

I stumbled over this webpage today [DIETS - Sustainable Pet Foods](#) It belongs to Andrew Knight, who has published many scientific papers regarding sustainability of vegetarian and vegan food for dogs. Really interesting and a lot of information and many good links to papers regarding vegan food for dogs, though I already had read most of them before.

However, I am truly surprised that his knowledge about meat-based diets is based on outdated information. Most of his references regarding meat by-products and treatment of meat by-products are from before 2003. None of the petfood producers I know use products and additives like those described in the link "Meat-Based Diets". In my former work as nutritionist and food ingredient quality expert for the Danish Mink feed industry, I have been working with most of the producers of animal by-products in Europe. Most of these companies also produced food ingredients for petfood and these were also of high-quality standards and nothing like what Andrew Knight is stating in his paper. In my opinion it should be classified as historical data because I think it was like that 30-40 years ago. But read it and make your own opinion.

Plant-based diets are important now, both for humans and companion animals, because of the climate change and because they are considered to have lower greenhouse gas emissions. However, the animal byproducts used in petfood are byproducts from the human food chain, where the main products carry the most part of the greenhouse gas emissions, and I find it unlikely that we all become vegans. Therefore, there will be animal byproducts available to use in petfood, and this will always be a sustainable way to use proteins of high nutritional value, which otherwise would be wasted as a food source and used in energy production.

One thing I do not understand, is why we must jump from one ditch to another. I like to eat 20% meat and 80% vegetables one day, and 50:50 another day, and 100% vegetables one day.

However, this we cannot do with petfood, and we need to provide enough essential nutrients every day, because they will have the same food every day. It is difficult for the owner to detect subclinical symptoms of deficiency without contacting a veterinarian or a petfood nutritionist like me with knowledge in clinical nutrition. Today we have all kind of recipes from 90% meat- to 98% plant-based and all of them need to be well-balanced in both macro- and micronutrients. The easiest way to do this, is by a combination of animal byproducts, vegetable proteins, fruits and berries, vegetable fiber sources (oligosaccharides), a source of omega-3 fatty acids EPA and DHA, and finally a source of vitamins and minerals.

I have made many diets during the years, so I know everything about the difficulties in "providing all essential nutrients" in a diet which is palatable and relatively low in price. This is what I mean by putting all your effort in one place. Nutritionally it is not possible to make a balanced diet only based on animal by-products, because one may provide all the essential nutrients, but one will not provide the optimal substrates for the gut microbiome. If you only use plant-based food sources, you will have the same problem with substrates for the gut microbiome. The gut microbiome has proven to be the key to many nutritional disorders, so we must maintain the gut microbiome. That's why a combination of high-quality animal byproducts, plant-based proteins, a highly digestible carbohydrate source, fruits, and berries (antioxidants and flavonoids), oligosaccharides (prebiotics), and a source of omega-3 fatty acids. Insect proteins can also be used, but the one needs to know the actual nutritional content of the product one is using. If you do not have an optimisation program like I have (WinOpti), one must also add vitamins and minerals, and essential nutrients of animal origin to vegan diets. Better to make it right than to be stubborn and narrow minded.