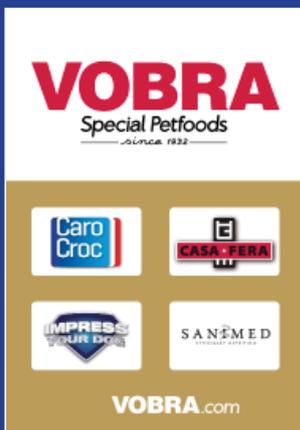




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## Green Pet Foods

*Keeping pet dogs and cats is a human activity that uses the earth's resources and leaves an ecological footprint. The environmental burden of pets' lies in the production and processing of feed materials, pet food manufacturing and packing. All of this is associated with transportation and waste generation. Apart from food, which chiefly sets the footprint, other pet supplies and medical care are contributing factors.*

*Eco-conscious caregivers wish to balance their pets' dietary needs with protecting the planet. Green pet foods with environmentally-friendly features are available. Many manufacturers have made green changes through recyclable packaging, sustainable ingredients and energy-saving facilities.*

*Meat production is a resource-intensive process. As a result, animal protein content significantly determines the environmental impact of dog and cat food formulas. For foods with the same manufacturing method, sustainability dwindles with higher levels of animal protein. Complete, extruded dry foods based on grains and rich in carbohydrates can be described as green compared with similar foods higher in animal protein and lower in carbohydrates.*

## Greening up Pet Food

Many pet food companies have made strides for packaging sustainability. Bags may be made of recycled materials and bio-plastics and utilize soy inks for the printing. Some packaging is manufactured with solar power or is space-saving to economize transportation. Food may contain crops requiring less fertilizer and irrigation and/or seafood products meeting standards for sustainable trawling.

Pet food manufacturing processes are being cut back on the amount of exploitation, waste and pollution put upon the earth. Companies are reducing fossil energy consumption and carbon dioxide emission with technologies such as rooftop solar panels and wind turbines. In addition, progress is made in utilizing energy otherwise lost to the environment and reducing water consumption and energy outlay for heated water.

## Ecological Footprint

The ecological footprint of a given person is the portion of the environment necessary to produce the goods and services supporting his or her particular lifestyle. The concept is quantified as biologically productive land and water required to produce the goods and services and to assimilate the wastes generated. The footprint of an agricultural or industrial product integrates all inputs. According to certain calculations, humanity's total ecological footprint exceeds the earth's bio-capacity, indicating that resources are being used at an unsustainable rate. It is clear that each footprint computation depends on questionable assumptions.

The following, well-known calculation has been proposed to estimate a dog's footprint based on its dietary needs. The medium-sized dog in question daily eats 300 g of dry food containing 90 g of meat meal and 156 g of cereals, equating 450 g of fresh meat and 260 g of fresh cereals. Over the course of a year, the dog would consume 164 kg of meat and 95 kg of cereals. Per year, it takes 43.3 m<sup>2</sup> of land to generate 1 kg of chicken live weight and 13.4 m<sup>2</sup> for 1 kg of cereals. Thus, the



dog's footprint is 0.84 global ha per year. The calculation does not take into account the footprints of ingredients other than chicken and cereals, processing of ingredients, food manufacturing, packaging and transportation. When realizing that the per capita footprint for different nations ranges from 1 to 10 global ha per year, it is evident that the medium-sized dog has a substantial footprint.

## Animal by products

Production of animal versus plant protein employs more land, water and fossil fuel. One reason is the inefficient conversion of plant into animal protein. For example, 1.75 kg of feed (= 350 g protein) is required to generate 1 kg of whole chicken (= 190 g of protein). Converting feed into pork, lamb or beef meat is more wasteful. Apart from meat gain, various other aspects of livestock production also compromise the environment.

Pet foods high in meat may be considered eco-unfriendly, but there is another line of approach. The animal ingredients of pet foods mainly consist of by products such as organs, entrails, blood, bones,



skin and fat trimmings. These products do not suit the cultural, religious and/or habitual eating patterns of many population sections. In this context, the meat component of pet foods does not compete with human nutrition. Consequent, short-sighted reasoning is that pets eat useless waste materials, thereby decreasing the footprint of man's meat consumption.

Irrespective of their application, animal by products as such have a footprint similar to that of meats. At a global level, all livestock parts are eaten by people. This classes animal by products among human foods. Within animal production altogether, slaughter by products are reused as feed materials for aquaculture. Animal by products also do duty as bio-fuel. From a pet food perspective, crying off by products requires alternative ingredients accompanied by a conditional net environmental effect.

## Green and Natural

Consumers seem to associate green pet foods with natural ingredients, recyclable packaging and manufacturers' eco-friendly practices. It should be noted that natural pet foods are found under various categories. Natural foods co-labelled as grain-free and/or meat-first can be rich in animal protein and thus would be less sustainable than similar complete foods containing lower amounts of animal protein.

*Dr Anton C Beynen writes this exclusive column on dog and cat nutrition and nutrition related items every month.*