



International Journal of Veterinary Sciences and Animal Husbandry



ISSN: 2456-2912

NAAS Rating (2026): 4.61

VET 2026; 11(1): 335-340

© 2026 VET

www.veterinarypaper.com

Received: 21-11-2025

Accepted: 26-12-2025

Rohini A

M.V.Sc. Scholar, Department of
Livestock Products Technology,
College of Veterinary and Animal
Sciences, Mannuthy, Thrissur,
Kerala, India

Sathu T

Professor, Department of
Livestock Products Technology,
College of Veterinary and Animal
Sciences, Mannuthy, Thrissur,
Kerala, India

Vasudevan VN

Professor and Head, College of
Veterinary and Animal Sciences,
Mannuthy, Thrissur, Kerala,
India

Irshad A

Assistant Professor,
Department of Livestock
Products Technology, College of
Veterinary and Animal Sciences,
Mannuthy, Thrissur, Kerala,
India

Silpa Sasi

Assistant Professor,
Department of Livestock
Products Technology, College of
Veterinary and Animal Sciences,
Mannuthy, Thrissur, Kerala,
India

Sajith Purushothaman

Associate Professor,
Department of Animal
Nutrition, College of Veterinary
and Animal Sciences, Mannuthy,
Thrissur, Kerala, India

Corresponding Author:

Rohini A

M.V.Sc. Scholar, Department of
Livestock Products Technology,
College of Veterinary and Animal
Sciences, Mannuthy, Thrissur,
Kerala, India

Optimisation of the level of poultry by-product meal inclusion in pet treats using acceptability study and owner's preference evaluation

**Rohini A, Sathu T, Vasudevan VN, Irshad A, Silpa Sasi and Sajith
Purushothaman**

DOI: <https://www.doi.org/10.22271/veterinary.2026.v11.i1e.2981>

Abstract

The present study was conducted to optimise the inclusion level of rendered poultry by-product meal (PBM) in the development of protein-rich, shelf-stable canine pet treats, based on both canine palatability and owner sensory preference. Preliminary trials evaluated PBM of two protein grades (60% and 70% crude protein) incorporated at levels ranging from 20 to 40%. On the basis of initial palatability responses, three formulations containing 70% crude protein PBM at inclusion levels of 25% (T₁), 30% (T₂) and 35% (T₃) were selected for detailed investigation. Palatability assessment was carried out in ten adult dogs maintained under uniform management conditions, using first-choice preference, interest to eat, intake ratio and feeding response parameters, following standard preference ranking protocols. In parallel, owner preference was evaluated using a five-point hedonic scale, assessing colour and appearance, surface texture and shape consistency, perceived naturalness, odour, overall acceptability and purchase intent. The results demonstrated a significant decline in palatability with increasing levels of PBM inclusion. Treatment T₁ (25% PBM) exhibited the highest first-choice preference and complete consumption rates, whereas rejection frequency and low-preference responses increased markedly in T₃ (35% PBM). Owner sensory evaluation corroborated these findings, with T₁ receiving significantly higher scores for perceived naturalness, odour acceptability, overall acceptance and purchase intent. No adverse behavioural or digestive responses were observed in dogs across the treatments. Based on the combined outcomes of canine palatability and owner sensory evaluation, PBM inclusion at 25% was identified as the optimal level for formulating protein-rich pet treats with high consumer acceptability. The study underscores the necessity of balancing nutritional enhancement with sensory attributes in the development of value-added pet food products.

Keywords: Poultry by-product meal, pet bites, palatability, sensory acceptability, shelf-stable pet food, protein-rich formulation

Introduction

The increasing humanisation of companion animals has markedly transformed pet feeding practices, leading to a growing demand for nutrition-dense, functional and high-quality pet food products. Within this evolving landscape, pet treats have gained considerable importance in modern canine management, functioning not only as rewards and training aids but also as supplementary sources of nutrients. Consequently, the formulation of pet treats that combine nutritional adequacy with high sensory acceptability has become a key focus for the pet food industry. Rendered poultry by-product meal (PBM) represents a nutritionally valuable ingredient for pet food formulations, owing to its high protein content, balanced amino acid profile, mineral richness and cost-effectiveness. The utilisation of PBM also contributes to sustainable animal production by enabling the efficient valorisation of poultry processing by-products. However, the nutritional and sensory quality of PBM may vary considerably depending on the nature of the raw materials and the rendering conditions employed. Such variability can influence the aroma, flavour and overall sensory characteristics of finished products, thereby affecting palatability and acceptance by dogs.

Palatability is a critical determinant of pet food success, as dogs rely predominantly on olfactory and gustatory cues during feed selection. Although higher inclusion levels of rendered animal by-products can enhance the nutritional profile of pet foods, excessive incorporation may intensify characteristic odours and flavours, potentially reducing voluntary intake despite improved nutrient density. In addition to animal response, owner perception plays a decisive role in product selection and market success. Attributes such as appearance, odour, texture and perceived naturalness strongly influence owner acceptance, purchase intent and brand loyalty.

In this context, the optimisation of PBM inclusion levels is essential to achieve an appropriate balance between nutritional enrichment and sensory acceptability. Therefore, the present study was undertaken to determine the optimal level of PBM incorporation in the development of protein-

rich, shelf-stable canine pet treats through systematic palatability evaluation in dogs, complemented by structured sensory preference assessment by pet owners.

Materials and Methods

Raw Materials and formulation

Rendered poultry by-product meal (PBM) containing 60 and 70% crude protein was procured from a local commercial supplier. The formulation also comprised fresh chicken meat, whole egg, millet flours (finger millet and pearl millet), sweet potato, selected vegetable powders, rendered poultry oil, flaxseed oil, bovine blood plasma, gelatin, a vitamin mineral premix and common salt, incorporated in proportions as detailed in Table 1. The level of PBM in the formulation was progressively increased by proportionate replacement of millet flours and sweet potato.

Table 1: Pet Treat Formulation

Ingredients	Control
Rendered poultry oil	3
Chicken	10
Egg	5
Pearl millet flour	20
Finger millet flour	20
Sweet potato	20.5
Rice bran oil	6
Flax seed oil	1
Carrot	4
Beetroot	2
Green peas	2
Elephant yam	2
Vitamin Mineral premix	2
Bovine plasma	1
Gelatin	1
Salt	0.5

Procedure for Preparation of Pet Treats

The ingredients specified in the formulation (Table 1) were prepared and accurately weighed according to the prescribed levels. Initially, all dry ingredients, namely rendered poultry by-product meal, millet flour, powdered vegetables, common salt and vitamin mineral premix, were transferred into a planetary mixer (ITALYA Mixer, Model VFM10A, India) followed by the wet ingredients, including minced chicken meat, whole egg, vegetable oil, rendered poultry oil, flaxseed oil, bovine blood plasma and gelatin and blended until a homogeneous dough mixture was obtained. The prepared batter was then cold-extruded to form strands of approximately one cm in diameter and subjected to freezing for 30 min to facilitate handling and uniform shaping. The partially frozen extrudates were cut under hygienic conditions into uniform pieces measuring approximately one cm in diameter and 1.5 cm in height. The shaped pet bites were baked in a preheated hot air oven at 130 °C for 50 min, followed by tempering within the oven for an additional 10 min. After baking, the products were removed from the oven, allowed to cool to ambient temperature and aerobically packed in polyethylene/aluminium/polyamide (PE/Al/PA) laminated pouches. The pouches were sealed using a continuous band sealer (Sepack, Sevana, Cochin, India) and stored at ambient temperature.

Acceptability Test and Owner's Preference Evaluation

Based on preliminary evaluations, three formulations containing 70% crude protein Poultry By-Product Meal (PBM) were selected for preference testing: T₁ (25% PBM), T₂ (30% PBM) and T₃ (35% PBM).

The palatability and acceptability of these formulations were assessed using ten adult dogs maintained under uniform management conditions. Following the preference testing methodology described by Griffin, the study was conducted in four phases using standard paired comparison protocols. The first-choice preference, interest to eat and intake ratio were evaluated. Throughout the feeding trials, behavioural responses-including chewing patterns, tail wagging, vocalisation and lip licking-were recorded, along with any signs of digestive discomfort. Owner preference evaluation was performed using a five-point hedonic scale. Owners assessed the products based on colour and appearance, surface texture, shape consistency, perceived naturalness, odour, overall acceptability and purchase intent. Based on the combined outcomes of the dog palatability trials and owner preference scores, the formulation with the highest overall acceptability was selected as the standardised product. Consequently, the maximum PBM inclusion level was optimised to maintain high acceptability and owner preference without compromising product quality.

Table 2: Score Card for Dog Behavioural Evaluation

Parameter	Measurement / Scale
Interest to eat	1-5 scale (1 = ignores, 5 = eats fully) 1 = Ignores 2 = Sniffs only 3 = Licks 4 = Takes in mouth 5 = Eats fully
First choice	Tick if chosen first
Amount offered (g)	Enter value
Amount eaten (g)	Enter value
Leftover (g)	Offered - eaten
% Consumed	(Eaten ÷ Offered × 100)
Nature of eating (put 1/2/3/4) as you observed	1 Chewing 2 Gulping 3 Partial 4 Rejecting
Palatability signs (puT1/2/3/4/5/6) as you observed	1 Tail wag 2 Pawing 3 Licking lips 4.Excited 5. Vocalisation 6 None
Satiety / demand for more (puT1/2) as you observed	1 Still searching 2. Appears satisfied
Digestive tolerance (24 h) (puT1/2/3/4/5) as you observed	1. Normal stools 2. Loose stools 3 Vomiting 4 Flatulence 5 Others ____

Table 3: Score Card for Evaluating Owner's Preference

Parameter	1	2	3	4	5
Colour & appearance (Uniform, attractive)	Very poor	Poor	Fair	Good	Excellent
Surface texture/shape consistency	Very poor	Poor	Fair	Good	Excellent
Odour (Pleasantness)	Very unpleasant	Unpleasant	Neutral	Pleasant	Very pleasant
Perceived naturalness/healthiness	Very low	Low	Moderate	High	Very high
Overall acceptability	Very low	Low	Moderate	High	Very high
Purchase intent	Definitely not	Probably not	Neutral	Probably yes	Definitely yes

Results

Palatability and Acceptability

The palatability and acceptability of pet treats formulated with varying inclusion levels of poultry by-product meal (PBM) were evaluated using a structured scorecard comprising two complementary components. The first component involved owner-based sensory assessment, while the second consisted of direct behavioural observations of dogs during feeding. The evaluations were conducted on ten homogeneous dogs maintained under uniform managerial conditions and the resulting data, expressed as%, are presented in Table 4 and 5.

Table 4: First-choice Preference

Treatment	High (%)	Medium (%)	Low (%)
T ₁	42.5	30.0	27.5
T ₂	22.5	37.5	40.0
T ₃	17.5	12.5	70.0

(Number of observations = 10*4) T₁- Treatment - 1 (Pet treat with 25% PBM), T₂ - Treatment -2 (Pet treat with 30% PBM), T₃ - Treatment -3 (Pet treat with 35% PBM)

Table 5: Interest to Eat

Treatment	Eats fully (%)	Partial (%)	Rejected (%)
T ₁	65.0	20.0	15.0
T ₂	50.0	25.0	25.0
T ₃	45.0	27.5	27.5

(Number of observations = 10*4) T₁- Treatment - 1 (Pet treat with 25% PBM), T₂ - Treatment -2 (Pet treat with 30% PBM), T₃ - Treatment -3 (Pet treat with 35% PBM)

First-choice preference exhibited a pronounced treatment effect. Treatment T₁ (25% PBM) recorded the highest proportion of high preference responses (42.5%), followed by T₂ (22.5%) and T₃ (17.5%). In contrast, low preference responses increased progressively with increasing PBM inclusion, with the highest proportion observed in T₃ (70.0%), followed by T₂ (40.0%) and T₁ (27.5%).

Interest to eat declined with increasing PBM inclusion levels. A higher proportion of dogs consumed T₁ completely (65.0%) compared to T₂ (50.0%) and T₃ (45.0%). Partial consumption was comparable among treatments, whereas rejection rates

were highest for T₃ (27.5%), followed by T₂ (25.0%) and T₁ (15.0%).

Comparative intake ratio analysis using the chi-square test revealed that T₁ was significantly preferred over T₂ ($p < 0.01$) and T₃ ($p < 0.05$). However, no significant difference ($p > 0.05$) was observed between T₂ and T₃, indicating comparable acceptability at higher PBM inclusion levels.

Behavioural observations indicated that six out of ten dogs exhibited normal chewing behaviour, while two displayed gulping behaviour. One dog partially rejected the treat and one dog completely rejected it. Among the nine dogs that accepted the product, only three exhibited signs of satiety following consumption, whereas six demonstrated continued interest and demand for additional portions.

Dogs displayed positive palatability-associated behaviours, including tail wagging, pawing, vocalisation and lip licking during feeding. No adverse digestive responses such as loose stools, vomiting or flatulence were observed across treatments, indicating good digestive tolerance of the formulated pet treats irrespective of PBM inclusion level.



Owner Preference

Owner perception of the formulated pet treats was evaluated using a five-point hedonic scale ranging from very poor to excellent. The assessment encompassed colour and appearance, surface texture and shape consistency, perceived naturalness, odour, overall acceptability and purchase intent.

The results, expressed as%, are presented in Table 8.

Colour and appearance received predominantly high (50.0-52.5%) and very high (47.5%) ratings across all treatments, with no responses recorded under the very low or low categories. This uniform trend indicates that variation in poultry by-product meal inclusion did not adversely influence the visual appeal of the pet treats.

Surface texture and shape consistency were largely rated as moderate (47.5%) to high (45.0-47.5%) across treatments, reflecting acceptable firmness, cohesiveness and dimensional stability of the products. Only a small proportion of responses fell under the very high category, while no very low or low ratings were recorded.

Perceived naturalness exhibited noticeable variation among treatments. Treatment T₁ recorded a higher proportion of moderate (42.5%) and high (40.0%) ratings, whereas T₃ showed a marked increase in low (47.5%) and very low (17.5%) responses, indicating a decline in perceived

naturalness at higher PBM inclusion levels. Treatment T₂ demonstrated an intermediate response pattern.

Odour was predominantly rated as moderate (50.0-57.5%) across all formulations. However, T₃ recorded a higher proportion of low ratings (20.0%) compared to T₁ and T₂, suggesting a perceptible change in aroma intensity with increased PBM incorporation.

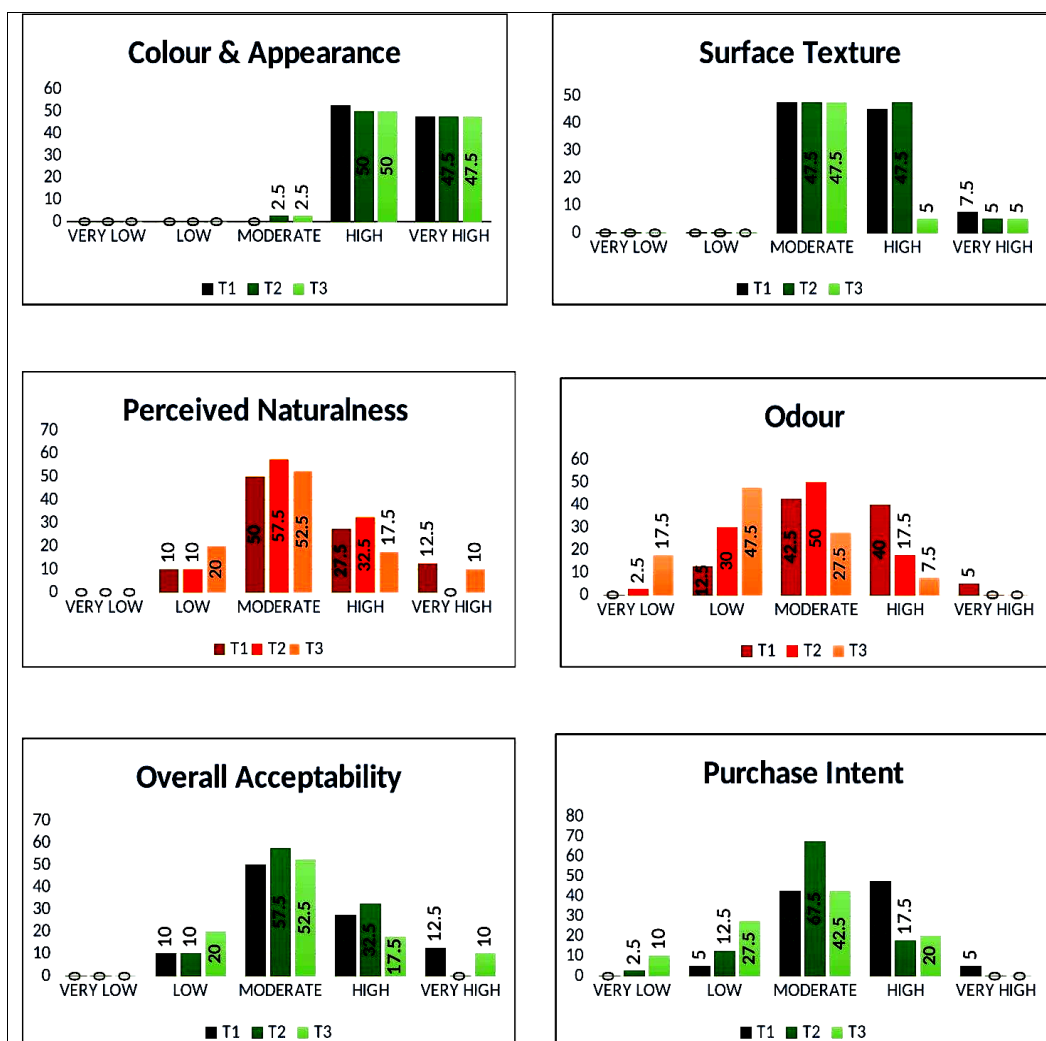
Overall acceptability was highest for T₁, with 47.5% of responses classified under the high category. Treatment T₂ was characterised by a predominance of moderate ratings (67.5%), while T₃ exhibited a clear shift towards lower acceptance levels, with 27.5% and 10.0% of responses falling under the low and very low categories, respectively.

A comparable trend was observed for purchase intent. The highest willingness to purchase was recorded for T₁, with 50.0% of respondents indicating a high level of purchase intent. This willingness progressively declined in T₂ and T₃, concomitant with increasing PBM inclusion.

Table 6: Owners Preference for T₁, T₂ and T₃

Parameter	Levels	T ₁	T ₂	T ₃
Colour and appearance	Very low	0	0	0
	Low	0	0	0
	Moderate	0	2.5	2.5
	High	52.5	50	50
	Very high	47.5	47.5	47.5
Surface texture/ Shape consistency	Very low	0	0	0
	Low	0	0	0
	Moderate	47.5	47.5	47.5
	High	45	47.5	47.5
	Very high	7.5	5	5
Perceived Naturalness	Very low	0	2.5	17.5
	Low	12.5	30	47.5
	Moderate	42.5	50	27.5
	High	40	17.5	7.5
	Very high	5	0	0
Odour	Very low	0	0	0
	Low	10	10	20
	Moderate	50	57.5	52.5
	High	27.5	32.5	17.5
	Very high	12.5	0	10
Overall Acceptability	Very low	0	2.5	10
	Low	5	12.5	27.5
	Moderate	42.5	67.5	42.5
	High	47.5	17.5	20
	Very high	5	0	0
Purchase Intend	Very low	0	2.5	17.5
	Low	0	12.5	10
	Moderate	45	55	47.5
	High	50	30	25
	Very high	5	0	0

(Number of observations = 40) T₁- Treatment - 1 (Pet treat with 25% PBM), T₂ - Treatment -2 (Pet treat with 30% PBM), T₃ - Treatment -3 (Pet treat with 35% PBM)



Discussion

Palatability and Acceptability

Palatability and acceptability assessments revealed a clear influence of poultry by-product meal inclusion level on canine feeding preference (Table 5, 6 and 7). Treatment T₁ (25% PBM) recorded the highest proportion of first-choice preference responses (42.5%), followed by T₂ (22.5%) and T₃ (17.5%). Conversely, low-preference responses increased markedly with higher PBM inclusion, reaching 70.0% in T₃. These findings indicate a progressive decline in immediate acceptability as PBM concentration increased beyond 25%.

A similar trend was observed in the 'interest to eat' parameter, where complete consumption was highest for T₁ (65.0%) and declined for T₂ (50.0%) and T₃ (45.0%). Although partial consumption remained relatively comparable among treatments, rejection rates were highest for T₃, suggesting that elevated PBM levels may negatively influence voluntary intake. Intake ratio analysis further substantiated these observations, demonstrating a statistically significant preference for T₁ over both T₂ ($p < 0.01$) and T₃ ($p < 0.05$), while no significant difference was detected between T₂ and T₃, indicating comparable acceptability at higher PBM inclusion levels.

These results corroborate earlier findings that first-choice and intake ratio tests are sensitive indicators of immediate palatability driven primarily by sensory cues such as aroma and flavour (Griffin, 2003) [5]. In dogs, olfactory perception plays a dominant role in food selection, often overriding gustatory inputs, with animal-derived odours acting as critical determinants of acceptance (Thombre, 2004) [10]. While poultry by-product meal enhances nutritional density, higher inclusion levels may intensify characteristic odours associated

with rendered ingredients, potentially leading to reduced initial preference despite adequate nutrient composition (Oba *et al.*, 2022) [7].

Behavioural observations during feeding further supported the palatability findings. The majority of dogs exhibited normal chewing behaviour, accompanied by positive palatability-associated responses such as tail wagging, lip licking, pawing and vocalisation. The absence of adverse digestive responses, including loose stools, vomiting or flatulence, across all treatments indicates satisfactory gastrointestinal tolerance and confirms that reduced preference at higher PBM levels was not related to post-ingestive discomfort. This observation aligns with the concept that palatability reflects pre-absorptive sensory perception rather than post-digestive physiological effects (NRC, 2006).

Overall, while higher PBM inclusion enhanced protein and mineral density, palatability outcomes indicate that 25-30% PBM represents an optimal inclusion range for balancing nutritional enrichment with consumer-driven acceptability. These findings emphasise the importance of integrating sensory evaluation with nutritional optimisation during the formulation of functional pet treats.

Owner Preference

Owner-based sensory evaluation provides critical insight into the market acceptability of pet treats, as purchasing decisions are predominantly driven by human perception rather than animal response alone. In the present study, owner preference was assessed using a structured five-point hedonic scale encompassing visual, textural, olfactory and holistic acceptance parameters, thereby enabling a comprehensive appraisal of product appeal.

Colour and appearance received consistently high to very high ratings across all treatments, with no responses recorded under the very low or low categories. This uniform response indicates that variation in poultry by-product meal (PBM) inclusion up to 35% did not adversely affect the visual appeal of the pet treats. These findings are in agreement with earlier reports demonstrating that colour uniformity and surface appearance are among the primary cues influencing owner acceptance of dry pet foods (Di Donfrancesco *et al.*, 2014)^[2]. The instrumental colour values observed in the present study further corroborate these subjective assessments, confirming that PBM incorporation did not result in visually undesirable products.

Surface texture and shape consistency were predominantly rated as moderate to high across all formulations, reflecting acceptable firmness, cohesiveness and dimensional stability of the baked treats. The absence of low or very low ratings indicates that the processing protocol ensured structural integrity irrespective of PBM inclusion level. Textural consistency is a key quality attribute in pet treats, as irregular shape or excessive friability is often associated with poor processing control and reduced consumer confidence (Tobie *et al.*, 2015)^[11].

In contrast, perceived naturalness exhibited a marked decline with increasing PBM incorporation. Treatment T₁ received a higher proportion of moderate to high ratings, whereas T₃ showed a substantial shift towards low and very low responses. This trend suggests that elevated inclusion of rendered by-products may negatively influence owner perception of ingredient naturalness, despite their recognised nutritional value. Similar findings have been reported in studies examining owner attitudes towards animal by-products, wherein increased inclusion levels were associated with diminished perceptions of product wholesomeness and transparency (Dust *et al.*, 2005)^[4].

Odour evaluation further reflected this pattern, with T₃ recording a higher proportion of low ratings compared to T₁ and T₂. Although odour was predominantly rated as moderate across all treatments, the increased frequency of unfavourable responses at higher PBM levels indicates that intensified aroma associated with rendered poultry ingredients may adversely affect owner acceptance. Odour perception is a critical determinant of purchase intent, as owners often associate strong or unfamiliar aromas with inferior quality or reduced freshness, irrespective of actual nutritional merit (Tobie *et al.*, 2015)^[11].

These combined effects were reflected in overall acceptability and purchase intent scores. Treatment T₁ achieved the highest overall acceptability, with nearly half of the respondents rating it under the high category, whereas T₂ was characterised by a predominance of moderate responses. In contrast, T₃ exhibited a clear shift towards lower acceptance levels, accompanied by a marked reduction in purchase intent. This progressive decline in owner willingness to purchase with increasing PBM inclusion highlights the decisive role of human sensory perception in determining the commercial viability of pet treats.

Overall, the present findings demonstrate that while higher PBM inclusion enhances nutritional density, owner preference is optimised at lower inclusion levels. A PBM inclusion rate of 25% provides the most favourable balance between visual appeal, perceived naturalness, odour acceptability and purchase intent, thereby supporting its selection as the optimal formulation from a consumer acceptance perspective. These results underscore the importance of harmonising nutritional optimisation with owner-driven sensory expectations in the development of functional pet treats.

Conclusion

The present study demonstrated that rendered poultry by-product meal can be effectively utilised in the formulation of protein-rich canine pet treats. However, palatability and overall acceptability declined progressively with PBM inclusion levels exceeding 25%. Based on combined canine preference, intake behaviour and owner sensory perception, a PBM inclusion level of 25% was identified as optimal. This level ensures enhanced nutritional value while maintaining superior palatability and consumer

acceptance, thereby supporting its suitability for commercial pet treat formulations.

Acknowledgement: The authors gratefully acknowledge the facilities and support provided by the Department of Livestock Products Technology, College of Veterinary and Animal Sciences, Mannuthy, Thrissur.

Conflict of Interest: Not available

Financial Support: Not available

References

1. Di Donfrancesco B, Koppel K, Chambers E. An initial lexicon for sensory properties of dry dog food. *J Sens Stud.* 2012;27(6):498-510.
2. Di Donfrancesco B, Koppel K, Swaney-Stueve M, Chambers E. Consumer acceptance of dry dog food variations. *Animals (Basel).* 2014;4(2):313-330.
3. Dozier WA III, Dale NM, Dove CR. Nutrient composition of feed-grade and pet-food-grade poultry by-product meal. *J Appl Poult Res.* 2003;12(4):526-530.
4. Dust JM, Grieshop CM, Parsons CM, Karr-Lilienthal LK, Schasteen CS, Quigley JD, *et al.* Chemical composition, protein quality, palatability and digestibility of alternative protein sources for dogs. *J Anim Sci.* 2005;83(10):2414-2422.
5. Griffin RW. Palatability. In: Kvamme JL, Phillips TD, editors. *Petfood Technology.* Mt. Morris (IL): Watt Publishing; 2003. p. 176-193.
6. Kumar R, Goswami M, Pathak V, Bharti SK, Verma AK, Rajkumar V, *et al.* Utilization of poultry slaughter byproducts to develop cost effective dried pet food. *Anim Nutr Feed Technol.* 2023;23(1):165-174.
7. Oba PM, Hwisa N, Huang X, Cadwallader KR, Swanson KS. Nutrient and Maillard reaction product concentrations of commercially available pet foods and treats. *J Anim Sci.* 2022;100(11):skac305.
8. Pame K, Sathu T, Vasudevan VN, Prajwal S, Gunasekaran P. A study on the effect of physicochemical characteristics, palatability and storage quality of kibbles incorporated with slaughterhouse byproducts for canine. *Int J Livest Res.* 2017;7:228-237.
9. Pame K, Sathu T, Vasudevan VN, Prajwal S, Gunasekaran P. The effects of baking process and inclusion of processed animal by-products on pet kibbles nutrition, palatability and texture characteristics. *Indian Vet J.* 2018;95(3):26-30.
10. Thombre AG. Oral delivery of medications to companion animals: Palatability considerations. *Adv Drug Deliv Rev.* 2004;56(10):1399-1413.
11. Tobie C, Péron F, Larose C. Assessing food preferences in dogs and cats: A review of the current methods. *Animals (Basel).* 2015;5(1):126-137.
12. Yam PS, Naughton G, Butowski CF, Root AL. Inaccurate assessment of canine body condition score, bodyweight and pet food labels: A potential cause of inaccurate feeding. *Vet Sci.* 2017;4(2):30.

How to Cite This Article

Rohini A, Sathu T, Vasudevan VN, Irshad A, Sasi S, Purushothaman S, *et al.* Optimisation of the level of poultry by-product meal inclusion in pet treats using acceptability study and owner's preference evaluation. *International Journal of Veterinary Sciences and Animal Husbandry.* 2026;11(1):335-340.

Creative Commons (CC) License

This is an open-access journal, and articles are distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.