## Refractive Index of Crop Juices -- Calibrated In % Sucrose Or Brix

	Poor	Average	Good	Excellent
FRUITS				
Apples	6	10	14	18
Avocados	4	6	8	10
Bananas	8	10	12	14
Blueberries	8	12	14	18
Cantaloupe	8	12	14	16
Casaba	8	10	12	14
Cherries	6	8	14	16
Coconut	8	10	12	14
Grapes	8	12	16	20
Grapefruit	6	10	14	18
Honeydew	8	10	12	14
Kumquat	4	6	8	10
Lemons	4	6	8	12
Limes	4	6	10	12
Mangos	4	6	10	14
Oranges	6	10	16	20
Papayas	6	10	18	22
Peaches	6	10	14	18
Pears	6	10	12	14
Pineapple	12	14	20	22
Raisins	60	70	75	80
Raspberries	6	8	12	14
Strawberries	6	8	12	14
Tomatoes	4	6	8	12
Watermelons	8	12	14	16
GRASSES				
Alfalfa	4	8	16	22
Grains	6	10	14	18
Sorghum	6	10	22	30

Within a given species of plant, the crop with the higher refractive index will have a higher sugar content, higher mineral content, higher protein content and a greater specific gravity or density. This adds up to a sweeter tasting, more minerally nutritious food with lower nitrate and water content, lower freezing point, and better storage attributes.

	Poor	Excellent			
VEGETABLES		oor Average Good			
Asparagus	2	4	6	8	
Beets	6	8	10	12	
Bell Peppers	4	6 8	8	12	
Broccoli	6		10	12	
Cabbage	6	8	10	12	
Carrots	4	6	12	18 10	
Cauliflower	4	6	8		
Celery	4	6	10	12	
Corn Stalks	4	8	14	20	
Corn (Young)	6	10	18	24	
Cow Peas	4	6	10	12	
Cucumbers	2	3	4	5	
Endives	4	6	8	10	
English Peas	8	10	12	14	
Escarole	4	6	8	10	
Field Peas	4	6	10	12	
Garlic, Cured	28	32	36	40	
Green Beans	4	6	8	10	
Hot Peppers	4	6	8	10	
Kale	8	10	12	16	
Kohlrabi	6	8	10	12	
Lettuce	4	6	8	10	
Onions	4	6	8	10	
Parsley	4	6	8	10	
Peanuts	4	6	8	10	
Potatoes	3	5 7		8	
Potatoes, Sweet	6	8	10	14	
Romaine	4	6	8	10	
Rutabagas	4	6	10	12	
Spinach	6	8	10	12	
Squash	6	8	12	14 24	
Sweet Corn	6	10	10 18		
Turnips	4	6	8	10	



## The Quest for Nutrient Dense Foods



**Grocery Store Beans** 



**Garden Beans** 

We analyzed fresh green beans from our garden and compared them to fresh green beans purchased from a local market. Interestingly, the garden beans were planted in early autumn. Growing conditions were not ideal and we barely got the beans harvested before the plants froze out.

Brix	Dry Matter	рН	Taste
4.2	8.1%	5.5	garbage

Brix	Dry Matter	рН	Taste
6.1	16.6%	6.4	decent

## **Nutritional Quality - Comparison of Store vs Garden Beans**

Nutrient	USDA	%DV	Store	Garden	%DV
Protein	1.8 g	4%	1.76 g	3.34 g	7%
Calcium	37 mg	4%	70 mg	130 mg	13%
Magnesium	25 mg	6%	30 mg	50 mg	13%
Phosphorous	38 mg	4%	40 mg	80 mg	17%
Potassium	209 mg	6%	190 mg	580 mg	17%
Copper	0.1 mg	3%	0.1 mg	0.4 mg	20%
Iron	1.0 mg	6%	1.3 mg	2.1 mg	12%
Zinc	0.2 mg	2%	0.72 mg	2.3 mg	15%
Manganese	0.2 mg	11%	0.29 mg	0.35 mg	18%

