Is pet ownership sustainable?

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There has been much talk about sustainability, but little attention has been paid to its nutritional aspects. University of Illinois animal sciences researcher Kelly Swanson, in cooperation with scientists at natural pet food maker The Nutro Company, have raised a number of important questions on the sustainability of pet ownership.

Sustainability is defined as meeting the needs of the present while not compromising the future. Swanson said that although the carbon footprint aspect of sustainability receives the most attention, nutritional aspects are also important. "If you just change the diet a little, the financial and environmental costs associated with it are quite different," he explained.

The pet food industry faces some unique issues. First, it is tightly interlinked with livestock production and the human food system. Second, many people consider their pets to be part of the family, so the food has to be culturally acceptable to the owner as well as good for the animal. Finally, pet food has to be affordable.

As with human food, dietary ingredient selection and nutrient composition affect the sustainability of the pet food system. Protein is expensive, both financially and environmentally, so the choice of protein source and amount in the diet are particularly important.

There are thousands of widely varying pet foods on the market. Many are formulated to appeal to the owners, who think their pets need extremely high levels of protein and other nutrients. Often, they contain

human-grade ingredients, thus competing directly with the human food system, which will have to feed a human population that is expected to reach 9 billion by 2050.

This does not need to happen. Dogs and cats require specific nutrients, not ingredients. It is possible to meet nutritional requirements using a wide variety of nutrient sources. Previous research by Swanson showed that kittens fed vastly different protein:carbohydrate ratios all remained healthy (see phys.org/news/2012-10-kittens-microbiomes.html).

For example, animal protein can be replaced by plant protein, which requires substantially less water and energy to produce. Soy-based proteins are a common pet food ingredient, and their production is estimated to be 6 to 20 times more efficient in terms of fossil fuel requirements.

Pet food manufacturers also make heavy use of the secondary products from the human food chain.

"That's great from a sustainability standpoint because we're using the products that would otherwise not be used," said Swanson.

In short, there are strategies to make pet food manufacturing more sustainable while meeting the animals' nutritional needs and keeping the products affordable. Pet food is a $55 billion industry worldwide, so adopting sustainable practices could have a global impact.

Nutritional sustainability is not just about minimizing environmental impact, it also involves promoting pet health through appropriate nutrition and food quality and safety. "Advancement in areas of nutritional sustainability will help us develop innovative products to improve pet health and nutrition and produce quality and safe pet food," said Rebecca Carter, research scientist at The Nutro Company.

"Nutritional sustainability is part of a wider sustainability platform to improve the sustainability of our products and promote the sustainability of pet ownership and the pet food industry."

However, pet owners also need to adopt sustainable feeding practices. Overfeeding and obesity of pets is a growing concern. Swanson stresses the importance of educating "consumers, veterinarians, pet food professionals, everybody."

"They're being fed as much as 20 percent more than they need, so their health is poor, and you're wasting all that food," said Swanson. "Especially with cats, it's very difficult." Cats do not self-regulate their food intake well and have a decided preference for protein and fat.

Swanson said it would be helpful to develop a model that would estimate the environmental impact of pet foods and serve as a basis for strategies to increase the sustainability of pet foods in the future.

Such a model could be used to respond to those who argue that we should not keep pets at all. A controversial study published in 2009 equated the cost of keeping a mid-sized dog eating a normal diet with the environmental cost of driving an SUV 12,500 miles a year. A New Zealand environmentalist has launched a campaign, "Cats to Go," which aims to ban all cats from the country.

Both the study and the proposed ban have provoked heated, angry responses from animal lovers. Nonetheless, the issues they raise should be taken into account. Pet ownership is increasing in Eastern Europe, some areas of Latin America, and the China-Pacific region, so the impact of pet food production will certainly increase.

Pets play an important role in our lives and society, so sustaining pet ownership is critical in maintaining these benefits. Research has

demonstrated the positive impact pets have on both the emotional and physical health of people with whom they have contact.

The researchers concluded that there are no "good" or "bad" practices; just some that are more or less sustainable. They hope that this article will serve to highlight areas where changes could be made to current practices and stimulate discussion within the industry so that the overall sustainability of pet foods may be improved in the future.

More information: "Nutritional Sustainability of Pet Foods" by Kelly S. Swanson, Rebecca A. Carter, Tracy P. Yount, Jan Aretz, and Preston R. Buff was recently published in *Advances in Nutrition* and can be viewed at advances.nutrition.org/content/4/2/141.full

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