

# Plant-Based Dog Food Delivers Huge Environmental Benefits, New UK Study Finds

LONDON, UNITED KINGDOM,  
September 25, 2025 /

EINPresswire.com/ -- A groundbreaking life cycle assessment of 31 commercially available dry dog foods in the United Kingdom finds that plant-based diets deliver far lower environmental impacts across every major metric compared with conventional meat-based alternatives. The study, by University of Nottingham veterinary researchers Rebecca Brociek and Prof. David Gardner was published today in [Frontiers in Sustainable Food Systems](#). It highlights a powerful opportunity for the pet food sector—and pet owners—to reduce their ecological “pawprint.”



## Key Findings

- Lowest greenhouse gas emissions: Plant-based options emitted 2.82 kg CO<sub>2</sub>-eq per 1,000 kcal, compared with 31.47 kg for beef formulations—an order-of-magnitude difference.
- Lowest land use: Plant-based dog foods required on average 2.73 m<sup>2</sup> per 1,000 kcal, versus 102.15 m<sup>2</sup> for beef-based formulas.
- Water savings: Plant-based diets used on average 249 L of freshwater per 1,000 kcal, far below beef (575 L) or lamb (684 L).
- Far lower pollution from nutrients and acidification: Beef-based products produced 14- to 16-fold higher acidifying

“

feeding your dog plant-based will significantly improve a households' environmentally sustainability”

*Rebecca Brociek and Prof.  
David Gardner*

(SO<sub>2</sub>-eq) and eutrophying (PO<sub>4</sub><sup>3-</sup>-eq) emissions vs. plant-based foods.

- Intermediate performers: Poultry-based and veterinary (semi-synthetic) diets sat between plant and red-meat diets in impact, but still much higher than plant-based.
- Lifetime impacts scale dramatically: Over nine adult years, feeding a 20 kg Labrador solely on plant-based dry food would require about 8,964 m<sup>2</sup> of land—and emit greenhouse gases

equivalent to 2.8 London–New York round trips. The same dog fed beef-based food would need 334,851 m<sup>2</sup> and emit 31.3 London–New York equivalents.

### Why This Matters

As pet ownership grows globally and demand for pet foods rises, the environmental toll of animal-derived ingredients becomes impossible to ignore. The authors argue that shifting toward plant-based pet diets offers a scalable lever to curb land use, greenhouse gas emissions, nutrient pollution, and water stress—without sacrificing caloric content.

They stated, “feeding your dog plant-based will significantly improve a households’ environmentally sustainability”, and that, “higher inclusion of plant-based ingredients in pet feed provides a major opportunity for pet food companies to mitigate the environmental footprint of companion animal food.”

While critics sometimes point to the use of animal by-products (e.g. ‘meat meals’) as a more sustainable route, the study’s results suggest these do not close the gap: some meat meal ingredients ranked among the highest-impact contributors in the analysis.

This affirms similar results from other recent studies. In 2023 veterinary professor Andrew Knight [showed](#) that a global transition towards nutritionally sound vegan dog food would save 1.5 times the greenhouse gases emitted by the UK, as well as sufficient food energy to feed the entire EU population of around 450 million people ([key results](#)). By late 2025, 11 studies in dogs had also shown good health outcomes when plant-based diets were used.

Prof. Knight stated, “Using more plant-based ingredients or formulating nutritionally complete plant-based diets can substantially reduce the ecological footprint of companion animals. As awareness grows, nutritionally sound plant-based pet diets may shift from niche to mainstream—helping align our love for animals with stewardship of the planet.”

A KNIGHT

Sustainable Pet Food Foundation

[email us here](#)

---

This press release can be viewed online at: <https://www.einpresswire.com/article/852419922>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2025 Newsmatics Inc. All Right Reserved.