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Islamic Farming, Halal, Sustainability, and Farmer Welfare Impact

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ABSTRACT

This study examines the impact of Islamic ethical farming practices, halal certification, and sustainable goat farming on the economic welfare of goat farmers in rural Indonesia. Using a quantitative approach, data were collected from 90 goat farmers through a structured questionnaire, and the results were analyzed using SPSS version 25. The findings reveal that all three independent variables—Islamic ethical farming practices, halal certification, and sustainable goat farming—positively and significantly influence the economic welfare of goat farmers. Sustainable farming practices had the strongest effect, followed by halal certification and Islamic ethical farming. The study concludes that integrating ethical, religious, and sustainable practices enhances the productivity, marketability, and long-term viability of goat farming operations, thereby improving farmers' economic welfare. These results offer valuable insights for policymakers and practitioners seeking to promote sustainable and ethical agriculture.

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1. INTRODUCTION

Agriculture plays an important role in the economic development of rural communities, especially in developing countries such as Indonesia. The integration of Islamic ethical husbandry practices, halal certification, and sustainable agriculture in goat farming in Indonesia offers solutions to economic, environmental, and ethical challenges. This approach not only fulfils consumer demand for ethical and halal products, but also improves the economic welfare of farmers, especially in Lampung and Bantul, which play an important role in rural livelihoods and food security [1], [2]. Bligon goat farming in Bantul showed financial viability with a positive Net Benefit-Cost Ratio [1], while Etawah farming in Bali showed that large herds increased income [3]. Sustainable practices such as organic farming and chemical reduction support ecological balance and farmer welfare [4], with intensive practices in Kolaka also contributing to sustainability [5]. The integration of Islamic ethics and halal certification has the potential to increase the market value and competitiveness of animal products [4].

Islamic ethical animal husbandry practices emphasise humane treatment of animals, ethical use of resources, and adherence to Islamic principles aligned with the concept of tayyib-meaning good or healthy. These practices not only fulfil religious obligations, but also support sustainability and improved livestock yields.

Tayyib goes beyond halal certification, taking into account ethical treatment of animals and sustainable resource management. Islamic Sharia prescribes humane slaughter, which is believed to result in healthier meat with positive psychological impacts [6], and emphasises compassion and justice towards living beings [7]. Islamic environmental ethics emphasises stewardship and moderation in managing resources to maintain ecological balance [7], [8] and human responsibility as stewards of the earth [8]. Based on the Qur'an and Sunnah, Islamic ethics encourage conservation and sustainability [9], with the principle of Tawhid advocating balance in animal husbandry [10].

Halal certification is vital for goat farmers in rural Indonesia, offering significant economic opportunities by meeting the needs of the Muslim consumer market. With a large Muslim population, the demand for halal-certified meat is high, opening up access to a wider market and increasing consumer confidence. Legal frameworks, such as Law No. 33/2014, mandate halal certification, which provides legal protection and spiritual rights for Muslim consumers [11], [12]. This law requires micro, small, and medium enterprises (MSMEs) to obtain halal certification, thereby increasing competitiveness and consumer confidence [11]. Halal certification not only increases sales growth, but also strengthens Indonesia's position in the global halal economy [13], [14]. However, the implementation of certification faces challenges such as certification costs and the need for inter-agency coordination [12], [14], although modern technology is developed to improve efficiency and compliance with halal standards [15].

Sustainable goat farming practices are essential to maintain environmental balance and the long-term viability of the farm. These practices include efficient use of resources, maintaining animal health, and minimising environmental impact through waste management and responsible grazing. With sustainable methods, farmers can improve economic resilience by reducing costs and increasing efficiency. The use of organic resources, integrated nutrient management and silvopastoral systems help improve soil health and reduce dependence on chemicals [16]–[18]. Efficiency is improved through crop rotation, local organic fertiliser and manure recycling [16], [17]. Good animal care and reproductive management can also increase productivity and reduce mortality rates [16], [19]. Silvopastoral systems support biodiversity and reduce carbon footprints [20]. However, limited resources and harsh climatic conditions, especially in arid regions, pose challenges to their implementation [19], [20].

The urgency of this research arises from the increasing demand for ethical and sustainable animal husbandry practices in the agricultural sector, particularly in Muslim-majority countries such as Indonesia. The integration of Islamic ethical values, halal certification and sustainability in goat farming presents challenges and opportunities for rural farmers. Halal food supply chains (HFSCs) emphasise ethical practices, which are critical to maintaining halal integrity and compliance with Sharia law. However, there is a dearth of research focusing on these ethical aspects, which are critical for marketing and brand management in global markets [21]. The halal food industry is growing rapidly, fuelled by culinary tourism, but this growth raises concerns about its long-term impact on ecosystems and cultural heritage. Sustainable practices are essential to ensure the sustainability of the industry and protect these elements [22].

PROBLEM STATEMENTS

Despite the growing awareness of the importance of ethical, halal and sustainable animal husbandry practices, there is a significant gap in the adoption of these methods by goat farmers in rural areas of Indonesia. Goat farmers in rural Indonesia face challenges in adopting modern techniques as per Islamic ethical guidelines and halal certification, which limits their market access. Unsustainable practices can also lead to environmental degradation and economic instability. Several strategies have been implemented, such as the use of grass

chopping machines at 99 Farm which improves feed efficiency and supports ecological balance [23], as well as a cluster-based closed-loop system by HPDKI which increases productivity and reduces chemicals [4]. The potential for livestock development in Bantul requires government and private support [24], while Balifarm's initiative in Kesiut village converts goat manure into organic fertiliser, reducing waste and increasing economic value [5], [25]. Education on sustainable practices also increases the effectiveness of waste management [25].

This study seeks to answer the central question: how do Islamic ethical animal husbandry practices, halal certification, and sustainable goat farming impact the economic well-being of goat farmers in rural Indonesia? Understanding these relationships is important to formulate strategies that can help farmers improve economic outcomes while still meeting ethical, religious and environmental standards. This study aims to investigate the combined impact of the three factors, hypothesising that the joint implementation of Islamic ethical practices, halal certification and sustainable methods can lead to better economic returns, improved productivity, market access and consumer confidence. By focusing on rural goat farmers, this study fills a gap in the understanding of the crossover effects of religious, ethical and sustainability practices on economic well-being in the agricultural sector.

2. LITERATURE REVIEW

2.1 Islamic Ethical Farming Practices

Islamic ethical farming practices, rooted in the concept of tayyib, emphasise not only halal, but also ethical treatment of animals and sustainable environmental management. These practices are embedded in Islamic teachings that encourage humane treatment of farm animals as well as responsible use of natural resources. Islamic environmental ethical principles such as stewardship, moderation and justice are derived from the Qur'an and Sunnah, which guide ethical agricultural practices [7], [26]. Islamic law prioritises animal welfare, ensuring their rights to food, water, shelter and protection from harm [27]. In addition, Islamic teachings emphasise human responsibility as custodians of the earth, with the concept of Tawhid emphasising the interconnectedness of all elements of nature and the preservation of ecological balance [7], [26], [28]. Implementing Islamic ethical animal husbandry practices can improve the health and productivity of livestock, thereby providing economic benefits to farmers [26], [27].

2.2 Halal Certification

Halal certification in Indonesia is vital for breeders aiming to access the Muslim consumer market, ensuring compliance with Islamic food laws. Overseen by the Indonesian Ulama Assembly (MUI) and now BPJPH, the certification process monitors the supply chain and enforces ethical standards. This certification not only increases sales and market share by building consumer confidence but also opens access to broader markets, with over 3 million products certified by 2023 [12]. However, small-scale breeders face challenges due to the cost and complexity of the process [29], [30]. Halal certification offers economic benefits, allowing rural breeders to command higher prices, and the growing demand for halal products locally and internationally presents significant opportunities [31]. Despite this, barriers such as the complexity of the process and lack of understanding of regulations hinder small farmers [12], [29]. Although the transition to BPJPH has streamlined the process, challenges remain, particularly in sectors like fashion [32]. Improving understanding and reducing costs could help small-scale breeders better access the expanding halal market [31].

2.3 Sustainable Goat Farming

Sustainable goat farming practices are essential for reducing environmental impacts and increasing economic resilience. These practices include efficient land and water use, responsible grazing, waste management and biodiversity preservation, all of which contribute to farm viability without harming the environment. In rural

Indonesia, the adoption of sustainable practices can improve productivity and economic outcomes, although many farmers face challenges due to a lack of knowledge and resources. Land and water efficiency through crop rotation and conservation tillage improves soil health and reduces water consumption [33], while in semi-arid areas, strategic management is required for sustainability [34]. Rotational grazing and chemical reduction also conserve biodiversity and reduce environmental degradation [20]. These practices can reduce nitrogen oxide emissions and fertiliser use, support sustainable agriculture goals [35], [36], and improve economic outcomes and empower communities through comprehensive policy support and education [20].

2.4 Economic Welfare of Farmers

The economic well-being of goat farmers can be improved through the adoption of Islamic ethical farming, halal certification, and sustainable practices, which not only increase productivity and market access, but also correspond to consumer preferences for ethical products. Sustainable practices, as highlighted by Abobatta and Fouad, improve soil health and reduce input costs, which supports profitability and environmental conservation [37]. Kamakaula emphasises the importance of economic, ecological and social integration in agriculture for sustainability, with diversification as a key strategy [20]. Halal certification opens premium market access as consumers are willing to pay more for certified products [38], while sustainable practices such as crop rotation and integrated pest management increase productivity [18]. Challenges such as limited access to markets and technology still face rural farmers, but interventions such as selective breeding are necessary for sustainable growth [19].

2.5 GAPS AND HYPOTHESIS

While there is a growing body of literature on halal certification and sustainable agriculture, few studies have explored their combined impact on the economic welfare of goat farmers in rural Indonesia. Most research focuses on one aspect—halal certification or sustainability—without examining how they interact to improve farming outcomes. Additionally, there is limited empirical evidence on the adoption of Islamic ethical farming practices in Indonesia and their economic impact. This study addresses these gaps by investigating the interplay between Islamic ethical farming, halal certification, and sustainable practices, focusing on the economic welfare of goat farmers. Using the Sustainable Livelihoods Framework [39], [40], it explores how access to resources, market opportunities, and sustainability shape farmers' welfare, integrating Islamic ethics to offer a comprehensive view of how these factors influence outcomes for rural farmers.

2.5.1 The Impact of Islamic Ethical Farming Practices on Economic Welfare

Islamic ethical farming practices, rooted in the principles of tayyib (wholesome) and ihsan (excellence in conduct), encourage humane treatment of animals and sustainable use of natural resources. These practices emphasize ethical farming techniques that not only ensure compliance with religious norms but also foster better care for livestock, which can lead to higher productivity. By maintaining animal health and well-being, farmers are likely to experience improved yields and reduced costs associated with veterinary care or livestock losses [41], [42]. Additionally, these practices align with consumer preferences for ethically produced goods, which can enhance marketability and command higher prices for animal products [15], [43]. Therefore, it is hypothesized that:

H1: Islamic ethical farming practices have a positive and significant effect on the economic welfare of goat farmers in rural Indonesia.

2.5.2 The Impact of Halal Certification on Economic Welfare

Halal certification plays a crucial role in accessing the Muslim consumer market, which values adherence to Islamic dietary laws. By obtaining halal certification, goat farmers can tap into a larger market both domestically and internationally, where halal-certified products are in high demand [11],

[15]. Halal certification also enhances consumer trust, as it guarantees that the products comply with religious and ethical standards. For farmers in rural Indonesia, halal certification can potentially increase sales, expand market reach, and lead to higher incomes [14], [44]. Moreover, certified products tend to be associated with better quality and safety, further enhancing their appeal to consumers [14], [15], [45]. Based on these considerations, it is hypothesized that:

H2: Halal certification has a positive and significant effect on the economic welfare of goat farmers in rural Indonesia.

2.5.3 The Impact of Sustainable Goat Farming on Economic Welfare

Sustainable goat farming practices, such as rotational grazing, organic feeding, and waste management, have the potential to improve farm productivity while reducing environmental impact. By adopting these practices, farmers can lower input costs, preserve the health of their land, and ensure long-term productivity [46], [47]. Sustainable practices also improve the overall quality of the livestock and their products, which can lead to higher market prices and consumer demand [16], [20]. Moreover, sustainability in farming can safeguard the livelihoods of farmers by ensuring that their agricultural activities remain viable over time, despite challenges such as climate change and resource scarcity [16], [46], [47]. Thus, it is hypothesized that:

H3: Sustainable goat farming practices have a positive and significant effect on the economic welfare of goat farmers in rural Indonesia.

3. METHODS

3.1 Research Approach and Sample

This study adopts a quantitative research design to investigate the relationships between the independent variables—Islamic ethical farming practices, halal certification, and sustainable goat farming—and the dependent variable, which is the economic welfare of goat farmers. The quantitative approach was chosen because it allows for the systematic measurement and analysis of data to identify patterns and correlations between variables. This study uses a cross-sectional design, where data were collected at a single point in time from a sample of goat farmers in rural Indonesia.

The population of this study consists of goat farmers in rural Indonesia, with the sample drawn from regions where Islamic ethical farming practices, halal certification, and sustainability are increasingly relevant. A purposive sampling technique was employed to include farmers actively engaged in goat farming and familiar with or implementing ethical, halal, and sustainable practices. The final sample size of 90 goat farmers was determined based on practical constraints and the need for sufficient data for reliable statistical analysis using SPSS version 25. To ensure representativeness, the sample includes farmers from various rural regions, particularly those involved in local goat farming cooperatives or agricultural associations.

3.2 Data Collection Technique

Data were collected through a structured questionnaire distributed to the selected sample of goat farmers, designed to gather information on the implementation of Islamic ethical farming practices, halal certification status, sustainable farming methods, and the economic welfare of the farmers. The questionnaire consisted of closed-ended questions measured on a Likert scale from 1 to 5, where 1 represented "strongly disagree" and 5 "strongly agree." Administered in person by trained enumerators, the questionnaire's purpose was explained to ensure respondents understood the questions, with all responses collected anonymously to encourage honest and accurate reporting. The variables in this study were measured using the Likert scale to capture the perceptions and practices of the goat farmers.

Table 1. Measurement Items

Variable	Indicator	Question
Islamic Ethical Farming Practices	Animal care according to Islamic law	X1.1: I always provide sufficient and nutritious feed to my livestock.
		X1.2: I maintain the cleanliness of the barn and surroundings according to Islamic principles.
		X1.3: I treat my livestock with compassion and do not harm them.
	Slaughtering according to Islamic law	X1.4: I ensure that livestock are slaughtered according to Islamic law.
	Wise use of resources	X1.5: I use natural resources (water, feed) wisely, in line with Islamic teachings.
Halal Certification	Halal certification status	X2.1: My livestock products have received official halal certification from authorized institutions.
	Halal certification process	X2.2: I understand the halal certification process for my livestock products.
		X2.3: I did not face difficulties in obtaining halal certification for my livestock products.
	Impact of halal certification on sales	X2.4: Halal certification has increased the sales of my livestock products.
		X2.5: Halal certification has increased consumer trust in my livestock products.
Sustainable Goat Farming Practices	Sustainable natural resource management	X3.1: I use rotational grazing techniques to maintain land sustainability.
		X3.2: I manage livestock waste in an environmentally friendly way.
	Use of organic feed	X3.3: I use sustainable organic feed for my livestock.
	Animal health management	X3.4: I ensure my livestock are always healthy and their welfare is maintained.
Economic Welfare of Farmers	Income	Y1: My income from goat farming has increased in recent years.
	Market access	Y2: I have good access to markets to sell my livestock products.
	Improved living standards	Y3: My family's economic welfare has improved due to my goat farming business.

Source: Results of data analysis (2024)

The dependent variable, Economic Welfare, was measured by assessing farmers' income levels, their access to resources and markets, and their ability to improve their living standards through goat farming.

3.3 Data Analysis Technique

The data were analyzed using SPSS version 25 through steps including data cleaning, descriptive analysis, and inferential statistics to test the hypotheses [48]. Descriptive statistics summarized

demographic characteristics and variable responses, using mean, standard deviation, frequency, and percentage distributions. Reliability was confirmed with Cronbach's Alpha (≥ 0.70), and validity was tested with Pearson's Correlation Coefficient, where r-hitung > r-tabel (0.205, n=90, α=0.05) indicated validity. Multiple regression was used to assess relationships between the independent variables (Islamic ethical farming, halal certification, sustainable goat farming) and the dependent variable (economic welfare), with the model $Y=\beta0+\beta1X1+\beta2X2+\beta3X3+\epsilon$. Hypotheses were supported if p-values were below 0.05 and regression coefficients were positive.

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

The descriptive statistics provide an overview of the sample's characteristics and the variables used in the study. The demographic profile showed that the majority of farmers were aged between 35 and 55 (65%), with 45% having a secondary education, 30% primary education, and 25% higher education. Most farmers (70%) had over 10 years of experience in goat farming, and 60% managed farms with 20 to 50 goats. These demographic factors help contextualize the farming operations and ensure the sample's representativeness. The descriptive statistics for the main variables are presented in Table 2.

Table 2. Descriptive Statistics

Variable	Mean	Standard Deviation
Islamic Ethical Farming Practices	3.80	0.65
Halal Certification	3.95	0.72
Sustainable Goat Farming Practices	4.10	0.60
Economic Welfare	3.85	0.68

Source: Results of data analysis (2024)

The mean scores indicate that farmers generally agreed with statements related to Islamic ethical farming practices, halal certification, and sustainable farming practices, with sustainable farming practices having the highest mean score (M = 4.10). The economic welfare of the farmers also showed a moderately high average score (M = 3.85), suggesting that the farmers were relatively satisfied with their economic situation.

4.2 Validity and Reliability

4.2.1 Validity Test

The validity of the questionnaire items was tested using Pearson's Product-Moment Correlation. If the r-hitung (Pearson correlation coefficient) for an item is greater than the r-tabel value, the item is considered valid [48]. With a sample size of n=90 and a significance level of α=0.05, the critical value from the r-tabel is 0.205.

Table 3. Validity Testing

Variable	**Item Code**	**r-hitung**	**r-tabel**	**Validity**
Islamic Ethical Farming Practices	X1.1	0.655	0.205	Valid
	X1.2	0.612	0.205	Valid
	X1.3	0.685	0.205	Valid
	X1.4	0.702	0.205	Valid
	X1.5	0.629	0.205	Valid
Halal Certification	X2.1	0.715	0.205	Valid
	X2.2	0.645	0.205	Valid
	X2.3	0.669	0.205	Valid
	X2.4	0.682	0.205	Valid
	X2.5	0.689	0.205	Valid
Sustainable Goat Farming Practices	X3.1	0.733	0.205	Valid
	X3.2	0.681	0.205	Valid
	X3.3	0.697	0.205	Valid

	X3.4	0.710	0.205	Valid
Economic Welfare	Y.1	0.702	0.205	Valid
	Y.2	0.668	0.205	Valid
	Y.3	0.692	0.205	Valid

Source: Results of data analysis (2024)

All items have an r-hitung greater than the r-tabel (0.207), indicating that all items in the questionnaire are valid and can be used to measure their respective variables.

4.4.2 Reliability Test

The reliability of the questionnaire items was tested using Cronbach's Alpha. A Cronbach's Alpha value greater than 0.70 indicates that the items are reliable and consistent in measuring the intended construct [48].

Table 4. Reliability Analysis

Variable	Cronbach's Alpha	Reliability
Islamic Ethical Farming Practices	0.821	Reliable
Halal Certification	0.785	Reliable
Sustainable Goat Farming Practices	0.848	Reliable
Economic Welfare	0.805	Reliable

Source: Results of data analysis (2024)

All variables have a Cronbach's Alpha value greater than 0.70, indicating that the items used to measure these variables are reliable.

4.3 Classical Assumption Tests

Normality Test The normalitytest aims to check whether the residuals of the regression model are normally distributed. In this study, the normality test was carried out using the Kolmogorov-Smirnov test. The test results show a Kolmogorov-Smirnov Z value of 0.950 with Asymp. Sig. (p-value) of 0.329, which is greater than 0.05. This means that the residuals are normally distributed, so the normality assumption is met.

Multicollinearity Test The multicollinearitytest is used to evaluate whether there is a high correlation between the independent variables. Testing is done using the Variance Inflation Factor (VIF) and Tolerance values. The test results show that all independent variables have VIF values below 10 and Tolerance above 0.1, namely Islamic Ethical Farming Practices (VIF 1.621, Tolerance 0.617), Halal Certification (VIF 1.725, Tolerance 0.580), and Sustainable Goat Farming Practices (VIF 1.455, Tolerance 0.687). This indicates there is no multicollinearity, so the assumption of multicollinearity is fulfilled.

Heteroscedasticity Test Heteroscedasticitytest aims to check whether the residual variance remains constant in each observation. Glejser test is used in this test. The results show that all independent variables have a p-value greater than 0.05, namely Islamic Ethical Farming Practices (0.410), Halal Certification (0.532), and Sustainable Goat Farming Practices (0.452). Thus, no heteroscedasticity is detected, and the residual variance is considered constant, so the assumption of heteroscedasticity is fulfilled.

4.4 Regression Analysis

Multiple regression analysis was conducted to test the hypotheses and examine the relationships between the independent variables (Islamic ethical farming practices, halal certification, and sustainable goat farming) and the dependent variable (economic welfare of the farmers).

Table 5. Multiple Regression

Variable	Beta Coefficient (β)	Standard Error	t-Value	p-Value
Constant	1.215	0.345	3.522	0.001
Islamic Ethical Farming Practices	0.295	0.110	2.682	0.008**

Halal Certification	0.322	0.098	3.286	0.002**
Sustainable Goat Farming Practices	0.410	0.094	4.362	0.000**

Source: Results of data analysis (2024)

The hypothesis testing results reveal that Islamic ethical farming practices, halal certification, and sustainable goat farming practices all have a positive and significant impact on the economic welfare of goat farmers. For H1, Islamic ethical farming practices show a positive effect on economic welfare ($\beta = 0.295$, $p = 0.008$), suggesting that following ethical guidelines improves productivity and reduces costs, benefiting farmers. H2 is also supported, with halal certification having a positive impact on economic welfare ($\beta = 0.322$, $p = 0.002$), as it enhances market access and consumer trust, leading to increased sales and profitability. H3 shows that sustainable goat farming practices have the strongest effect ($\beta = 0.410$, $p = 0.000$), emphasizing how sustainability reduces costs and improves product quality, boosting revenues. Lastly, H4 is confirmed by the overall model's significance, indicating that the combined implementation of Islamic ethical practices, halal certification, and sustainable farming creates synergistic benefits, further enhancing the economic welfare of goat farmers.

The regression model was statistically significant ($F = 31.562$, $p < 0.001$), indicating that the independent variables collectively explain 56.8% of the variance in the economic welfare of goat farmers ($R^2 = 0.568$, Adjusted $R^2 = 0.554$). This demonstrates that Islamic ethical farming practices, halal certification, and sustainable goat farming practices significantly contribute to improving the economic welfare of the farmers.

4.5 DISCUSSION AND IMPLICATIONS

4.5.1 DISCUSSION

The findings of this study align with the existing literature, emphasizing the positive role that Islamic ethical farming practices, halal certification, and sustainable goat farming play in improving the economic welfare of farmers. Islamic ethical farming practices were found to significantly improve economic welfare, supporting previous research [15], [41]–[43] that highlights the benefits of humane and ethical livestock management. By adhering to these principles, farmers not only fulfill their religious obligations but also create more productive farming environments, leading to higher yields and cost savings.

Halal certification continues to be a critical factor for Muslim-majority countries like Indonesia, where the demand for halal products is significant. The positive effect of halal certification on economic welfare aligns with studies by [46], [47] and [20] who found that halal-certified products tend to be more marketable and command higher prices. This suggests that farmers should be encouraged to obtain halal certification to access these economic benefits.

Sustainable farming practices had the strongest impact on economic welfare, corroborating the findings of [46], [47] and [20], who emphasized that sustainability leads to long-term agricultural productivity and profitability. Farmers who adopt environmentally friendly practices not only preserve the natural resources necessary for continued farming but also reduce input costs, contributing to improved financial outcomes.

4.5.2 IMPLICATIONS

The results of this study have important implications for policymakers and practitioners in the agricultural sector. Government programs and agricultural extension services should focus on promoting Islamic ethical farming practices, facilitating access to halal certification, and educating farmers on sustainable farming techniques. By doing so, rural farmers can improve their economic welfare while contributing to the broader goals of sustainability and ethical agriculture.

5. CONCLUSION

This study provides empirical evidence on the positive effect of Islamic ethical farming practices, halal certification, and sustainable goat farming on the economic

welfare of goat farmers in rural Indonesia. The findings highlight the importance of adopting a holistic approach that combines religious, ethical, and sustainable practices to improve farming outcomes. Sustainable goat farming practices were found to have the greatest impact on economic welfare, as they reduce production costs and improve long-term productivity. Halal certification also significantly enhances marketability and consumer trust, while Islamic ethical farming practices contribute to humane animal treatment and resource management, which also improve economic outcomes.

The results suggest that promoting these integrated practices can offer substantial benefits to goat farmers, particularly in rural areas. Therefore, it is recommended that policymakers and agricultural stakeholders focus on facilitating access to halal certification, providing education on sustainable farming techniques, and raising awareness of the economic benefits of Islamic ethical farming practices. By doing so, farmers can achieve improved livelihoods, contribute to environmental sustainability, and meet the growing demand for halal and ethically produced products.

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