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Food Facts

Could This Sweet Food Be a Game-Changer for Your Pet?

If your pet has a sensitive stomach and needs to be fed a bland diet temporarily, this is one of the best choices. It's rich in antioxidants to help scavenge free radicals.

Reviewed by <u>Dr. Becker</u>

SAFE

STORY AT-A-GLANCE

- Squash contains the carotenoids lutein and zeaxanthin, which have protective effects against damage that may affect the ocular tissues and cells, according to animal models
- Bioactive peptides found in butternut squash seeds and skin also have multiple benefits such as "antihypertensives, antioxidant, immunomodulating, anticarcinogens, antimicrobials and others"
- A 1-tablespoon serving of cooked acorn squash can give your pet 585 micrograms of beta-carotene, which acts as a powerful antioxidant that protects against oxidative damage, helping reduce the risk for cardiovascular disease, obesity, cancer and other chronic conditions
- One tablespoon of butternut squash also gives your pet 0.41 grams of soluble fiber, which can be a great choice for bland diets for animals with sensitive stomachs, or as a meal topper. Fiber found in squash builds the microbiome and provides roughage for optimal bowel health
- Squash can be given safely to your pets, which can be softened via steaming. This method also helps preserve the nutritional value of the flesh

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Did you know that there are four plant species that fall under the squash family? The different types of squash you may know today have different appearances and can be used for a wide variety of dishes, but one thing's for sure: There's no shortage of nutritional benefits that can be acquired from these vegetables (although, technically speaking, they're classified as fruits).

But can your pets safely eat squash, too? The answer is yes — squash can be given to pets as healthy treats or added as

food toppers to their nutritionally balanced, species-appropriate diet. Keep on reading to learn why squash can be valuable for your pet.

There Are Different Varieties of Squash

The term "squash" can refer to various plants under the genus Cucurbita (gourd family Cucurbitaceae). These crops are classified under four different species, namely:¹

- **C. maxima** Buttercup squash, hubbard squash
- **C. pepo** Most pumpkins, zucchini, summer squash, spaghetti squash and acorn squash

- **C. mixta** Cushaw squash
- C. moschata Butternut squash

Most varieties of squash have a mild, nutty flavor and silky texture, which is why they're usually treated like vegetables in cooking.² Due to their smooth texture and neutral flavor, most pets enjoy squash as a part of their nutritionally complete homemade meals or bland diet (if there's been GI upset), or as a treat or meal topper. Later on, we'll discuss the best ways to feed squash to your pets.



In North America, squash are loosely classified as summer squash, winter squash and autumn squash. This depends on when they are harvested. Summer squash are the immature fruits, while autumn squash and winter squash are mature fruits.



Squash Is Rich in Antioxidants

What makes squash a noteworthy addition in pets' and humans' diet is its high levels of carotenoids. These are pigments found in plants that play a role in protecting them against photooxidative damage. Carotenoids work as antioxidants by scavenging free radicals.³

In squash, carotenoids that are present include lutein, zeaxanthin as well as beta-carotene (more on this later).^{4,5} In animal models, lutein and zeaxanthin have demonstrated protective effects against damage that may affect the ocular tissues and cells. According to the researchers:⁶

"The mechanisms responsible for these effects of lutein and zeaxanthin include prevention of phototoxic damage by absorption of blue light, reduction of oxidative stress through antioxidant activity and free radical scavenging, and their anti-inflammatory and antiangiogenic properties."

One study noted that bioactive peptides are also found in butternut squash seeds and skin. These can have multiple benefits such as "antihypertensives, antioxidant, immunomodulating, anticarcinogens, antimicrobials and others." Phenolic compounds in squash also play a protective role against oxidative stress, protecting biomolecules from oxidative damage, and help reduce the risks of degenerative diseases, cardiovascular disease and certain cancers.⁷

Which States Are the Top Producers of Squash?



In the U.S., California produces the most squash, followed by Florida, Georgia and Michigan. However, the U.S. also imports the most squash per year. According to the Agricultural Marketing Resource Center (AgMRC), the U.S. imports 300,000 metric tons of squash each year.







Mexico is the top supplier, providing 93.2% of squash imports. In 2020, the overall squash imports to the U.S. were valued at \$507 million.⁸

Your Pets Can Get Beta-Carotene from Squash

A one-tablespoon serving of cooked acorn squash can give your pet 75 micrograms of beta-carotene.⁹ As mentioned above, this is one of the major antioxidants found in squash. Beta-carotene acts as a powerful antioxidant that protects against oxidative damage, helping reduce the risk for cardiovascular disease, obesity, cancer and other chronic

conditions.10

It's also found to have immune-modulating benefits. According to one study involving beagles, consuming dietary beta-carotene helped increase cell-mediated and immune response in canines.¹¹

Squash Has Good Amounts of Fiber

One tablespoon of butternut squash can give your pet 0.41 grams of soluble fiber, which your pet needs in appropriate amounts in their nutritionally balanced diet. Soluble fiber dissolves in water and bind with fatty acids and slow digestion, which can have a stabilizing effect on an animal's blood sugar levels.

Fiber also builds the microbiome and provides roughage for optimal bowel health, and also gives pets a feeling of fullness, which helps prevent overeating. It also improves blood sugar control and helps maintain normal cholesterol levels.¹²



Pumpkin Is Good for Dogs with Diarrhea

Aside from being rich in fiber, pumpkin, which is also a type of squash, contains potassium. Pets lose important electrolytes like potassium when they suffer from diarrhea or vomiting, putting them at risk of dehydration.

This is what makes pumpkin an ideal treat, topper or add-in for pets with sensitive stomachs, IBS or IBD. In fact, an increasing number of hospitals are now recommending 100% pumpkin in place of white rice, and ground fat-free turkey in place of hamburger, as a bland diet for managing dietary indiscretion.



How to Give Squash Safely to Your Pets

"Gently cook hard squash before giving it to your pet. Make sure to remove the skin, and don't add any seasonings like salt, pepper or sugar."

Steaming hard squashes will help retain their nutritional value (as compared to other cooking methods).¹³ Softer varieties, such as zucchini or summer squash, can be shredded and fed as a real food topper or diced and fed raw. All varieties make for great ingredients in a homemade, nutritionally complete meal. Squash is also a great ingredient for homemade pet treats. All treats, including toppers and add-ins, should make up 10% of your pet's daily caloric intake.

Winter squash rank No. 16 and summer squash rank No. 25 in the EWG's 2022 Shopper's Guide to Pesticides in Produce list.¹⁴ So while they're not exactly loaded with pesticides, it might be better to choose organic or "spray-free" squash if they're available in your area or at a local farmers markets.

Choose Organic, Sustainably Grown, Non-GMO Squash

In the U.S., there are some varieties of genetically engineered (GE), virus-resistant squash being grown.¹⁵ One example is zucchini — in fact, GMO zucchini is almost exclusively grown in the U.S., albeit on a smaller scale (compared to other GE crops like corn) with only 2,500 acres being grown.

Unlike the GMO crops manufactured to be able to tolerate herbicides, GMO squash are made to be resistant to certain viruses. However, these genetic modifications don't actually protect the crops; GMO zucchini only mitigates mosaic viruses, and the plants still become infected and get symptoms.¹⁶ According to a paper from Cornell Cooperative Extension:

"The adoption of Asgrow's GE varieties has still been very limited because of the multiple-virus problem: when squashes are infected by viral disease, they are often infected by several different viruses at once. If a GE variety is resistant to some viruses but not others, the farmer still has to continue using the same control measures and will see little cost savings to offset the higher-priced GE seeds."

The good news is that these issues with GE squash mean that very few farmers are adopting them, so it's not widely available. But to make sure that you're feeding your family food that is safe and sustainably grown, make sure to avoid purchasing GE squash and opt for organic, non-GMO varieties instead.

Sources and References

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