

**September 1, 2008**

**Volume 1 Issue 4**

## **PAWS TO THE STARS**

### **What's Really in Pet Food**

Plump whole chickens, choice cuts of beef, fresh grains, and all the wholesome nutrition your dog or cat will ever need.

These are the images pet food manufacturers promulgate through the media and advertising. This is what the \$16.1 billion per year U.S. pet food industry wants consumers to believe they are buying when they purchase their products.

This report explores the differences between what consumers think they are buying and what they are actually getting. It focuses in very general terms on the most visible name brands — the pet food labels that are mass-distributed to supermarkets and discount stores — but there are many highly respected brands that may be guilty of the same offenses.

What most consumers don't know is that the pet food industry is an extension of the human food and agriculture industries. Pet food provides a convenient way for slaughterhouse offal, grains considered "unfit for human consumption," and similar waste products to be turned into profit. This waste includes intestines, udders, heads, hooves, and

**POINTS OF INTEREST**  
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## What's really in Pet Food



**A chameleon**



**Parakeet**

possibly diseased and cancerous animal parts.

### The Players

The pet food market has been dominated in the last few years by the acquisition of big companies by even bigger companies. With \$15 billion a year at stake in the U.S. and rapidly expanding foreign markets, it's no wonder that some are greedy for a larger piece of the pie.

- Nestlé's bought Purina to form Nestlé Purina Petcare Company (Fancy Feast, Alpo, Friskies, Mighty Dog, Dog Chow, Cat Chow, Puppy Chow, Kitten Chow, Beneful, One, ProPlan, DeliCat, HiPro, Kit'n'Kaboodle, Tender Vittles, Purina Veterinary Diets).
- Del Monte gobbled up Heinz (MeowMix, Gravy Train, Kibbles 'n Bits, Wagwells, 9Lives, Cycle, Skippy, Nature's Recipe, and pet treats Milk Bone, Pup-Peroni, Sausages, Pounce).
- MasterFoods owns Mars, Inc., which consumed Royal Canin (Pedigree, Waltham's, Cesar, Sheba, Temptations, Goodlife Recipe, Sensible Choice, Excel).

Other major pet food makers are not best known for pet care, although many of their household and personal care products do use ingredients derived from animal by-products:

- Procter and Gamble (P&G) purchased The Iams Company (Iams, Eukanuba) in 1999.
- P&G shortly thereafter introduced Iams into

## What's Really in Pet Food

grocery stores, where it did very well. Colgate-Palmolive bought Hill's Science Diet (founded in 1939) in 1976 (Hill's Science Diet, Prescription Diets, Nature's Best).

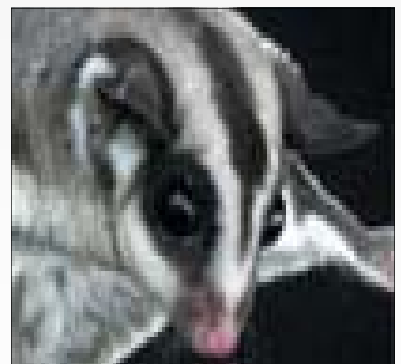
Private labelers (who make food for "house" brands like Kroger and Wal-Mart) and co-packers (who produce food for other pet food makers) are also major players. Three major companies are Doane Pet Care, Diamond, and Menu Foods; they produce food for dozens of private label and brand names. Interestingly, all 3 of these companies have been involved in pet food recalls that sickened or killed many pets.

Many major pet food companies in the United States are subsidiaries of gigantic multinational corporations. From a business standpoint, pet food fits very well with companies making human products. The multinationals have increased bulk-purchasing power; those that make human food products have a captive market in which to capitalize on their waste products; and pet food divisions have a more reliable capital base and, in many cases, a convenient source of ingredients.

definitions are published in AAFCO's *Official Publication*, revised annually, but can also be found in many places online.



**Pot Belly Pig**



**A Sugar Glider**

## What's Really in Pet Food

The Pet Food Institute — the trade association of pet food manufacturers — has acknowledged the use of by-products in pet foods as additional income for processors and farmers: “The growth of the pet food industry not only provided pet owners with better foods for their pets, but also created profitable additional markets for American farm products and for the byproducts of the meat packing, poultry, and other food industries which prepare food for human consumption.”<sup>1</sup>

### Label Basics

There are special labeling requirements for pet food, all of which are contained in the annually revised *Official Publication of AAFCO*.<sup>2</sup> While AAFCO does not regulate pet food, it does provide model regulations and standards that are followed by U.S. pet food makers.

**The name of the food** provides the first indication of the food’s content. The use of the terms “all” or “100%” cannot be of the terms “all” or “100%” cannot be used

“if the product contains more than one ingredient, not including water sufficient for processing, decharacterizing agents, or trace amounts of preservatives and condiments.”



**A Ferret**

**Suffering the loss of a pet is like losing a child, to many people their pets are their children**



**A Peacock**

## What's Really in Pet Food



**A butterfly fish**



**A Porkfish**

“if the product contains more than one ingredient, not including water sufficient for processing, decharacterizing agents, or trace amounts of preservatives and condiments.”

The “95% Rule” applies when the ingredient(s) derived from animals, poultry, or fish constitutes at least 95% or more of the total weight of the product (or 70% excluding water for processing). Because all-meat diets are not nutritionally balanced and cause severe deficiencies if fed exclusively, they fell out of favor for many years. However, due to rising consumer interest in high quality meat products, several companies are now promoting 95% and 100% canned meats as a supplemental feeding option.

The “dinner” product is defined by the “25% Rule,” which applies when “an ingredient or a combination of ingredients constitutes at least 25% of the weight of the product (excluding water sufficient for processing)”, or at least 10% of the dry matter weight; and a descriptor such as “recipe,” “platter,” “entree,” and “formula.” A combination of ingredients included in the product name is permissible when each ingredient comprises at least 3% of the product weight, excluding water for processing, and the ingredient names appear

## What's Really in Pet Food

in descending order by weight.

The "With" rule allows an ingredient name to appear on the label, such as "with real chicken," as long as each such ingredient constitutes at least 3% of the food by weight, excluding water for processing.

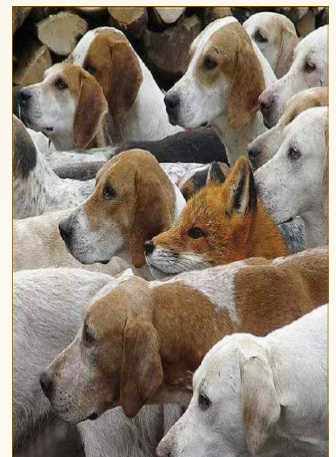
The "flavor" rule allows a food to be designated as a certain flavor as long as the ingredient(s) are sufficient to "impart a distinctive characteristic" to the food. Thus, a "beef flavor" food may contain a small quantity of digest or other extract of tissues from cattle, or even an artificial flavor, without containing any actual beef meat at all.

**The ingredient list** is the other major key to what's really in that bag or can. Ingredients must be listed in descending order of weight. The ingredient names are legally defined. For instance, "meat" refers to only cows, pigs, goats and sheep, and only includes specified muscle tissues. Detailed definitions are published in AAFCO's *Official Publication*, revised annually, but can also be found in many places online. **The guaranteed analysis** provides a very general guide to the composition of the food. Crude protein, fat, and fiber, and total moisture are required to be listed.



**A Tribble**

**A Good Tip:**  
When you are in deep trouble, look straight ahead, keep your mouth shut, and say nothing.



## What's Really in Pet Food



**A Stuffed  
Penguin**

**If you can  
donate  
time or  
money to a  
no kill dog  
or cat  
shelter**



**Virtual pet  
Wooley  
Hooves**

Some companies also voluntarily list taurine, Omega fatty acids, magnesium, and other items that they deem important — by marketing standards.

### **Pet Food Standards and Regulations**

The National Research Council (NRC) of the Academy of Sciences set the nutritional standards for pet food that were used by the pet food industry until the late 1980s. The original NRC standards were based on purified diets, and required feeding trials for pet foods claimed to be “complete” and “balanced.” The pet food industry found the feeding trials too restrictive and expensive, so AAFCO designed an alternate procedure for claiming the nutritional adequacy of pet food, by testing the food for compliance with “Nutrient Profiles.” AAFCO also created “expert committees” for canine and feline nutrition, which developed separate canine and feline standards.

While feeding trials are sometimes still done, they are expensive and time-consuming. A standard chemical analysis may also be used to make sure that a food meets the profiles. In either case, there will be a statement on the label stating which method was used. However, because of the “family rule” in the AAFCO book, a label

## What's Really in Pet Food

can say that feeding tests were done if it is "similar" to a food that was actually tested on live animals. There is no way to distinguish the lead product from its "family members." The label will also state whether the product is nutritionally adequate (complete and balanced), and what life stage (adult or growth) the food is for. A food that says "all life stages" meets the growth standards and can be fed to all ages.

Chemical analysis, however, does not address the palatability, digestibility, or biological availability of nutrients in pet food. Thus it is unreliable for determining whether a food will provide an animal with sufficient nutrients. To compensate for the limitations of chemical analysis, AAFCO added a "safety factor," which was to exceed the minimum amount of nutrients required to meet the complete and balanced requirements.

In 2006, new NRC standards were published; but it will take several years for AAFCO's profiles to be updated and adopted, let alone accepted by the states.

The pet food industry loves to say that it's more highly regulated than human food, but that's just not true. Pet food exists in a bit of a regulatory vacuum; laws are on the books, but enforcement is another story. The FDA



**TURTLE**

**Dogs have owners**

**Cats have staff**

**Anonymous**



**A green iguana**

## What's Really in Pet Food



**"We  
can  
judge  
the  
heart  
of a  
man by  
his  
treat-  
ment  
of ani-  
mals."  
~ Im-  
manua**

has nominal authority over pet foods shipped across state lines. But the real "enforcers" are the feed control officials in each state. They are the ones who actually look at the food and, in many instances, run basic tests to make sure the food meets its Guaranteed Analysis, the chart on the label telling how much protein, fat, moisture, and fiber are present. But regulation and enforcement vary tremendously from state to state. Some, like Texas, Minnesota, and Kentucky, run extensive tests and strictly enforce their laws; others, like California, do neither.

The Manufacturing Process: How Pet Food Is Made

### Dry Food

The vast majority of dry food is made with a machine called an extruder. First, materials are blended in accordance with a recipe created with the help of computer programs that provide the nutrient content of each proposed ingredient. For instance, corn gluten meal has more protein than wheat flour. Because the extruder needs a consistent



## What's Really in Pet Food

amount of starch and low moisture to work properly, dry ingredients — such as rendered meat-and-bone-meal, poultry by-product meal, grains, and flours — predominate.

The dough is fed into the screws of an extruder. It is subjected to steam and high pressure as it is pushed through dies that determine the shape of the final product, much like the nozzles used in cake decorating. As the hot, pressurized dough exits the extruder, it is cut by a set of rapidly whirling knives into tiny pieces. As the dough reaches normal air pressure, it expands or “puffs” into its final shape. The food is allowed to dry, and then is usually sprayed with fat, digests, or other compounds to make it more palatable. When it is cooled, it can be bagged.

Although the cooking process kills bacteria in the ingredients, the final product can pick up more bacteria during the subsequent drying, coating, and packaging process. Some experts warn that getting dry food wet can allow the bacteria on the surface to multiply and make pets sick. **Do not mix dry food with water, milk, canned food, or other liquids.**

A few dog foods are baked at high



**RED MCCA**

**Remember  
your pet  
depends  
on you for  
protection**



**A Red  
headed Duck**

## What's Really in Pet Food



**Parrot**



**A bicolor parrot fish**

temperatures (over 500°F) rather than extruded. This produces a sheet of dense, crunchy material that is then broken into irregular chunks, much like crumbling crackers into soup. It is relatively palatable without the sprayed-on fats and other enhancers needed on extruded dry food.

Semi-moist foods and many pet treats are also made with an extruder. To be appealing to consumers and to keep their texture, they contain many additives, colorings, and preservatives; they are not a good choice for a pet's primary diet.

### **Wet Food**

Wet or canned food begins with ground ingredients mixed with additives. If chunks are required, a special extruder forms them. Then the mixture is cooked and canned. The sealed cans are then put into containers resembling pressure cookers and commercial sterilization takes place. Some manufacturers cook the food right in the can.

Wet foods are quite different in content from dry or semi-moist foods. While many canned foods contain by-products of various sorts, they are "fresh" and not rendered or processed (although they are often frozen for transport and storage). Wet foods usually contain much more protein,

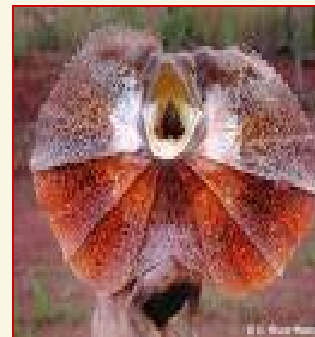
## What's Really in Pet Food

and it's often a little higher quality, than dry foods. They also have more moisture, which is better for cats. They are packaged in cans or pouches.

### Comparing Food Types

Because of the variation in water content, it is impossible to directly compare labels from different kinds of food without a mathematical conversion to "dry matter basis." The numbers can be very deceiving. For instance, a canned food containing 10% protein actually has much more protein than a dry food with 30% protein.

To put the foods on a level playing field, first calculate the dry matter content by subtracting the moisture content given on the label from 100%. Then divide the ingredient by the dry matter content. For example, a typical bag of dry cat food contains 30% protein on the label, but 32% on a dry-matter basis (30% divided by its dry matter content, 100-6% moisture = 94%). A can of cat food might contain 12% protein on the label, but almost 43% on a dry-matter basis (12% divided by its dry matter content, 100-72% moisture = 28%). Dry food typically contains less than 10% water, while canned food contains 78% or more water.



**A frilled lizard**



**A Pork fish**

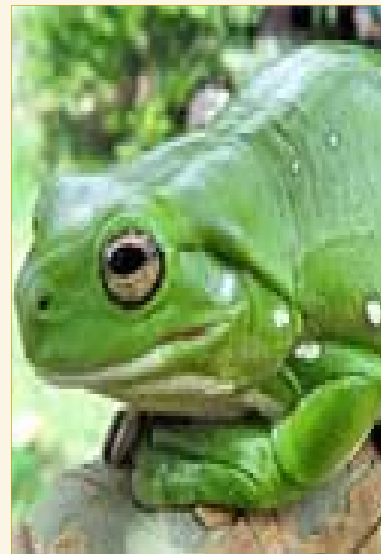
## What's Really in Pet Food

Now that you've decided to have pet mice or rats as part of your household, you want to make sure you provide the best care for them. Besides their cute and playful qualities, what attracted you to mice or rats is the fact that they take up less space and require less maintenance. However, low maintenance does not mean no maintenance. The three main aspects that you need to consider to ensure the best health of your pets are nutrition, hygiene, and exercise/play.

### Nutrition

Improper diet is the leading cause of some of the most common ailments in mice and rats. A poor diet can result in obesity, diarrhea, or overgrown teeth. Provide a balanced diet that is high in fiber and limit or avoid oil-rich and high-fat foods such as nuts and sunflower seeds. Include coarse vegetable matter or fibrous roughage to encourage the natural wearing of teeth.

Commercially available [foods](#) and pellets should be the mainstay of a nutritious diet for mice and rats. Balanced "block" type diets are ideal since they are nutritionally complete and provide the added benefit of gnawing exercise. Make sure the



**A dog is the only thing on earth that will love you more than you love yourself**

**Josh Billings**



**Hamster**

## Proper Mice and Rat Husbandry



**A horse A  
horse**

**My kingdom  
for a horse**

**Shakespeare**



commercial foods are complete or balanced to ensure proper nutrition.

Vary their diet by supplementing with small amounts of fresh fruits and vegetables, especially items such as carrots, cauliflower, broccoli, and apples. Fruits and vegetables should only make up a small portion of their total diet. While they are nutritious, excess fruits and vegetables can cause diarrhea.

Seed mixes are not the best alternative since mice and rats will often ignore the pellets in the mixture or eat only certain seeds in the mixture. Your pet will not receive the proper nutrients if they are "picking and choosing" particular items. Limit feeding seeds or mixes that contain seeds if your pets are eating just the seeds.

Rats have a "sweet-tooth" and crave sweets. Resist the temptation of feeding anything sugary or with processed sugar. Consider "healthier" treat options such as small pieces of fruit or commercially available [treat](#) items. These treats should be given occasionally in small quantities based around a nutritionally complete diet.

In addition to a balanced diet, remember to provide a daily source of clean fresh water for your mice.

## Proper Mice and Rat Husbandry



There's no need for a piece of sculpture in a home that has a cat

Wesley Bates



### Hygiene and Cleaning

Though pet mice and rats have a natural musk to them, their smell should be slight and not unpleasant. The primary cause of strong odors is inadequate or poor cleaning routines. It is important to regularly clean and sanitize cages, not only to minimize odors but also to keep your pets healthy. Proper maintenance is important, especially if your pets are housed in a glass aquarium where ventilation may not be adequate. Vapors from urine or other waste materials can linger. Wet bedding materials or uneaten fresh foods can encourage the growth of bacteria, mildew, and fungus. These conditions can cause respiratory ailments.

Uneaten fresh foods should be removed and dishes and water bottles should be cleaned daily when new food and fresh water is given. Heavily soiled areas should be removed from the bedding material daily. The entire cage, including accessories, should be thoroughly cleaned and the bedding changed once a week.

Clean the cage and accessories weekly with hot soapy water to remove any hardened material and sanitize using mild bleach or disinfecting solutions to kill germs. Thoroughly rinse the cage and accessories and

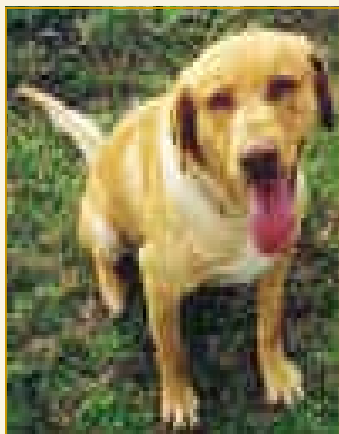


## Proper Mice and Rat



**Llama eating a leaf**

**Your pet is your number one confident,**



and air dry. Make sure cage and accessories are completely dry before putting everything back.

### Exercise and Play

Because pet mice and rats are very intelligent social animals, they can quickly become bored if enough activity and stimulation are not provided. This can result in undesirable activities such as excess chewing or gnawing, constant moving or rearrangement of accessories, or regular attempts to escape.

Provide [toys](#) and an [exercise wheel](#) for activity and stimulation while you are away. [Chew toys](#) are a good choice since they offer stimulation as well as gnawing exercise that help wear down teeth. When you are home, spend at least half an hour a day playing and interacting with your pet outside of the cage. Never leave pet mice or rats unattended when they are out of their cages.

Pet rats are very intelligent and can learn to respond to their name and come to you when called. Time spent training your pet rat is quality time socializing and interacting with your pet.

## Proper Mice and Rat Husbandry

Call your pet rat by name and reward him with a piece of Cheerio each time he responds correctly to your command. Discover what other "tricks" your pet rat can learn.

Provide a healthier, happier life for your pet and avoid more serious problems with proper nutrition, cleaning, and exercise. Caring for a pet should never be a chore. Observing these three basic aspects will make caring for your pet easier and rewarding for both you and your pet.

## Pet Insurance Redo

I recently wrote on pet insurance. Needless to say I wish I would have had some a few weeks ago. My Sabrina went to the vet's for her shot and a general checkup. That was \$89.00. Then when I took her back for her dental, that cost me \$414.00. I really believe that everyone that should consider insurance because my trip to the vet's was expensive. If you have multiple pets or even one pet, look in into the costs. It might be worth it.



**Teddy bear**

**A good venue to learn about animals to tune into the Animal Planet**



Pet Fleet is a division of Starfleet Internationals and it exists for the enjoyment of the members. The enrollment of pets in Pet Fleet does not count towards a ship's strength. The membership fees will be tallied at the end of the end donated to a worthwhile animal charity. The pet whether it be animal, stuffed, or virtual are part of the lives of members of Starfleet. Remember your pets are helping other needy animals from good homes and loving families

## PPAWS TO THE STARS

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## COMING ATTRACTIONS

In the coming weeks, I have articles on turtles, fish and other assorted reptiles. I will be continuing my multi part article on pet food. It is an informative but cautionary article. Also feel free to email me if you have something you want covered in the newsletter or something that happened with your pet that might help others.