## Pets, Ahimsa, and Climate Change

Many people now know about the destructive impact of meat, dairy, and eggs in connection with climate change, and that maintaining a $100 \%$ plant-based diet can be a huge factor in halting climate change. Research shows that a totally plant-based diet uses $9 \%$ of the petroleum of an omnivore diet, $8 \%$ of the water, and only $5 \%$ of the land. (1) ) Additionally, animal agriculture produces $18 \%$ (2) to $51 \%$ (3) of worldwide human-cause greenhouse gas emissions.

But what about the impact of the dog and cat members of your household?

Many people love the cats and dogs in their lives and view them as members of the family. However, it may come as a surprise that there are 163 million cats and dogs in the United States. The U.S. has the largest population of pet dogs and cats globally, with an estimated 77.8 million dogs and 85.6 million cats in 2015. (5), and their impact on climate change and the environment is very large and often totally overlooked. We can no longer afford to remain in ignorance. According to a new study, American dogs' and cats' yearly food consumption has the same carbon footprint as driving 13.6 million cars for an entire year. (4)

A study done by the Proceedings of the National Academy of Sciences in 2014 found that producing a pound of chicken results in about 3.7 pounds of carbon dioxide equivalent (CO2e), while a pound of pork comes with 24 pounds. The same amount of beef can be responsible for up to 1,000 pounds of CO2e. (4) For these and other reasons it is important to curb our own meat consumption, but we must also recognize that chicken, pork, and beef are prevalent ingredients in the foods eaten by the pets we live with. Assessments regarding climate change almost never take into account the impact of the dietary habits of dogs and cats.

The total caloric consumption of U.S. dogs and cats is about $19 \%$ that of humans in the U.S. The quantity of food eaten by American dogs and cats is roughly the same amount of calories consumed by the entire human population of France. (4)

If pets' food consumption was included in calculations, the US would be equivalent to a country of 380 million people in terms of food calories consumed, and a country of about 690 million in terms of animal-source food calories consumed. (5)

It is worth noting here that dry pet foods, which make up $75 \%$ of the pet food total, were used for all the climate calculations given here. Dry cat food outsells wet cat food on a by a factor of about 3 to 1. Furthermore, dry pet food typically has lower animal-food content than wet food. (5) Consequently, the environmental figures given here are actually quite conservative estimates.

Now that we know, how can we respond? First, we can change the way dogs and cats are fed. Most commercial pet foods sold in supermarkets are not very healthy. They often contain_"PCBs, heavy metals and other toxins, particularly from fish; bacterial, protozoal, fungal, viral, and prion
contaminants, along with their associated endotoxins and mycotoxins; [there are also] ...hormone and antibiotic residues; and dangerous preservatives..."(6) as well as pesticides. These are the same substances that typically "are found in commercial meat products for humans." (7)

There are alternatives that are healthier as well as more climate-friendly: you can purchase vegan pet food or make your own pet food at home. Dogs can be healthy, and in fact thrive, on a vegetarian or vegan diet, as long as all necessary nutrient requirements are met. (6) The same is true of cats, though more attention to nutritional supplementation is needed. (7) People for the Ethical Treatment of Animals (PETA) lists five brands of commercially available vegan pet foods that contain supplements that some dogs and cats need to be healthy. They also recommend a book by James Peden, Vegetarian Cats \& Dogs, as an excellent resource for making your own nutritionally balanced vegan pet foods at home. The last two entries in the Citations list at the end of this article are excellent places to start to obtain more information.

An interesting sided note from Dr. May: "Most of the time a dog has a food allergy it is to a meat protein such as beef, chicken, or one of the other common meat sources. Vegetarian diets may bring these food allergic dogs relief from their skin allergies. (6)

A second response to pets and climate change can be to work to reduce unwanted dog and cat births and by compassionate means stabilize or even decrease the population of dogs and cats. We live on a finite planet with finite resources. The more consumers there are, all other things being equal, the more greenhouse gases are produced and the more stress is placed on the environment that keeps us all alive. This is no less true of dog and cat populations than for humans, so we can respond by supporting programs to spay and neuter to prevent unwanted dog and cat births.

Finally, if you have thought about it deeply and have decided you really want a dog or cat companion, a good choice is to adopt a homeless animal instead of buying one and contributing to the continuing breeding cycle of the commercial animal trade.

## Citations

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(2) "Livestock's Long Shadow: Environmental Issues and Options," Food and Agriculture Organization of the United Nations, page 112 accessed from ftp://ftp.fao.org/docrep/fao/010/a0701e/a0701e03.pdf
(3) "Livestock and Climate Change," by Goodland, Robert, and Jeff Anhang. WorldWatch.org website, November/December, 2009. https://www.worldwatch.org/files/pdf/Livestock\ and\ climate\ change.
(4) "Scientists tally the environmental impact of feeding meat to our cats and dogs. It's huge," by Amina Khan, Los Angeles Times, August 4, 2017, http://www.latimes.com/science/sciencenow/la-sci-sn-cats-dogs-environment-20170802-story.html\#nt=barker\&bn=Barker\ 06\ -\ In\ Case\ You\ Missed\ It Last accessed August 5, 2017.
(5) "Environmental impacts of food consumption by dogs and cats," by Gregory S. Okin, from PLOS website, published August 2, 2017, http://journals.plos.org/plosone/article?id=10.1371/journal.pone. 0181301 Last accessed August 5, 2017.
(6) "Vegetarian Diets Can Be Healthy for Dogs," by Dr. Armaiti May, D.V.M, C.V.A., VeganHealth.org, no publication date given, http://www.veganhealth.org/articles/vegan dogs. Last accessed August 5, 2017.
(7) "Vegetarian Cats and Dogs," People for the Ethical Treatment of Animals (PETA) website, no publication date given, https://www.peta.org/living/companion-animals/vegetarian-cats-dogs/ Last accessed August 5, 2017.

