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DECIPHERING FACT FROM FICTION

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Corn: Is there any truth in anything you've heard?



Corn has been commonly included in pet foods for decades, but recently, some consumers have come to perceive corn as an undesirable ingredient. Regrettably, many common consumer concerns about corn are scientifically invalid, and it is important for veterinarians to be able to communicate this information to clients.

FACT True food allergies are uncommon in dogs and cats.

True food allergies are actually uncommon causes of gastrointestinal (e.g., chronic vomiting or diarrhea) and dermatological signs (e.g., pruritus, otitis, pyoderma) in dogs and cats. It has been estimated that only 1% of all skin disease can be attributed to food allergies.¹ Flea-allergy and atopy account for the vast majority of dermatological signs. Even in gastrointestinal disease, only a very small percentage of dogs and cats have food allergy. In addition to this small number of food allergies, some dogs and cats have a food-sensitive (responsive) disease that may improve when a new diet is fed. This is not the result of an allergic reaction but rather a response to a change in other properties of the diet, such as differences in digestibility, fat, fiber content or other properties, irrespective of dietary ingredients. This response

is often incorrectly attributed to a food allergy to a specific ingredient (rather than, for example, the lower fat content of the new diet), without further investigation.

FACT Corn is a rare cause of food allergies.

Among the very small number of animals with true food allergies, documented allergies to corn, while they do exist, are actually quite rare and are much less common than allergies to other ingredients such as beef, dairy and chicken.¹ Overall, animal-based protein ingredients have been demonstrated to be much more common causes of food allergies than plant-based ingredients. Despite this compelling data, many consumers with food-intolerant pets still blame corn rather than other more probable dietary ingredients. These pet owners are likely influenced by various marketing materials and misinformation propagated by sources with little or no understanding of the mechanisms of food allergies in pets.

FACT Appropriately prepared corn is highly digestible by dogs and cats.

The digestibility of most carbohydrate sources (corn, oats, potato, barley, wheat, etc.) increase dramatically with processing; such as rolling, grinding and flaking, as well as with cooking. Whole ground corn cooked via extrusion (the way that most dry foods are made) has been shown to have digestibility $\geq 97\%$ in both dogs^{2,3} and cats⁴, which is similar to other grains. Misinformation regarding corn's digestibility may be the result of marketing from manufacturers of "corn-free" pet foods and pet owners' experience of feeding whole corn and seeing undigested kernels in the feces. When corn is properly prepared, it is highly digestible by both dogs and cats and provides a number of essential nutrients to a pet's diet.

FACT Corn is a source of essential nutrients, including protein, fiber and linoleic acid.

Corn, as with other grains, contributes protein, fiber, vitamins, minerals and highly digestible carbohydrates to pet diets. Corn and corn oil are also some of the richest sources of linoleic acid, an essential fatty acid. Corn is not "cheap filler." True fillers are ingredients that do not contribute any nutrients or beneficial properties to a food and are rarely used in pet foods. In any case, corn clearly does not fit this definition.

	Brown rice	Potato (with skin)	Corn meal	Sweet potato
Protein (g)	9.6	10.3	9.1	8.3
Carbohydrates (g)	85.0	83.9	85.7	83.3
Total dietary fiber (g)	6.7	9.0	8.1	13.6
Sugars (g)	1.3	4.2	0.7	26.8
Linoleic acid	1.1	0.2	1.8	0.3

TABLE 1 Major nutrient composition of popular carbohydrate sources used in pet foods. Values are based on 100g of each ingredient, on a dry matter basis (data from USDA Nutrient Database, release 24).



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