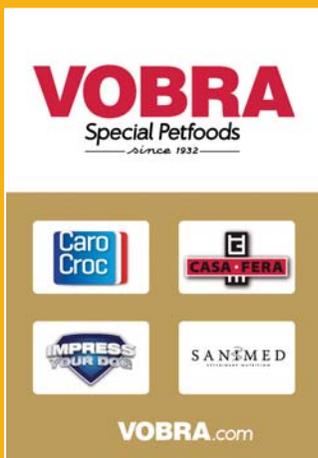




Dr A C Beynen was professor of veterinary nutrition at the Faculty of Veterinary Medicine, Utrecht University, The Netherlands in the period of 1993-2007.



Owner-pleasing Cat Foods

Cat foods must meet both the nutritional requirements of the pet consumer and the desires of the human purchaser and dispenser. Food and packaging qualities that please cat owners encourage brand loyalty. Functional foods with additional health benefits accommodate the owner's intention to care for her or his cat with devotion. Gourmet cat foods please both pet and owner. Other food aspects, such as packaging, waste-odour and hairball control, are more about the owner than about the pet.

Caregivers feel good when providing a food that is enthusiastically consumed by their cats. Gourmet foods go along with this emotion. These foods are characterised by their radiation of warmth, taste allure, and aesthetics. The gourmet segment has an array of flavour offerings and textures. The products, which may carry names of human foods or dishes, have easy-use packaging. Other pet food segments also show increasing convenience in packaging.

Some cat foods contain a yucca preparation to support waste-odour control. Owners of indoor cats will appreciate suppression of litter box odours. Research data indicate that the impact of yucca is small and will not be perceived by each owner. Cellulose-enriched foods make claims on feline hairball control. These foods can reduce the owner-displeasing retching, coughing and vomiting associated with the cat's ejection of mats of fur.

Packaging

Food and packaging can be considered two-in-one. The basic functions of packaging are containment and protection of the food, communication and promotion. It is also important in terms of product differentiation and shelf appeal and thus influences the buying decision. Pet food manufacturers also fall in with the wishes of the buyer who looks for sustainability (column, March 2015) and convenience in packaging.

Convenient packaging involves single-serve, stand-up retort pouch, re-sealable, easy-open and easy-carry. Pouches have penetrated the market as an alternative to metal cans and aluminium foil trays. Quick access to the bags' contents and easy re-closing is provided by different kinds of zippers or hook-to-hook closures. Gusset handles make large bags of pet food easier to carry and transport.

Gourmet Foods

A fancier gets delight in being able to plate something new and see the cat lick it clean. Gourmet cat foods satisfy both the owner and pet. These foods have carved a marketing sub-niche that pairs a warm, friendly image with further escalation of the palatability message to welcome finicky tastes. The image on the packaging and the food itself not infrequently mirror real people food and entice many owners.

In westernised countries, about 60 percent of the pet cats consume a combination of commercial dry and wet foods for



their whole intake. The moist foods are generally used as treat that supplements the dry main meal. This feeding practice has fuelled growth of the moist gourmet food category. The foods are characterised by their taste attraction and aesthetic attributes, but they differ widely as to flavour, texture and container.

Waste-Odour Control

Having to clean the cat's litter box very frequently to prevent awful smell is irksome. Some feline foods purport to reduce stool odour which would give an extra zest to cat ownership. These foods may contain highly digestible proteins, but they are usually enhanced with a preparation derived from the *Yucca schidigera* plant. The preparation may reflect the whole plant or juice extracted from yucca fibres.

In six experiments with cats, yucca ingestion generally diminished offensiveness of faeces as determined by the human nose, the overall decrease being 26 percent. On a group-mean basis, owners can detect a beneficial yucca effect, but quite some individuals cannot. For a given food, the efficacy of added yucca depends on the amount and type of preparation, while the mechanism of action is obscure.

One of the six experiments is a double-blind, placebo-controlled study with two groups of 12 privately-owned cats each, fed a dry diet without or with yucca. A fixed amount of identical litter-box filler was used per cat and replaced weekly.

Owners scored the degree of malodour of excrements on a standardised scale. Faeces were scooped and smelled, and then the filler was scored for urine odour. Yucca consumption for three weeks lowered group-mean faecal and urinary offensiveness by 17 and 27 percent.

Hairball Control

Normal grooming behaviour of cats is associated with swallowing fur. The non-digestible hair is voided with faeces. However, some of it may be regurgitated or vomited periodically in the form of hairballs. Occasionally, aggregates of hair obstruct the intestine and cause severe clinical signs. Hairballs normally are harmless, but many cat owners are annoyed by the signs of vomiting, retching and coughing.

Cat foods making hairball-control claims commonly are fortified with the insoluble cellulose fibre. Reduction of clinical symptoms of feline hairballs by supplemental fibre in dry foods has been demonstrated in two in-home studies. One study had a cross-over design. The other was double-blind, placebo-controlled with cellulose as the only dietary variable. Three studies found that addition of cellulose to dry foods increased faecal hair excretion.

The anti-hairball effect of dietary cellulose in cats involves two synergistic mechanisms. Cellulose prevents the agglomeration of single strands of hair in the stomach, thereby promoting the transfer of hairs into the first part of the intestine. Cellulose also accelerates the movement of partly digested food through the gut, thereby propelling hair into the faeces.

At unchanged grooming activity, more faecal hair excretion infers less gastric hairballs.

Dr Anton C Beynen writes this exclusive column on dog and cat nutrition every month. He is affiliated with Vobra Special Petfoods.