High Nutritional Organics

The Why's, What's & How's of Nutrient Dense Foods

Presented by

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Peterson Schraven

High Nutritional Organics

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mentor of inspirations

earth-body-mind-spirit wellness

It all starts with the soil .... our body is made up of what comes from the soil, our minds are fueled by our body, and our spirits are dependent on the condition of our bodies, our minds, and our soil!

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High Nutritional Organics

"High Nutritional Organics"
is nutrient dense food that has the **highest nutrient levels** nature meant it to have.

Not all organics are created equal

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Our nutrient-deficiency comes from the soil's

- Plants derive all of their nutrients and minerals from the earth, **absorbing as many as 70 to 80.**
- But in the last century, average mineral levels in North America's soils have ***declined 85%.***
- Since WWII, our change in agricultural practices has stripped the soil of its nutrients and does little to replenish it.

Source: Kline, Gary L. "The Gospel According to Weston A. Price and William A. Albrecht." *Weston A. Price Foundation.* Jan 2005.

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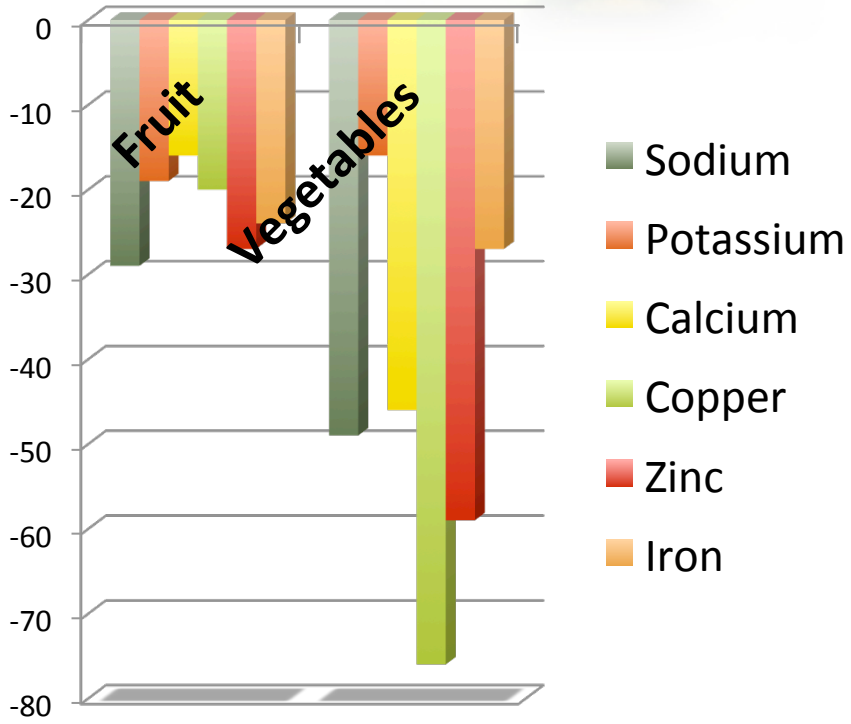
90% of Americans are under-nourished

- We lack nutritious food.
- Trace minerals in fruit and vegetables **declined up to 76%** from 1940 and 1991.
- In 1951, eating **2 peaches** provided the daily requirement of vitamin A.
- Today, you would have to eat **53 peaches**.

Percent of average mineral declines between 1940-1991



Sources: McCance R.A. "A study on the mineral depletion of the foods available to us as a nation over the period 1940 to 1991." Medical Research Council, Ministry of Agriculture Fisheries and Foods, and the Royal Society of Chemistry; Burns, Sarah. "Nutritional Value of Fruits, Veggies Dwindling." *MSNBC*. 9 July 2010.

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Several studies have proven this phenomenon

One study found potatoes had lost:

- 28% of their calcium,
- 57% of their vitamin C and iron, and
- **100 % of their vitamin A !!!**

The average mineral content of vegetables like cabbage, lettuce, spinach, and tomatoes have declined **88%** from 400mg to less than 50mg.

Source: McKeown, Maurice, BDS, PhD. "Is Modern Food Still Your Best Medicine?" International Health News. April 2006.

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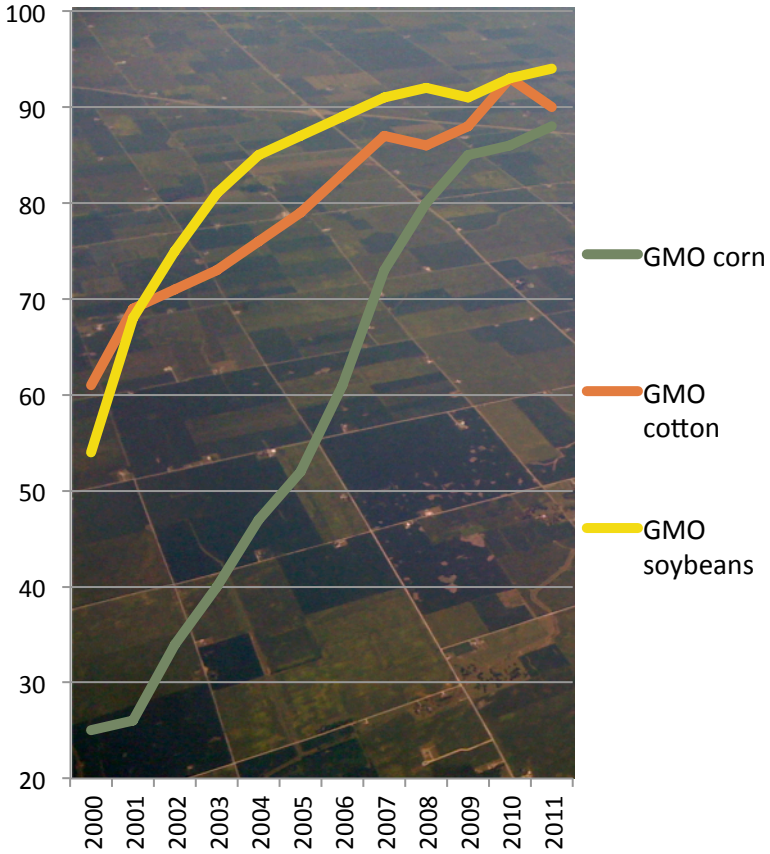
The U.S. eats mostly GMO foods

Percentage of U.S. planted acres that are GMO



- GMOs (Genetically Modified Organisms) entered our food 15 years ago, but the food industry never told us.
- Now, GMOs have taken over:
- **75-80% of conventional processed foods** at the supermarket have *at least* one GMO.
- The U.S. leads all other countries in the production of GMO crops…
- **88%** of corn, **90%** of cotton, and **94%** of soy grown in the U.S. are GMO.

Source: "Adoption of Genetically Engineered Crops in the U.S.: Extent of Adoption." *USDA Economic Research.* 2011.

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Organics are, in fact, nutritionally superior

Nutritionists and agriculturalists have often been ambivalent about this, citing “a lack of high-quality data.”

That was true back in 2001.

Since then, more than 40 studies have been published, all with more sensitive analytical methods to measure not only mineral and vitamin content in foods, but also health-promoting polyphenols and total anti-oxidant capacity.

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Organics – a 25% nutritional premium

The Organic Center joined professors from Washington State University and the University of Florida to study 236 pairs of organic and non-organic produce, comparing concentrations of 11 nutrients, including:

- Four measures of antioxidants
- Three precursors of Vitamins A, C, and E
- Two minerals (potassium & phosphorous)
- Total protein

They found that ***organic foods have a 25% nutritional premium.***

Source: Benbrook, Charles. "New Evidence Confirms the Nutritional Superiority of Plant-Based Organic Foods." *The Organic Center*. March 2008.

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Organics – an increased awareness of our soil

The increase in nutritional value of organic foods continues to climb – because of how we treat our SOIL!

As the interest and demand for high quality organic foods has grown, so has our knowledge of what Mother Nature needs to nurture our soil so that it produces nutrient dense, flavorful, healthy foods.

- The role of soil microbiology
- The role of minerals and the right balance
- Natural methods to contain soil toxins
- The importance of mimicking nature

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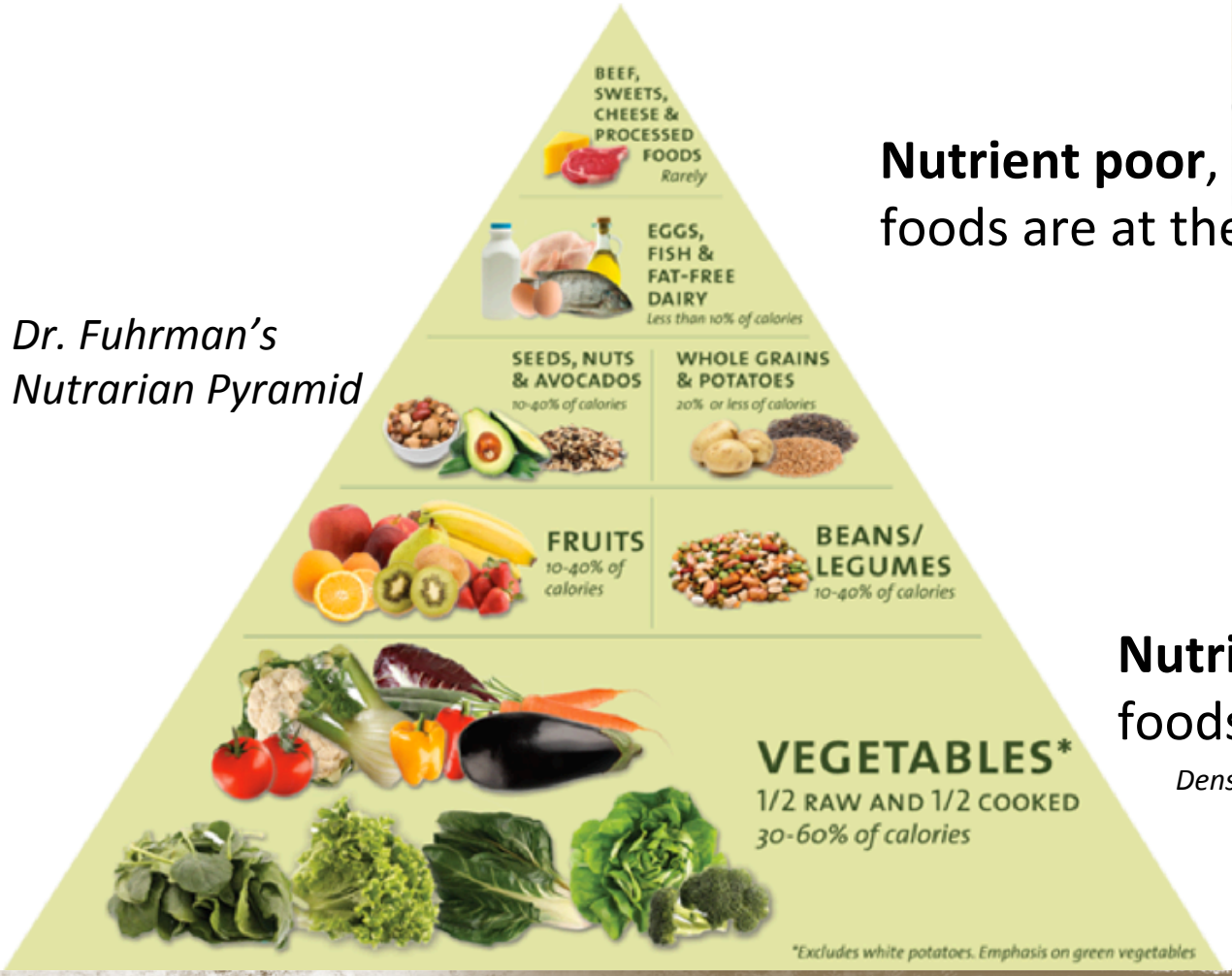
Health is our greatest wealth

Dr. Fuhrman's Nutrarian Pyramid



Nutrient poor, high calorie foods are at the top.

Nutrient dense, low calorie foods are at the base.

Dense with micro-nutrients & phytochemicals

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Grassroots Organics

Traditional organic agriculture gained notoriety in the 1970's and became a grassroots movement

- to provide healthier whole foods, chemical-free, in a sustainable, ecologically sound manner that gives back to nature.

When we see "organic" on foods, we still have that same mental image of family farming.

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"Big Ag" comes to Organic Farming

Organics has **5 times the growth rate** of any other food sector!

The Big Food Industry has been vying for control of the organic market since 2002.

- Focus on yield and profits
- Buying up small farms
- Buying up popular organic brand names.
- Greening of the junk food market

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The Ag/Chem Industry's onslaught to our health

- Pesticides – less that 23% of our foods are pesticide free
- GMO's make up 80% of processed foods
- Glyphosate world-wide contamination
- Nutrient deficient fresh foods
- Chemicals in our homes, even in our carpets
- Fluoride in our water
- Bottled water contamination
- Indoor and outdoor air pollution - chemtrails

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What does Organic really mean today?

- **The USDA Certified Organic Label is only as good as the quality & integrity of the company that puts it on their product.**
- The Organic Standards set a baseline but do no guarantee quality. The USDA has categorically stated that.
- Big Ag has lobbied the USDA to allow more synthetics into organic certification, and weakening the standards.
- Big Ag uses the same centralized industrial processes as their commercial growing, except the inputs are organic, not chemical.

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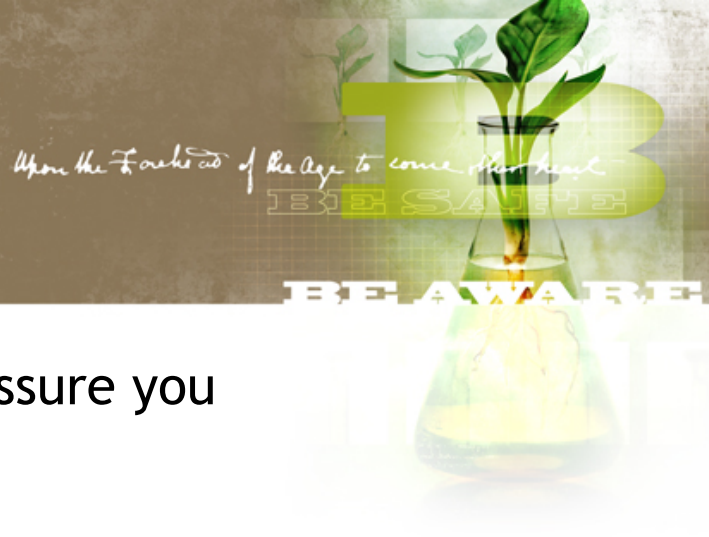
What does this mean for You?



The USDA Certified Organic Label DOES assure you

- NO chemical pesticides
- NO chemical fertilization
- NO GMO

Can you get the Highest Nutritional Organics from companies that:

- Have yield and profit as the prime motivation?
- Have divisions that promote chemical-laden and GMO ingredients?
- Use practices that are not sustainable, such as mono-cropping and feedlots?
- Lobby for weaker organic standards?
- Fight against right- to-know labeling laws?

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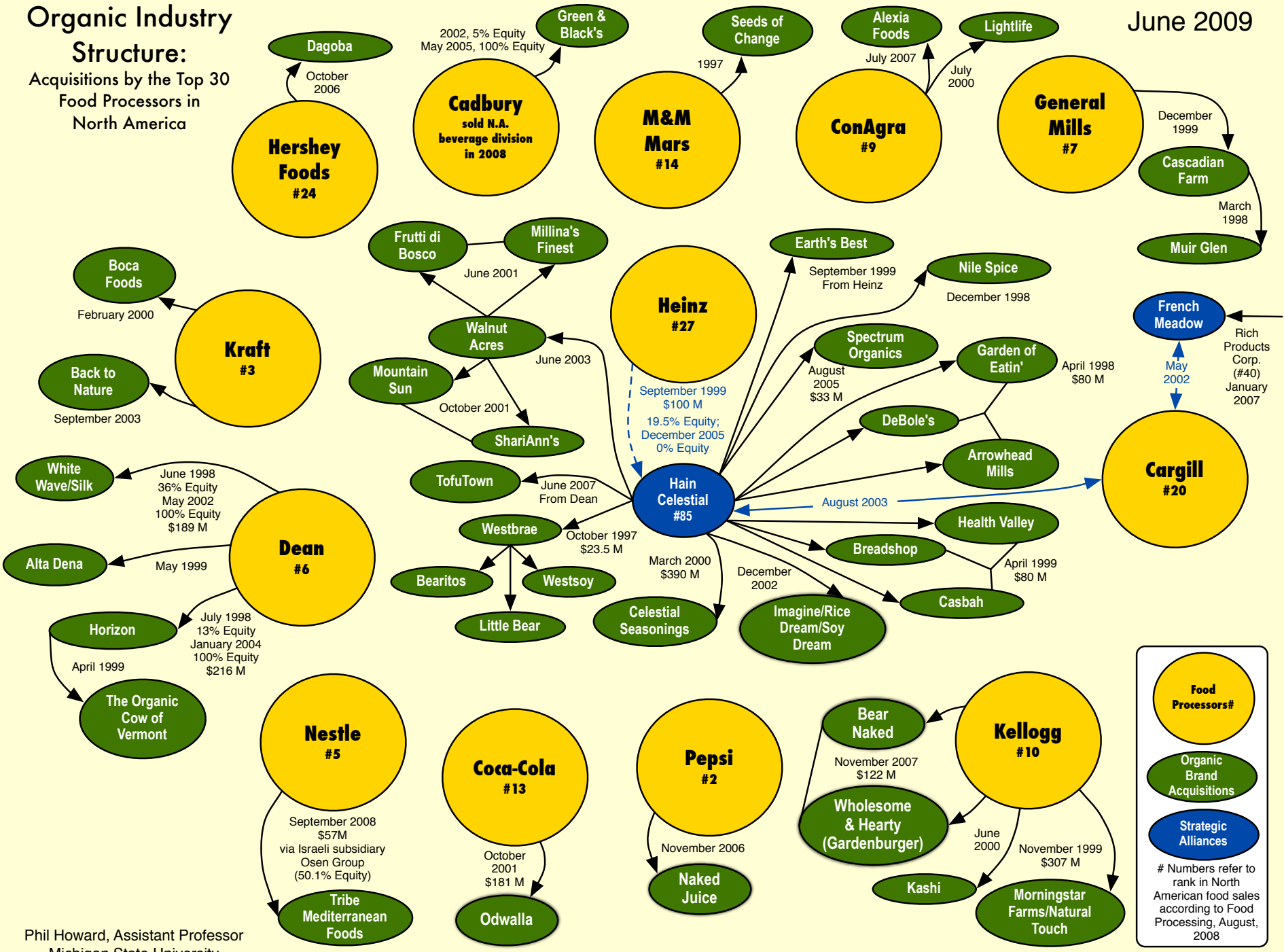
Organic Industry Structure:

Acquisitions by the Top 30 Food Processors in North America

June 2009

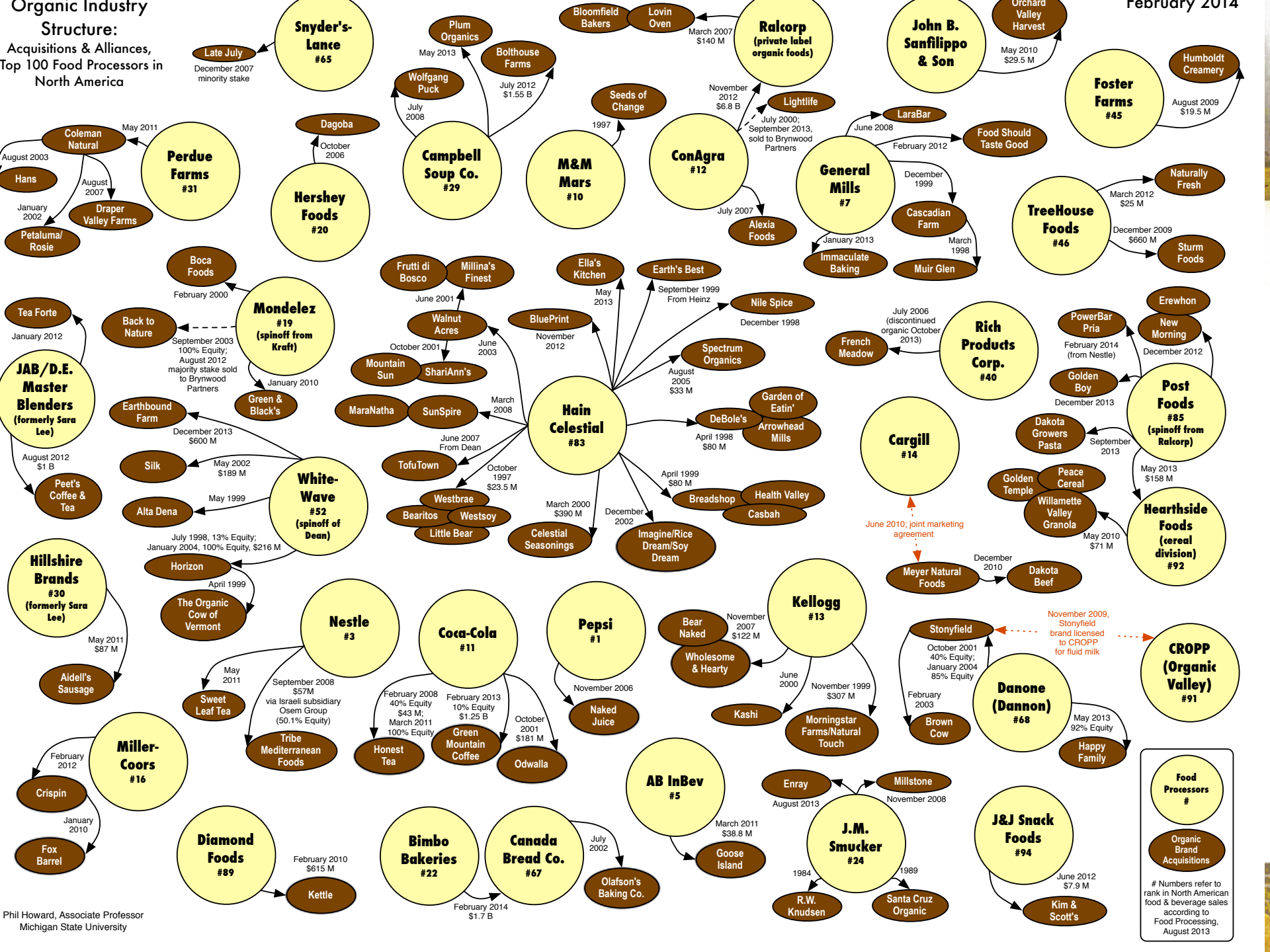


Phil Howard, Assistant Professor
Michigan State University

Organic Industry Structure:

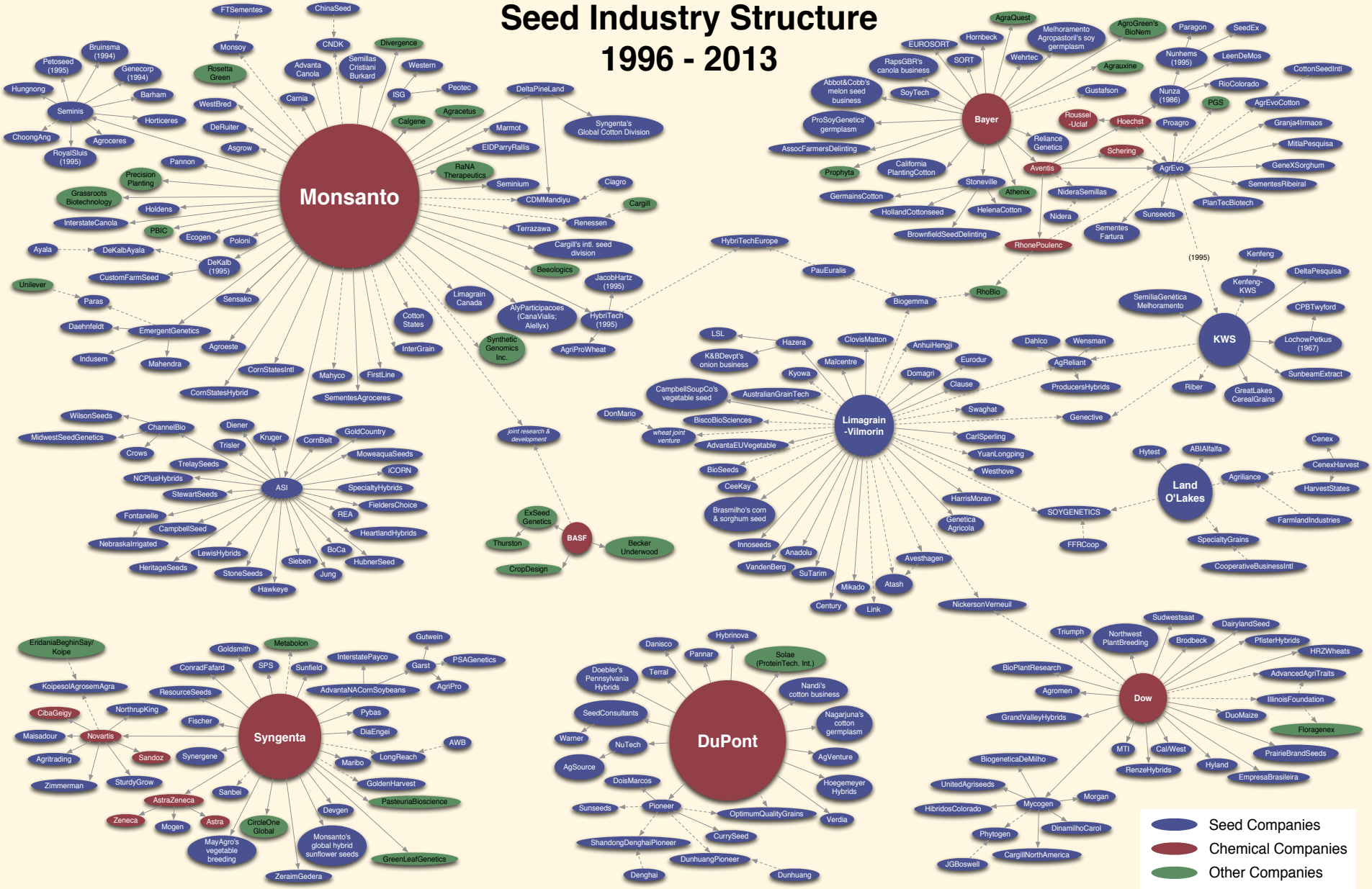
Acquisitions & Alliances, Top 100 Food Processors in North America

February 2014



Phil Howard, Associate Professor
Michigan State University

Seed Industry Structure
1996 - 2013



Size proportional to global seed market share

Phil Howard, Associate Professor, Michigan State University
http://www.msu.edu/~howardp

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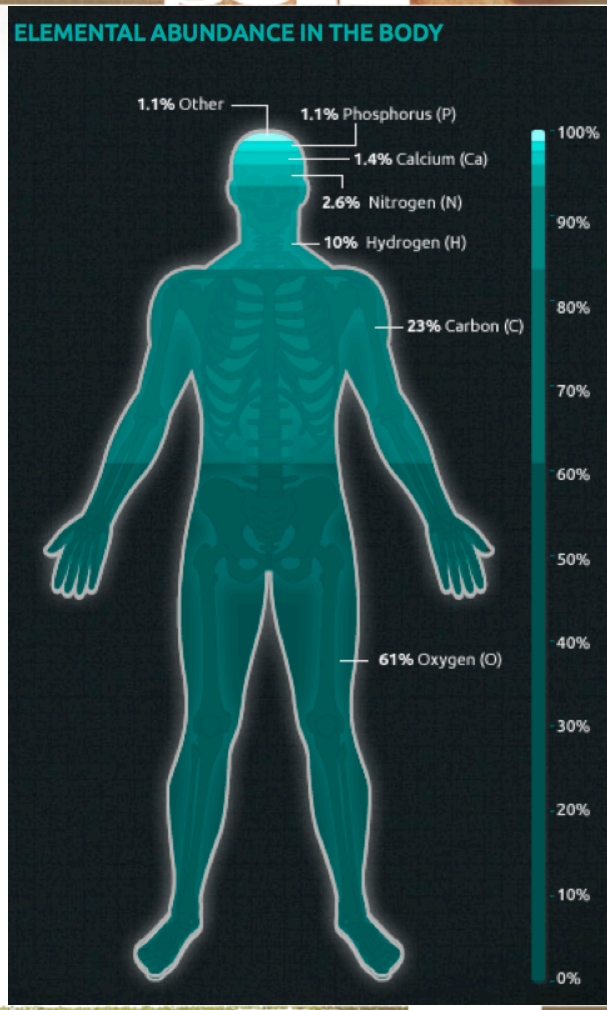
The Solution - Reconnect
Soil ~ Body ~ Mind ~ Spirit

- The periodic table lists the elements of life, many are the minerals in rock / soil.
    - Plants deliver these elements to us
- Soil Biome – more microbes in a tablespoon of soil than people on the planet (7 billion+)
- Human Biome – 10x more bacteria cells than human cells in our bodies. (100x DNA)
- Nutrition & our Biome are critical to mental health and vitality.
- Our spirit is a direct connection to the entire cycle.
- What element makes up our spirit?



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The Solution - Vote with your Dollar

Buy from local Farmers Markets or CSA's
(Community Supported Agriculture)

- Support our small organic farmers, they deserve it.
- Get to know the farmers that you buy from.

or:

Grow your own high nutritional organic foods

- Start a veggie garden if you do not already have one.
- Even a small garden in pots will add nutritionally dense vegetables whose quality you can count on.

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Basics of Soil Nutrition

Soil	•	balance of clay, sand, silt & organic matter
Percability	•	water retention & drains well
Compost	•	fine, mature, high quality
pH	•	slightly acidic, ideally 6.4 for vegetables
Soil Biology	•	From worms to microbes
Nutrients	•	entire spectrum of quality nutrition

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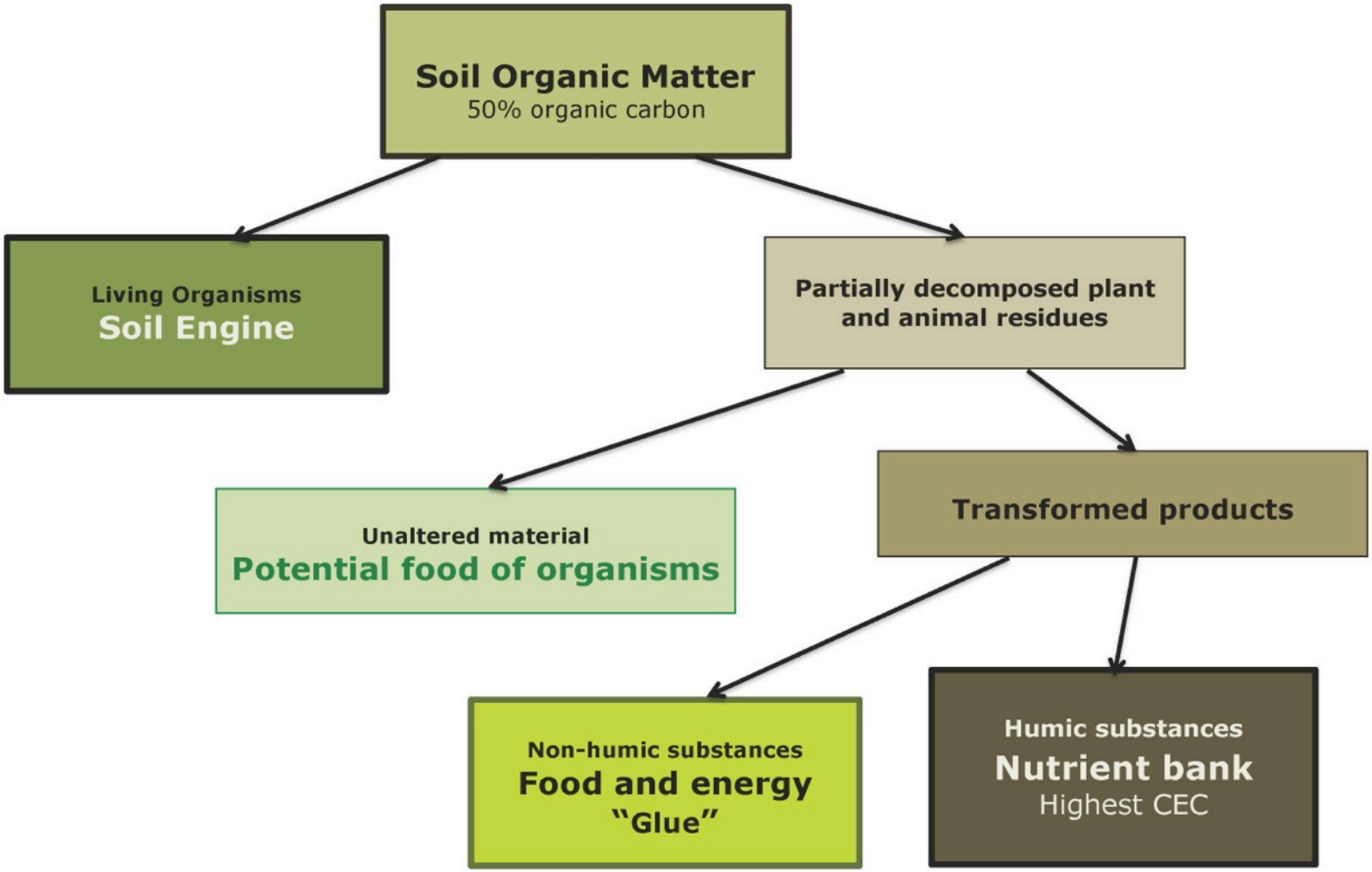
Soil Organic Matter
Components & their Functions



Importance of Soil Organic Carbon

The Major Building Block for Life on Earth - The cycle of Life!

All living things on earth are made of CARBON

Soil holds 75% of the carbon on land *(3x more than in living plants and animals)*

CARBON regulates our climate, our biodiversity, our water supplies

Soil Organic Carbon makes up 50% of Soil Organic Matter

Decomposition of Soil Organic Matter releases

- **Carbon dioxide**
- **Energy**
- **Water**
- **Plant nutrients**
- **Resynthesized organic carbon compounds**

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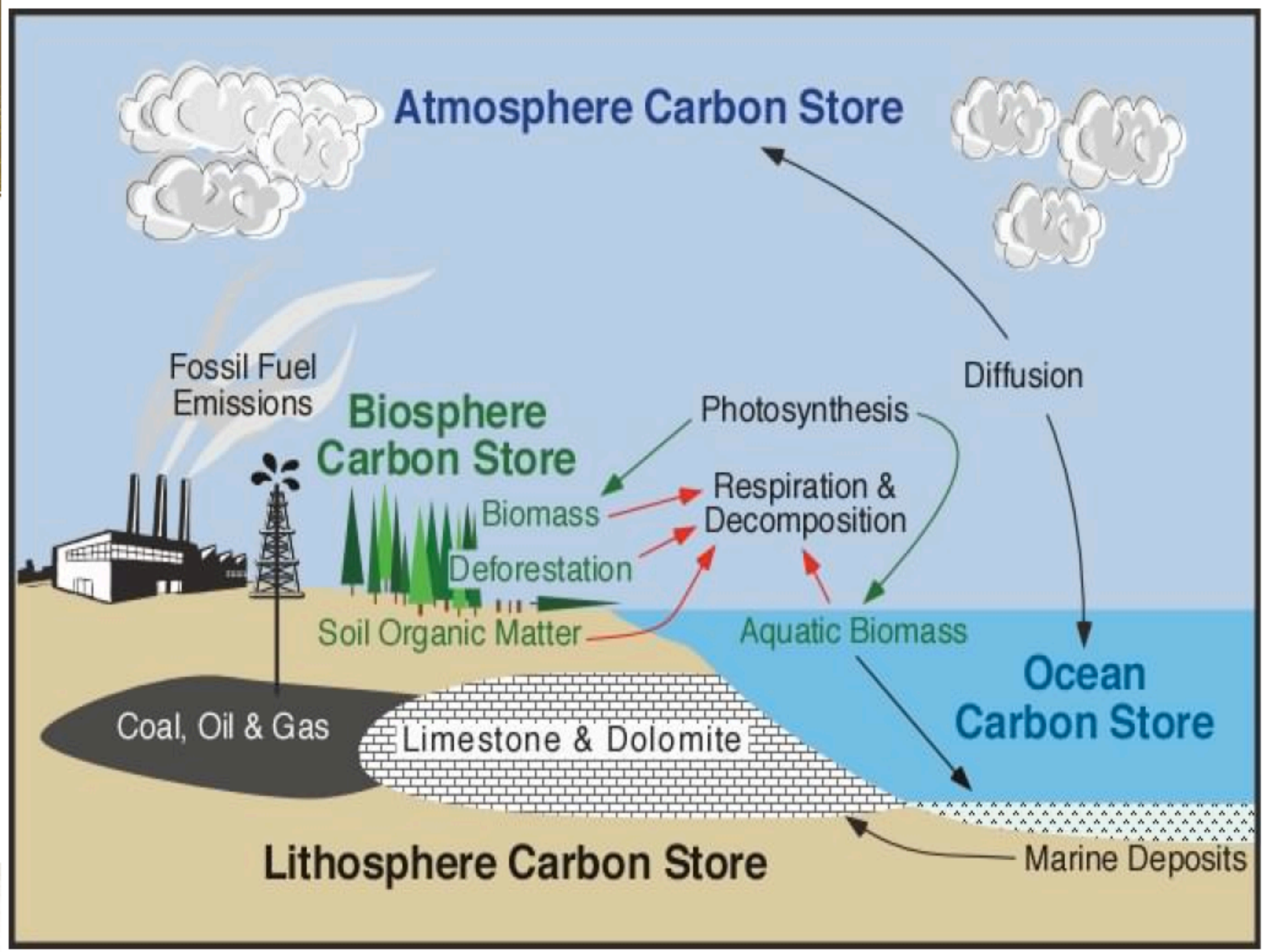
Atmosphere Carbon Store
Fossil Fuel Emissions
Biosphere Carbon Store
Photosynthesis
Diffusion
Respiration & Decomposition
Biomass
Deforestation
Soil Organic Matter
Aquatic Biomass
Ocean Carbon Store
Coal, Oil & Gas
Limestone & Dolomite
Marine Deposits
Lithosphere Carbon Store

Importance of CEC

Cation Exchange Capacity of Soil

The ability of soil to hold and release nutrients!

- A low CEC allows nutrients to leach through the soil
- The higher the CEC, the better your soil provides nutrition

HUMUS and CLAY provide CEC

- Humus always has a high CEC
- Clay has a varying CEC (depending on the age and type of clay)

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Soil Energy
Calcium-Magnesium

The **Calcium to Magnesium ratio** (with Potassium & Sodium)

are CRITICAL to the health of your soil.

Ideal ratio:

- 65% Calcium; 15% Magnesium, 4% Potassium, 1%-5% Sodium

  This Ca/Mg ratio can vary a bit when working with overly loose or overly dense soils.

The Calcium-Magnesium ratio determines how tight or loose a soil is.

- Higher calcium is looser, more oxygen, drains more freely
- Higher magnesium has less oxygen, drains slower and breaks organic matter down poorly

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Soil Energy
Calcium-Magnesium

A balanced **Calcium, Magnesium, Potassium & Sodium** will

- Provide rich levels of nutrients to crops & soil life
- Affect soil texture and stabilize pH around 6.4

6.4 pH is the ideal pH for

- Organic/biological agriculture
- The sap in a healthy plant
- The saliva and urine in a healthy human

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Testing for High Nutrition

How do I know if my foods are nutritionally high?

- **Taste**
- **Overall Health**
- **Color**
- **Shelf Life**
- **Brix Meter Testing**

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Testing for High Nutrition

Brix Meter Testing

- Purchase a 0%-32% Refractometer
- Test the fruit or vegetable juice (from pulverized pulp) for sugar content
- Plant sugars carry and store the plant nutrients, using those sugars as needed, to signal microbiology, ward off disease, etc.
- The higher the sugar content, the healthier and more nutrient rich the plant or fruit.
- Dr. Carey Reams developed the Brix chart for comparing your results with the standards.

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Refractive Index of Crop Juices -- Calibrated In % Sucrose Or ºBrix

	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

	Poor	Average	Good	Excellent
VEGETABLES				
Asparagus	2	4	6	8
Beets	6	8	10	12
Bell Peppers	4	6	8	12
Broccoli	6	8	10	12
Cabbage	6	8	10	12
Carrots	4	6	12	18
Cauliflower	4	6	8	10
Celery	4	6	10	12
Corn Stalks	4	8	14	20
Corn (Young)	6	10	18	24
Cow Peas	4	6	10	12
Cucumbers	4	6	8	12
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
Squash	6	8	12	14
Sweet Corn	6	10	18	24
Turnips	4	6	8	10

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.

Summary

- Start with the soil – get it fertile, alive, well draining, slightly acidic
- Add the nutrients it needs, both in the soil and foliar spray. Be sure you have the whole spectrum in your soil.
- Use high quality ingredients – no spiking
- Balance your minerals
- Add or activate your soil biology
- Add living humus/humic acids
- Use your Brix Meter to compare and confirm
- Taste it ☺

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Testing your soil for its mineral profile

Test before you add individual minerals:

- Mix together 1 cup of soil taken from 6” down, with 6 to 10 samples of the area with no organic matter or loose duff.

Test for:

- The 13 Essential Macro (6) and Micro (7) nutrients
- CEC and base saturation % of Ca, Mg, P, Na and Hydrogen

USA Soil Testing Labs:

- A&L Eastern: www.al-labs-eastern.com
- A&L: Western: www.al-labs-west.com

  A&L provides a great graphic soil test that is easy to read
- Brookside Laboratories: www.blinc.com
- Logan Labs: www.loganlabs.com

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Additional Learning

References to help you test and learn about the **soil mineral balance**:

- The importance of the Ca/Mg/P/Na ratio, and balancing soil's mineral content for optimum growth, is the result of **Dr. William Albrecht**'s work in the 1920's to late 1940's.
- **The Ideal Soil Book**, by Michael Astera takes Dr. Albrecht's work and walks you through testing and amending to achieve these results.

Learn more about **Soil Carbon**:

- http://www.csiro.au/Outcomes/Environment/Australian-Landscapes/soil-carbon.aspx#

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Additional Learning

- List of the World's Healthiest (Nutrient Dense, Whole) Foods
  http://www.whfoods.com/foodstoc.php

- Dr. Fuhrman's Nutritarian Pyramid
  http://www.drfuhrman.com/library/foodpyramid.aspx

- Learn about Brix testing your foods
  http://www.highbrixgardens.com

- Soil to Sky Poster: Agroecology vs. Industrial Agriculture
  http://www.hendrikusorganics.com/chemicals/see-through-the-green-washing/

- The Organic-Industrial Complex, article by Michael Pollan
  http://www.hendrikusorganics.com/chemicals

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Documentaries worth watching

There are numerous great documentaries (and books!) that really express what is going on in our food chain, our health and our environment ... The good, the bad, and the ugly.

Learn the true history of the selling out of our nutrition and farmers, what you can do, and what people are doing to bring back high nutritional foods, small farming and awareness to others.

Get Inspired and Inspire Others!

Food, Inc
Fresh
King Corn
Hungry for Change
In Organic We Trust
The Greenhorns
Vanishing of the Bees
Fat, Sick & Nearly Dead
Earth Voice, Food Choice
Fed Up!
Symphony of the Soil

...Just to name a few

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"The **soil** is the '**creative material**' of most of the basic needs of life. Creation starts with a handful of dust."

Dr. William A. Albrecht

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Thank You!

Thank you for giving us your time and energy!

We hope we were able to impart some helpful information for your success in high nutritional living!

Be sure to visit my FaceBook page:

Mother Earth Solutions

Please leave us your name and email
if you would like us to send you a copy of this presentation

www.hendrikusorganics.com