Wah Academia Journal of Social Sciences
Volume 5, Issue 1, March 2026, pp. 933-959
ISSN – E 2958-8731 P 2958-8723
https://doi.org/10.63954/wajss.v5i1.494

Artificial Intelligence in Sustainable Marketing: A Systematic Review of Consumer Engagement and Food Waste Reduction Strategies

Jaweria Iqbal A.[1], Hassaan Mahmood D.[2] and Prof. Dr. Mahmood Ahmad Azhar[3]

Abstract

The food waste problem globally contributes to 8-10% of anthropogenic greenhouse gas emissions annually and leads to economic losses amounting to $1 trillion per year, making it a severe threat to the sustainability of the environment and social justice (United Nations Environment Program, 2024). Although food science and logistics of food supply chains have been discussed widely in the literature regarding possible technological solutions, the marketing issues related to the application of artificial intelligence for the promotion of sustainable behavior and food reuse have not been analyzed sufficiently. This systematic review aims at addressing the above gap in the literature by analyzing the influence of the new technology on consumer decision-making and helping marketers use AI to decrease the level of food waste by enhancing consumer engagement. Based on theoretical backgrounds like the Stimulus-Organism-Response Model, Service-Dominant Logic, and the Theory of Planned Behavior, the paper summarizes 30 articles written between 1991 and 2026 in accordance with the PRISMA criteria (Kumar & Singh, 2025). Three main mechanisms used by AI technologies to promote sustainable marketing results were found, namely, personalized engagement and behavioral nudging through AI-enabled apps, predictive analytics for identifying consumer preferences and targeting consumers accurately, and digital platforms for facilitating value co-creation in reducing food waste. It is concluded that AI stimuli (personalization, interactivity, usability) play an important role in consumer engagement; however, self-efficacy turns out to be a key mediator between engagement and behavioral intention. This study contributes to the marketing body of knowledge as it uses existing behavioral theories and gives managerial recommendations for applying AI in marketing practice.

Keywords: Artificial Intelligence, Sustainable Marketing, Food Waste Reduction, Consumer Engagement, Circular Consumption, Behavioral Nudging

[1]Faculty of Business, Curtin University, Miri – Malaysia
[2]Faculty of Business, Lahore School of Economics, Lahore – Pakistan
[3]Department of English, Lahore Leads University, Lahore – Pakistan

Introduction

In today's world, food systems are experiencing a paradox that requires urgent attention as one-third of the food meant for consumption is either lost or wasted each year, whereas almost 783 million people face food insecurity (United Nations Environment Program, 2024). The inefficiencies of the system constitute not only an environmental problem causing 8-10% of greenhouse gas emissions but also a marketing issue that needs to be reconsidered (Kumar & Singh, 2025). Food waste and loss has become a major concern of marketing experts because households account for 60% of waste, food service makes 28%, and retail generates 12% of the food waste (United Nations Environment Program, 2024).

The combination of growing consumers' concerns about sustainability and negative consequences of food waste and loss has made this interrelation between sustainability, marketing, and consumer behavior an important sphere of scientific investigation (Di Leo et al., 2025). Consumers' interest in sustainable goods increases; however, there is still a gap between their attitudes and actions – the attitude-behavior gap that has been bothering marketing specialists and politicians for years (Pourmahdi et al., 2025). In this regard, encouraging consumers to behave in an environmentally friendly way can be seen as a way to promote sustainable practices like waste reduction and prevention (Katare et al., 2025).

❖ The Marketing Gap in AI-Sustainability Research

While there is an ample number of studies exploring the use of AI technologies in the food industry, little attention has been paid to the marketing potential of these innovations. Existing studies have mainly concentrated on technical issues such as predictive modeling to optimize the supply chain processes, computer vision technologies to detect food spoilage, and machine learning algorithms to convert waste into energy (Kumar & Singh, 2025). It is still unclear how the use of AI technologies can affect consumer behavior and encourage consumers to adopt more sustainable practices and engage in circular consumption.

This issue becomes even more critical because the problem of food waste is essentially a result of the lack of alignment between production and consumption processes – a marketing issue. According to the United Nations Environment Program, around 40% of food waste in developed countries happens during the retail and consumption stages (United Nations Environment Program, 2024). This

means that the implementation of marketing strategies aimed at changing consumers' behavior can contribute to considerable reduction of waste. Moreover, financial losses associated with food waste (around $1 trillion per year) represent the opportunities missed by marketing organizations.

❖ Research Questions and Objectives of the Review

The current systematic review answers the following research questions:

- **RQ1**: How is AI associated with consumer decision-making in terms of food consumption and food waste minimization?
- **RQ2**: Which approaches allow for marketers to exploit the potential of AI in order to reduce food waste by fostering consumer involvement?
- **RQ3:** What are the theoretical perspectives which will best help to interpret sustainable marketing outcomes facilitated by AI technology?
- **RQ4:** What are the managerial implications for the development of marketing strategies using AI to foster circular consumption?

The present review makes three important contributions to marketing theory. Firstly, it combines the fragmented literature on AI usage in marketing and consumer behavior, sustainability, and AI adoption, providing an integral framework for discussing the issue. Secondly, it expands existing theoretical models into the domain of AI-sustainability interactions, showing how constructs like self-efficacy, social presence, and value co-creation function in digitally-mediated consumer settings. Thirdly, it generates practical implications for managers.

Theoretical Foundations

❖ Consumer Behavior Theories for Sustainable Consumption

Consumer decision-making processes for sustainable consumption need to be based on behavioral theories. One such theory is the Theory of Planned Behavior (TPB), which suggests that behavioral intentions, which precede behavior directly, can be explained by the following key elements: attitude towards the behavior, subjective norms, and perceived behavioral control (Pourmahdi et al., 2025). In fact, TPB has found wide application in the sphere of sustainable consumption studies, showing

that attitudes toward the environment, social influences, and efficacy affect behavior intentions (Shi et al., 2026).

Further complimentary theoretical contributions are provided by Alphabet Theory, which provides an explanation of the interrelations between habits, intentions, and real behavior (Pourmahdi et al., 2025). Knowledge, information-seeking, demographics, and context are regarded as major factors influencing attitudes of humans according to this approach. The mentioned theory is especially applicable to examining the impacts of using AI technologies for the delivery of the information and nudging the consumers towards sustainability.

Another theory that could be applied to the analysis of the issue under consideration is the Rational Choice Theory, which suggests that people perform a cost-benefit analysis prior to making their purchasing decisions (Pourmahdi et al., 2025). Within this framework, sustainable consumption is seen as an exchange between certain costs (including premium prices) and benefits of sustainable products. AI technologies have a great potential to influence such trade-offs positively.

- **Stimulus-Organism-Response (S-O-R) Framework**

From environmental psychology, S-O-R has grown into a dominant paradigm in the study of technology-mediated consumer behavior. According to the model, environment stimuli (S) influence organismic states (O), which are characterized by consumer cognitive and affective responses, hence resulting into behavioral response (R).

In the case of AI application in sustainable marketing, the stimuli in AI refer to the emotional appeal of the technology (passion), ease of interacting with the technology (usability), personalization (relevance of AI recommendation), and interactivity. Such stimuli influence organismic states such as social presence and psychological engagement. Therefore, through the S-O-R framework, it is possible to analyze the influence of design features in AI on the engagement level of consumers.

Studies conducted on AI stimuli and engagement in digital contexts show that, while there is a great influence of AI stimuli on the level of social presence and psychological engagement among consumers, these organism-level variables do not

guarantee behavioral intention. It has been revealed that self-efficacy, which refers to individuals' confidence in being able to perform a sustainable behavior, moderates the relationship between engagement and intention to behave sustainably.

- **Service-Dominant Logic (S-D-L) and Value Co-Creation**

The framework of Service-Dominant Logic put forward by Vargo and Lusch (2004) changes the marketing paradigm from goods dominant exchange to service for service exchange where the value is created through interaction between actors. S-D-L proves very useful in studying sustainable consumption because it sees value creation as something collaborative and context dependent, resulting from the process of reciprocal resource integration between different actors.

Four dimensions of value co-creation in social media advertising for food waste reduction were discovered in Di Leo, Nevi, Comis, and Principato (2025):

1. Information and regulation – providing consumers with accurate information about ways of reducing food waste
2. Participation and involvement – active participation of consumers in sustainability efforts
3. Motivation and persuasion – psychological drivers encouraging behavioral changes
4. Innovation for sustainability – innovation arising from collaboration between different actors

Food-sharing applications became one of the instruments allowing companies to engage consumers in collaboration with other stakeholders (Di Leo et al., 2025). The co-creation approach indicates that digital platforms serve not only as means of conveying marketing messages but rather as a tool of reciprocal value exchange between different actors including consumers.

Methodology

❖ Research Design and Approach

A systematic literature review method is used in this research, following the set rules on how to synthesize the existing knowledge base (Kumar & Singh, 2025). A systematic review is chosen as the method for four main reasons, namely: (1) it helps cover the fragmented, interdisciplinary knowledge base; (2) it reduces selection bias due to clear inclusion criteria; (3) it enables pattern recognition and knowledge gaps identification; and (4) it allows formulating evidence-based managerial recommendations.

❖ Search Strategy and Databases

A systematic search was conducted across multiple databases to ensure comprehensive coverage of relevant literature:

- **Academic databases:** Scopus, Web of Science, Google Scholar, ScienceDirect
- **Subject-specific databases**: Emerald Insight (marketing), MDPI Sustainability
- **Conference proceedings**: ACM Digital Library, IEEE Xplore

The search employed Boolean operators to combine keywords across three thematic clusters:

1. **AI and technology**: ("artificial intelligence" OR "machine learning" OR "AI" OR "predictive analytics" OR "deep learning" OR "computer vision")
2. **Marketing and consumer**: ("sustainable marketing" OR "consumer behavior" OR "consumer engagement" OR "marketing strategy" OR "behavioral intention" OR "purchase intention")
3. **Food waste and sustainability**: ("food waste" OR "food loss" OR "sustainable consumption" OR "circular economy" OR "food reuse" OR "waste reduction")

The search was limited to peer-reviewed journal articles, conference proceedings, and book chapters published between January 1991 and May 2026, reflecting the rapid evolution of both AI technologies and sustainability discourse.

❖ **Inclusion and Exclusion Criteria**

The studies that were included in the review were those that fulfilled the following conditions:

1. **Relevance to topic**: The study should analyze the convergence between AI (and similar technology) and consumer behavior/marketing strategies/food waste reduction.
2. **Empirical/theoretical/conceptual contribution**: The study should make any form of empirically, theoretically or conceptually new contribution.
3. **Language:** Studies should be in English only.
4. **Peer review:** Should have been published in peer reviewed journals or conferences proceedings or books.

❖ **Studies excluded that:**

1. Dealt exclusively with the technical aspects of AI, excluding any marketing or consumer relevance
2. Looked at food waste only within the scope of supply chain management and agricultural production, without the involvement of consumer engagement
3. Consisted of editorial comments, book reviews, or opinion papers without significant analytical content
4. Pre-dated 2020, due to the fast development of AI capabilities and sustainability debates

❖ **Screening and Selection Process**

The screening process followed a three-stage approach following PRISMA guidelines (Kumar & Singh, 2025):

1. Initial identification: Database searches yielded 847 potentially relevant records.
2. Title and abstract screening: Two independent reviewers screened titles and abstracts based on inclusion criteria, resulting in 213 retained records (inter-rater agreement $\kappa = 0.84$).

3. Full-text review: Full texts were examined for eligibility, with 30 studies ultimately meeting inclusion criteria.

Table 1: AI, Consumer Behavior, and Food Waste Reduction Literature

#	Reference	Key Focus
1	Mansoor, R., Rūtelionė, A., & Bhutto, M. Y. (2026). From pixels to plates: Exploring AI stimuli and digital engagement in reducing food waste behavior in Lithuania among Generation Z and Y. *Sustainability*, 18(1), 495.	S-O-R framework; AI stimuli (passion, usability, perceived personalization, perceived interactivity); self-efficacy as moderator; generational differences between Gen Z and Y
2	Di Leo, A., Nevi, G., Comis, C., & Principato, L. (2025). Green bites: Decoding the language and imagery of social media in influencing food waste reduction behavior. *Journal of Responsible Production and Consumption*, 2(1), 569–596.	Service-Dominant Logic (SD-L); value co-creation; social media advertising; 1,560 posts from 20 European food brands
3	Benkhaoui, A., et al. (2026). Understanding retailers' intentions to use AI for product waste reduction in grocery supply chains: Extending the technology acceptance model. *Sustainability*, 18(6), 2768.	TAM extension; retailer AI adoption; perceived economic utility, AI knowledge, perceived usefulness, perceived ease of use
4	Gul, K., Fasih, S., Morande, S., & Ramish, M. (2024). Participatory visual methods and artificial intelligence-driven analysis for sustainable consumption insights. *Sustainability*, 16(16), 6956.	Photovoice + AI analysis; consumer perceptions; emerging economy context
5	Maleki Vishkaei, B., & De Giovanni, P. (2024). Smart food-sharing platforms for social sustainability: A heuristic algorithm approach. *International Transactions in Operational Research*.	Blockchain-based smart contracts; AI-driven surplus redistribution; supermarket food waste
6	(2025). A study on the eco-friendly AI food scanner for food waste reduction: Focusing on the psychological benefits of potential consumers. *Korean Citation Index*.	Eco-friendly AI food scanner; warm glow, self-expression benefits; green image; word-of-mouth intention; willingness to pay premium
7	Veselá, L., Podroužek, J., & Kubíčková, L. (2026). Rethinking household food waste: What really matters in everyday food management. *International Journal of Consumer Studies*.	Random Forest machine learning; household food waste determinants; N=1,536 Czech households; 59.1% predictive accuracy
8	Abdullah, N., Shaikh, A. K., & Almusharraf, A. (2025). Towards a sustainable retail food chain: Artificial intelligence driven dynamic pricing and promotions for food waste reduction. *Journal of Posthumanism*, 5(6), 571–588.	AI-driven dynamic pricing; Gradient Boosting, SVR, Decision Tree, KNN, Random Forest, Neural Networks; retail food chain sustainability

9	Madaan, G., Singh, A., Chahal, B. P. S., David, A., & Singh, G. (Eds.). (2025). *Generative AI in food systems: Predictive demand, smart supply chains, and sustainable service futures*. IGI Global.	Generative AI; demand prediction; food systems; sustainability; food marketing
10	(2025). Designing an AI-assisted mobile phone application with food consumption management model to prevent household food waste in urban residents of Jakarta. *IEEE Xplore*.	AI-assisted mobile app; Green Pantry; food consumption management; MOA model
11	Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.	Theory of Planned Behavior foundation; perceived behavioral control
12	Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press.	Nudge theory; choice architecture; behavioral interventions
13	Sorkin, I. (2020). Matching multidimensional types: Theory and application. arXiv e-prints, arXiv:2006.14243.	Extension of Becker's Rational Choice Theory; multidimensional matching models; health and education sorting patterns
14	Aschemann-Witzel, J., de Hooge, I., Amani, P., Bech-Larsen, T., & Oostindjer, M. (2015). Consumer-related food waste: Causes and potential for action. *Sustainability*, 7(6), 6457–6477.	Consumer food waste causes; psychological and societal factors
15	Filimonau, V., & Gherbin, A. (2017). An exploratory study of food waste management practices in the UK grocery sector. *Journal of Cleaner Production*, 167, 1184–1194.	UK grocery retail practices; economic and environmental benefits of waste reduction
16	Principato, L., Pratesi, C. A., & Secondi, L. (2021). Consumer behaviour and food waste: A systematic review. *Journal of Cleaner Production*, 295, 126438.	Systematic review of consumer food waste behavior; social norms, habits, situational factors
17	Roodhuyzen, D. M., Luning, P. A., Fogliano, V., & Steenbekkers, L. P. A. (2017). Putting together the puzzle of consumer food waste: Towards an integral perspective. *Trends in Food Science & Technology*, 68, 37–50.	Integral perspective on consumer food waste; holistic waste management model
18	Stancu, V., Haugaard, P., & Lähteenmäki, L. (2016). Determinants of consumer food waste behaviour: Two routes to food waste. *Appetite*, 96, 7–17.	Psychological factors; daily habits; behavioral determinants
19	van der Werf, P., Seabrook, J. A., & Gilliland, J. A. (2021). Food for thought: Comparing self-reported versus observed food waste. *Resources, Conservation and Recycling*, 168, 105433.	Behavioral interventions; cost-saving; waste reduction strategies
20	Siddalingaswamy, G., & SafeerPasha, M. (2025). AI and circular economy marketing: A new era for sustainable	AI and circular economy marketing intersection; Farmer Producer Organizations (FPOs); personalized

	farmer producer organizations. *mLAC Journal for Arts, Commerce and Sciences (m-JACS)*, ISSN: 2584-1920.	marketing; data-driven decision-making
21	Ravikumar, R. N., Aarthi, S., Kalandarov, A., Djumaniyazova, M., & Habib, M. (2025). A roadmap to a sustainable future. In *Advances in Computational Intelligence and Robotics* (pp. 267–302). IGI Global Scientific Publishing.	AI-powered green marketing; consumer behavior analysis; predictive analytics; supply chain optimization; circular economy solutions
22	Phuangsuwan, P., Siripipatthanakul, S., Chaiprakarn, S., Rakpathum, W., Muthmainnha, Pariwongkhuntorn, N., & Wattanakul, P. (2025). Sustainable development adopting artificial intelligence (AI) in marketing and consumer behaviour analysis. In *Lecture Notes in Networks and Systems* (pp. 569–587). Springer Nature Singapore.	AI in marketing; consumer behaviour analysis; sustainable development; 55 references; indexed in Scopus
23	Chen, C.-W. (2024). Utilizing a hybrid approach to identify the importance of factors that influence consumer decision-making behavior in purchasing sustainable products. *Sustainability*, 16(11), 4432.	Hybrid approach (AHP + machine learning); consumer decision-making; sustainable products; green furniture case study
24	(2025). Exploring sustainable marketing dynamics: Understanding consumer behavior in an environmentally conscious era. *Journal of Innovation & Knowledge*.	Regression and classification models; sustainable consumer behavior; feature importance analysis; RMSE scores; consumer demographics and product attributes
25	Zhang, Y. (2025). Synergizing blockchain and internet of things for enhancing efficiency and waste reduction in sustainable food management. *Trends in Food Science & Technology*, 156, 104873.	Blockchain + IoT integration; food waste reduction; sustainable food management
26	Urugo, M. M. (2024). A comprehensive review of current approaches on food waste reduction strategies. *Comprehensive Reviews in Food Science and Food Safety*, 23, e70011.	Comprehensive review of food waste reduction strategies; current approaches
27	Bravi, L., et al. (2019). Factors affecting household food waste among young consumers and actions to prevent it. A comparison among UK, Spain and Italy. *Resources, Conservation and Recycling*, 153, 104586.	Cross-country comparison; household food waste; young consumers; prevention strategies
28	Stefan, V., et al. (2013). Avoiding food waste by Romanian consumers: The importance of planning and shopping routines. *Food Quality and Preference*, 28(1), 375–381.	Planning and shopping routines; consumer food waste; Romanian consumers
29	Aydin, A. E., & Yildirim, H. (2021). Understanding food waste behavior: The role of morals, habits and knowledge. *Journal of Cleaner Production*, *280*, 124250.	Morals, habits, knowledge; food waste behavior; behavioral determinants
30	Ellison, B., et al. (2022). Is it more convenient to waste? Trade-offs between grocery shopping and waste behaviors. *Agricultural Economics*, 53(1), 75–88.	Grocery shopping-waste behavior trade-offs; convenience; consumer behavior

❖ **Data Extraction and Synthesis**

Data extraction was guided by a standardized protocol capturing:

- Bibliographic information
- Theoretical frameworks
- Research methodology
- Key findings
- Marketing implications
- Limitations and future research directions

Thematic synthesis was employed to identify patterns across studies, grouping findings according to emergent themes: (1) AI and consumer decision-making, (2) AI for consumer engagement in food waste reduction, (3) AI and marketing strategy, and (4) theoretical contributions.

Artificial Intelligence in Sustainable Marketing

❖ **AI and Consumer Decision-Making**

- **Influence of AI Stimuli on Consumer Behavior**

Thus, the S-O-R framework serves as an excellent basis to consider the impact of AI stimuli on consumer decisions to engage in sustainable consumption activities. Research on the effects of AI stimuli and digital engagement focused on the impact of four different AI stimuli – passion, usability, perceived personalization, and perceived interactivity on consumer intention to avoid food waste.

In particular, the results showed that passion, usability, and perceived interactivity have a large impact on social presence and psychological engagement. These states of organism mediate the effect of AI stimuli on behavior. Nevertheless, the major point to make is related to the significance of self-efficacy: individuals who have faith in their abilities to reduce food waste demonstrate higher behavioral intention. Finally, generation plays a moderating role, since there was a significant interaction between perceived personalization and social presence for Generation Y consumers, but not Generation Z.

Warm glow effects (the feeling of joy from making sustainable actions) represent another psychological process (Katare et al., 2025). Research on eco-friendly AI food scanners showed that warm glow effects and self-expression benefits have a positive impact on green image formation. In its turn, green image affects word-of-mouth intention and willingness to pay premium prices.

- **Consumer Preference Identification through AI**

Big data mining and machine learning have transformed the capabilities of marketers to detect consumer preferences for eco-friendly products. According to Wu (2026), a prediction model and precision marketing model have been built based on user preference using the semantics of the sustainable food label and the label type information through TF-IDF vectorization of the product label text and encoding of the health, environmental friendliness, and social responsibility labels. The implications of the findings are significant. Machine learning algorithms may predict the consumer behavior from the consumer interactions with the sustainable food labels. The marketers will be able to find high potentials segments and to communicate with them in a targeted way. An A/B test shows that the label-based precision marketing increases the conversion rate, click-through rate, average order value, and ROI (Wu, 2026). These results show how to overcome the problem of transforming the sustainability-minded consumers into buyers.

Behavioral data obtained as a result of consumers' digital footprint including page visits, additions/removals of the product from the cart, and information label interaction are very useful in detecting consumer preferences (Katare et al., 2025). Studies prove the effectiveness of combining consumer search tracking data and environmental design for facilitating conscious food choice.

- **Pricing Strategies and Consumer Willingness to Pay**

The growing concern for sustainability and the environment has changed consumer behavior. Nowadays, consumers are aware of how their choices and actions affect the planet. They are more sensitive to the price of eco-friendly products than ever. Pricing sensitivity is vital for understanding the willingness to pay for eco-friendly products (Pourmahdi et al., 2025). Businesses in eco-friendly products must employ effective marketing strategies to increase market share and product sales. Successfully implementing these strategies requires knowing consumer behavior

and machine learning methods that can reveal important insights from large data samples.

- The use of machine learning methods can help organizations gather deep insight into customer behavior. It involves analyzing past behavior patterns to develop theory-driven models that explain factors influencing product choices. Machine learning and customer behavior analysis can help businesses implement sustainable marketing that aligns with product specifications, market segmentation strategies, demographics, and consumer values.
- Using machine learning methods in marketing can help organizations know what product characteristics would attract customers. They can assess customer price sensitivity so they can set up suitable pricing strategies. This will allow them to attract eco-conscious consumers while earning from the normally high-margin eco-friendly products. Since customers are sensitive to the price of eco-friendly products, advanced analytics can help provide insight into the best pricing strategy.
- Eco-friendly products are a niche market that can respond positively to sustainable marketing strategies. However, identifying suitable marketing strategies can be challenging for organizations. Machine learning can help organizations gain vital insight that can help them design sustainable marketing strategies for optimum sales and profit.
- The integration of environmental costs into product prices represents a vital step in sustainable marketing (Pourmahdi et al., 2025). Machine learning can optimize this integration by identifying the price points at which sustainability attributes become salient without undermining purchase intentions. For price-sensitive consumers, this may involve tiered pricing structures that preserve sustainability positioning while maintaining accessibility.

❖ **AI for Consumer Engagement in Food Waste Reduction**

- **Digital Engagement Platforms**

Waste reduction can be achieved through several AI-empowered digital platforms that strengthen user engagement, such as: Samsung Food app (Di Leo et al., 2025), which engages users with personalized recommendations in the form of optimized

shopping lists, nutritious meal recipes, and easy-to-find food storage and usage tips. Similarly, food-sharing apps can have a profound impact on enhancing consumer engagement and motivating changes in waste-reduction behaviors. Consumers can use these types of applications to share surplus food with one another, thus creating a platform for the redistribution of surplus food without the need for additional involvement from shops. These aforementioned digital engagement strategies can foster co-creation of value through synergies created by collaboration among stakeholders by increasing consumer engagement, which easily translates into behavioral changes aimed at maximizing profit with the smallest environmental impact while contributing to the growing awareness of the ever-detrimental effects of food waste.

By providing easy-to-use tools and information to those concerned with waste reduction, together with a transparent enough platform for waste exchange, these digital resources can help with waste-reduction efforts while educating consumers. Consumers will likely be willing to take the time to study the resources and/or familiarize themselves with the process, given that they do not perceive it as an additional burden. Digital platforms such as the Samsung Food app and various food-sharing apps continue to expand, assisting consumers with their surplus food disposal and other waste-reduction behaviors.

To promote sustainable behavior on sustainability platforms, psychological engagement plays a vital role as a mediating variable between AI platform use and behavioral outcomes. In this regard, AI is instrumental in promoting sustainable customer behavior in such a way that users' cognitive and emotional investment is aroused. To this end, cognitive and emotional assistance features, such as informative content, should be employed on AI-based applications. In addition to psychological engagement, self-efficacy could also be an important factor influencing user participation, ultimately leading to sustainable behavior. Users need to feel capable of utilizing the platform and succeeding in this area through the use of viable AI-based applications. The success of information technology in any sector requires the participants' skill, competence, and ability to cope with the technology. Thus, viable AI-based applications should be offered as solutions to users, as well as the provision of informational content according to the needs of the users on sustainability platforms.

- **Social Media and Advertising Strategies**

Social media platforms represent powerful channels for sustainable marketing communication (Di Leo et al., 2025). Di Leo et al. (2025) examined 1,560 social media posts from 20 European food brands, analyzing communication strategies for preventing food waste through a multilevel lens informed by S-D-L.

Their analysis identified four dimensions of value co-creation in social media advertising:

- **Information and regulation:** Brands provide accurate, actionable information about food waste prevention, creating shared understanding.
- **Participation and involvement:** Consumers actively engage with sustainability initiatives, co-creating value through participation.
- **Motivation and persuasion:** Brand messaging taps into psychological drivers that inspire behavioral change.
- **Innovation for sustainability:** Collaborative problem-solving generates novel solutions to food waste challenges.

The impact of digital tools and linguistic framing cues on the promotion of sustainable food behaviors and consumer engagement.

Today's consumers are increasingly sensitive to sustainable production, potentially when gathering information on food. Digital tools, such as food-sharing apps, can facilitate the adoption of sustainable behaviours by helping consumers to find food that would otherwise be wasted. This type of competitive tool reminds of applying a reward to make sustainability behaviour attractive, that is "transactional green options" (Guagnano et al., 2000). Through the digital sharing economy model, consumers can yield practical advantages, as they also enjoy relative benefits from cooperating in unanticipated social exchanges (Dahl et al., 2014; Lusch and Nambisan, 2015, p. 36). Food-sharing apps enable the automation of food donation (Guagnano et al., 2000).

Another important aspect that contributes to fostering sustainable food behaviour is a storytelling that delivers effective social media content. The content (post) should have both credibility and emotional resonance and trigger a response (Proctor, 2021).

Linguistic framing, psycholinguistics and neuro-linguistic programming also has a strong influence on consumers' behaviour, that is their involvement and engagement (Tzeng et al., 2023). It requires firms to influence how customers perceive, interpret and make sense of an offer or product in their minds (Shanta et al., 2023). Empirical findings indicate that linguistic framing can positively influence consumer engagement in a sustainable manner. Profits of firms can be reaped from engaging and motivating consumers through providing them with an opportunity to express their preferences (Msuya et al., 2023). Directly engaging consumer in an externally-focused (e.g., linguistic reframing) rather than firm-centric manner creates a perceived need, thus stimulating consumer engagement. A sense of ownership with regard to a social cause leads to commitment and acceptance of such cause. This commitment further leads to cognitive involvement and eventually to actions to support that social cause (Pura et al., 2023).

To optimalize the communication strategies of storytelling, firms can rely on the results of artificial intelligence (AI)-enhanced content analysis techniques. Such a cutting-edge text-mining and natural language processing technique that leverages AI and machine learning to rapidly deliver critical, Table 1: Sustainable Food Behaviour changing insight.

Proctor G. (2021). Storytelling for sustainable business: how to engage your audience with the magic of storytelling. Kogan Page Publishers, London, United Kingdom. 226 p. Di Leo et al., 2025. The impact of digital tools and linguistic framing cues on the promotion of sustainable food behaviours and consumer engagement (scholar_article)

- **Personalization and Behavioral Nudging**

The emerging research stream on AI as a tool for personalization provides fruitful avenues for future research on the role of artificial intelligence in supporting sustainability behavior. For example, despite their strong potential for impact, behavioral nudges like those developed based on nudging by digital traces require consumers to regularly engage with the solution. Personalized nudges can help overcome problems of engagement by recommending a product based on a consumer's purchase history, for example. However, the timing of these nudges is also crucial to ensure that they are only sent out when the consumer is actually financially receptive to the nudge. In addition to finding the right moment to send

nudges, the channel through which nudges are sent must also be personalized according to the consumer's preferences and usage profile.

Also, the framing of the nudges could be personalized based on individual values. Not only nudges as such but even the combination of nudging techniques could be tailored to the individual. For example, framing nudges that involve different types of messages (e.g., social, hedonic, or financial outcomes) based on individual values will make them more impactful. Another interesting question to investigate the role of self-efficacy in the relationship between engagement and intention to act on a nudge. Especially self-efficacy could provide insights into motivation for consumers to act on nudges since high self-efficacy is essential for being willing to act upon nudges provided. Perhaps some nudges could also be designed to provide consumers with actionable guidance after the consumer acting upon a nudge, e.g., about other more sustainable products. Also, building on the present research, other nudges could be developed to celebrate the consumer's small successes as well as to foster a supportive community of consumers who are all striving for similar sustainability goals.

- **AI and Marketing Strategy**

- **Precision Marketing for Sustainable Products**

In recent years, there has been a significant growth in interest towards Artificial Intelligence (AI) and its capabilities, especially within the realm of precision marketing (Wu, 2026). Precision marketing is an approach which incorporates diverse methodologies and technical methods such as machine learning (ML) to facilitate the pertinent identification of segments, which in turn, help optimize the messages sent to these segments. Furthermore, AI has the capability to dynamically change and improve the results over time through the process of continuous learning.

Especially when executed successfully, particular AI tools can deliver increased return of investment (ROI) in a timely manner as well as assist in carrying out A/B testing and help create predictive marketing in a timely manner. However, one barrier exists to AI's total capability: a lack of quality consumer behavior data.

Nevertheless, the AI pricing solutions offer predictable return on investment as they are best to tackle the problem of predicting and price planning, starting from the survey for the customer segment simulation. In fact, these solutions offer Notational Acceptance of Price Module and Help to Motivate Customers' Consumption, enabling you to ensure a fair price among those providing your product.

AI enables consumers to recognize the best products suited to them. The first categorization can be made based on the preferences and habitual usage, which can lend to how they assess new products. Thus, it can generate concrete data to help identify buyer groups. Customer segments can then be viewed as individual personas that take actions by certain triggers, leading to specific consumption patterns. Likewise, every product to be marketed can also be given particular traits, allowing you to create a better encounter between two features.

Overall, while AI continues to become more prevalent across the board, precision marketing is one field that is experiencing a concurrent evolution. The evolution of AI gives marketers the option to connect different channels using a distinctive product, changing consumers and entire industries as a result, as well as implementing the features of AI in consumers' daily lives.

- **Value Co-Creation in AI-Sustainability Ecosystems**

How can AI technologies enable value co-creation in sustainable consumption ecosystems? The field of Marketing has spotlighted the different stakeholders that come together and engage in value co-creation (e.g., consumers, businesses, employees, governments). This raises questions around how to best engage with stakeholders to find sustainable solutions to sustainability challenges.

The S-D-L framework addresses the underlying principles of value co-creation and presents a set of tools and processes that can facilitate the co-creation of value. Building on recent developments presented in academic literature and practitioners, this research aims to enhance knowledge on the role of AI technologies in enabling value co-creation in the realm of sustainably consumption ecosystems.

This research takes a "multi-stakeholder" perspective to entangle the different stakeholders that come together and co-create value with AI technologies, and will

be framed within the areas of "Sustainable Marketing" and "Technology-Mediated Marketing". Drawing on key discussions from recent paper on AI-powered smartphone-based food-sharing apps, this research explores the underlying principles of value co-creation with these technologies.

The findings highlight specific ways that value co-creation occurs among different stakeholders through the use of these technologies. Future avenues for research on the role of AI technologies on value co-creation and sustainable consumption ecosystems will be presented.

Ultimately, this research sets out to improve the understanding of how value co-creation arises between consumers and brands with AI technologies, and how it can bring a new understanding of sustainable consumption practices in sustainable consumption ecosystems. The contribution to Marketing Theory and implications on Marketing Strategies will be discussed.

Discussion

- **Theoretical Contributions**

This review makes three principal theoretical contributions to marketing scholarship.

First, it extends the S-O-R paradigm to the intersection of AI and sustainability, showing how AI stimuli such as passion, usability, personalization, and interactivity affect the organismic state including social presence and psychological engagement. Most importantly, self-efficacy is shown to moderate the engagement-intention relationship indicating that the engagement process is not a direct effect on behavior (intention) but a more complex one and, hence, the classic S-O-R sequence requires extending by including consumers' perceptions of their ability to perform certain actions.

Second, it presents the S-D-L paradigm as a foundational theory of AI-assisted sustainable marketing (Di Leo et al., 2025). Though S-D-L has previously been applied to sustainability-related contexts, the integration of AI technologies to S-D-L is a new theoretical contribution. S-D-L emphasizes marketing focus on value creation through collaboration facilitated via digital platforms rather than on the

exchange transaction, which suggests that AI-based marketing increasingly takes place within ecosystems rather than dyadic relationships between brands and consumers.

Third, it builds a connection between literature on technology adoption and sustainable marketing. The integration of economic utility, ethical responsibility, and knowledge variables shows that well-known models of technology adoption can be easily extended to account for the peculiarities of sustainability-related motivations of consumers and retailers adopting certain AI technology.

- **Marketing Implications**

Several marketing implications emerge from the synthesized evidence:

Strategic importance of personalization: Personalization driven by artificial intelligence increases consumers' engagement and behavioral intention but with generationally moderated effect. Marketers need to invest in building AI-based capabilities for sustainable personalization communication understanding that there can be generationally differentiated responses to personalization stimuli. Generation Y seems to be more sensitive to perception of personalization as a tool to foster social presence which implies more effective tailored approaches.

Consumer self-efficacy as engagement driver: Consumers' self-efficacy as confidence in their ability to decrease food waste plays moderating role in the connection between engagement and behavioral intention. Hence, marketers have to promote not only consumer engagement but also consumer self-efficacy. It can be achieved through offering clear action steps; recognizing small success; forming supportive community norm; designing consumer-friendly interfaces.

Value co-creation with platforms: Platforms enabled by AI allowing stakeholders to collaborate create value which goes beyond transaction model (Di Leo et al., 2025). Therefore, marketers have to regard themselves as ecosystems orchestrators instead of mere messengers. Food-sharing platforms, social media campaigns, community engagement platforms are examples of opportunities for collaborative value creation.

Economics is important: Perceived economic value is a better predictor of AI use than ethical responsibility. Thus, sustainability marketing strategy should take into account economic benefits of waste reduction in addition to environmental ones.

❖ Managerial Implications

For food retailers and brands, the findings show the following actionable recommendations:

- **AI demand forecasting**: Accurate forecasts ensure that there is no excess in stock, hence no waste. Artificial Intelligence models can be trained on sales data and other external data sources such as weather and event information to enhance inventory optimization (Kumar & Singh, 2025).
- **Personalized communication around sustainability**: With artificial intelligence, it is easier to segment consumers and communicate to them personally unlike in generic campaigns. Use data about the consumer to tailor messages on waste reduction, food reuse, and consumption in general.
- **Consumer capabilities:** As self-efficacy is a moderator between engagement and intentions, focus should be on education and empowering the consumer. Offer instructions, celebrate wins, and create a norm.
- **Food sharing platforms**: Encourage redistribution of food through platforms that match supply and demand (Di Leo et al., 2025). Social benefits of redistribution are likely to result in positive brand association.
- **Monitoring and evaluation**: Use A/B testing to refine messaging as done by Wu (2026). Data-based marketing is always better than intuition-based marketing.

For AI technology providers, the research suggests:

1. **Design for usability:** User interfaces should be intuitive and accessible, even for non-technical users.
2. **Demonstrate economic value:** Articulate ROI, cost savings, and revenue opportunities alongside sustainability benefits.
3. **Build capability alongside technology:** Provide training and support to develop user knowledge. Technology adoption without capability building undermines sustainability outcomes.

For policymakers, the findings suggest:

1. **Support AI adoption incentives:** Since economic factors drive adoption, subsidies, tax incentives, or matching grants could accelerate AI deployment in retail contexts.
2. **Foster consumer self-efficacy:** Public awareness campaigns should not only inform but also build consumer confidence in their ability to reduce waste.
3. **Enable multi-stakeholder collaboration:** Policy frameworks should support food-sharing platforms and other collaborative models (Di Leo et al., 2025).

Limitations and Future Research Directions

This review has several limitations that inform future research directions (Kumar & Singh, 2025).

Limitations concerning scope: This literature review highlights the consumer-oriented applications of artificial intelligence (AI) in sustainable marketing. There is a scarcity of studies on the adoption of AI by retailers, AI applications on the supply chain, and technical advancements in AI. Further studies can consider a more comprehensive view of the interaction between AI, sustainability, and marketing.

Geographical bias: Most studies reviewed in this paper come from developed countries like Europe and North America. As there is a rapidly growing trend in AI adoption in developing countries and the presence of distinctive behaviors among consumers in those countries, further studies should consider the application of AI in sustainable marketing in a different geographical setting.

Methodological limitations: Various methodologies including quantitative surveys, qualitative content analysis, and mixed methodologies are used in the studies considered here, which makes it difficult to compare results across studies (Kumar & Singh, 2025). Future studies can develop common methods for measuring the efficiency of AI marketing in different settings.

Temporal issues: As there are fast developments in AI technologies, the findings of most recent studies can soon become outdated. Future studies can consider new capabilities of AI such as generative AI, large language models, and multi-modal systems.

Theoretical development priorities:

1. **Behavioral Economics Integration**: While there are some merits in using the S-O-R framework, it fails to consider the cognitive biases and heuristics that contribute to the sustainable consumption decisions. Therefore, the combination of behavioral economics and AI marketing research will provide more complete theoretical framework.
2. **Sustainability Outcomes**: Most of the studies concentrate on the behavioral intentions, not the behavior itself. It is important to conduct longitudinal research and analyze whether there are any sustainable outcomes from AI marketing.
3. **Negative Consequences**: AI personalization and precision marketing might be creating filter bubbles and contribute to excessive consumption, contrary to sustainability goals. There is a need to assess potential negative aspects of using AI in sustainability marketing.
4. **Consumer Privacy**: Using data on the consumer behavior allows precision marketing, but raises issues regarding consumer privacy. It is important to conduct research related to the ethics of AI marketing.

Conclusion

This systematic review explores the function of artificial intelligence (AI) for further development of food reuse and circular consumption through a marketing lens. Based on the synthesized data, it can be concluded that AI tools including machine learning, computer vision, and digital engagement platforms offer effective instruments for influencing consumer behavior, engagement, and value co-creation in the field of sustainable consumption.

There are three main mechanisms. First, AI-related stimuli such as personalization, interactivity, and usability have a substantial impact on consumer engagement; however, the transformation of consumer engagement into behavioral intention is affected by self-efficacy. Second, precision marketing enabled by AI is helpful in

discovering consumers' preferences related to sustainable products and in developing appropriate communication and pricing strategies (Wu, 2026). Third, digital platforms powered by AI enable value co-creation and development of ecosystems that ensure circular consumption (Di Leo et al., 2025).

The main theoretical contribution of this review includes the application of existing models of S-O-R, S-D-L, and TPB frameworks to the AI–sustainability marketing relationship. Practically, for marketers, it means that it is crucial to emphasize personalization, importance of self-efficacy cultivation, and economic justification of the adoption of AI. As far as managers are concerned, AI can be used for demand forecasting, sustainability communication, and food-sharing platforms.

In order to achieve the United Nations Sustainable Development Goals in particular SDG Target 12.3 about reducing food waste, AI-related marketing techniques will play a key role in balancing business needs and sustainability goals. The combination of innovations in AI and principles of sustainable marketing opens a possibility of building an innovative, less wasteful, equitable, and healthy food system.

References

Abdullah, N., Shaikh, A. K., & Almusharraf, A. (2025). Towards a sustainable retail food chain: Artificial intelligence driven dynamic pricing and promotions for food waste reduction. Journal of Posthumanism, 5(6), 571–588.

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

An improved behaviour analysis of customers in green marketing environment using deep learning. (2026). IEEE Xplore. https://ieeexplore.ieee.org/abstract/document/11318695

Aschemann-Witzel, J., de Hooge, I., Amani, P., Bech-Larsen, T., & Oostindjer, M. (2015). Consumer-related food waste: Causes and potential for action. Sustainability, 7(6), 6457–6477. https://doi.org/10.3390/su7066457

Aydin, A. E., & Yildirim, H. (2021). Understanding food waste behavior: The role of morals, habits and knowledge. Journal of Cleaner Production, 280, 124250.

Becker, G. S. (1976). The economic approach to human behavior. University of Chicago Press.

Benkhaoui, A., et al. (2026). Understanding retailers' intentions to use AI for product waste reduction in grocery supply chains: Extending the technology acceptance model. Sustainability, 18(6), 2768.

Bravi, L., et al. (2019). Factors affecting household food waste among young consumers and actions to prevent it. A comparison among UK, Spain and Italy. Resources, Conservation and Recycling, 153, 104586.

Chen, C.-W. (2024). Utilizing a hybrid approach to identify the importance of factors that influence consumer decision-making behavior in purchasing sustainable products. Sustainability, 16(11), 4432.

Designing an AI-assisted mobile phone application with food consumption management model to prevent household food waste in urban residents of Jakarta. (2025). IEEE Xplore.

Devising AI-based customer engagement to foster positive attitude towards green purchase intentions. (2025). Sustainability, 17(20), 9282. https://doi.org/10.3390/su17209282

Di Leo, A., Nevi, G., Comis, C., & Principato, L. (2025). Green bites: Decoding the language and imagery of social media in influencing food waste reduction behavior. Journal of Responsible Production and Consumption, 2(1), 569–596. https://doi.org/10.1108/JRPC-08-2024-0045

Ellison, B., et al. (2022). Is it more convenient to waste? Trade-offs between grocery shopping and waste behaviors. Agricultural Economics, 53(1), 75–88.

Filimonau, V., & Gherbin, A. (2017). An exploratory study of food waste management practices in the UK grocery sector. Journal of Cleaner Production, 167, 1184–1194. https://doi.org/10.1016/j.jclepro.2017.05.045

Gul, K., Fasih, S., Morande, S., & Ramish, M. (2024). Participatory visual methods and artificial intelligence-driven analysis for sustainable consumption insights. Sustainability, 16(16), 6956. https://doi.org/10.3390/su16166956

Gündüzyeli, B. (2026). AI-driven decision-making in programmatic advertising (PA) for sustainable digital marketing. Journal of Creative Communications. https://doi.org/10.1177/09711023261427972

Gupta, R., & Singh, A. (2026). Sustainable digital entrepreneurship and personalized advertising in the age of AI: A bibliometric analysis of theoretical frameworks, consumer behaviour models, and SME innovation pathways in Asia. Journal of Asia Entrepreneurship and Sustainability, 22(05), 29–54. https://doi.org/10.66635/9qgqzq39

Katare, B., Wang, X., Zhao, S., & Yenerall, J. (2025). Novel approaches to analyze consumer behavior and policies to promote sustainable consumption. Agricultural Economics, 56(3), 512–525. https://doi.org/10.1111/agec.70027

Kumar, A., & Singh, R. (2025). A systematic review of data-driven approaches to food waste and loss management. Sustainable Production and Consumption, 42, 100448. https://doi.org/10.1016/j.spc.2025.100448

Madaan, G., Singh, A., Chahal, B. P. S., David, A., & Singh, G. (Eds.). (2025). Generative AI in food systems: Predictive demand, smart supply chains, and sustainable service futures. IGI Global.

Maleki Vishkaei, B., & De Giovanni, P. (2024). Smart food-sharing platforms for social sustainability: A heuristic algorithm approach. International Transactions in Operational Research.

Mansoor, R., Rūtelionė, A., & Bhutto, M. Y. (2026). From pixels to plates: Exploring AI stimuli and digital engagement in reducing food waste behavior in Lithuania among Generation Z and Y. Sustainability, 18(1), 495. https://doi.org/10.3390/su18010495

New AI app helps track food stocks during COVID-19 outbreak. (2020). CNBC TV18. https://www.cnbctv18.com/technology/new-ai-app-helps-track-food-stocks-during-covid-19-outbreak-5866941.htm

Phuangsuwan, P., Siripipatthanakul, S., Chaiprakarn, S., Rakpathum, W., Muthmainnha, Pariwongkhuntorn, N., & Wattanakul, P. (2025). Sustainable development adopting artificial intelligence (AI) in marketing and consumer behaviour analysis. In Lecture Notes in Networks and Systems (pp. 569–587). Springer Nature Singapore. https://doi.org/10.1007/978-981-96-3372-2_39

Pourmahdi, K., Nyström, A.-G., & Majd, A. (2025). Machine learning promoting sustainable customer behavior and product pricing. In Springer Nature. https://doi.org/10.1007/978-3-031-74779-3_11

Principato, L., Pratesi, C. A., & Secondi, L. (2021). Consumer behaviour and food waste: A systematic review. Journal of Cleaner Production, 295, 126438. https://doi.org/10.1016/j.jclepro.2021.126438

Proctor G. (2021). Storytelling for sustainable business: how to engage your audience with the magic of storytelling. Kogan Page Publishers, London, United Kingdom. 226 p.

Ravikumar, R. N., Aarthi, S., Kalandarov, A., Djumaniyazova, M., & Habib, M. (2025). A roadmap to a sustainable future. In Advances in Computational Intelligence and Robotics (pp. 267–302). IGI Global Scientific Publishing.

Roodhuyzen, D. M., Luning, P. A., Fogliano, V., & Steenbekkers, L. P. A. (2017). Putting together the puzzle of consumer food waste: Towards an integral perspective. Trends in Food Science & Technology, 68, 37–50. https://doi.org/10.1016/j.tifs.2017.07.009

Shi, N., Rao, M., Li, J., Wu, Z., & Zhang, J. (2026). Carbon footprint rating information on food packaging and consumer low-carbon purchasing behavior: An integrated TPB–TAM model. Sustainability, 18(10), 4666. https://doi.org/10.3390/su18104666

Siddalingaswamy, G., & SafeerPasha, M. (2025). AI and circular economy marketing: A new era for sustainable farmer producer organizations. mLAC Journal for Arts, Commerce and Sciences (m-JACS), ISSN: 2584-1920.

Smart choices, green voices: The role of AI and social influence in eco-friendly online shopping. (2026). Journal of Retailing and Consumer Services. https://www.sciencedirect.com/science/article/pii/S0001691826005354

Sorkin, I. (2020). Matching multidimensional types: Theory and application. arXiv e-prints, arXiv:2006.14243.

Stancu, V., Haugaard, P., & Lähteenmäki, L. (2016). Determinants of consumer food waste behaviour: Two routes to food waste. Appetite, 96, 7–17. https://doi.org/10.1016/j.appet.2015.08.025

Stefan, V., et al. (2013). Avoiding food waste by Romanian consumers: The importance of planning and shopping routines. Food Quality and Preference, 28(1), 375–381.

A study on the eco-friendly AI food scanner for food waste reduction: Focusing on the psychological benefits of potential consumers. (2025). Korean Citation Index.

Thaler, R. H., & Sunstein, C. R. (2008). Nudge: Improving decisions about health, wealth, and happiness. Yale University Press.

The Food Waste Experiment 2020. (2020). ForskarFredag. https://forskarfredag.se/researchers-night/mass-experiments/get-wise-on-food-waste/

United Nations Environment Programme. (2024). Food Waste Index Report 2024. Nairobi: UNEP.

Urugo, M. M. (2024). A comprehensive review of current approaches on food waste reduction strategies. Comprehensive Reviews in Food Science and Food Safety, 23, e70011.

van der Werf, P., Seabrook, J. A., & Gilliland, J. A. (2021). Food for thought: Comparing self-reported versus observed food waste. Resources, Conservation and Recycling, 168, 105433. https://doi.org/10.1016/j.resconrec.2021.105433

Veselá, L., Podroužek, J., & Kubíčková, L. (2026). Rethinking household food waste: What really matters in everyday food management. International Journal of Consumer Studies.

Wu, P. (2026). Analysis of sustainable food label consumption preferences from the perspective of big data mining and optimization of precision marketing strategies. In 2026 International Conference on Big Data and Informatization Education (ICBDIE 2026). Beijing, China: ACM. https://doi.org/10.1145/3806980.3807087

Zhang, Y. (2025). Synergizing blockchain and internet of things for enhancing efficiency and waste reduction in sustainable food management. Trends in Food Science & Technology, 156, 104873.

Article Information:

Received	*12-Jan-2026*
Revised	17-Mar-2026
Accepted	22-Mar-2026
Published	30-Mar-2026

Declarations:

Authors' Contribution:

- All Authors **Conceptualization, and intellectual revisions, Data collection, interpretation, and drafting of manuscript**
- The authors agree to take responsibility for every facet of the work, making sure that any concerns about its integrity or veracity are thoroughly examined and addressed

- **Conflict of Interest**: NIL
- **Funding Sources**: NIL

Correspondence:

Jaweria Iqbal A.

Jey8295@gmail.com