Get The Facts:

What's Really in Pet Food

Information on reprints

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 $11 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 market for slaughterhouse offal, grains considered "unfit for human consumption," and similar waste products to be turned into profit. This waste includes intestines, udders, esophagi, and possibly diseased and cancerous animal parts.

Three of the five major pet food companies in the United States are subsidiaries of major multinational companies: Nestlé (Alpo, Fancy Feast, Friskies, Mighty Dog, and Ralston Purina products such as Dog Chow, ProPlan, and Purina One), Heinz (9 Lives, Amore, Gravy Train, Kibbles-n-Bits, Nature's Recipe), Colgate-Palmolive (Hill's Science Diet Pet Food). Other leading companies include Procter & Gamble (Eukanuba and Iams), Mars (Kal Kan, Mealtime, Pedigree, Sheba, Waltham's), and Nutro. From a business standpoint, multinational companies owning pet food manufacturing companies is an ideal relationship. 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.

There are hundreds of different pet foods available in this country. And while many of the foods on the market are similar, not all of the pet food manufacturing companies use poor quality or potentially dangerous ingredients.

Ingredients

Although the purchase price of pet food does not always determine whether a pet food is good or bad, the price is often a good indicator of quality. It would be impossible for a company that sells a generic brand of dog food at $9.95 for a 40-lb. bag to use quality protein and grain in its food. The cost of purchasing quality ingredients would be much higher than the selling price.

The protein used in pet food comes from a variety of sources. When cattle, swine, chickens, lambs, or other animals are slaughtered, the choice cuts such as lean muscle tissue are trimmed away from the

carcass for human consumption. However, about 50% of every food-producing animal does not get used in human foods. Whatever remains of the carcass — bones, blood, intestines, lungs, ligaments, and almost all the other parts not generally consumed by humans — is used in pet food, animal feed, and other products. These "other parts" are known as "by-products," "meat-and-bone-meal," or similar names on pet food labels.

The Pet Food Institute — the trade association of pet food manufacturers — acknowledges 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."[1]

Many of these remnants provide a questionable source of nourishment for our animals. The nutritional quality of meat and poultry by-products, meals, and digests can vary from batch to batch. James Morris and Quinton Rogers, two professors with the Department of Molecular Biosciences, University of California at Davis Veterinary School of Medicine, assert that, "There is virtually no information on the bioavailability of nutrients for companion animals in many of the common dietary ingredients used in pet foods. These ingredients are generally by-products of the meat, poultry and fishing industries, with the potential for a wide variation in nutrient composition. Claims of nutritional adequacy of pet foods based on the current Association of American Feed Control Officials (AAFCO) nutrient allowances ('profiles') do not give assurances of nutritional adequacy and will not until ingredients are analyzed and bioavailability values are incorporated."[2]

Meat and poultry meals, by-product meals, and meat-and-bone meal are common ingredients in pet foods. The term "meal" means that these materials are not used fresh, but have been rendered. What is rendering? Rendering, as defined by *Webster's Dictionary*, is "to process as for industrial use: to render livestock carcasses and to extract oil from fat, blubber, etc., by melting." Home-made chicken soup, with its thick layer of fat that forms over the top when the soup is cooled, is a sort of mini-rendering process. Rendering separates fat-soluble from water-soluble and solid materials, removes most of the water, and kills bacterial contaminants, but may alter or destroy some of the natural enzymes and proteins found in the raw ingredients. Meat and poultry by-products, while not rendered, vary widely in composition and quality.

What can the feeding of such products do to your companion animal? Some veterinarians claim that feeding slaughterhouse wastes to animals increases their risk of getting cancer and other degenerative diseases. The cooking methods used by pet food manufacturers — such as rendering, extruding (a heat-and-pressure system used to "puff" dry foods into nuggets or kibbles), and baking — do not necessarily destroy the hormones used to fatten livestock or increase milk production, or drugs such as antibiotics or the barbiturates used to euthanize animals.

Animal and Poultry Fat

You may have noticed a unique, pungent odor when you open a new bag of pet food — what is the source of that delightful smell? It is most often rendered animal fat, restaurant grease, or other oils too rancid or deemed inedible for humans.

Restaurant grease has become a major component of feed grade animal fat over the last fifteen years. This grease, often held in fifty-gallon drums, may be kept outside for weeks, exposed to extreme temperatures with no regard for its future use. “Fat blenders” or rendering companies then pick up this used grease and mix the different types of fat together, stabilize them with powerful antioxidants to retard further spoilage, and then sell the blended products to pet food companies and other end users.

These fats are sprayed directly onto extruded kibbles and pellets to make an otherwise bland or distasteful product palatable. The fat also acts as a binding agent to which manufacturers add other flavor enhancers such as digests. Pet food scientists have discovered that animals love the taste of these sprayed fats. Manufacturers are masters at getting a dog or a cat to eat something she would normally turn up her nose at.

Wheat, Soy, Corn, Peanut Hulls, and Other Vegetable Protein

The amount of grain products used in pet food has risen over the last decade. Once considered filler by the pet food industry, cereal and grain products now replace a considerable proportion of the meat that was used in the first commercial pet foods. The availability of nutrients in these products is dependent upon the digestibility of the grain. The amount and type of carbohydrate in pet food determines the amount of nutrient value the animal actually gets. Dogs and cats can almost completely absorb carbohydrates from some grains, such as white rice. Up to 20% of the nutritional value of other grains can escape digestion. The availability of nutrients for wheat, beans, and oats is poor. The nutrients in potatoes and corn are far less available than those in rice. Some ingredients, such as peanut hulls, are used for filler or fiber, and have no significant nutritional value.

Two of the top three ingredients in pet foods, particularly dry foods, are almost always some form of grain products. Pedigree Performance Food for Dogs lists Ground Corn, Chicken By-Product Meal, and Corn Gluten Meal as its top three ingredients. 9 Lives Crunchy Meals for cats lists Ground Yellow Corn, Corn Gluten Meal, and Poultry By-Product Meal as its first three ingredients. Since cats are true carnivores — they must eat meat to fulfill certain physiological needs — one may wonder why we are feeding a corn-based product to them. The answer is that corn is a much cheaper “energy source” than meat.

In 1995, Nature’s Recipe pulled thousands of tons of dog food off the shelf after consumers complained that their dogs were vomiting and losing their appetite. Nature’s Recipe’s loss amounted to $20 million. The problem was a fungus that produced vomitoxin (an aflatoxin or “mycotoxin,” a toxic substance produced by mold) contaminating the wheat. In 1999, another fungal toxin triggered the recall of dry dog food made by Doane Pet Care at one of its plants, including Ol’ Roy (Wal-Mart’s brand) and 53 other brands. This time, the toxin killed 25 dogs.

Although it caused many dogs to vomit, stop eating, and have diarrhea, vomitoxin is a milder toxin than most. The more dangerous mycotoxins can cause weight loss, liver damage, lameness, and even death as in the Doane case. The Nature's Recipe incident prompted the Food and Drug Administration (FDA) to intervene. Dina Butcher, Agriculture Policy Advisor for North Dakota Governor Ed Schafer, concluded that the discovery of vomitoxin in Nature's Recipe wasn't much of a threat to the human population because "the grain that would go into pet food is not a high quality grain."[3]

Soy is another common ingredient that is sometimes used as a protein and energy source in pet food. Manufacturers also use it to add bulk so that when an animal eats a product containing soy he will feel more sated. While soy has been linked to gas in some dogs, other dogs do quite well with it. Vegetarian dog foods use soy as a protein source.

Additives and Preservatives

Many chemicals are added to commercial pet foods to improve the taste, stability, characteristics, or appearance of the food. Additives provide no nutritional value. Additives include emulsifiers to prevent water and fat from separating, antioxidants to prevent fat from turning rancid, and artificial colors and flavors to make the product more attractive to consumers and more palatable to their companion animals.

Adding chemicals to food originated thousands of years ago with spices, natural preservatives, and ripening agents. In the last 40 years, however, the number of food additives has greatly increased.

All commercial pet foods must be preserved so they stay fresh and appealing to our animal companions. Canning is a preserving process itself, so canned foods contain less preservatives than dry foods. Some preservatives are added to ingredients or raw materials by the suppliers, and others may be added by the manufacturer. Because manufacturers need to ensure that dry foods have a long shelf life to remain edible after shipping and prolonged storage, fats used in pet foods are preserved with either synthetic or "natural" preservatives. Synthetic preservatives include **butylated hydroxyanisole (BHA)** and **butylated hydroxytoluene (BHT)**, propyl gallate, propylene glycol (also used as a less-toxic version of automotive antifreeze), and **ethoxyquin**. For these antioxidants, there is little information documenting their toxicity, safety, interactions, or chronic use in pet foods that may be eaten every day for the life of the animal.

Potentially cancer-causing agents such as BHA, BHT, and ethoxyquin are permitted at relatively low levels. The use of these chemicals in pet foods has not been thoroughly studied, and long term build-up of these agents may ultimately be harmful. Due to questionable data in the original study on its safety, ethoxyquin's manufacturer, Monsanto, was required to perform a new, more rigorous study. This was completed in 1996. Even though Monsanto found no significant toxicity associated with its own product, in July 1997, the FDA's Center for Veterinary Medicine requested that manufacturers voluntarily reduce the maximum level for ethoxyquin by half, to 75 parts per million. While some pet food critics and veterinarians believe that ethoxyquin is a major cause of disease, skin problems, and infertility in dogs, others claim it is the safest, strongest, most stable preservative available for pet food. Ethoxyquin is approved for use in human food for preserving spices, such as cayenne and chili

powder, at a level of 100 ppm — but it would be very difficult to consume as much chili powder every day as a dog would eat dry food. Ethoxyquin has never been tested for safety in cats.

Some manufacturers have responded to consumer concern, and are now using “natural” preservatives such as Vitamin C (ascorbate), Vitamin E (mixed tocopherols), and oils of rosemary, clove, or other spices, to preserve the fats in their products. Other ingredients, however, may be individually preserved. Most fish meal, and some prepared vitamin-mineral mixtures, contain chemical preservatives. This means that your companion animal may be eating food containing several types of preservatives. Federal law requires preservatives to be disclosed on the label; however, pet food companies only recently started to comply with this law.

Additives in Processed Pet Foods

Anticaking agents
Antimicrobial agents
Antioxidants
Coloring agents
Curing agents
Drying agents
Emulsifiers
Firming agents
Flavor enhancers
Flavoring agents
Flour treating agents
Formulation aids
Humectants
Leavening agents
Lubricants
Nonnutritive sweeteners
Nutritive sweeteners
Oxidizing and reducing agents
pH control agents
Processing aids
Sequestrants
Solvents, vehicles
Stabilizers, thickeners
Surface active agents
Surface finishing agents
Synergists
Texturizers

While the law requires studies of direct toxicity of these additives and preservatives, they have not been tested for their potential synergistic effects on each other once ingested. Some authors have

suggested that dangerous interactions occur among some of the common synthetic preservatives.[4] Natural preservatives do not provide as long a shelf life as chemical preservatives, but they are safe.

The Manufacturing Process

How Pet Food Is Made

Although feeding trials are no longer required for a food to meet the requirements for labeling a food "complete and balanced," most manufacturers perform palatability studies when developing a new pet food. One set of animals is fed a new food while a "control" group is fed a current formula. The total volume eaten is used as a gauge for the palatability of the food. The larger and more reputable companies do use feeding trials, which are considered to be a much more accurate assessment of the actual nutritional value of the food. They keep large colonies of dogs and cats for this purpose, or use testing laboratories that have their own animals.

Most dry food is made with a machine called an expander or extruder. First, raw materials are blended, sometimes by hand, other times by computer, in accordance with a recipe developed by animal nutritionists. This mixture is fed into an expander and steam or hot water is added. The mixture is subjected to steam, pressure, and high heat as it is extruded through dies that determine the shape of the final product and puffed like popcorn. The food is allowed to dry, and then is usually sprayed with fat, digests, or other compounds to make it more palatable. Although the cooking process may kill bacteria in pet food, the final product can lose its sterility during the subsequent drying, fat coating, and packaging process. A few foods are baked at high temperatures rather than extruded. This produces a dense, crunchy kibble that is palatable without the addition of sprayed on palatability enhancers. Animals can be fed about 25% less of a baked food, by volume (but not by weight), than an extruded food.

Ingredients are similar for wet, dry, and semi-moist foods, although the ratios of protein, fat, and fiber may change. A typical can of ordinary cat food reportedly contains about 45-50% meat or poultry by-products. The main difference between the types of food is the water content. It is impossible to directly compare labels from different kinds of food without a mathematical conversion to "dry matter basis."[5] 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.

There are special labeling requirements for pet food, all of which are contained in the annually revised Official Publication of AAFCO.[6] The use 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." Products containing multiple ingredients are covered by AAFCO Regulation PF3(b) and (c). 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 usually not nutritionally balanced, 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) as long as the ingredient(s) shall constitute at least 10% of the total product weight; and a descriptor that implies other ingredients are included in the product formula is used on the label. Such descriptors include “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 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, without containing any actual beef meat at all.

What Happened to the Nutrients?

Dr. Randy L. Wysong is a veterinarian and produces his own line of pet foods. A long-time critic of pet food industry practices, he said, “Processing is the wild card in nutritional value that is, by and large, simply ignored. Heating, cooking, rendering, freezing, dehydrating, canning, extruding, pelleting, baking, and so forth, are so commonplace that they are simply thought of as synonymous with food itself.”[7] Processing meat and by-products used in pet food can greatly diminish their nutritional value, but cooking increases the digestibility of cereal grains.

To make pet food nutritious, pet food manufacturers must “fortify” it with vitamins and minerals. Why? Because the ingredients they are using are not wholesome, their quality may be extremely variable, and the harsh manufacturing practices destroy many of the nutrients the food had to begin with.

Contaminants

Commercially manufactured or rendered meat meals and by-product meals are frequently highly contaminated with bacteria because their source is not always slaughtered animals. Animals that have died because of disease, injury, or natural causes are a source of meat for meat meal. The dead animal might not be rendered until days after its death. Therefore the carcass is often contaminated with bacteria such as Salmonella and Escherichia coli. Dangerous E. Coli bacteria are estimated to contaminate more than 50% of meat meals. While the cooking process may kill bacteria, it does not eliminate the endotoxins some bacteria produce during their growth and are released when they die. These toxins can cause sickness and disease. Pet food manufacturers do not test their products for endotoxins.

Mycotoxins — These toxins comes from mold or fungi, such as vomitoxin in the Nature's Recipe case, and aflatoxin in Doane's food. Poor farming practices and improper drying and storage of crops can cause mold growth. Ingredients that are most likely to be contaminated with mycotoxins are grains such as wheat and corn, cottonseed meal, peanut meal, and fish meal.

Labeling

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 NRC standards, which still exist and are being revised as of 2001, 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 can still be done, a standard chemical analysis may be also be used to determine if a food meets the profiles.

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.

The digestibility and availability of nutrients is not listed on pet food labels.

The 100% Myth — Problems Caused by Inadequate Nutrition

The idea of one pet food providing all the nutrition a companion animal will ever need for its entire life is a myth.

Cereal grains are the primary ingredients in most commercial pet foods. Many people select one pet food and feed it to their dogs and cats for a prolonged period of time. Therefore, companion dogs and cats eat a primarily carbohydrate diet with little variety. Today, the diets of cats and dogs are a far cry from the primarily protein diets with a lot of variety that their ancestors ate. The problems associated with a commercial diet are seen every day at veterinary establishments. Chronic digestive problems, such as chronic vomiting, diarrhea, and inflammatory bowel disease are among the most frequent illnesses treated. These are often the result of an allergy or intolerance to pet food ingredients. The market for "limited antigen" or "novel protein" diets is now a multi-million dollar business. These diets were formulated to address the increasing intolerance to commercial foods that animals have developed. The newest twist is the truly "hypoallergenic" food that has had all its proteins artificially chopped into pieces smaller than can be recognized and reacted to by the immune system.

Dry commercial pet food is often contaminated with bacteria, which may or may not cause problems. Improper food storage and some feeding practices may result in the multiplication of this bacteria. For example, adding water or milk to moisten pet food and then leaving it at room temperature causes

bacteria to multiply.[8] Yet this practice is suggested on the back of packages of some kitten and puppy foods.

Pet food formulas and the practice of feeding that manufacturers recommend have increased other digestive problems. Feeding only one meal per day can cause the irritation of the esophagus by stomach acid. Feeding two smaller meals is better.

Feeding recommendations or instructions on the packaging are sometimes inflated so that the consumer will end up purchasing more food. However, Procter & Gamble allegedly took the opposite tack with its Iams and Eukanuba lines, reducing the feeding amounts in order to claim that its foods were less expensive to feed. Independent studies commissioned by a competing manufacturer suggested that these reduced levels were inadequate to maintain health. Procter & Gamble has since sued and been countersued by that competing manufacturer, and a consumer complaint has also been filed seeking class-action status for harm caused to dogs by the revised feeding instructions.

Urinary tract disease is directly related to diet in both cats and dogs. Plugs, crystals, and stones in cat bladders are often triggered or aggravated by commercial pet food formulas. One type of stone found in cats is less common now, but another more dangerous type has become more common. Manipulation of manufactured cat food formulas to alter the acidity of urine and the amount of some minerals has directly affected these diseases. Dogs also form stones as a result of their diet.

History has shown that commercial pet food products can cause disease. An often-fatal heart disease in cats and some dogs is now known to be caused by a deficiency of the amino acid taurine. Blindness is another symptom of taurine deficiency. This deficiency was due to inadequate amounts of taurine in cat food formulas, which itself occurred because of decreased amounts of animal proteins and increased reliance on carbohydrates. Cat foods are now supplemented with taurine. New research suggests that supplementing taurine may also be helpful for dogs, but as yet few manufacturers are adding extra taurine to dog food. Inadequate potassium in certain feline diets also caused kidney failure in young cats; potassium is now added in greater amounts to all cat foods.

Rapid growth in large breed puppies has been shown to contribute to bone and joint disease. Excess calories and calcium in some manufactured puppy foods promoted rapid growth. There are now special puppy foods for large breed dogs. But this recent change will not help the countless dogs who lived and died with hip and elbow disease.

There is also evidence that hyperthyroidism in cats may be related to excess iodine in commercial pet food diets.[9] This is a new disease that first surfaced in the 1970s, when canned food products appeared on the market. The exact cause and effect are not yet known. This is a serious and sometimes terminal disease, and treatment is expensive.

Many nutritional problems appeared with the popularity of cereal-based commercial pet foods. Some have occurred because the diet was incomplete. Although several ingredients are now supplemented, we do not know what ingredients future researchers may discover that should have been supplemented in pet foods all along. Other problems may result from reactions to additives. Others are a result of contamination with bacteria, mold, drugs, or other toxins. In some diseases the role of

commercial pet food is understood; in others, it is not. The bottom line is that diets composed primarily of low quality cereals and rendered meat meals are not as nutritious or safe as you should expect for your cat or dog.

What Consumers Can Do

- Write or call pet food companies and the Pet Food Institute and express your concerns about commercial pet foods. Demand that manufacturers improve the quality of ingredients in their products.
- Call API with any information about the pet food industry, specific manufacturers, or specific products.
- Print out a copy of this report for your veterinarian to further his or her knowledge about commercial pet food.
- Direct your family and friends with companion animals to this website, to alert them of the dangers of commercial pet food. Or request copies of our Fact Sheet on Selecting a Good Commercial Food.
- Stop buying commercial pet food. Or if that is not possible, reduce the quantity of commercial pet food and supplement with fresh foods. Purchase one or more of the many books available on pet nutrition and make your own food. Be sure that a veterinarian or a nutritionist has checked the recipes to ensure that they are balanced and complete.
- If you would like to learn about how to make healthy food for your companion animal, read up on "Sample Diets," which contains simple recipes and important nutritional information.
- Please be aware that API is not a veterinary hospital, clinic, or service. API does not and will not offer any medical advice. If you have concerns about your companion animal's health or nutritional requirements, please consult your veterinarian.

Because pet food manufacturers frequently change the formulations of their products and API would not have conducted the necessary testing, we are unable to offer endorsements for particular brands of pet food. Many of our staff choose to make their own pet food or to purchase natural or organic products found in most feed and specialist stores but we cannot recommend brands that would be right for your companion animal or animals.

For Further Reading about Animal Nutrition

The Animal Protection Institute recommends the following books, many of which include recipes for home-prepared diets:

- Rudy Edalati. *Barker's Grub: Easy, Wholesome Home Cooking for Your Dog*. Three Rivers Press. ISBN 0-609-80442-1.
- Richard H. Pitcairn, D.V.M., and Susan Hubble Pitcairn. *Dr. Pitcairn's Complete Guide to Natural Health for Dogs and Cats*. Rodale Press, Inc. ISBN 0-87596-243-2.
- Kate Solisti-Mattelon and Patrice Mattelon. *The Holistic Animal Handbook: A Guidebook to Nutrition, Health, and Communication*. Beyond Words Publishing Co. ISBN 1-5827-0023-0.

- Donald R. Strombeck. *Home-Prepared Dog & Cat Diets: The Healthful Alternative*. Iowa State University Press. ISBN 0-8138-2149-5.
- Celeste Yarnall. *Natural Cat Care*. Journey Editions. ISBN 1-8852-0363-2.
- Celeste Yarnall. *Natural Dog Care*. Journey Editions. ISBN 0-7858-1123-0.

The books listed above are a fraction of all the titles currently available, and the omission of a title does not necessarily mean it is not useful for further reading about animal nutrition.

Please note: The Animal Protection Institute is not a bookseller, and cannot sell or send these books to you. Please contact your local book retailer or an online bookstore, who can supply these books based on the ISBN provided for each title.

What API Is Doing

- API is a liaison to the AAFCO Pet Food and Ingredient Definitions Committees. By attending AAFCO meetings, we hope to learn more about the industry itself and about potential avenues for bringing about change.
- An API representative attends other petfood industry meetings to give voice to our and the consumers' concerns about pet food.
- API is involved in lobbying for the federal regulation of pet food and the development of more stringent standards for the quality of ingredients used.
- API will continue to provide information to the public about the pet food industry and the products it promotes.
- API is preparing a detailed scientific paper documenting the numerous problems associated with commercial pet food, for presentation to veterinarians.

Who to Write

AAFCO Pet Food Committee
Dr. Rodney Noel — Chair
Office of Indiana State Chemist
Purdue University
1154 Biochemistry Building
West Lafayette, IN 47907-1154
www.aafco.org

FDA — Center for Veterinary Medicine
Sharon Benz
7500 Standish Place
Rockville, MD 20855
301-594-1728
www.cvm.fda.gov/

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Notes

1. Pet Food Institute, 2.
2. Morris, 2520S.
3. Corbin, 81.
4. Cargill, 36.
5. The conversion is: ingredient percentage divided by (100 minus moisture percentage).
6. Official Publication, Regulation PE3, 114-115.
7. Wysong, *Rationale*, 40-41.
8. Strombeck, 50-52.
9. Smith, 1397.

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