



## Organic vs. Inorganic

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- “Organic” means a food is produced without synthetic chemicals or fertilizers, herbicides, antibiotics, hormones, pesticides, genetic engineering, radiation or sewage sludge
- Nutrients
  - 60% of studies show nutrients are higher in organic food in some nutrients
    - Based on studies is based on studies of same varieties of fruits and vegetables in similar locations
  - Recent Stanford University study showed there was no benefit to organic
    - Only 50% of studies compared similar varieties in similar locations
  - Nutrient levels in organic produce were about 5-15% higher than conventional in these studies
    - Due to stronger natural defenses of organic plants
      - Fewer pesticides so stronger natural defenses against insects (these defensive compounds keep us healthier)
    - Due to dilution effect of conventional plants
      - Nitrogen in conventional fertilizer makes bigger plants but dilutes nutrients because concentration less
- Pesticides
  - Organic foods are NOT pesticide free
    - They can pick up traces from air or water from conventional farms
  - Imported produce is riskier
    - EPA has standards about use of pesticides in US but has no control over imports
  - Traces of pesticides on conventional foods has an impact on neurological and developmental problems, cancer, hormone disruption and skin, eye, and lung irritation
  - Children are more at risk because they are exposed to more pesticides than adults and are more sensitive to the adverse effects.
    - Most long term studies have investigated insecticides called organophosphates
  - Eating organic food lowers pesticide exposure
  - To reduce pesticides: wash and peel all produce, buy only domestically grown produce, buy from organic local farther markets

**EWG's 2(ENVIRONMENTAL WORKING GROUP) 2012 GUIDE**

**80/20 Rule: No one is perfect. Set your goal to eat properly 80% of the time.**



## TO PESTICIDES IN PRODUCE

<b>Dirty Dozen (buy these organic)</b>	<b>Clean 15 (lowest in pesticides)</b>
Apples	Onions
Celery	Sweet Corn
Sweet bell peppers	Pineapples
Peaches	Avocado
Strawberries	Cabbage
Imported Nectarines	Sweet peas
Grapes	Asparagus
Spinach	Mangoes
Lettuce	Eggplant
Cucumbers	Kiwi
Domestic blueberries	Domestic cantaloupe
Potatoes	Sweet potatoes
	Grapefruit
	Watermelon
	Mushrooms

- **What Does Organic Mean?**

**80/20 Rule:** No one is perfect. Set your goal to eat properly **80%** of the time.



Organic Fruit, Nuts, Vegetables, Grains	No synthetic pesticides or fertilizers Not irradiated Not genetically engineered No sewage sludge
Organic Meat and Poultry	Access to outdoors Not irradiated No growth hormones, antibiotics, other drugs Raised on 100% organic feed No fed animal byproducts
Organic Eggs	Hens fed 100% organic feed No growth hormones, antibiotics, other drugs Not necessarily cage-free or free-range
Organic Milk	Cow have access to outdoors No growth hormones, antibiotics, other drugs All cows' feed for past 12 months 100% organic At least 30% of cows' diet from pasture during primary growing season
Organic Seafood	No current official US standards USDA working on a standard for farm-raised seafood
"100% Organic" Packaged Foods	All ingredients are organic
"Organic" Packaged Foods	At least 95% of ingredients are organic
"Made with Organic Ingredients" Packaged Food	At least 70% of ingredients are organic

- **What Does Sustainable Mean?**

Sustainable foods refer to foods that are grown locally and seasonal by techniques that don't harm the environment and preserve the land. This movement is humane to animals and helps support local farms by paying them fairly and distributing their food through farmers markets and other locations. Organic and sustainable do not mean the same thing. It is important to try to buy food that is both organic AND sustainable.

- **Other Labels**

- No antibiotics added

**80/20 Rule:** No one is perfect. Set your goal to eat properly **80%** of the time.



- Documentation required for beef, pork or lamb. No current procedure for eggs, milk or fish
- No hormones administered
  - Documentation required for beef
  - No procedure for verifying claim on milk, fish or eggs
  - Hormones never permitted on pork and chicken
- Hormone-Free
  - Illegal claim because all animals produce hormones
- Cage-Free
  - Poultry not confined to cages
    - Not a guarantee that the birds were able to roam freely
    - Not verified by a third party
- Free-range
  - Poultry has access to the outdoors
  - No minimum time nor requirement for size or quality of outside range
  - No official definition for beef
- Natural
  - No artificial ingredients or added colors
  - Minimally processed
  - Does not mean organic
  - Applies only to meat, chicken and eggs
- Certified humane raised and handled
  - No cages or crates
  - Animals have ample space and shelter
  - Humanely slaughtered
  - No antibiotics or hormones in the feed
- Pasture raised
  - No official meaning/not a legal term
  - Means animals roam freely outdoors
- Grass-Fed
  - Animals fed mostly grass
  - Ford not mean they are outdoors and roaming – could be fed grass indoors
  - Does not mean organic
- Bird Friendly/Shade Grown
  - On coffee it means it was grown under trees that provide shade and habitat for birds
  - If coffee grown in open sun requires more fertilizer and pesticides
- Marine Stewardship Council
  - Seafood was caught without endangering the species or harming the ecosystem

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