

# Director's Digest



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July/August 1989 No. 243

## HIGH FAT PETFOODS PROS, CONS AND TRENDS

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Fat boosts the energy content and palatability of petfoods. It may also boost sales. Based on recent estimates, high fat petfoods are capturing a significant share of the US petfood dollar.

### PROS:

The flavor of fat and the effect it has on the texture of food makes petfoods more appetizing. By weight, fat yields at least 2.25 times more energy than carbohydrates or proteins. So, high fat petfoods can be beneficial during periods

### Marketing claims

Claims frequently made for high fat, nutrient dense petfoods include:

- High palatability,
- Superior nutrition,
- Less food required,
- Lower stool volume,
- Improved haircoat and general appearance and
- High nutrient density for pets requiring extra energy. ■

### Essential fatty acids

#### Requirements, sources and signs of a deficiency

Dietary fat is required as a source of essential fatty acids. A deficiency of essential fatty acids can impair wound healing, cause a dry, dull coat and scaly skin and predispose to skin infection. An essential fatty acid deficiency may also result in impaired reproduction.

Essential fatty acid deficiency occurs most commonly in dogs receiving low fat dry dog foods containing beef tallow. Dry dogs that have an stored food long, particularly under warm, humid conditions.

Fats are either saturated or unsaturated. The essential fatty acids are all unsaturated. The proportion of unsaturated to saturated fats varies with the source of the fat (see Table 1, 2).

Linoleic acid is an essential fatty acid required by all animals. It is the main unsaturated fatty acid in most vegetable oils and makes up 15-25% of poultry and pork fat but less than 5% of beef tallow, fish oil and butter fat (see Table 1, 2). In addition to linoleic acid, cats require arachidonic acid in the diet. Arachidonic acid is a constituent of animal fats and is not present in plant products of any type (see Table 1, 2). Linoleic acid is converted to arachidonic acid by both cats and dogs. Therefore, if the species requires linoleic acid in the diet, essential fatty acids should constitute a basis for the diet or make up 2% of the diet intake. ■

of high caloric need, such as growth, lactation or work.

Pets can eat less of a high fat diet to satisfy their caloric requirements-high fat foods tend to have substantially more calories than low fat foods. If the high fat diet is balanced, nutritional requirements are also met with less food. Because less food is required, stool volume is reduced.

All of these factors have made fat a popular ingredient, especially in super-premium petfoods.

#### CONS:

On the other hand, high dietary fat can be a disadvantage. If a pet eats more fat than its body can assimilate, diarrhea can result. Obesity is an obvious danger associated with highly palatable, high fat diets. Without sufficient levels of antioxidants, high levels of unsaturated fat may result in "yellow fat disease" (pansteatitis).

The ingestion of very high levels of fat (e.g. meat trimmings) may lead to abdominal pain and vomiting (due to acute pancreatitis). This has led to speculation that excessive fat consumption, over a long period of time, may contribute to the development of pancreatitis. But it is debatable, whether or not fat levels found in some commercial petfoods are associated with the development of pancreatitis.

#### TRENDS:

Petfoods are changing rapidly. They're evolving from "low protein/low energy" foods into highly concentrated foods, according to Dr. Jim Corbin, a specialist in canine and feline nutrition and professor emeritus at the University of Illinois. Petfood tonnage was reported by Sami/Burke to the Pet Food Institute in September 1988. Their report reflected petfood removal from warehouses to grocery outlets based on weight and sales dollars. But the report did not consider the rapid development of high-protein and high fat diets which supply increased levels of nutrition per unit of weight.

Although some of these "nutrient concentrated" foods can be found in retail food outlets, the rapid surge of nutrient concentrated foods being marketed through pet and veterinary outlets is not reflected by SAMI surveys and reports. Corbin estimates that, for the 52 week period ending June 17, 1988, at least 1.13-1.36 million tons of petfoods were sold through feed stores, veterinarians and

pet stores. This amount plus the 4.52 million tons reported by SAMI bring the total petfood sold through retail outlets to 5.65-5.88 million tons. Based on that total tonnage, total retail sales are calculated to be \$6.4-\$7.7 billion. Other industry sources put the total US retail petfood market at \$7 billion.

SAMI reported grocery store sales of \$5.6 billion for the one year period ending June 17, 1988. Assuming that the total petfood market is \$7 billion, non-grocery petfood sales were \$1.4 billion.

Several nutrient concentrated petfoods currently being marketed have guarantees of 30% protein and 20% fat. Some are guaranteed at 35% protein and 30% fat. Other products ready for marketing contain approximately 35% protein and 60% fat, according to Corbin.

These foods appeal to many different types of pet owner. For example, people keeping dogs in high-rise apartments. Since these nutrient dense petfoods produce lower stool volumes, they require fewer trips outside to "exercise". Cat owners don't have to clean the litter box as often. Owners of "hard keepers" are better able to maintain their pets at desirable weights. Those with working dogs can help ensure their dog gets enough energy for strenuous activity.

Corbin thinks that competitive sled dog races, which dogs require high levels of energy, stimulated the trend toward nutrient dense petfoods. Whatever the case, these high fat petfoods now have a following that goes well beyond snow country.

**REFERENCES:**

Morris, M. L. et al., 1987. Small Animal Clinical Nutrition. Mark Morris Associates, Topeka, Kansas. National Renderers Association Bulletin, Issue No.

Fatty acids in common fats and oils			
Fat/Oil	Unsaturated Fatty Acids (%)	Linoleic Acid (%)	Arachidonic Acid (%)
Pork fat (lard)	84.1	18.3	0.3-1.0
Poultry fat	60.9	22.3	0.5-1.0
Tallow	52.4	4.3	0.0-0.20
Fish oil	60.0	2.7	20.0-25.0
Corn oil	87.7	55.4	
Coconut oil	9.7	1.1	
Linseed oil	91.8	13.9	
Safflower oil	89.5	72.7	
Butter fat	35.8	2.1	

Source: Morris et al., 1987