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Fermented veggies.

By: Billy Hoekman

The quality of the soil we grow plants in directly affects the overall nutrition we & our dogs receives.
It makes sense that the plant can only create certain nutrients or a certain amount of nutrients if the plants are given the proper nutrition itself.
But have we stopped to consider the implications of what life stage the plant is in and how it affects nutrition?

What about when it dies and starts to decompose?
In differing stages of life, the plant uses energy to perform differing tasks for eventual reproduction.
When we connect the research to life stages we can see that this energy is expressed through digestible nutrients.
Let's examine the birth, adolescence, adulthood, reproduction, death and decomposition of vegetation and how it affects the overall nutritive properties of the plant and your dog's diet.
Young plants - Micro-greens and sprouts.

Seeds have anti-nutrient properties like "phytic acid" and "enzyme" inhibitors that keep them from sprouting until they reach ideal growing conditions.
This keeps your and or your dog's body from digesting a portion of the nutrients and in some cases, can also bind minerals.
Sprouting seeds will lessen these harmful substances.

… *the first two weeks of a plant's life are when its nutrients are the densest.*
Once the plant begins to grow, it expends large amounts of energy, which translate into nutrients and antioxidants.
For this reason, the first two weeks of a plant's life are when its nutrients are the densest.
During this time, vitamins have been shown to be between 40 to 400 times higher than their adult counterparts!
Sprouts and microgreens also tend to have much higher concentrations of carotenes, phytonutrients, antioxidants and minerals.
Broccoli sprouts contain between 10 and 100 times the amount of "sulforaphane" of adult plants.
Sulforahane is a well-researched sulfate compound that has been shown to combat cancer.
Other great examples of microgreens and sprouts to feed are clover, kale, alfalfa and sunflower.

Middle aged – adult vegetation.

While in the adult stage vegetation is the least nutritious for your dog but then it's the most widely available as it's what you typically find in the grocery store.
But then the fresh organic adult vegetation still maintains much of the nutritional content mentioned above and it's also a great source of fiber!
Insoluble fiber doesn't dissolve in water and therefore speeds up the rate at which food passes through the digestive tract.
Soluble fiber on the other hand is the opposite: it dissolves in water and slows down the rate at which food passes through the digestive tract.

Like most things in nutrition, having the correct balance as opposed to one being better than the other is what's truly becomes important.
Despite what you may have read on the internet, fiber is a necessary part of proper digestion and it thereby feeds the gut flora in the large intestine.
The best, most species-appropriate options for dogs are low carb veggies like salad greens, broccoli, celery, zucchini, carrot greens and beet greens.

Reproduction – organic berries.

Bacciferous (berry-bearing) plants reproduce through their berries.
Reproductive foods (like raw milk and eggs) are more nutrient-dense because they're the conduit for life or they sustain life completely.
While berries lack the nutrient content of other reproductive foods, they are the king of the plant world when it comes to antioxidants.
Among other things, these antioxidants come from "anthocyanins".
Anthocyanins include cyanidin, malvidin, petuniclin, delphinidin, and pelargonidin.
They're the pigments that give berries their colors.
Using different colors in rotation will ensure diversity in the antioxidants your & your dog's gets.
The best widely available berry choices include goji berries, blueberries, cranberries and blackberries.
Note! >> As a word of caution, berries are high in plant sugar.
While they're also high in fiber, which helps control blood sugar levels, feed sparingly.
As with all plant foods, a little goes a long way.

Decomposition – fermenting.

The process of fermenting vegetables is simple and effective.
Its premise is to inoculate food with good bacteria and yeast, then encourage these to grow by placing them in an environment that's favorable to their growth – usually an area at room temperature.
Those bacteria and yeasts then go to their important work predigesting the plant's sugars.
This process turns the sugars into lactic acid and removes the negative effects typically associated with feeding vegetables: the carbohydrates.
Unlike with fresh vegetables, there's no need to grind fermented vegetables before feeding them, as in this state they're much easier to digest.
While predigesting the vegetables, those same bacteria and yeast produce extra vitamins and most of all beneficial enzymes.
As if they haven't done enough for you or your dog already, when you or the dog eats the vegetables, all those bacteria become a very effective food-sourced **probiotics.**
This process is similar to a wolf eating a whole small prey animal including its digestive enzymes and digestive bacteria (from what they were eating as their natural plant based diets).
Rotating fermented vegetables for a variety of nutrients will give you the best results.
Fermented vegetables are by far the healthiest and most efficient way to supplement your dog's diet with vegetation.

Rotating fermented vegetables for a variety of nutrients will give you the best results.
Most health food stores carry at least raw sauerkraut, but a lot are also starting to carry mixes that include beets, carrots and other root vegetables.
Or you can make your own!

Looking at preparation.
A dog's digestive tract is shorter than a human's.
As carnivores, Mother Nature intended them to eat a specific species appropriate diet of prey animals and animal products.
The nutrients from these foods are more efficient and require less conversion.
Because of this, most plant foods require pre-processing to break down the cell walls for proper digestion and that's paisley what the carnivore's prey animals eat and do.
Then in feeding our domesticated dogs (still carnivores) different plant life stages require different types of preparation before giving them to your dog.
Sprouts and adult vegetables should be pureed to provide the highest bioavailability for your dog.
Berries can be fed whole or cut in half or crushed.
Fermented vegetables don't need to be pureed beyond the initial chopping-up as they then are already pre-digested by bacteria with the fermented proses.
Adding vegetation to your dog's diet is also a great opportunity to provide fresh, never frozen food.
Not everything needs to be frozen – freezing might serve as a method of saving premade batches of food.
Therefore it stand to reason that freshly prepared food is best for the same day feeding.
Freezing is the best long term storage for raw foods as it damages the food the least.

In fact, in commercial raw food production it's the only way to keep food in a raw food state long term.
But that doesn't mean we shouldn't incorporate fresh foods as daily supplement to whatever you feed as well.
One easy way to do this is to puree some fresh vegetation every four or five days and store them in the refrigerator (then not freezing).
Then of course premade and bottled fermented vegetables keep for a very long time!

Just keep a couple of jars in your fridge or shelve and use them whenever you want.

Summary.
Much in the same way as we rotate protein sources, it's important to not only rotate types of vegetation but also differing life stages of that vegetation for variety.

Simple guidelines to get you started:
A little goes a long way.
Give your dog any of the above choices daily, supplementing whatever you feed with a small portion of fermented foods - giving a half to one teaspoon per 10 kg of your dog's body weight.
Rotate between fermented vegetables and microgreens as much as possible.
Buy organic, seasonal and as local as possible.