

Customer Perceptions of Sustainable Goat Cheese Production Within a Circular Farm to Fork Model: a Case Study of PIB College

Sandy Dwiputra Yubianto

D3- Culinary Arts, Politeknik Internasional Bali

Sandy.dwiputra@pib.ac.id

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Abstrak

Pertumbuhan pesat industri makanan telah meningkatkan pentingnya pendidikan kuliner, khususnya dalam mendorong praktik berkelanjutan. Di Politeknik Internasional Bali (PIB College), keberlanjutan menjadi fokus utama baik dalam pengajaran praktis maupun produksi makanan. Peternakan di dalam kampus, yang memelihara kambing dan sapi Bali, memberikan kesempatan untuk memasukkan keju kambing lokal ke dalam menu restoran kampus. Konsep Farm to Fork menekankan penggunaan bahan lokal dan berkelanjutan, sejalan dengan prinsip konsumsi bertanggung jawab dan mengurangi dampak lingkungan dari sistem pangan. Selain itu, program seni kuliner di PIB menangani limbah makanan dengan memanfaatkan limbah praktikum mahasiswa sebagai pakan bagi kambing, sehingga berkontribusi pada sistem produksi pangan yang lebih berkelanjutan dan sirkular. Penelitian ini bertujuan untuk meneliti persepsi konsumen terhadap strategi Farm to Fork dalam pemaparan keju kambing yang bersumber dari kampus dalam upaya yang berkelanjutan. Penelitian ini menghasilkan kesimpulan bahwa konsumen akan merespons positif terhadap pendekatan Farm to Fork, melihatnya sebagai pilihan menarik dan ramah lingkungan. Dengan menyoroti keberlanjutan produksi lokal dan pengurangan limbah, penelitian ini mengeksplorasi bagaimana strategi Farm to Fork dapat mendorong dan meningkatkan konsumsi makanan yang bertanggung jawab.

Kata Kunci: *Farm to Fork, Keberlanjutan, Keju Kambing, Pengelolaan Limbah Makanan.*

Abstract

The rapid growth of the food industry has increased the significance of culinary education, particularly in promoting sustainable practices. At Politeknik Internasional Bali (PIB), sustainability is a key focus in both practical teaching and food production. The campus's farm, which raises goats and Balinese oxen, provides an opportunity to incorporate locally sourced goat cheese into the menu of the campus restaurant. The farm-to-fork concept emphasizes the use of local, sustainable ingredients, aligning with the principles of responsible consumption and reducing the environmental impact of food systems. Additionally, the culinary arts program at PIB addresses food waste by repurposing waste from student practicals as feed for the goats, contributing to a more sustainable and circular food production system. This research aims to assess the customer perception, focusing on

how sustainability performed through campus-sourced goat cheese perceived by the eyes of consumer. The study resulted that consumers will respond favorably to the Farm to Fork approach, viewing it as an attractive and eco-friendly option. By highlighting the sustainability of local production and reducing waste, the research explores how Farm to Fork strategies can encourage and enhance responsible food consumption.

Keywords: Farm to Fork, Sustainability, Goat Cheese, Food Waste Management.

1. INTRODUCTION

Culinary education in Bali is primarily delivered through vocational and academic higher education, with vocational programs ranging from Diploma 1 to Diploma 4 and emphasizing industry-oriented learning. This vocational program still proven to be the choice of studying program in Indonesia, in hoping to cater the needs of competent human resources in tourism industry (Kadek Eni Juniari et al., 2022). The rapid growth of the culinary industry has increased the importance of culinary education (Kim, 2020), a trend reflected in the development of PIB College as a leading vocational institution. Among its four study programs, the Diploma 3 Culinary Arts program is one of the most popular, reflecting strong student interest in practical culinary training. Hands-on learning approaches what mostly causes the vocational culinary education in Bali becoming widely favoured.

PIB College supports the hands-on learning approaches by providing the international-standard kitchen laboratories and a curriculum structure consisting of 70% practical and 30% theoretical classes. This learning composition allows students to master culinary techniques while understanding kitchen fundamentals and operations. As a result, the kitchen laboratory becomes one of the most intensively used facilities, particularly during early-stage training where students learn basic cooking processes.

In the kitchen laboratory, students are in process of acquiring essential knowledge of ingredients, equipment, utensils, and recipes. Among these, ingredient knowledge is an important aspect to learn in kitchen laboratory, as it serves as the primary medium through which culinary techniques are learned. PIB College students come from diverse educational backgrounds, which are from vocational high school majoring in cooking program, or senior high school majoring from science and social sciences. The students also come with varying level of cooking experiences. Students with limited prior knowledge tend to generate more food waste due to unrefined cutting, peeling, and processing techniques, especially during early practical sessions. Increased student participation in practical classes leads to higher ingredient usage and, consequently, greater food waste generation.

The situation of increased student and increased food waste persist until now, and there are no prominent actions to tackle and limiting the number of food waste produced that would end up in the landfill which in return will generate more issue regarding health and safety risk within the environment. In November 2024, the food waste generated from kitchen practical reach the total amount of kilograms (see figure 1.1). With the large amount of food waste that ended up straight to the landfill, the researcher planned to reduce and recreate something out of the food waste that would in return be beneficial for the learning environment as well. In response, the Laboratory team together with the coordination in culinary arts lecturer team in

PIB College emphasizes early education on ingredient maximization to reduce food waste. This approach is aligned with Sustainable Development Goal 12, which promotes responsible consumption and production and requires sustainable ingredient use with reduced resource consumption (Svendsen et al., 2022).

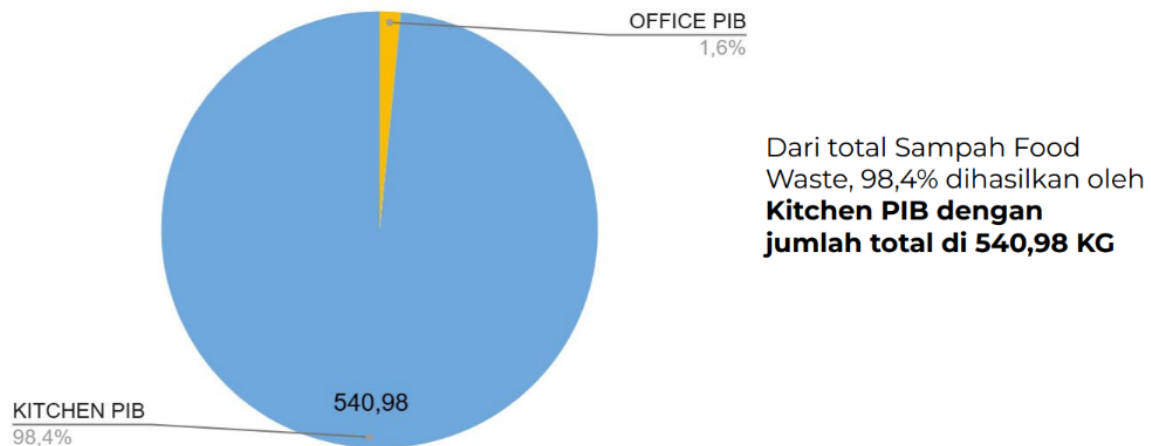


Figure 1.1 Food waste generated from Kitchen PIB in November 2024.
(Source: Summary Waste Report, LTP, 2024)

One major initiative introduced by the researcher focuses on managing food waste starts from fruit carving classes. The class is a compulsory first-semester subject that produces significant fruit trimmings. This initiative supports PIB College's broader objective of achieving green campus certification. The sustainability program was further strengthened by integrating campus farming activities. In PIB College, goats and Balinese oxen are 2 of the farm animals that are daily treated as the part of the establishment. With their presence, and their needs of a good source of feed, fruit carving waste is repurposed for the animal fed especially being given to the goats in purpose of giving them more nutrients and variety in their diets. Meanwhile other organic wastes are processed into compost to be used for the garden soil. This closed-loop system evolved into a Farm to Fork Model, transforming food waste into valuable outputs such as goat milk, goat cheese, and vegetables for practical classes and campus café use as seen on **figure 1**.



Figure 1 PIB College Farm to Fork Model at Food and Beverage Lab
(Source : Documentation Author, 2025)

The repurposing waste especially for compost and for goat cheese making has decreased the food waste to the number of 335,29 kilograms in December 2024 (see figure 1.2). It has been decreased as much as 205,69 kilograms of food waste generated from kitchen PIB. The initiative has led the operations inside classes becomes more genuine towards a greener act in limiting the food waste during practical as well.

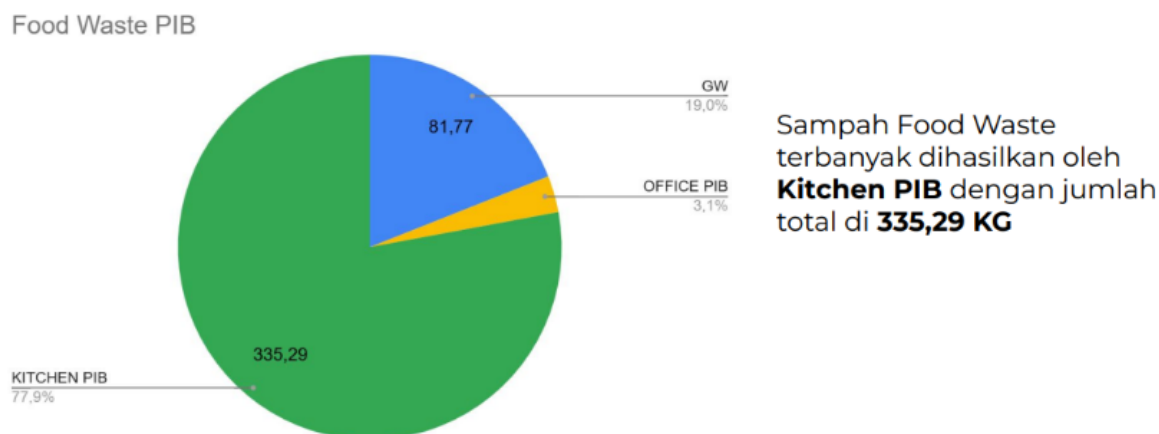


Figure 1.2 Food waste generated from Kitchen PIB in December2024.
(Source: Summary Waste Report, LTP, 2024)

Sustainable food practices within campus food services are increasingly important, as managing food supply and demand plays a key role in food waste reduction (Nicastro & Carillo, 2021). Involving consumers in sustainability initiatives can further reduce environmental impact and carbon footprints (Kim & Hall, 2020). The Farm to Fork strategy, a core element of the European Green Deal, emphasizes sustainable food systems that enhance economic viability, social well-being, and environmental protection (European Union, 2020). PIB College's integrated campus environment enables effective implementation of this strategy within culinary education.

2. LITERATURE REVIEW

2.1 Farm to Fork as a Circular Food System

According to Giannou (2022) in the publication of Farm to Fork EU's Strategy for a Sustainable Food System Sustainability, relationship between human health, environmental wellbeing, and long-term economic stability that are emphasized are in line with the UN's Sustainable Development Goals. The phenomena highlight strategies such as the Green Deal and Farm to Fork as approaches to addressing global challenges including food waste, hunger, and climate change. The research findings show that the Farm to Fork strategy supports a fair, healthy, and environmentally conscious food system. Thus, this finding also strengthens the flow of a circular food system that utilizes the environment, and being conscious to the consumption and the impact resulted from this action in exchange of a longing sustainable processes within the food system.

Highlighting sustainability and farm to fork system, Elshaer et al., (2023) examines the mediating role of perceived economic benefit and environmental sustainability in the relationship between Farm to Fork sourcing and sustainable agricultural practices. The study identifies challenges associated with increasing crop productivity while maintaining sustainability, leading to the adoption of regenerative agricultural practices. The findings show that Farm to Fork sourcing positively influences sustainable agriculture, with economic perceptions and environmental sustainability acting as key mediators. The results further suggest that direct sourcing from local farms can generate economic benefits for both farmers and food service operators while simultaneously reducing carbon footprints within the food supply chain. The phenomena highlight a better circular system resulted from the lower carbon footprint and benefiting both farmers and the environment in return creating a better circular system in the food supply chain.

2.2 Customer Perceptions towards Sustainable Food Products

Perceptions as depict in the research from Fernqvist (2021), examines customer perspectives on the Farm to Fork strategy and discusses the challenge of balancing farmer income with affordable and healthy food. Using descriptive analysis, the study introduces the Impossible Food Triangle, showing that consumer choices often prioritize price, convenience, or health, which influences sustainable consumption. This has shown the presence of point of view within the process of examining a food product especially when they are driven by the concept of sustainable which also contains economic side, value side, environment side, and the community side. Those 3 sides in sustainable food product are in conjunction with the concept of price (market and society driven pricings), convenience (the travel and efficiency within the carbon footprint produced), and health (which might as well be affected by environment they are living in during the process of creation and consumption). In this research perceptions is driven by the presence of numerical scoring of the products hedonic test aspects and the feedback summarization resulted from the thematic analysis.

Apart from perceptions, the farm to fork product itself has bigger role in promoting sustainability by highlighting the creation through the presence of attributes such as food labeling. Neculai (2021) analyzes the role of Farm to Fork SMART labels in increasing consumer trust in local dairy products. The study emphasizes information gaps that influence purchasing decisions, particularly for animal-based products. Through survey based quantitative analysis, the findings indicate that smart labels improve transparency, product traceability, and consumer confidence. This research provides insight into how information delivery and labeling strategies can support sustainable local food products, including goat cheese produced within a Farm to Fork model.

2.3 Previous study

Below are the table showing the previous study and the novelty this research has progressed onto.

Table 2. 1 Previous Study

No.	Researcher	Title	Method	Results	Novelty
1.	(Giannou, 2022)	Farm to Fork: EU's Strategy for a Sustainable Food System	<i>Comparative Article Examination</i>	The research finds that the Farm to Fork strategy supports a healthy and environmentally friendly food system while addressing food waste and sustainability.	The sustainable food system is implemented through a Farm to Fork Model that utilizes students' practical food waste for goat cheese production. This research focuses on examining customer perceptions of this initiative. It differs from the current research in terms of scope, as it focuses on system level implementation rather than food waste utilization within an educational environment.
2.	(Fernqvist, 2021)	Farm to Fork Strategy – A Consumer Perspective	Descriptive Analysis	The Farm to Fork Strategy highlights food supply chain complexity and reveals that current consumption patterns are unsustainable, with customers less likely to choose healthy and sustainable diets.	The Farm to Fork Strategy reveals unsustainable consumption patterns and low preference for healthy and sustainable diets. This research continues the research to see the perceptions on how a more sustainable, and healthier product produced from farm to fork activity could be approved by students and benefiting all parties involved.
3.	(Neculai et al., 2021)	Farm-to-Fork SMART LABEL for Increasing Consumer Trust and Ensuring Support for Local Milk and Dairy Producers	Descriptive Quantitative Data Analysis	The study shows that smart labels increase consumer trust in local animal products and may reduce carbon footprints through shorter supply chains.	This study trying to strengthen the Lable perceptions within the campus scale of marketing. Seeing how students who participated in the sustainable efforts program would gain benefit from the goat cheese resulted from

					the food waste. Their perceptions would then give insights to the researcher about this Farm to Fork model thus will create a better decision in the label design for the product in the future research.
4.	(Elshaer et al., 2023)	Farm-to-Fork and Sustainable Agriculture Practices: Perceived Economic Benefit as a Moderator and Environmental Sustainability as a Mediator	Quantitative Data Analysis	The study finds that Farm to Fork sourcing positively influences agricultural practices, with economic and environmental perceptions shaping this relationship.	This Study examines the stakeholder who are part of the system which are the students, and the farm processes. The study examines them directly and gather the data of the partaker of the project in an educational area.

2.4 Research Gap

The research gap within the mentioned previous study are the scale of the program and the real perceptions of the customer with the direct interaction of the product that has been resulted straight from the farm to fork model. These perceptions would be as valuable as how a product would be produced and marketed later while as well understanding the valuable point off view from all the parties in turning this circular food system into a valuable module on educational level institution all around Indonesia and the world. The focused produced goat cheese is also one of the key aspect in determining a special interest and perceptions of the participants in seeing how a farm to fork model could change their mind and influence their decision in buying a better product and partaking in a more sustainable food processes.

3. METHODS

This study employed a qualitative dominant mixed method approach to examine customer perceptions of a Farm to Fork Model implemented within a vocational culinary education environment. Research is defined as a systematic process of inquiry aimed at generating new knowledge through structured investigation (Pandey & Pandey, 2015). Qualitative methods were selected to capture in depth perspectives, experiences, and meanings related to sustainability practices that cannot be fully represented through numerical data alone (Taherdoost, 2022). Descriptive analysis was used to interpret empirical findings supported by relevant literature on sustainable food systems and Farm to Fork strategies.

The research was conducted at Bali International Polytechnic (PIB College), Indonesia, from January to August, following proposal preparation between October and December. PIB College was selected due to its integrated campus layout, where culinary laboratories, a campus café, waste management facilities, and a livestock farm are in proximity. The campus spans approximately 15 hectares and serves as a vocational education institution specializing in

tourism, digital, and creative industries (PIB College, 2024). The presence of goats and cows on campus enables the conversion of culinary practical food waste into animal feed, which in turn supports goat milk and goat cheese production for educational and café use.

Data collection involved both primary and secondary sources. Primary data were gathered through hedonic sensory testing of campus produced goat cheese, open ended questionnaires, and discussions with students involved in food waste separation and goat cheese processing. The sensory test evaluated taste, aroma, texture, appearance, and overall acceptance using a five points Likert scale ranging from dislike very much to like very much. Secondary data were collected from academic journals, official reports, and online publications related to sustainability and Farm to Fork strategies.

The research population consisted of culinary arts students, hotel management students, chefs, and staff familiar with the Farm to Fork initiative. Purposive sampling was applied to select participants directly involved in food waste separation and goat cheese production, primarily Culinary Arts students from Batch 7 and Batch 8. A minimum of 25 participants was selected to meet sensory panel requirements. Questionnaires were distributed online using Google Forms to ensure accessibility and support paper waste reduction. Participants were provided with study information and consent details prior to participation. Data collection occurred over a one month period, with responses automatically recorded and organized in spreadsheet format. Data analysis followed a mixed method strategy. Quantitative data from the sensory test were analyzed using descriptive statistics, while qualitative responses from open ended questions were analyzed through thematic analysis to identify recurring patterns related to taste perception, sustainability awareness, and engagement with the Farm to Fork Model (Sadler et al., 2022). This combined approach enabled a comprehensive evaluation of customer perceptions toward sustainable goat cheese production within an educational Farm to Fork context.

Thematic analysis is done to understand the perceptions of the panelists after trying the goat cheese. The answers from each respondents according to each thematic questions is analyzed to see further the aligning topics towards the sustainable practices result. the result is divided into 2 category, which is the open ended survey from additional feedback for the additional information that could be analyzed related to the hedonic test result. Some of the answers are translated to English language due to some are written in Indonesian. The exaggeration of the emotion are sometimes shown in the writings with exclamation marks and a repetitive use of the same vowels such as: “suuuper!”, or repetitive use of the same consonant such as: superrrr!. The exaggeration is also analyzed and interpreted towards a specific theme that are originated throughout the answers from this 1 additional feedback section and 5 open ended surveys.

The results of the data collection and analysis process are interpreted to address the research problem and reflect actual conditions within the research environment, leading to conclusions presented in the following chapter. The Sustainable Farm to Fork Model was developed to reduce food waste and maximize its environmental benefits. The model was introduced to all participants through the online questionnaire to ensure understanding of the sustainability initiative before data collection.

Before the participants fill down the questionnaire, participants are given the socialization of the sustainable farm-to-fork program. This socialization is to give explanation towards what is the update inside the food and beverage lab in PIB College, and to update them with the result of the cheese sourced from the goats milk in the campus farm area.

4. RESULTS AND DISCUSSION

The research has involve 25 respondents in the process of gathering sensory evaluation data. The gained data is used to represent the repondents the physical evidence of the sustainable farm-to-fork model realization that has been done in the PIB College food and beverage laboratory. A hedonic evaluation was carried out to assess the acceptability of the goat cheese product, utilizing a 5-point scale in which 1 represented "dislike very much" and 5 indicated as "like very much".

Table 4. 1 Sensory evaluation summary.

Respondents	Age	Gender	Aroma	Texture (Mouthfeel)	Flavor	Appearance	Overall
1	19	M	1	5	4	2	4
2	20	M	3	5	4	4	4
3	19	M	4	5	4	4	5
4	21	F	3	5	4	4	4
5	23	M	4	4	4	4	5
6	19	M	5	5	5	5	4
7	19	M	4	5	5	5	5
8	18	F	2	3	5	3	5
9	20	F	5	4	4	5	5
10	19	M	1	2	2	1	2
11	19	M	3	3	3	2	3
12	21	M	5	5	5	4	5
13	21	M	3	5	3	5	4
14	20	F	2	4	5	4	4
15	20	M	4	5	5	4	5
16	20	M	2	5	5	4	4
17	20	M	1	3	4	5	5
18	20	M	3	4	4	4	4
19	20	F	3	3	3	4	3
20	21	F	3	3	4	3	3
21	38	M	3	3	3	2	3
22	20	F	1	3	3	3	3
23	42	M	3	3	2	3	3
24	20	M	3	4	3	3	3
25	20	F	4	4	4	4	4
Total			75	100	97	91	99
Average			3	4	3.88	3.64	3.96

(Source : Author Data, 2025)

From the table above, the average of the hedonic test scored from 3 and above which tends to create likeliness towards the goat cheese product. The highest score comes from the texture (mouthfeel) with the average of 4 out of 5 in the scoring which translates to “like” the goat cheese. The overall score of the goat cheese also comes second close to the texture score which comes at an average of 3.96 out of 5. the lowest score seen in the factor of aroma.



Figure 2. Goat cheese spread result with condiments and packaging.
(Source : Documentation Author, 2025)

4.1 RESPONDENT CHARACTERISTICS

A total of 25 respondents participated in the study. The sample was predominantly male, accounting for 68% of participants, while females represented 32% of the respondent group. Most respondents were categorized as young adults, reflecting the dominant demographic of students and campus visitors involved in the sensory evaluation activity. This demographic composition is consistent with the educational and institutional context in which the study was conducted. The respondent profile therefore provides a relevant representation of the target consumer group for campus-based sustainable food products.

With respect to product familiarity, 56% of respondents reported having prior knowledge or experience with goat cheese, whereas 44% indicated no previous exposure. Awareness of sustainability-related concepts was comparatively lower, as only 44% of respondents were familiar with farm-to-fork systems or sustainable food production practices. This suggests that more than half of the participants lacked foundational knowledge of sustainability frameworks within food systems. Consequently, a substantial proportion of respondents evaluated the product without strong preconceived perceptions of either goat cheese or sustainability narratives. This condition allowed for an assessment based largely on direct sensory experience.

4.2.1 HEDONIC SENSORY EVALUATION

The hedonic sensory evaluation results indicate that the goat cheese product was generally well accepted by respondents (Table 4.1). All assessed sensory attributes recorded mean scores above the neutral midpoint of the five-point hedonic scale (score = 3). This finding

reflects an overall positive perception of the product across evaluated dimensions. The results suggest that the product achieved a satisfactory level of consumer acceptance within the sampled group. No attribute was rated unfavorably at an aggregate level.

Among the sensory attributes, texture achieved the highest mean score ($M = 4.00$), followed by overall liking ($M = 3.96$), flavor ($M = 3.88$), appearance ($M = 3.84$), and aroma ($M = 3.52$). Texture also demonstrated the greatest consistency in positive responses, with the majority of respondents assigning scores of 4 or 5. This indicates a strong preference for the smooth and spreadable texture of the cheese. The high texture rating suggests that mouthfeel played a central role in shaping respondents' acceptance. These findings highlight texture as a key strength of the product formulation.

Aroma received the lowest mean score and exhibited greater variability among respondents. This variation may reflect differences in individual sensitivity to goat milk aroma or varying levels of familiarity with goat cheese products. Despite this variability, aroma ratings remained above the neutral threshold, indicating that the attribute was generally acceptable. Importantly, lower aroma scores did not substantially reduce overall product liking. This suggests that aroma was not a critical barrier to acceptance in this context. Overall liking scores closely aligned with both texture and flavor evaluations. This alignment indicates that sensory attributes related to mouthfeel and taste were the primary determinants of product acceptance. Visual appearance and aroma played a secondary role in influencing respondents' preferences. These findings reinforce the importance of optimizing texture and flavor in the development of goat cheese products. The results also suggest that improvements in secondary attributes may further enhance overall acceptance.

4.2.2 QUALITATIVE SENSORY FEEDBACK

Qualitative data gathered from open-ended surveys were analyzed thematically to gain deeper insight into respondents' sensory perceptions. The analysis identified eight dominant themes representing both positive experiences and areas for improvement. These themes complemented the quantitative findings by providing contextual explanations for respondents' ratings. The qualitative results also highlighted individual differences in sensory perception and enriched the interpretation of the hedonic evaluation outcomes.

The most prominent theme turns out to be related to flavor balance and complexity. While many respondents described the cheese as flavorful and enjoyable, several noted that the herbal infusion occasionally masked the natural flavor of the goat cheese. Some participants suggested reducing the intensity of the herbs to achieve better balance. Others recommended extending the maturation period to allow the cheese's inherent flavor to develop more fully. These responses indicate a desire for greater clarity in the primary cheese flavor.

Perceptions of texture were overwhelmingly positive and consistent with the quantitative sensory results. Respondents frequently described the cheese as smooth, soft, and easy to spread. These characteristics were viewed as desirable and contributed positively to overall liking. However, a small number of respondents noted excessive oiliness or moisture. Such feedback suggests that minor adjustments in formulation or processing could improve textural consistency.

Feedback regarding appearance was mixed among respondents. Some participants perceived the darker color of the cheese as less visually appealing when compared to conventional dairy products. In contrast, others associated the color with natural, artisanal, or minimally processed qualities. This variation suggests that visual expectations are influenced by prior exposure and personal preferences. Appearance, therefore, may be subject to contextual interpretation rather than universal standards.

Aroma related comments reflected the relatively lower hedonic scores observed in the quantitative assessment. While some respondents described the aroma as mild and acceptable, others perceived it as strong or unfamiliar. These perceptions were often linked to respondents' prior experience with goat milk products. The findings suggest that aroma acceptance may improve with increased consumer familiarity. This highlights the role of exposure and education in shaping sensory perception.

4.3 PERCEPTION OF SUSTAINABILITY AND FARM TO FORK VALUE

Beyond sensory attributes, respondents demonstrated a notable level of engagement with the sustainability narrative associated with the product. Many participants expressed positive attitudes toward the use of food waste as animal feed within a closed-loop production system. This approach was frequently perceived as environmentally responsible and innovative. Respondents also recognized the educational value of implementing such practices in a campus setting. These perceptions suggest that sustainability added an important non-sensory dimension to product evaluation.

Table 4.1 Perceptions on Farm to Fork Efforts resulted from the questionnaire

Answers for questions 1: "What are your thoughts on the sustainability efforts involved in producing this goat cheese using food-waste-fed goats?"	
Its good	Superrrr!
It's great	Very useful and inspirational, especially since it makes food waste even more useful than before, and is good for the environment.
A pretty good way to turn waste that otherwise will just decompose in a landfill to a quality product with great use	For me, its good idea especially for some way to produce cheese having a goat as pet and convert something food waste to cheese is quite something.
Very efficient and creative.	it sounds very interesting and i sure do hope that it will help improve the environment
so good	I think it's a great step toward sustainability. Feeding goats with food waste helps reduce environmental impact and makes cheese production more eco-friendly.
Is good	It is a good start and innovation in empowering waste from PIB
Really a good idea	Producing goat cheese using goats fed on food waste is a commendable sustainability effort. It greatly reduces food waste

It's really nice, reducing food waste while also reducing the cost for feeding farm animals.	Really great idea for sustainable
Uniq	very good to help protect the environment.
great idea	It's a great sustainable move, reducing food waste and lowering your carbon footprint by using leftovers as goat feed without sacrificing milk quality or animal welfare.
In my opinion it's really effective and sustainable for the food waste coming from PIB	I think it's good idea to use waste of food from kitchen or household to make food sources of goat
I think it's a good way to reduce food waste	I believe the sustainability efforts involved in producing this goat cheese are highly commendable. Feeding goats with food waste not only reduces agricultural and commercial waste but also contributes to a more circular food system. It helps minimize the environmental impact of both food disposal and animal farming. However, I think it's important to ensure that the nutritional quality and safety of the goat feed are properly monitored. Overall, this initiative reflects an innovative and responsible approach to sustainable food production, and I would support more products developed using similar methods.
Pretty good	-

(Source : Author Data, 2025)

Sustainability-related feedback often emphasized ethical considerations, environmental impact, and social responsibility. Several respondents indicated that awareness of the farm-to-fork model enhanced their appreciation of the product. In some cases, participants expressed a greater willingness to support or purchase the product due to its sustainable production method. This response occurred even when certain sensory attributes were perceived as unfamiliar. The findings suggest that sustainability narratives can positively influence consumer attitudes and behavioral intentions. This has been in conjunction with the research result from the SMART labeling by Neculai et al. (2021), and within the label can be written the process or link towards the processes video.

Despite positive perceptions, respondents also raised concerns related to food safety, hygiene, and product consistency. These concerns were particularly associated with the use of food waste as animal feed. Participants emphasized the need for clear standards, monitoring, and transparent communication. Such concerns highlight the importance of trust in the successful implementation of sustainable food systems. Addressing these issues is essential to ensure long-term consumer acceptance.

4.4 SUMMARY OF KEY FINDINGS

The results indicate that the goat cheese product achieved positive sensory acceptance among respondents. Texture and flavor emerged as the primary contributors to overall liking,

while aroma and appearance showed greater variability in perception. Nevertheless, none of the sensory attributes negatively affected acceptance at the aggregate level. The findings demonstrate that the product meets basic sensory expectations for consumer acceptance.

Importantly, the sustainability narrative associated with the farm-to-fork model functioned as a significant value-enhancing factor. Respondents evaluated the product not only based on sensory quality but also on its environmental and ethical implications. The results suggest that sustainability-oriented food products can achieve favorable consumer responses when supported by appropriate communication and education. Ensuring food safety, transparency, and quality control remains critical in reinforcing consumer trust and acceptance.

5. CONCLUSION

This study explored the perceptions of 23 students and two chefs toward a farm-to-fork goat cheese initiative that incorporates food waste as animal feed within an educational setting. The findings indicate a strong positive response to the sustainability aspects of the project, reflecting growing awareness and critical engagement with sustainable food production practices among participants. The reuse of food waste from culinary practical classes was perceived as an innovative, environmentally responsible, and educational approach aligned with the principles of circular food systems and the United Nations Sustainable Development Goals. Knowledge of the farm-to-fork model enhanced the perceived value and acceptance of the herb-infused goat cheese product. While sustainability positively influenced product perception, respondents emphasized that food safety, hygiene, and quality consistency are essential to maintaining trust. Concerns regarding feed quality and animal health were constructive and highlight the need for transparency and quality control in sustainable food initiatives. Recommendation from this research is to support effective implementation, clear standard operating procedures for food waste handling and animal feed safety should be established. Transparent communication of sustainability practices through labeling or educational media is recommended to strengthen consumer trust and perceived value. Further research could use the farm to fork in goat cheese production model for other culinary educational institution in creating a more sustainable practices within campus operations. This research also offers opportunities for research in deeper integration into sustainability-focused culinary education overseas. Future research may explore product diversification and the scalability of similar circular food systems in hospitality and tourism contexts within tourism destination.

6. REFERENCES

- Elshaer, I. A., Azazz, A. M., Hassan, S. S., & Fayyad, S. (2023). Farm-to-Fork and Sustainable Agriculture Practices: Perceived Economic Benefit as a Moderator and Environmental Sustainability as a Mediator. *Sustainability*, 1-16.
- European Union. (2020, 05 20). A Farm to Fork Strategy for a Fair, Healthy and Environmentally-Friendly Food System. *Communication from The Commission to The European Parliament, The Council, The European Economic and Social Committee and The committee of The Regions*.

- Fernqvist, F. (2021). Farm to Fork Strategy - A consumer perspective. *SLU Future Food Reports* 16:3, 1-18.
- Giannou, C. (2022). Farm to Fork: EU's Strategy for a Sustainable Food System. *HAPSc Policy Briefs Series*, 189-198.
- Kadek Eni Juniari, N., Nyoman Arcana, I., Mira Astuti Pranadewi, P., Nyoman Gede Agus Jaya Saputra, I., Studi Manajemen Tata Hidangan, P., Pariwisata Bali Jalan Dharmawangsa, P., & Dua, N. (2022). Faktor-Faktor yang Mempengaruhi Pemilihan Program Studi Diploma III Manajemen Tata Hidangan di Politeknik Pariwisata Bali. *Jurnal Bisnis Hospitaliti*, 11(1). <https://doi.org/10.52352/jbh.v11i1.463>
- Kim, J. S. (2020). The Effects of Major Selectio Motivations on Dropout, Academic Achievement and Major Satisfactions of College Students Majoring in Foodservice and Culinary Arts. *Information*, 1-12.
- Kim, M. J., & Hall, C. M. (2020). Can sustainable Restaurant Practices Enhance customer Loyalty? The Roles o Value Theory and Environmental concerns. *Journal of Hospitality and Tourism Management*, 43, 127-138. doi:10.1016/j.jhtm.2020.03.004
- Liem, R. (2024). *Summary Waste Management, Politeknik Internasional Bali, Desember 2024, LTP*. BITDeC, Waste Management. Tabanan: Nyanyi Bali Development.
- Liem, R. (2024). *Summary Waste Management, Politeknik Internasional Bali, November 2024, LTP*. BITDeC, Waste Management. Tabanan: Nyanyi Bali Development.
- Neculai-Valeanu, A.-S., Ariton, A.-M., Rimbu, C.-M., & Vranceanu, N. (2021). Farm-to-Fork SMART LABEL for Increasing Consumer Trust and Ensuring Support for Local Milk and Dairy Producers. *Foods 2021. Biol. Life Sci. Forum 2021*, 1-4.
- Nicastro, R., & Carillo, P. (2021). Food Loss and Waste Prevention Strategies from Farm to Fork. *Sustainability*, 1-23.
- Pandey, P., & Pandey, M. M. (2015). *Research Methodology: Tools and Techniques*. Buzau: Bridge Center.
- PIB College. (2024, 12 1). *About Us, Greeting from our Director*. Retrieved from PIB College: <https://pib.ac.id/about-us/>
- Sadler, C. R., Grassby, T., Hart, K., Raats, M. M., Sokolovic, M., & Timotijevic, L. (2022, February 23). "Even We are Confused": A Thematic Analysis of Professionals Perceptions of Processed Foods and CHallenges for Communication. *Frontiers in Nutrition*, 9, 14. doi:10.3389/fnut.2022.826162
- Svendsen, M. D., Karpantschhof, B.-e. M., Stovgaard, M., & Frost, M. B. (2022). Effect on Skills and Knowledge of a sensory teaching Program for Culinary Students. *International Journal of Food Design*, 119-141.
- Taherdoost, H. (2022). What are Different Research Approaches? Comprehensive Review of Qualitative, Quantitative, and Mixed Method Research, Their Applications, Types, and Limitations. *Journal of Management Science & Engineering Research* , 53-63.