

# FROZEN VEG VS FRESH RAW VEG



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Many parrot owners often give frozen vegetables to their parrots. Although not entirely wrong, there are a few considerations to take note of.

Even though freezing is regarded as the simplest and most important preservation method for fruits and vegetables, it is not a perfect process as some nutritional value (vitamins and minerals) may be lost during the freezing process.



Huffingtonpost.co.uk

The process of peeling may remove some of the nutrients with the portions that are separated from the peeled products. Also, by exposing the flesh of the fruit/vegetable to the atmosphere, some carotenoid activity may be lost through oxidation. Many vegetables are blanched (heat treated) before freezing, causing further nutrient loss.

In general, since fruits are more sensitive to heat, only a few types are blanched by heating and the treatment may be achieved by the use of chemical treatments or additives.



Yogadigest.com

Freezing green vegetables, especially the leafy greens, causes the thiamine (vitamin B1) to leach out. When frozen greens are fed over a long period of time and no provision is made for adding back in thiamine to the diet, a deficiency, hypothiaminosis, will occur. Symptoms present much the same as calcium deficiency and veterinarians will often treat for calcium deficiency if they are not told by the parrot owner that no fresh leafy greens are given.

Thiamine can be supplemented in a parrot's diet. In the past brewer's yeast was given, but this is no longer recommended as brewer's yeast contains high levels of phosphorous which your parrot does not need. Adding flaxseed to your parrot's diet may increase thiamine levels. Vit B supplements can also be given to parrots to increase their thiamine levels. The best way however is feed a variety of **fresh** leafy greens to your parrot.

## POTASSIUM



Potassium, the most abundant mineral in vegetables, is extremely mobile and is easily lost by leaching during blanching because of its high solubility in water. Potassium is necessary in muscle activity, including the heart muscle.

### Consider the following:

- Feed your parrot a **variety** of fresh veg and fruit and frozen veg.
- Ensure that your parrot (and you!) get fresh leafy greens
- Never feed your parrot tinned food- tinned food contains preservatives
- Ensure your frozen veg is kept below  $-18^{\circ}\text{C}$ 
  - Storage at higher temperatures and long periods of time cause for nutrient loss.
- Giving the veg just as is still frozen to your parrot is fine. Many parrots prefer a 'veggie-lollie'
- Cook from frozen. Thawing can result in enzyme activity that destroys nutrients.
- You lose less nutrients by steaming, stir-frying or grilling veg than by boiling it.

### Resources:

<https://pdfs.semanticscholar.org/fd90/0931812081bff85f304a557906852b9add90.pdf>

<http://www.anapsid.org/thiamine.html>