market (Kotler & Keller, 2016; Armstrong & Kotler, 2022). All calculations assume normal operating conditions with a mortality rate of 0–3%, stable feed prices, and eight production cycles per annum (OECD & FAO, 2023).

RESULTS AND DISCUSSION

Economic Feasibility Analysis

1. Initial Investment Capital Estimation

The total initial investment capital for "AA Farm" comprises fixed investment in production infrastructure and initial working capital to support the first production cycle, as presented in Table 1.

Table 1. Initial Investment Capital Estimation

Investment Component	Cost (IDR)
Land (8 x 10 meters)	50,000,000
Poultry House Construction	100,000,000
Equipment (blower, feeders, drinkers, lighting, etc.)	20,000,000
Initial Operating Costs (DOC, feed, medicine, labor)	34,000,000
Total Initial Investment	204,000,000

Source: Primary data, AA Farm (2024).

A total of IDR 170,000,000 is allocated for fixed investment in primary production facilities, while IDR 34,000,000 is used as working capital for one production cycle. This separation facilitates feasibility and investment return analysis.

2. Operational Cost Estimation per Cycle

Variable operational costs per production cycle (28–35 days) for a batch of 1,000 birds are detailed in Table 2.

Table 2. Operational Costs per Production Cycle

Cost Component	Cost (IDR)
Day-Old Chicks (1,000 birds @ IDR 7,000)	7,000,000
Feed (SP42)	20,000,000
Medicines and Vitamins	2,000,000
Labor	5,000,000
Total Operational Cost	34,000,000

Feed represents the single largest cost item at IDR 20,000,000 per cycle, accounting for 58.8% of total variable costs. This is consistent with the broader literature, which typically places feed costs at 60–70% of total broiler production costs in Indonesia (Abbasi et al., 2024). Reducing feed wastage and improving the feed conversion ratio (FCR)

therefore constitute the most impactful levers for enhancing the profitability of the enterprise.

3. Revenue and Profitability Estimation

Broilers are harvested at 28–35 days with an average live weight of 1.9 kg per bird, assuming a 97% survival rate (30 birds mortality). Total harvested weight is thus 970 birds × 1.9 kg = 1,843 kg. For conservatism, this study uses 1,900 kg per cycle (equivalent to 1,000 birds × 1.9 kg), consistent with the farm's operational records. Revenue and profit estimates are summarised in Table 3.3

Table 3. Revenue and Profit Estimation per Cycle

Component	Value (IDR)
Total Revenue (1,900 kg × IDR 25,000)	47,500,000
Total Variable Cost (VC)	34,000,000
Gross Profit per Cycle	13,500,000
Depreciation – Housing & Equipment (per cycle)	1,500,000
Net Profit per Cycle (π)	12,000,000

Source: Primary data, AA Farm (2024). Depreciation calculated using straight-line method over 10 years / ~80 cycles.

The R/C Ratio is calculated as: 47,500,000 / 34,000,000 = 1.40, which is greater than 1.0, confirming that the business is operationally profitable. For every IDR 1.00 of cost incurred, "AA Farm" generates IDR 1.40 in revenue, yielding a 40% gross return on operational expenditure.

4. Break-Even Point Analysis

Break-even analysis was conducted to determine the minimum output required for "AA Farm" to cover all costs, using fixed cost (FC = depreciation) of IDR 1,500,000 per cycle, Average Variable Cost (AVC) of IDR 34,000,000 / 1,900 kg ≈ IDR 17,895/kg, and selling price (P) = IDR 25,000/kg.

a. BEP (kg) = FC / (P − AVC) = 1,500,000 / (25,000 − 17,895) = 1,500,000 / 7,105 ≈ 211 kg
b. BEP (Revenue) = FC / (1 − VC/TR) = 1,500,000 / (1 − 34,000,000/47,500,000) ≈ IDR 5,278,000

The BEP production volume of 211 kg is substantially below the farm's actual output of 1,900 kg per cycle, and the BEP revenue of IDR 5,278,000 is far below actual revenue of IDR 47,500,000. This wide safety margin indicates low operational risk and confirms the economic viability of the enterprise.

5. Payback Period and Return on Investment

Table 3.4. Summary of Economic Feasibility Indicators

Indicator	Value
Total Initial Investment	IDR 204,000,000
Net Profit per Cycle	IDR 12,000,000
Payback Period	17 cycles (≈17 months)

Annual Net Profit (8 cycles)	IDR 96,000,000
Annual ROI	47% (96,000,000 / 204,000,000 × 100%)
R/C Ratio	1.40
BEP (Volume)	211 kg / cycle (11.1% of capacity)

Source: Authors' calculations based on primary data, AA Farm (2024).

The Payback Period of 17 cycles (≈17 months, based on 8 cycles/year ≈ 2.1 years of operation) demonstrates a relatively rapid return on investment for an agricultural enterprise. The annual ROI of 47% (calculated as IDR 96,000,000 / IDR 204,000,000 × 100%) significantly exceeds the prevailing bank deposit rates in Indonesia (≈4–6% per annum), making "AA Farm" an attractive investment proposition. These results are consistent with findings reported for comparable broiler enterprises in Indonesia (Kementerian Pertanian, 2023) and internationally (Waghmare et al., 2024).

Market and Demand Analysis

Field surveys and interviews with market actors in Garut Regency reveal consistent and growing demand for broiler chicken meat. Traditional wet markets, restaurants, food stalls (warung), and modern retail collectively absorb an estimated 500–800 kg of broiler meat per day within the Kadungora–Garut corridor. Seasonal demand spikes of 40–50% are observed during weekends and major religious holidays (Eid al-Fitr, Eid al-Adha, and Christmas). Demand drivers include: (1) the competitive price of broiler meat relative to beef and mutton; (2) strong cultural and culinary preference for chicken-based dishes; (3) rapid expansion of the food-service and restaurant sector in Garut; and (4) increasing health awareness driving preference for lean animal protein.

The competitive landscape comprises 3–5 large-scale farms (3,000–10,000 birds/cycle) and numerous small-scale operations (fewer than 2,000 birds/cycle). While large farms benefit from economies of scale in procurement, "AA Farm" can differentiate itself through product freshness, direct relationship marketing, and operational agility.

Marketing Strategy

1. Market Segmentation and Target Consumers

Based on market analysis, four primary consumer segments were identified, each requiring a distinct marketing approach. The segmentation, characteristics, estimated market share, and recommended strategy for each segment are presented in Table 5

Table 5. Market Segmentation and Marketing Strategy for "AA Farm"

Segment	Characteristics	Market Share	Strategy
Traditional Market	High volume, price sensitive	40%	Competitive pricing, consistent quality
Restaurants & Food Stalls	Routine purchases, quality consistency	35%	Monthly contracts, delivery service
Modern Retail	High standards, proper packaging	15%	Certification, premium branding
Direct Consumers	Household buyers	10%	Social media, local promotion

Source: Authors' field analysis, AA Farm (2024).

2. Pricing Strategy

"AA Farm" applies a cost-plus pricing strategy, setting the selling price at a margin of 15–20% above the production cost of approximately IDR 20,000/kg. This results in a price range of IDR 23,000–26,000/kg, differentiated by segment: (1) Traditional market: IDR 23,000–24,000/kg; (2) Restaurants & food stalls: IDR 24,000–25,000/kg; (3) Modern retail: IDR 25,000–26,000/kg; (4) Direct consumers: IDR 24,000/kg (minimum 5 kg). Price flexibility of up to 10% is maintained to accommodate market fluctuations. This tiered pricing structure balances volume competitiveness in price-sensitive channels with premium positioning in value-driven segments, consistent with best practices in agricultural marketing (Armstrong & Kotler, 2022).

3. Distribution Channels

"AA Farm" employs a multi-channel distribution strategy designed to maximise market reach while maintaining cost efficiency and product quality. Three distribution channels are utilised:

a. Direct Distribution: On-site farm sales for walk-in consumers; a dedicated delivery service for restaurants and food stalls within a 20 km radius; and WhatsApp Business/social media ordering with a minimum 24-hour pre-order window. Direct channels eliminate intermediary margins, improving net realisation.
b. Intermediary Distribution: Partnerships with 3–5 established traders in major traditional markets in Garut Regency, operating under a consignment or direct purchase system. Traders are granted a margin of 8–10% to maintain end-consumer price competitiveness. This channel provides rapid volume absorption and market penetration without proportional logistical investment.
c. Modern Retail Partnerships: Products are processed, vacuum- or styrofoam-packaged, and branded as "AA Farm Premium" for placement in local minimarkets and supermarkets. PIRT certification and halal certification are being pursued to meet the quality and regulatory standards of this channel, which offers the highest per-kilogram realisation price.

4. Promotion and Branding Strategy

"AA Farm" is positioned as a provider of premium-quality, health-assured broiler chickens, differentiated by its close-house management system and biosecurity standards. The tagline "Sehat Ayamnya, Kuat Keluarganya" (Healthy Chickens, Strong Families) reinforces health and quality associations. The visual identity utilises green (freshness) and white (cleanliness) as primary colours, applied consistently across packaging, banners, and digital assets.

Digital promotion is conducted via Instagram, Facebook, and TikTok (3–4 posts/week featuring farming practices, nutritional content, and customer testimonials) and WhatsApp Business (for product catalogues, order management, and direct customer communication). Traditional promotion includes strategic banner and billboard placement near traditional markets and arterial roads, distribution of brochures to food stalls and restaurants, and participation in local agricultural exhibitions and bazaars.

5. Customer Relationship Management (CRM)

A systematic CRM programme was developed to strengthen customer retention and satisfaction. Key components include: (1) a customer database recording contact details, purchase history, and product preferences, enabling personalised service; (2) a 24/7 WhatsApp hotline for rapid complaint resolution and customer enquiries; (3) a loyalty programme with a points-based reward system and referral incentives; (4) monthly

WhatsApp newsletter group communications with product updates and promotional content; and (5) a product return and replacement guarantee for sub-standard deliveries. This CRM framework aligns with the relationship marketing principles advocated by Kotler & Keller (2016), which emphasise customer lifetime value over transactional engagement.

SWOT Analysis

The integrated SWOT analysis identifies the strategic position of "AA Farm" and informs the prioritisation of marketing and operational initiatives (Table 6).

Table 3.6. SWOT Analysis of "AA Farm"

STRENGTHS	WEAKNESSES
• Strategic location with easy access to Garut's main markets • Modern close-house system ensuring consistent chicken health and quality • Competitive production costs (IDR 20,000/kg) with healthy profit margins (40% gross) • Production flexibility: scalable from 1,000 to 5,000 birds/cycle • Wide BEP safety margin (actual output 9× above BEP volume)	• Low initial brand awareness as a market entrant • Limited current production scale (1,000 birds/cycle) restricting market presence • Capital constraints limiting rapid capacity expansion • PIRT and halal certifications pending, restricting modern retail access
OPPORTUNITIES	**THREATS**
• 4.3% annual growth in per capita chicken meat consumption in Indonesia • Health and wellness trends increasing demand for high-quality lean protein • Rapid growth of food-service sector (restaurants, catering) in Garut • Government support programmes for livestock MSMEs (Kementerian Pertanian, 2023) • Digital marketplace expansion enabling broader customer reach	• Intense competition from large integrated farms with economies of scale • Feed price volatility (constituting >58% of variable costs) • Disease outbreak risks potentially disrupting production continuity • Regulatory changes in poultry farming standards and food safety requirements

Source: Authors' analysis (2024).

The SWOT analysis suggests that "AA Farm" should prioritise (SO) strategies leveraging its quality production system and the growing local market to build brand equity quickly; (ST) strategies to hedge feed cost risk through bulk procurement agreements and maintain a disease prevention protocol; and (WO) strategies to accelerate PIRT/halal certification and selectively increase production capacity as capital permits.

Marketing Projections and Sales Targets

Based on the current production capacity of 1,900 kg per cycle and a planned schedule of eight cycles per year (two cycles per quarter), the first-year sales projection is presented in Table 7. Targets are conservative, reflecting the market penetration phase and current single-cycle capacity.

Table 3.7. First-Year Sales Projection for "AA Farm"

Period	Volume (kg)	Revenue (IDR)	Strategic Focus
Month 1–3 (2 cycles)	3,800	95,000,000	Market penetration; build distributor relationships
Month 4–6 (2 cycles)	3,800	95,000,000	B2B contract development; loyalty programme launch

Month 7–9 (2 cycles)	3,800	95,000,000	Modern retail entry; PIRT certification completion
Month 10–12 (2 cycles)	3,800	95,000,000	Market stabilisation; customer retention & expansion planning
Year 1 Total (8 cycles)	15,200	380,000,000	Annual ROI target: 47%

Source: Authors' projections, AA Farm (2024). All four quarters reflect identical production capacity; revenue growth from Year 2 onward is expected through incremental capacity expansion.

The uniform quarterly projections reflect the current single-capacity constraint of 1,000 birds per cycle. From Year 2 onward, "AA Farm" plans to scale towards 2,500–3,000 birds per cycle, leveraging the existing housing capacity of 5,000 birds, which would substantially increase revenue while achieving unit-cost reductions through economies of scale.

CONCLUSION

This study demonstrates that the broiler farming enterprise "AA Farm" in Tanggulun Village, Kadungora District, Garut Regency is economically feasible and presents strong growth potential. The financial analysis confirms that the enterprise generates a net profit of IDR 12,000,000 per production cycle, with an R/C Ratio of 1.40, a Break-Even Point reached at just 211 kg (11.1% of cycle capacity), a Payback Period of 17 cycles (≈17 months of operation), and an annual Return on Investment of 47%. These indicators collectively attest to the financial viability and attractiveness of the investment, particularly in the context of Indonesia's growing demand for affordable, high-quality broiler chicken.

The marketing strategy developed through SWOT analysis and the 4P Marketing Mix framework is comprehensive and actionable. The four-segment market approach—targeting traditional markets (40%), restaurants and food stalls (35%), modern retail (15%), and direct consumers (10%)—provides risk diversification and multiple revenue streams. The tiered pricing strategy (IDR 23,000–26,000/kg), multi-channel distribution system, integrated digital and traditional promotion, and systematic CRM programme collectively establish a robust commercial foundation for sustainable business growth.

The long-term success of "AA Farm" depends critically on: (1) effective execution of the marketing strategy, particularly brand building and customer retention; (2) disciplined operational management adhering to close-house biosecurity and welfare standards; (3) procurement of high-quality, vaccinated day-old chicks to minimise mortality and optimise growth performance; (4) feed cost management through bulk purchasing agreements or cooperative procurement; and (5) timely attainment of PIRT and halal certifications to unlock modern retail access. Integration of these economic and marketing imperatives constitutes the key to long-term business sustainability.

Limitations and Future Research

This study is subject to several limitations. First, it is based on a single-enterprise case study, limiting the generalisability of findings to other broiler farming contexts. Second, the financial projections assume stable feed prices and disease-free operations; actual performance may differ under adverse conditions. Third, the analysis does not incorporate sensitivity analysis for key variables such as feed price changes, selling price fluctuations, or DOC supply disruptions.

Future research should: (1) apply sensitivity and scenario analyses to evaluate business resilience under different risk conditions; (2) conduct multi-farm comparative studies to establish industry benchmarks for small-to-medium broiler enterprises in West Java; (3) investigate the feasibility of vertical integration (e.g., in-house feed blending or DOC hatchery)

as a cost reduction strategy; and (4) examine the impact of digital marketing adoption on revenue growth and customer acquisition costs in the Indonesian broiler farming sector.

REFERENCES

Abbasi, I. A., Shamim, A., Shad, M. K., Ashari, H., & Yusuf, I. (2024). Circular economy-based integrated farming system for indigenous chicken: Fostering food security and sustainability. *Journal of Cleaner Production, 436*, 140368. https://doi.org/10.1016/j.jclepro.2024.140368

Armstrong, G., & Kotler, P. (2022). *Marketing: An introduction* (14th ed.). Pearson Education.

Badan Pusat Statistik. (2024). *Statistik konsumsi daging ayam ras per kapita Indonesia 2023*. https://www.bps.go.id

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications.

Kadariah. (2001). *Evaluasi proyek: Analisis ekonomi*. Fakultas Ekonomi Universitas Indonesia.

Kementerian Pertanian Republik Indonesia. (2023). *Statistik peternakan dan kesehatan hewan 2023*. Direktorat Jenderal Peternakan dan Kesehatan Hewan. https://ditjenpkh.pertanian.go.id

Kotler, P., & Keller, K. L. (2016). *Marketing management* (15th ed.). Pearson Education.

OECD, & FAO. (2023). *OECD-FAO agricultural outlook 2023–2032*. OECD Publishing. https://doi.org/10.1787/08801ab7-en

Sugiyono. (2022). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta.

Waghmare, S. D., Prakash, S., Sharma, A., Krishnani, K. K., Yadav, V. K., & Qureshi, N. W. (2024). Evaluating economic viability and environmental externalities of integrated tilapia-sugarcane farming in Maharashtra. *Agricultural Water Management, 302*, 108967. https://doi.org/10.1016/j.agwat.2024.108967

Yang, D., Cui, D., & Ying, Y. (2024). Development and trends of chicken farming robots in chicken farming tasks: A review. *Computers and Electronics in Agriculture, 221*, 108916. https://doi.org/10.1016/j.compag.2024.108916

Yitbarek, M. (2019). Livestock and livestock product trend by 2050: Review. *International Journal of Animal Research*, 1–20.