**Interpreting Dog Food Labels**

This information provides you with a quick overview about what the labels on a pet food tell you, and what they **don't** tell you. It is based on the [FDA consumer information](http://www.fda.gov/cvm/petlabel.htm) provided by the [Center for Veterinary Medicine](http://www.fda.gov/cvm/default.html). Though there are regulations regarding information provided on pet food labels, the way these regulations are developed can make understanding the information somewhat complicated. It can be just as challenging to read nutritional information on pet food as it is on human food, yet it is just as important.

**What is the AAFCO?**

The Association of [American Feed Control Officials](http://www.aafco.org/) is a group that regulates the pet food industry. While the board consists of state and federal representatives, it is not a government body and also includes people directly involved in the industry. According to the definition on their website, the AAFCO *"provides a mechanism for developing and implementing uniform and equitable laws, regulations, standards and enforcement policies for regulating the manufacture, distribution and sale of animal feeds"*. Since this process does include business insiders, they must balance the need for honest, descriptive labeling on pet food with their own business interests. This does create an internal conflict as manufactures want their products to look as good as possible regardless of the nutritional quality of the food.

**Important Information on the Label**

**Product Name**

The product name is generally what is noticed first by the consumer and can be a key factor in deciding to buy the product. For that reason manufacturers often use fanciful names or other techniques to emphasize a particular aspect of the food. Since many consumers buy a product based on the presence of a specific ingredient, product names often incorporate the name of an ingredient that is perceived to be of high quality or value. The percentages of named ingredients in the total product are dictated by AAFCO rules.

* If a food is named specifically, e.g. "Beef Dog Food", the named ingredient must not be less than 95% of the total weight if the water required for processing is excluded, no less than 70% if the water is included in the calculation. If more than one ingredient is named, e.g. "Beef and Liver Dog Food", all of them combined must not be less than 95% (or 70% respectively) and they must be named in descending order of content by weight. This description is used almost exclusively for canned foods.
* If a food name includes the word "dinner" (or similar ones like "formula", "nuggets" etc.), e.g. such as in "Lamb Formula", the named ingredient must not be less than 25% of the total weight. If more than one ingredient is named, e.g. "Lamb and Rice Formula", all of them combined must not be less than 25% and they must be named in descending order of content by weight.

**Look closely!**

Since the named ingredients are only required to make up ¼ of the total product, they may not be truly descriptive of the main ingredients. You must look closely to make sure you get what you intend.

On a bag of dry food labeled “Lamb and Rice Formula”

 Look for…**lamb**, **ground rice**, barley flour, fish meal, etc.

 Rather than…ground yellow corn, meat and bone meal, **lamb**, **brewers rice**, etc.

* If the name of a food includes the phrase "with [ingredient]" (e.g. "with beef"), the named ingredient must not be less than 3% of the total weight.

**Look closely!**

Since the mentioned ingredient is only a small percentage of the total it is really not a good description when making a purchase decision.

On a product labeled “with Real Lamb and Rice”

 The label will likely read…ground yellow corn, chicken by-product meal, wheat, animal

fat, **lamb**, **rice**, natural poultry flavor, salt, minerals, vitamins, etc.

* If a name only includes the word "flavor" or "flavored", no specific percentage is required at all, but a product must contain an amount sufficient to be able to be detected.

**Look closely!**

If you buy a “flavored” product you can be certain that only a minute amount of the flavoring ingredient is contained in it, while prominent ingredients are not included in the name at all.

On a product labeled “with Liver flavor”

 The label will likely read…ground yellow corn, chicken by-product meal, brewers rice,

soybean meal, beef tallow, corn gluten meal, brewers yeast, digest of beef liver, natural flavors, salt, minerals, vitamins, etc.

**Ingredient List**

All ingredients contained in the food are required to be listed in order of predominance by weight *before processing*. Ingredients must be listed by their common or usual name. Keep in mind that weight before processing makes it challenging to compare products where the moisture content is different. Even in dry foods moisture can vary by 4%. If dry food is combined with semi-moist food in the same bag things get even more difficult, especially if the manufacturer uses better quality ingredients that retain a lot of water and less desirable components in a dehydrated form.

**Look closely!**

 Good rule of thumb is to look for the **first named source of fat** in the food. Anything listed before and including that ingredient makes up the main portion of the food. All other ingredients are present in much smaller amounts to add flavor, function as preservatives or add dietary benefits (like probiotics, vitamins and minerals).

Compare the following ingredient lists (first named source of fat in **bold**):

* Food A: ground yellow corn, meat meal, **chicken fat,** ground wheat, chicken by-product meal, dried beet pulp, flaxseed, salt, vitamins, minerals
* Food B: turkey, chicken meal, ground barley, ground brown rice, potatoes, **chicken fat**, herring, apples, carrots, cottage cheese, sunflower oil, alfalfa sprouts, egg, garlic, probiotics, vitamins, minerals

The comparison allows you to see differences in ingredients that are included in both large and small amounts. This is important when looking for the high quality ingredients you desire as well as ingredients that aren't necessarily harmful but should only be present in small amounts in a quality product (like beet pulp and corn gluten meal).

Be aware that many highly desirable ingredients have a high water content and since ingredients are listed by weight before processing, you might mistake a lower quality product for a higher quality one if you don't consider *weight before processing*. A food that lists lamb as a first ingredient may not as nutritionally sound as you think when you consider the water content of the lamb that is removed during processing. Once the water is removed the lamb meat may have shrunk to a final percentage of around 10% of the total. A product that lists dehydrated lamb meat as the third ingredient may be nutritionally superior since the water has already been removed.

Here are some common dog food ingredients and their AAFCO definitions.

**Meat** is the clean flesh of slaughtered animals (chicken, cattle, lamb, turkey, etc.). The flesh can include striated skeletal muscle, tongue, diaphragm, heart, esophagus, overlaying fat and the skin, sinew, nerves and blood vessels normally found with that flesh.

**Meat by-products** are clean parts of slaughtered animals, not including meat. These include lungs, speed, kidney, brain, liver, blood, bone, some fatty tissue, and stomach and intestines freed of their contents. It does not include hair, horns, teeth, or hooves.

**Poultry By-products** are clean parts of slaughtered poultry such as heads, feet, and internal organs (like heart, lungs, liver, kidneys, and intestines). It does not include feathers.

**Fish meal** is the clean ground tissue of undecomposed whole fish or fish cuttings, with or without the oil extracted.

**Ground Corn** is the entire corn kernel ground or chopped.

**Corn Gluten Meal** is the by-product after the manufacture of corn syrup or starch, and is the dried residue after the removal of the bran, germ, and starch.

**Brewers Rice** is the small fragments of rice kernels that have been separated from larger kernels of milled rice.

**Brown Rice** is the unpolished rice left over after the kernels have been removed.

**Soybean Meal**  is a by-product of the production of soybean oil.

**BHA** is butylated hydroxyanisole, a fat preservative.

**Ethoxyquin** is a chemical preservative that is used to prevent spoilage in dog food.

**Tocopherols** (e.g., vitamin E) are naturally occurring compounds used as natural preservatives.

**Guaranteed Analysis**

A pet food label must state guarantees for the minimum percentages of crude protein and crude fat, and the maximum percentages of crude fiber and moisture. The term “crude” refers to a specific method of testing the product and not the quality of nutrients themselves. Some manufacturers include guarantees for other nutrients as well. Dog foods often include guarantee percentage levels of calcium, phosphorus, sodium and linoleic acid. Cat foods often guarantee the maximum percentages of ash, taurine and magnesium.

The guaranteed analysis is given on an "as is" or "as fed" basis. In order to compare products with different moisture content you will have to calculate percentages for both products at an equal moisture content.

**Look closely!**

Before comparing products by weight, cost, or content of protein, fat and fiber you must make sure they have the same moisture content. If they differ, all products must be converted to an equal percentage.

Three different products may all contain 22% protein, 12% fat and 4% fiber “as fed”. Yet the moisture content is significantly different: Food A = 10%, Food B = 12% and Food C =14%. The more moisture a food contains, the less nutritious dry matter is present. Meaning you pay extra for the water and get less nutrient dense food in return.

Still, knowing the relationship between moisture content and nutritional density is not enough information for you to be able to compare foods and make a purchasing decision. But once converted to comparative percentages it's much easier to see the difference that moisture content makes.

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|  | Product "as fed" | Contains dry matter |
| Product A | 22% protein, 12% fat, 4% fiber, 10% moisture | 90%, or 900 g per kg, or 14.4 oz per pound |
| Product B | 22% protein, 12% fat, 4% fiber, 12% moisture | 88%, or 880g per kg, or 14.1 oz per pound |
| Product C | 22% protein, 12% fat, 4% fiber, 14% moisture | 86%, or 860g per kg, or 13.8 oz per pound |

**Feeding Directions**

Knowing how much to feed your pet is as essential as knowing what to feed. Food manufacturers know this and all labels include some sort of direction for the consumer. At a minimum, the label should include verbiage such as “feed xxx cups per xxx pounds of body weight per day. Feeding directions are valuable as a quick, general tool to use when comparing foods.

**Look closely!**

Manufacturers recommendations for feeding should be used only as very basic guidelines. Please always follow the advice of your veterinarian when determining how much to feed your dog.the amount you feed depends on whether the goal for your dog is weight maintenance, weight loss or weight gain as well as the dog’s age, breed, metabolism and activity and other environmental conditions.

While consumers often feel that manufacturers overstate feeding amounts in order to sell more food, the converse can also be true. Manufacturers may understate feeding amounts so that their food seems more economical, or the recommended amounts may be a true reflection of the quantity of food your dog should consume daily.

**Calorie Statement**

Calorie statements are relatively new to pet food labels. If a calorie statement is included it must be expressed as “kilocalories per kilogram”. Kilocalories are the same as the “calories” consumers are used to seeing on labels for their own food. A kilogram is equal to 2.2 pounds. Manufactures may also include calories in familiar units, such as “per cup” or “per can”.

The caloric content of a food gives a good idea about the digestibility of a product, but it should always be taken into consideration along with the guaranteed analysis. Fat provides more than twice the amount of energy per weight unit than protein or carbohydrates, so if a food is slightly higher in fat content, it will automatically provide more energy.

**Look closely!**

Calorie statements can be found in three different values.

* Gross Energy – The amount of energy on an “as fed” basis.
* Digestible Energy – The amount of energy available to the dog after the amount lost in feces is subtracted, and
* Metabolizable Energy – The amount of energy available to the dog after the amount lost through all products of digestion are subtracted. This is the most common value used.

Clearly it can be hard to compare products if manufactures use different values. Consider the following example.

* Manufacturer A lists all three values, with Gross Energy = 1,950 Kcal/lb, Digestible Energy = 1,700 Kcal/lb, and Metabolizable Energy = 1,550 Kcal/lb.
* Manufacturer B only lists Metabolizable Energy = 1,900 Kcal/lb.
* Manufacturer B offers the more nutritional food but Manufacturer A includes all three values because they feel it reflects better on their product.

Unless you have a dog with a tendency to overeat, feeding a more concentrated food is usually a better option since you end up feeding less and have less waste.

Also be aware that knowing the amount of Kcal per cup really isn't a good basis of comparison since a cup is a measure of volume and not weight. Depending on the size and density of kibble, a cup of food can weigh less than 3 ounces to almost 5. For this reason if you typically feed 1 ½ cups per meal you may find yourself over feeding if you switch to a different food.

**Other Label Information**

Many pet foods are labeled “premium” and some are now “super premium” or even ultra premium”. Other foods or treats may be labeled as “gourmet”. All of these terms are marketing terms which have meaning to pet food industry insiders but can mean little and be confusing to consumers. Products carrying these labels are not required to contain any different or higher quality ingredients nor or they held up to any higher nutritional standards standards than any other complete and balanced products.you can only tell the quality of the ingredients and the product by reading other information on the label.

“Natural” is another term often used on pet food labels that does not have a consistent definition. For the most part “natural” can be considered equivalent to a lack of artificial flavors, colors or preservatives in the product.

“Natural” is not the same as “organic” though the two are often confused. There are no official regulations governing the use of the term organic (for humans or pets), though they are currently in development. This term refers to the conditions under which plants were grown or animals were raised, generally without pesticides, fertilizers or other substances.

While it is true that many terms used to market a pet food are not legally defined, the manufacturers of quality brands go out of their way to supply their customers with additional information, such as stating the use of hormone free animal products and/or pesticide free grains, providing the USDA grades of ingredients, avoiding genetically modified products and so on.

**Limited Ingredient Foods**

There is no specific definition for limited ingredient dog foods which means manufacturers apply the term in different ways. Usually it means that a single source protein is used, e.g. chicken, beef, bison or duck. Sometimes it refers to a single carbohydrate or fat source.

Some manufacturers use the term to refer to a reduced number of ingredients in comparison to their other products, but not those manufactured by a different company.

Limited ingredient formulas are the pet food industry’s response to a perceived concern about sensitivities or allergies to specific foods. These foods can combat common symptoms of food allergies like itchy or flaky skin, dull coat, ear infections, hot spots, vomiting or diarrhea if the symptoms are caused by a specific food ingredient AND the ingredient is not present in the food.

The most important things to look for when choosing a limited ingredient food for your dog and the words “complete and balanced”. The AAFCO regulates the use of these terms and requires that all foods labeled complete and balanced to have the total nutrition to sustain your dog at his given life stage. Even limited ingredient foods must have the proper mix of protein, fat, carbs, vitamins and minerals necessary for your dog’s health.

Though these types of foods can be helpful to dogs with allergies, dogs with no medical issues don't need a limited ingredient diet. Less than 10 percent of dogs with allergies are allergic to food. And of those, about 95 percent are allergic to proteins and not carbs. Typically when dogs suffer from skin or gastrointestinal tract issues, it's likely due to inflammation or intolerance to a specific commercial food and not a food allergy. In this case it's important to avoid the specific brand rather than any specific ingredient.

If you believe your dog suffers from an actual food allergy talk to your veterinarian about a food trial, where certain foods are taken out of the dog’s diet and then added back in to try and determine the cause of the allergy.

**Human Grade Ingredients**

Everyone wants to feed their dog the best food possible. The term “human grade” tends to appeal to us because surely something labeled human grade must be high in quality, right? To answer that question it's important to first recognize that the term refers to an ingredient and NOT to the finished product. Human grade simply means that the finished ingredient is legally suitable and approved as nourishment for people. It is edible.

In order for an ingredient to be classified “human grade” it has to meet certain criteria. It must be deemed edible by the FDA and it must adhere to approximately 100 different manufacturing and quality control regulations. In comparison, feed grade ingredients are only subject to 15 of these regulations. Also, feed grade ingredients can include things that are rejected as unfit for human consumption.

Human foods are much more rigorously regulated than foods made for animals. Unlike the loosely controlled pet food industry, the FDA and USDA regulate human foods and conduct frequent, detailed inspections of the manufacturing facilities that produce food for people.

Only dog foods made in human grade facilities, subject to the inspections and approval necessary to have human grade status, can be legally considered 100 percent human grade. There are only a few dog foods on the market that meet these high standards, where the finished product is human grade rather than single ingredients, and they are quite expensive.

**Super Foods**

Foods that deliver the maximum amount of nutrients along with minimal calories per serving are said to be “super” foods. Some of these nutritionally dense foods are no different than those identified as part of a well rounded human diet. While there is not agreement that these foods fight specific diseases, they do support essential body functions in normal, healthy dogs. Super foods can act as energy boosters and are excellent foods to include in your dog’s diet as they pack a lot of healthful benefits into each serving.

Super foods can be added to the canine diet either as an ingredient of one of the ultra premium commercially prepared foods, or they can be added as fresh ingredients to supplement another dog food or raw diet. Remember to add these foods gradually and check with your veterinarian before making significant changes to your dog’s diet, especially if the dog has ongoing medical issues.

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**Kale** is a leafy vegetable that contains an abundant amount of vitamins, including A, E, and C. It is a good source of antioxidants and helps the liver detoxify the body. It also has anti-inflammatory properties. Avoid in pets with certain types of bladder stones or kidney disease.

**Carrots** make great snacks as they are crunchy, naturally sweet and most dogs really like them. They are loaded with carotenoids, fiber, vitamin C and K (needed for blood clotting), as well as potassium. They have magnesium, manganese, most of the B vitamins and phosphorus, which is required for energy production. Carrots are often suggested to take the place of higher calorie snacks when included as part of a weight loss diet.

Low in calories and high in soluble fiber, **pumpkin** helps maintain a healthy digestive tract. It is low in sodium and exceptionally high in carotenoids, potassium and vitamin C, and has some calcium and B vitamins. Canned organic pureed pumpkin can be found at food stores but be sure that it is pure and not a pie filling, so with no sugar or spices added. Canned pumpkin is one of the foods used to calm an upset digestive system.

**Sweet potatoes** are root vegetables that are rich in beta-carotene and boast 150% more antioxidants than blueberries. They are also high in heart-healthy vitamin A and packed with vitamin C to support a strong immune system.

Oily **fishes** like herring, salmon, sardines, mackerel and anchovies contain large amounts of omega-3 fatty acids. Omega-3s do wonders for skin, coat and brain and may limit inflammatory processes that cause arthritic pain and other chronic canine conditions. Dogs with these conditions are often prescribed these oils in a liquid or capsule form for this reason. Fish are also excellent sources of protein that include many essential vitamins and minerals.

Dried edible **seaweed**, or **nori** is a Japanese staple and is available in many supermarkets. It has protein, soluble fiber, vitamins C, E and all the Bs, and minerals such as zinc and copper. It also contains some lesser-known plant sterols and chlorophyll and may have beneficial effects on fat metabolism, immune function and anti-tumor response. When adding seaweed to your dog’s diet be sure that the product you choose is low in sodium, as salt content varies greatly depending on brand.

**Chia** is a grain seed that has several of the same benefits as the more well-known flax seed, but unlike flax, they don’t need to be ground. The nutritional benefits of chia seed includes fiber, omega rich fatty acids, calcium, antioxidants and even some protein. Chia seeds can be simply sprinkled top of on your dog’s food without any preparation required.

Commonly considered a grain, **quinoa** (pronounced keen-wa) is actually a seed related to spinach. It is a complete protein supplying all eight of the essential amino acids and is a good source of fiber, folate, magnesium, iron, and phosphorous. Quinoa is one of the few vegetables sources of complete proteins. It is a potent antioxidant and may reduce the risk of diabetes.

**Yogurt contains active** cultures known as probiotics (necessary, friendly bacteria) that help keep the bad bacteria away. Yogurt contains a number of nutrients, including protein, calcium, phosphorus, vitamin B12, potassium, zinc and iodine. It is also a fair source of other B vitamins required for enzyme action, energy production, and other cellular functions and it may support healthy gut function.

**Blueberries** are available year round either fresh or frozen and they make a great treat for your dog. The deep blue color comes from anthocyanidins, which are antioxidants, and the berries also supply vitamins C and E and fiber. It is essential to introduce blueberries to your dog’s diet slowly and in small quantities. Dogs are known to gorge on this fruit because it tastes so good and too many blueberries is very likely to adversely affect bowel movements.

Besides these super foods, there are many other simple, fresh and wholesome foods that dogs can thrive on, including apples, green beans, papaya, leafy greens, liver, hearts, eggs, oats, bananas, wheat grass, cranberries, pumpkin seeds, coconut oil, parsley, and wheat germ. Animal proteins such as chicken, turkey, duck, lamb, goat, rabbit, ostrich, kangaroo, pork, beef, bison and venison, should always be an integral part of a dog’s diet.

**Grain or Gluten Free Diets**

Many pet owners choose to mimic their own food choices when choosing a food for their pet. Grain free and gluten free pet diets have become extremely popular as more people are choosing these types of diets for themselves. These diets are particularly helpful for people that have celiac disease, intolerance to glutens in general, or allergies to wheat. Yet there is no evidence to suggest that these diets are beneficial to people who don't have those medical conditions.

Grain free dog foods are, as the name implies, diets that contain no grains. Gluten free dog foods are free of the gluten protein that is found is specific types of grains like wheat, barley and rye. Gluten free foods may contain other other grains since not all grains contain gluten. Most dogs do not actually require a grain or gluten free diet.

Grain free diets are often chosen because people believe that grains are an unnatural source of nutrition for dogs. While it's true that their ancestors may not have eaten grains, dogs have evolved to be able to digest both grains and gluteus pretty easily. While most dogs do very well on grain free diets, they are not required for good metabolism.

Another reason people choose a grain or gluten free diet is the mistaken belief that these diets are the best choice for dogs with allergies, or people who want to prevent allergies in their dogs. While food allergies do occur in dogs, corn and other grains are not the most common allergens found in food. Corn is actually one of the least likely sources for food allergies in dogs. Beef, poultry and dairy products are much more likely culprits for dogs with food allergies. Also, corn provides your dog with linoleic acid, an essential fatty acid that supports a healthy coat and skin, so grain free diets may need to be supplemented to prevent dry skin and excess shedding.

Unlike in people, celiac disease is uncommon in dogs. As a result, most dogs do not require a gluten free diet. However, some Irish Setters in the U.K. have been found to have a congenital disease that results in gluten intolerance, and do benefit from a gluten free diet. As with other questions about your dog’s diet, your veterinarian is the best source of information about whether or not your dog should be on a gluten free diet.

**RAW DIETS - ADD**

**About Recalls**

Unfortunately, recalls on dog foods and treats do occur, just as they do occasionally for human foods. When recalls do occur they can cause hysteria among pet owners as social media allows us to spread the word quickly. Often when news of a recall is shared the information is incomplete or incorrect. For example, manufacturer recalls are most often very detailed and refer to foods made in specific plants on specific dates, and containing specific ingredients. Yet when news of a recall spreads through the dog community it includes ALL foods made by the manufacturer at ANY time. Additionally, sometimes food are blamed for illnesses in pets when the true cause of the illness is completely unrelated to food, other than the fact that the owner first noticed signs of the illness and connected these signs to what the dog was eating.

There are things that you can do to protect your dog.

1. When you hear of a recall take the first step of checking with the FDA to confirm the recall. The FDA provides consumers with an easy to use link to a list of recalled pet foods. <https://www.fda.gov/animalveterinary/safetyhealth/recallswithdrawals/> This list is updated by the FDA in real time. Avoid spreading food-related rumors that are not backed up by facts.
2. Practice good hygiene with your dog’s food and water bowls. Use stainless steel bowls whenever possible. The non-porous quality of stainless steel doesn't allow bacteria to survive as it might on plastic or ceramic bowls due to scratches or chips in the surface of these materials. Use hot, soapy water to clean food bowls after each use and water bowls daily. Using a dishwasher is preferable for keeping bowls clean.
3. If possible, find out where your dog’s food is manufactured. Many manufactures share production lines in plants, so sometimes recalls across several brands are related to the plant where the foods are made. If you know what plant your dog’s food is manufactured in you can check the recall history for the plant and you can keep an eye out for any recalls related to that plant.
4. If your dog’s food or treats are recalled, immediately stop feeding them. Return the recalled product to the store where it was purchased for a full refund. If returning the product is not possible dispose of it in an area that is inaccessible to pets and wildlife. You can contact the manufacturer directly if you have questions about their recalled food or treats.
5. If your dog may have consumed a recalled product consult your veterinarian as soon as possible, even if the dog isn't showing any symptoms.

Recalls are unfortunate when they happen but remaining calm and exercising common sense can help to keep your dog safe. If you ever have any question about your dog’s food you can contact the manufacturer directly. The manufacturer’s contact information is included on the label of every dog food.