

## ANIMAL SCIENCE AND VETERINARY MEDICINE

September 11, 2023 | Webinar



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## Received date: 29-08-2023 | Accepted Date: 31-08-2023 | Published Date: 16-10-2023

## Should dogs and cats go vegan?

The environmental impacts of meat-based pet food (e.g., land and water use, fossil fuel consumption, greenhouse gas production, pesticide and fertilizer use, and impacts on biodiversity loss), are globally significant. Given increasing pet ownership globally, 'food' animal use for pet food is rising. However, alternative pet foods based on novel protein sources, such as plants and seaweed, insects, yeast, fungi and laboratory grown meat, are rapidly developing. Vegan pet foods are most developed. These use plant, mineral and synthetic sources to supply necessary nutrients. In 2020 I surveyed 4,060 dog or cat guardians to investigate determinants of pet food purchasing decisions, as well as health, behavioural and other outcomes using different diets. I also surveyed 29 pet food manufacturers to determine whether nutritional soundness and quality control of plant-based pet foods are nutritionally sound vegan diets. Detailed analysis of feeding behaviour indicates dogs and cats generally find such diets as palatable as conventional diets. And manufacturers of plant-based pet foods appear to adhere to quality control standards at least as good as those used in the creation of conventional diets. The environmental and animal welfare benefits of plant-based and alternative diets are profound. These factors are driving a rapid expansion of this sector.

## **Recent Publications:**

1. Knight A, Huang E, Rai N, Brown H (2022). Vegan versus meat-based dog food: Guardian-reported indicators of health. PLoS ONE 17(4): e0265662. https://doi.org/10.1371/journal.pone.0265662.

2. Knight A and Satchell L, (2021). Vegan versus meat-based pet foods: owner-reported palatability behaviours and implications for canine and feline welfare. PLoS ONE 16(6): e0253292. https://doi.org/10.1371/journal.pone.0253292.

3. Knight A and Light N. (2021). The nutritional soundness of meat-based and plant-based pet foods. Revista Electronica De Veterinaria 22(1), 1 – 21. http://veterinaria.org/index.php/REDVET/article/view/92.

#### Biography

Andrew Knight was Founding Director of the University of Winchester Centre for Animal Welfare, and is Adjunct Professor in the School of Environment and Science at Griffith University, Queensland. An experienced cat and dog veterinarian, he's also a UK, European and American Veterinary Specialist in animal welfare. He has around 150 academic and 80 popular publications, and an extensive series of social media videos and several websites (including www.sustainablepetfood.info), on vegan companion animal diets, climate change and the livestock sector, invasive animal research, educational animal use, humane clinical and surgical skills training, and other animal welfare issues. He regularly works with animal welfare charities to advocate for animals, and is frequently interviewed by the media. He has received over 20 awards and research grants for this work.

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