



GREEN MARKETING FOR AGRICULTURAL PRODUCE: STRATEGIC APPROACHES TO PROMOTE SUSTAINABILITY, TRUST AND MARKET ACCESS

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Article DOI: <https://doi.org/10.36713/epra28989>

DOI No: 10.36713/epra28989

ABSTRACT

Many producers lack cost-effective means of transforming farming techniques into verified green claims and breaking into higher-value markets, despite the growing consumer demand for environmentally friendly agricultural products. With an emphasis on Kerala, this study looks at perishable agricultural goods that are very pertinent to green marketing, like fruits, vegetables, and dairy. A sample of 250 farmers and traders was chosen using purposive sampling as part of a mixed-methods strategy that combined quantitative surveys and qualitative interviews. Data was gathered through structured questionnaires, and regression and mediation models were employed for analysis. The results show that the adoption of green marketing strategies is highly influenced by environmental awareness ($\beta = 0.151, p = 0.002$). Green Marketing Strategies, in turn, positively impact Consumer Trust ($\beta = 0.687, p < .001$) and Sustainability Performance ($\beta = 0.253, p < .001$), with Consumer Trust partially mediating the effect on Sustainability Performance ($\beta = 0.204, p < .001$). Finally, Sustainability Performance strongly enhances Market Access ($\beta = 0.281, p < .001$), highlighting the role of strategic green marketing in improving sustainability outcomes and market opportunities for agricultural producers.

INTRODUCTION

For agricultural products, sustainable green marketing refers to marketing strategies that highlight environmental benefits throughout the product lifecycle, from production (less use of agrochemicals, conservation of soil and water) to processing, packaging, and distribution, while also communicating to consumers transparent sustainability claims. Green marketing is more than just promotion; it incorporates supply-chain practices, product design, and certification that reduce ecological footprint and meet consumer demands for safer, ethically produced food (Melović et al., 2020).

While green marketing presents new value-added opportunities (price premiums, direct-to-consumer channels, niche markets like organic or locally sourced products) for many farmers and agri-enterprises, it also presents obstacles (certification costs, traceability requirements, and the risk of green washing when claims are ambiguous or unsubstantiated). Consumers are prepared to pay more for confirmed green or organic produce, according to evidence from several studies; nevertheless, trust depends on accurate labeling and reliable certification (Kremen et al., 2003).

How agricultural green claims are validated and disseminated is increasingly being shaped by policy efforts and market processes, such as national organic labeling regimes and the EU's Farm to Fork agenda. The need for strong marketing strategies that integrate sustainability practices with verifiable claims and stakeholder engagement is also highlighted by recent reporting that has brought attention to the pervasive mislabeling and green washing risks in food markets (European Commission, 2020; The Guardian, 2025).

Need and Significance of the Study

Through credible green marketing strategies, smallholders and agricultural cooperatives can access new consumer segments and get price premiums thanks to the growing demand for ecologically friendly food items worldwide. To properly execute and convey sustainability-based marketing strategies, many producers still lack strategic direction (Melović et al., 2020). Research that supports both policy design and producer compliance is necessary as agribusinesses must align their claims with verifiable practices due to the changing policy and regulatory landscape, which includes eco-labeling requirements and farm sustainability, targets (European Commission, 2020). Additionally, numerous instances of mislabeling and green washing have revealed financial and reputational hazards, highlighting the significance of open communication and reliable verification methods in fostering customer confidence (The Guardian, 2025). Although a lot of research has been done on green marketing in general consumer markets, this study intends to fill the



gap in specific, evidence-based frameworks for agricultural products that combine sustainability concepts with workable marketing tactics (Irfan, 2024).

Statement of the Problem

Despite growing consumer demand for eco-friendly agricultural products, many producers and marketers lack proven, affordable ways to turn farm practices into verifiable green claims, convince buyers and consumers of those claims, and gain access to higher-value channels without incurring exorbitant certification costs. As a result of inconsistent labeling and green washing, producers lose out on market potential and consumers become confused. This research investigates the effect of green marketing techniques work best for small and medium-sized farmers in terms of customer trust, and market access, and which implementation pathways enable them to be scalable and viable.

Scope of the Study

Kerala or a similar agricultural region, where sustainable farming and marketing techniques are becoming important development priority, is the study's geographic focus. Because of their perishability and direct consumer interaction, the research focuses on perishable agricultural products including fruits, vegetables, and dairy, which are extremely relevant to green marketing. Smallholder farmers, agricultural cooperatives, retailers, and consumers are the main stakeholders; each of these parties is essential to the production-to-market value chain. Large industrial commodities chains are not included in the analysis.

Research Methodology

In order to give a thorough grasp of green marketing strategies in the agriculture industry, the study uses a mixed-methods research approach that combines a quantitative survey with qualitative interviews. Finding current green marketing strategies, gauging consumer trust for sustainable agriculture products and finally suggesting a strategic framework for successful implementation are the main goals. To guarantee representation throughout the agricultural value chain, the research sample comprise of 250 farmers and traders equally divided. The main tools for gathering data will be structured questionnaires that use established scales and specific case studies. Data were analyzed using SPSS and AMOS. Structural Equation Modeling was used to test causal relationships, while Chi-Square tests were employed to examine associations between categorical representations of key variables. The Purposive sampling technique was relied in the present study.

Review of Related Literature

A solid empirical basis for comprehending the dynamics of green marketing in agriculture and its influence on consumer behavior and sustainability results is provided by earlier research. Melović et al. (2020) highlighted the psychological aspect of sustainability-oriented purchasing by finding that consumer trust, health perceptions, and environmental concern are important factors influencing purchase intention for green and organic products. In a similar vein, Kremen et al. (2003) showed that eco-labeling techniques and farmers' markets greatly raise price premiums for agricultural producers, providing financial incentives for implementing green marketing techniques. Through its Farm to Fork Strategy, the European Commission (2020) highlighted the importance of traceability and uniform labeling systems in fostering accountability and transparency throughout the agri-food value chain. In support of these conclusions, Irfan (2024) examined modern green marketing techniques and came to the conclusion that including certification processes and narrative techniques enhances customer confidence and brand genuineness. Furthermore, Xin (2024) and Braik (2024) found that producers' adoption and performance of sustainable marketing techniques are highly influenced by the cost of certification, government subsidies, and customer trust. By exposing instances of mislabeled organic products, The Guardian (2025) brought attention to practical difficulties and emphasized the pressing need for reliable verification and regulatory supervision to protect consumer trust and market integrity.

Variable Framework

No.	Variable Type	Variable Name	Operational Definition	Measurement / Indicators
1	Antecedent / Contextual Variable	Environmental Awareness	Degree of consumer knowledge and concern toward sustainability and eco-friendly food consumption. The degree to which producers and consumers are conscious of environmental impacts and sustainability goals	Standard environmental awareness scales (e.g., NEP, 5-item Likert).
	Independent	Green Marketing Strategies	The set of sustainable marketing actions adopted by producers or marketers—eco-labeling, green packaging, digital	Composite index using Likert-scale items (extent, frequency, visibility).



			sustainability promotion, and transparency.	
2	Mediating	Consumer Trust	The level of confidence consumers place in the authenticity and credibility of sustainability claims for agricultural produce.	5-point Likert scale: belief in claims, labeling reliability, brand reputation.
4	Dependent	Market Access	Extent to which producers reach new markets or premium segments via green marketing.	Indicators: Sales growths, premium buyer access, export/retail linkages.
5	Dependent	Sustainability Performance	Environmental, social, and economic outcomes resulting from green marketing adoption.	Reduction in chemical inputs, income improvement, eco-brand recognition.

Conceptual Model Description

The conceptual model proposes that Environmental Awareness influences Green Marketing Strategies positively. The effective Green Marketing Strategies positively influence Consumer Trust and Sustainability Performance. Consumer Trust in turn enhances Sustainability Performance. Finally, the Sustainability Performance influences Market Access. Accordingly the Observed, endogenous variables are Consumer Trust, Green Marketing Strategies, Sustainability Performance and Market Access. The Observed, exogenous variable is Environmental Awareness. The Unobserved, exogenous variables are e1 to e4. The Number of variables in the model are 9, Number of observed variables are 5, Number of unobserved variables are 4, Number of exogenous variables are 5 and Number of endogenous variables are 4.

Objectives of the Study

1. To examine the influence of environmental awareness on the adoption of green marketing strategies.
2. To analyze the effect of green marketing strategies on consumer trust.
3. To assess the impact of green marketing strategies on sustainability performance.
4. To examine the association between Environmental Awareness and Green Marketing Strategies, Green Marketing Strategies and Consumer Trust and Sustainability Performance and Market Access.

Hypotheses

- H1: Environmental Awareness has a significant positive influence on Green Marketing Strategies.
H2: Green Marketing Strategies significantly influence Consumer Trust.
H3: Green Marketing Strategies significantly influence Sustainability Performance.
H4: Consumer Trust significantly influences Sustainability Performance.
H5: Sustainability Performance significantly influences Market Access.
H6: There is a significant association between Environmental Awareness and Green Marketing Strategies.
H7: There is a significant association between Green Marketing Strategies and Consumer Trust.
H8: There is a significant association between Sustainability Performance and Market Access.

Table 1.1 Impacts of Environmental Awareness and Green Marketing on Consumer Trust

Relationship			Un-Standardized Regression Estimate	S.E.	C.R.	P	Standardized Regression Estimate
Green Marketing Strategies	<---	Environmental Awareness	.151	.049	3.095	.002	.192
Consumer Trust	<---	Green Marketing Strategies	.687	.060	11.372	***	.585
Sustainability Performance	<---	Consumer Trust	.204	.049	4.160	***	.279
Sustainability Performance	<---	Green Marketing Strategies	.253	.058	4.383	***	.294
Market Access	<---	Sustainability Performance	.281	.082	3.421	***	.212

Source: Primary data

The Un-Standardized Regression Estimate indicates that Environmental Awareness (Antecedent (exogenous variable)) is statistically significant, influencing the adoption of Green Marketing Strategies ($\beta = 0.151$, $p = 0.002$). Adoption of green marketing is favorably influenced by environmental awareness, indicating that producers who are more conscious of sustainability are more likely to incorporate eco-friendly certifications and practices into their marketing strategies. Green marketing strategies have a direct impact on sustainability performance ($\beta = 0.253$) and consumer trust ($\beta = 0.687$), shows that consumer trust and sustainability results increase with producers' application of green marketing techniques. Consumer Trust increases by 0.687 for every unit rise in Green Marketing Strategies, a high and statistically significant effect ($p < .001$).

Furthermore, it directly improves Sustainability Performance by 0.253 ($p < .001$), demonstrating that, even in the absence of trust benefits, sustainable marketing directly improves ecological and social consequences. Sustainability, both consumer trust ($\beta = 0.204$) and green marketing strategies ($\beta = 0.253$) have an impact on performance, acting as a mediator between Market Access and Green Marketing Strategies. Sustainability Performance serves as a channel that facilitates improved market access as well as a direct effect of marketing efforts. Producers can maintain improved environmental performance, which in turn improves market awareness, when customers believe green claims. Sustainability Performance affects Market Access ($\beta = 0.281$, $p < .001$).

Improved sales and a competitive edge result from producers' increased market access and reputation among environmentally sensitive consumers as they improve their sustainability performance.

Figure 1.1- Impact of Environmental Awareness and Green Marketing on Consumer Trust

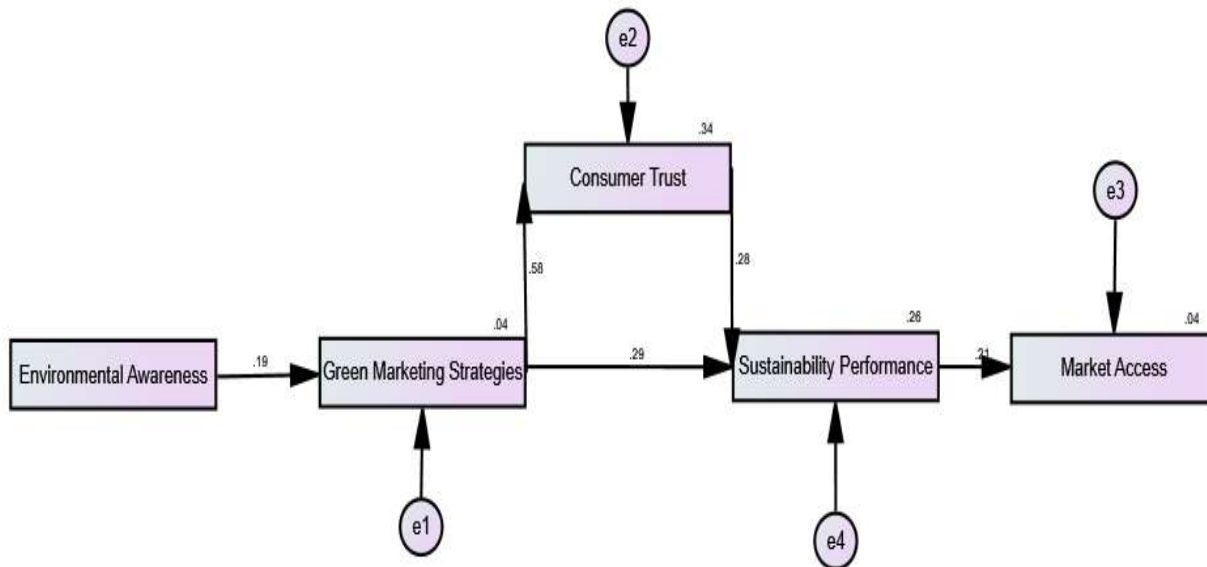


Table 1.2 Variances- Impacts of Environmental Awareness and Green Marketing on Consumer Trust

	Estimate	S.E.	C.R.	P
Environmental Awareness	20.134	1.804	11.158	***
e1	11.940	1.070	11.158	***
e2	11.256	1.009	11.158	***
e4	6.766	.606	11.158	***
e3	15.346	1.375	11.158	***

Source: Primary data

All variances are statistically significant, as the p values are lower than 5%.

**Table 1.3 Squared Multiple Correlations - Impacts of Environmental Awareness and Green Marketing on Consumer Trust**

Relationship			Squared Multiple Correlations
Green Marketing Strategies	<---	Environmental Awareness	.337
Consumer Trust	<---	Green Marketing Strategies	.542
Sustainability Performance	<---	Consumer Trust	.461
Sustainability Performance	<---	Green Marketing Strategies	
Market Access	<---	Sustainability Performance	.345

Source: Primary data

According to the structural equation model's findings, environmental awareness has a considerable impact on agricultural producers' adoption of green marketing techniques, accounting for 33.7% of the variance in these methods ($r^2 = 0.337$). This implies that eco-friendly marketing strategies are more likely to be used by producers who are more concerned about environmental sustainability. Conversely, green marketing strategies have a significant positive impact on consumer trust, explaining 54.2% of its variance ($r^2 = 0.542$). This suggests that successful green marketing, which includes eco-labeling, transparent communication, and sustainable practices, significantly raises consumer trust in agricultural products' sustainability claims. Additionally, 46.1% of the variance in Sustainability Performance can be explained by Consumer Trust ($r^2 = 0.461$), demonstrating the mediating function of trust in promoting real sustainable results. Additionally, through consumer trust, green marketing strategies directly improve sustainability performance, enhancing the indirect effect. Last but not least, Market Access is positively impacted by Sustainability Performance, which explains 34.5% of its variance ($r^2 = 0.345$), showing that producers with better sustainability results have a higher chance of gaining access to premium and new markets.

Table 1.4 Standardized Indirect Effects- Impacts of Environmental Awareness and Green Marketing on Consumer Trust

Standardized Indirect Effects	Environmental Awareness	Green Marketing Strategies	Consumer Trust	Sustainability Performance
Green Marketing Strategies	.000	.000	.000	.000
Consumer Trust	.113	.000	.000	.000
Sustainability Performance	.088	.163	.000	.000
Market Access	.019	.097	.059	.000

Source: Primary data

Environmental Awareness significantly influences the adoption of Green Marketing Strategies among agricultural producers, explaining 33.7% of the variance ($r^2 = 0.337$). Environmental Awareness significantly influences the adoption of Green Marketing Strategies among agricultural producers, explaining 33.7% of the variance ($r^2 = 0.337$). Higher environmental knowledge among producers increases the likelihood that eco-friendly marketing strategies would be used, which benefits consumer trust by explaining 54.2% of its variation ($r^2 = 0.542$). By using Green Marketing Strategies, Environmental Awareness also has a moderate indirect impact on Sustainability Performance ($\beta = 0.088$) and Consumer Trust ($\beta = 0.113$), according to standardized indirect effects. Green marketing strategies have an indirect effect on consumer trust ($\beta = 0.163$) and a direct influence on sustainability performance ($\beta = 0.253$), underscoring the mediating function of trust in promoting sustainable results. Sustainability Performance and Consumer Trust both have indirect effects on Market Access ($\beta = 0.097$ and $\beta = 0.059$, respectively), whereas Sustainability Performance directly influences Market Access ($r^2 = 0.345$). Consumer Trust also adds to Sustainability Performance ($R^2 = 0.461$).

As per the model fit summary, the default model reports a Chi-square value of 13.513 with 5 degrees of freedom and a corresponding p-value of 0.019. Although the Chi-square test is significant, the Chi-square/DF ratio of 2.703 falls within the acceptable threshold limit, indicating an adequate model fit. Therefore, the null hypothesis is accepted, confirming a satisfactory goodness-of-fit for the proposed model. The results demonstrate that Environmental Awareness significantly influences the adoption of Green Marketing Strategies among agricultural producers, which in turn affect Consumer Trust in sustainability claims related to agricultural produce. Furthermore, the Goodness of Fit Index (GFI = 0.979) and the Adjusted Goodness of Fit Index (AGFI = 0.936) exceed the recommended cutoff value of 0.90, indicating a good model fit. The Normed Fit Index (NFI = 0.937) and Comparative Fit Index (CFI = 0.958) also confirm an excellent fit of the model. Additionally, the Root Mean Square Error of Approximation (RMSEA = 0.08) falls within the acceptable limit, further supporting the adequacy of the model.

**Table 1.5 Association between Environmental Awareness and Green Marketing Strategies; Green Marketing Strategies and Consumer Trust and Sustainability Performance and Market Access**

Association	Chi-Square Value (χ^2)	Degrees of Freedom	Significance (p-value)
Environmental Awareness and Green Marketing Strategies	24.618	4	0.000
Green Marketing Strategies and Consumer Trust	31.842	4	0.000
Sustainability Performance and Market Access	27.506	4	0.000

Source: Primary data

The Chi-Square test results reveal statistically significant associations among all the examined variables, as evidenced by p-values less than 0.05. The significant relationship between environmental awareness and green marketing strategies indicates that producers who possess a higher level of environmental consciousness are more inclined to adopt and implement environmentally responsible marketing practices, as awareness often translates into proactive strategic behavior. Similarly, the significant association between green marketing strategies and consumer trust suggests that the consistent and credible application of green marketing initiatives strengthens consumers' confidence in producers' sustainability claims, thereby enhancing trust. The observed significant association between sustainability performance and market access implies that producers demonstrating superior sustainability outcomes are better positioned to access premium and expanded markets, as such performance increasingly serves as a key criterion for market acceptance and competitiveness.

Findings

According to the analysis, agricultural producers' adoption of green marketing strategies is significantly influenced by their level of environmental awareness ($\beta = 0.151$, $p = 0.002$), indicating that producers who are more concerned about sustainability are more likely to use eco-friendly certifications and marketing techniques. Green marketing strategies have a direct and positive impact on sustainability performance ($\beta = 0.253$, $p < .001$) and consumer trust ($\beta = 0.687$, $p < .001$), demonstrating that the use of green marketing strategies improves sustainability and trust results. The mediating effect of consumer trust is demonstrated by the large contribution it makes to sustainability performance ($\beta = 0.204$, $p < .001$). Market Access is strongly positively impacted by Sustainability Performance ($\beta = 0.281$, $p < .001$), showing that producers can access more upscale and expansive markets with better sustainability results. Also, higher environmental awareness among producers significantly encourages the adoption of green marketing strategies. Effective implementation of green marketing practices enhances consumer trust in sustainability claims, while strong sustainability performance improves producers' access to premium and expanded markets.

Conclusions

Since awareness directly pushes farmers to adopt sustainable marketing techniques, the study suggests that environmentally conscious activities are essential for the successful adoption of green marketing in agriculture. In addition to increasing customer trust, green marketing strategies also directly improve sustainability performance, showing that strategic marketing can produce observable ecological and social advantages even in the absence of mediating factors. Additionally, Sustainability Performance is a key method for enhancing market access, demonstrating how eco-friendly marketing strategies result in enhanced market opportunities and a competitive edge. Overall, the results demonstrate that attaining sustainable production and expanded market reach in the agricultural industry requires combining consumer trust, green marketing techniques, and environmental consciousness.

Suggestions

In light of the results, it is advised that policymakers and agricultural producers support environmental awareness initiatives in order to stimulate the use of green marketing techniques and sustainable practices. To increase customer trust and sustainability results, producers should spend money on reliable certifications, environmentally suitable packaging, and open marketing communications. Furthermore, technical assistance and training initiatives can help smallholders adopt sustainable practices that immediately enhance market accessibility and environmental performance. In order to prevent green washing, policymakers should take into account incentives and regulatory frameworks that promote sustainable agriculture production. This will help to build consumer trust and promote long-term market competitiveness.

REFERENCES

1. Braik, A. (2024). Green marketing practices and organizational sustainable performance. *Journal of Sustainability Studies*, 15(2), 45–62. <https://doi.org/10.1080/15378020.2023.2205337>
2. European Commission. (2020). Farm to Fork Strategy. Brussels: European Commission. Retrieved from https://food.ec.europa.eu/horizontal-topics/farm-fork-strategy_en
3. Irfan, A. (2024). Green marketing strategies for sustainable food and agriculture. *Sustainability*, 16(2), 1045. <https://doi.org/10.3390/su16021045>



4. **Kremen, A., Greene, C., Hanson, J., & Dimitri, C.** (2003). *Organic produce, price premiums, and eco-labeling in U.S. farmers' markets*. USDA Economic Research Service. https://www.ers.usda.gov/sites/default/files/_laserfiche/outlooks/39497/13895_vgs30101_1_.pdf
5. **Melović, B., Cirović, G., & Mihić, M.** (2020). Attracting green consumers: Factors influencing organic choice. *Journal of Marketing Development and Competitiveness*, 14(3), 45–58. <https://doi.org/10.33423/jmdc.v14i3.3167>
6. **The Guardian.** (2025, January 13). *Falsely labelled 'organic' products rife on Australian shelves*. The Guardian. <https://www.theguardian.com/environment/2025/jan/13/falsely-labelled-organic-products-rife-on-australian-shelves>
7. **Xin, Y.** (2024). *A study on green agricultural production decision-making by agricultural cooperatives under government subsidies*. *Sustainability*, 16(3), 1219. <https://doi.org/10.3390/su16031219>