PETFOOD FORUM

Where the GLOBAL PET FOOD INDUSTRY does business Insect protein in pet food: Assessing consumer perceptions, knowledge and willingness to pay

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Introduction

The Pet Food Industry ⁽¹⁾

- Significant global sales growth
- 50% sales growth over the past 5 years
- Pet food prices have increased by 17.7% since 2021 due to inflation.

Driving Forces

- Rising pet ownership
- Pet owners' growing health consciousness
- Changing customer preferences for specialized diets

Emerging opportunities for specialized pet food production and innovation

• Growing demand for higher-protein products.



Global Pet Food Sales



Euromonitor; Pet Food Processing (Sep. 2023)

Motivation:

Animal-based protein for pet food production is limited by human food production!

Alternative protein sources

- Plant-based protein
- Cultured based meat (in-vitro)
- Insect-based proteins

Insect-based proteins

- Becoming a viable, healthy, and sustainable option in the pet food market
- Offers a high source of protein and low fat
- Immune health benefits in pets
- Hypoallergenic qualities



- Total Slaughter Live Weight (1,000 pounds)
- US Produced Pet Food Units (millions)
- Linear (Total Slaughter Live Weight (1,000 pounds))
- Linear (US Produced Pet Food Units (millions))

Hill, M. R. (2022)



Research Purpose

Research Question:

• What are U.S. dog owners' knowledge, perceptions, and willingness to pay for pet food containing insect proteins?

Objectives

- Identify U.S. dog owners' current *knowledge* of insect protein in pet food.
- Identify U.S. dog owners' current *perceptions* of insect protein in pet food.
- Identify U.S. dog owners' current *willingness to pay* for insect protein relative to other protein types in pet food.



Methods | Data Collection

- A survey was administered to U.S. dog owners through Qualtrics, utilizing Dynata.
- Sample size: 763 usable responses (representative of U.S. dog owner population)
- Analysis methods: Conjoint Analysis (WTP)
- Type of data captured:
 - Owner demographic
 - Customer knowledge of IP: True / false questions
 - Customer perceptions of IP: Positive and negative select all questions
 - Customer willingness to pay (WTP): Choice-based experiment





Methods | Choice-based Experiment

Low fat

Skin-coat care

(1/4) Choose your preferred option below:

Option 1 Product high protein	Option 2 Product low fat	Product susta	Option 3 inable	
feature Product \$35.00 price	feature Product \$45.00 price	feature Product \$25.0 price	10	None of these options
Protein animal-based protein	Protein plant-based protein	Protein plant-	based protein	
<u> </u>	Product Feature:	Prices:	Protein types:	
	High protein	\$25	Animal-based proteir	1
Sustainable		\$35	Plant-based protein	

\$45

Insect-based protein

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Data | Sample Characteristics



70 % of the survey respondents make less than \$100K annually



Results | Knowledge of Insect Proteins

Questions	% True	% False
1. Insect proteins are high in protein content and low in fat content		29%
2. Insect proteins used in pet food can have hypoallergenic properties	59%	41%
Insect protein used in pet food can be a sustainable and nutritious alternative to traditional protein sources		31%
4. Insect proteins used in pet food can promote healthy skin/coat quality in pets.		36%
5. Insect proteins are highly digestible		36%
 Insect protein production releases lower greenhouse gas emissions compared to traditional livestock production. 		26%
7. Insect protein used in pet food can support your pet's immune system.		38%
8. Insect protein is a rich source of essential amino acids and fatty acids for pets.		29%



Results | Perceptions of Insect Proteins

Positive Aspects of Insect Proteins in Pet Food

10%

5%

2%



Negative Aspects of Insect Proteins



High protein

I don't know

No positives

Sustainable

Eco-friendly

Healthy

Natural

Low fat

Organic

Dog likes

Cost effective

Hypoallergenic

Vegetarian

Results | Willingness to Pay for Insect Proteins

Total Sample



Results | Willingness to Pay for Insect Proteins

Current & Open to Buy IBP



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Key Findings

Knowledge

- Customers are aware of the high protein and low production emissions from insect proteins
- Customers are less aware of the hypoallergenic and immune health properties of insect proteins

Perceptions

- Positive: High protein, healthy, and natural
- Negative: Dog dislikes, less nutritious than meat, and cheap meat replacement
- Significant gap in consumer knowledge driving the perceptions of insect proteins

Willingness to pay

- Current buyers or open to buy insect-based pet food are willing to pay more for IBP pet food than PBPF
- Gen X and millennial pet owners who are currently buying or open to buy IBP are willing to pay more than other demographic segments.



Conclusion and Implications

There is a need to **increase the knowledge** of insect protein benefits in pet food. This in turn can potentially increase the **customer acceptance** and **potential marketability** of insect proteins in pet food.

Future Research

- Modelling factors that affects willingness to pay (WTP) and/or preference shares for insect proteins in pet food.
- Identify and test ways to improve the knowledge of insect proteins in pet food.
- Examine the effect of education on willingness to pay for insect proteins in pet food.





Questions?

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