

From Humus to Human: Why the Organic Farmer is a Hero

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Growing Food

Inputs: seed, soil, sun, water

What makes an edible plant healthy?

- Seeds
 - small seeds less energy
 - Potential seed borne disease
- Soil
 - Nutrients-like nitrogen, minerals, phytochemicals
 - Brix rating
 - measure of sugars and minerals, higher Brix more resilient plant
 - Micro biome
 - fungus, bacteria, worms





What's the difference?

Agricultural landscapes occupy 40% of the terrestrial ecosystems

10 REASONS TO GO ORGANIC

1 YOU CAN TRUST IT

Organic products must meet strict standards of organic certification, so you can be certain your food is both grown and handled according to organic standards.

2 IT'S MONEY WELL SPENT

Though organics can cost a little more than traditional food, prices are based on the true cost of production.

3 YOU'LL CUT CHEMICAL USE

Organic agriculture reduces the risk from agro-chemicals polluting the air, water and earth that sustain us.

4 NATURE IS NOURISHED

By not using chemicals and nitrogen that leach into the soil, organic food protects and conserves our water resources and builds richer soils. Organic agriculture encourages environmental protection and enhanced biodiversity on the farm.

5 IT ENCOURAGES INNOVATION

Organic farmers have developed their farming practices to minimize agriculture's impact on the environment.

6 IT DEFENDS DIVERSITY

Biodiversity, that is, Biodiversity is the variety of species living on our planet, and studies show many organic fields contain more species of wild plants, insects and birds than regular farms.

7 IT REACHES OUT RURALLY

Organic agriculture supports small farms and offers new markets for local farmers.

8 THERE'S NO LIMIT

Today in every food category, you can find organic alternatives. More and more organic non-food agriculture products—such as cotton, something most experts believed couldn't be grown organically—are being developed.

9 IT'S GOOD FOR THE EARTH

Like reforestation, research is showing that organic agriculture could positively impact the global warming crisis.

10 YOU'LL FEEL BETTER

Organic food is rich with nutrients and disease-fighting antioxidants.



Soil

- Plants need 17 essential nutrients for health
- Macronutrients and micronutrients from compost, organic matter
 - Rotate crops to avoid disease
- Top few inches contain valuable microorganisms
 - cover is key-mulch or cover crops: wrote
- Water and air
 - avoid compaction and tillage



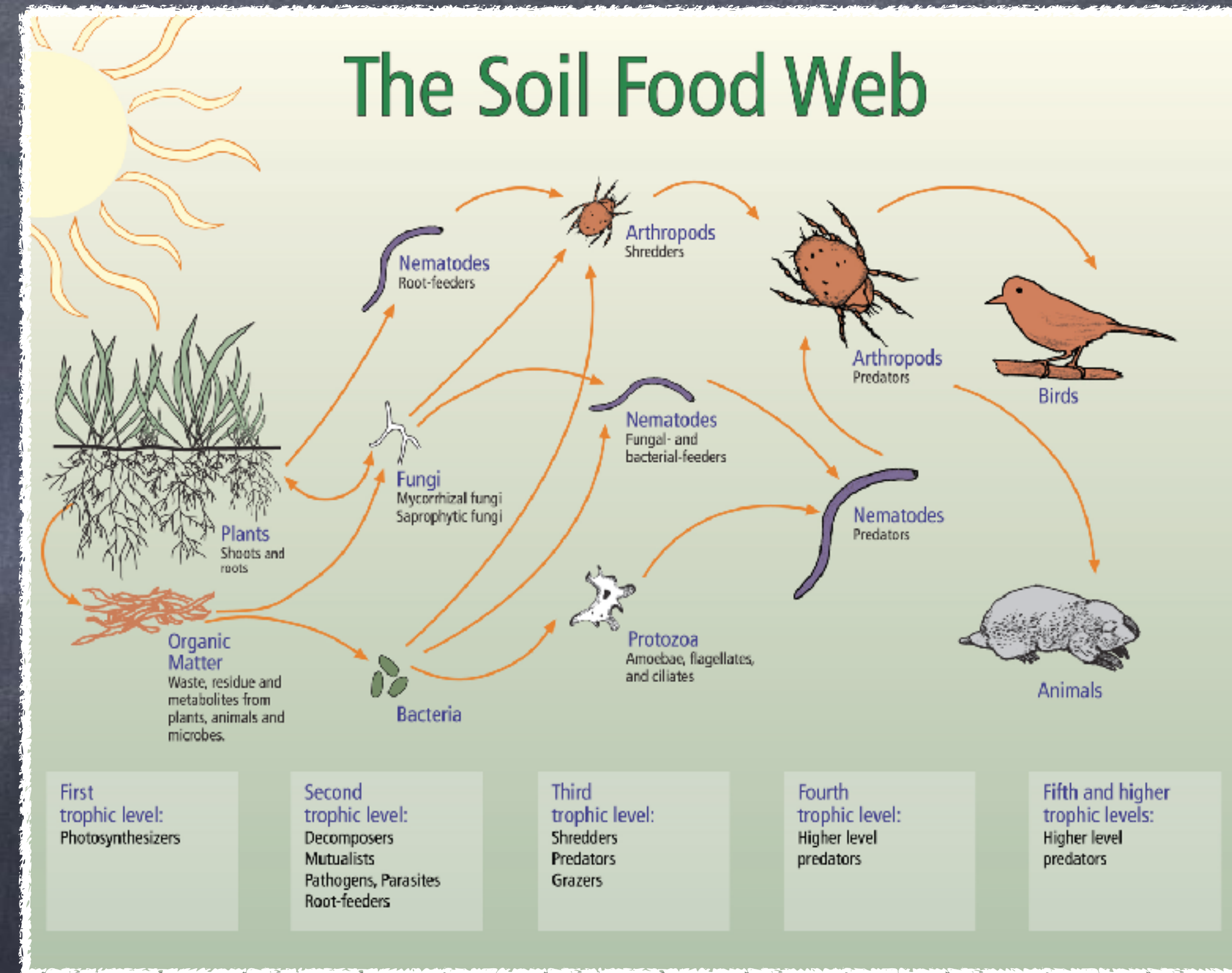


1995 Drought Rodale farm

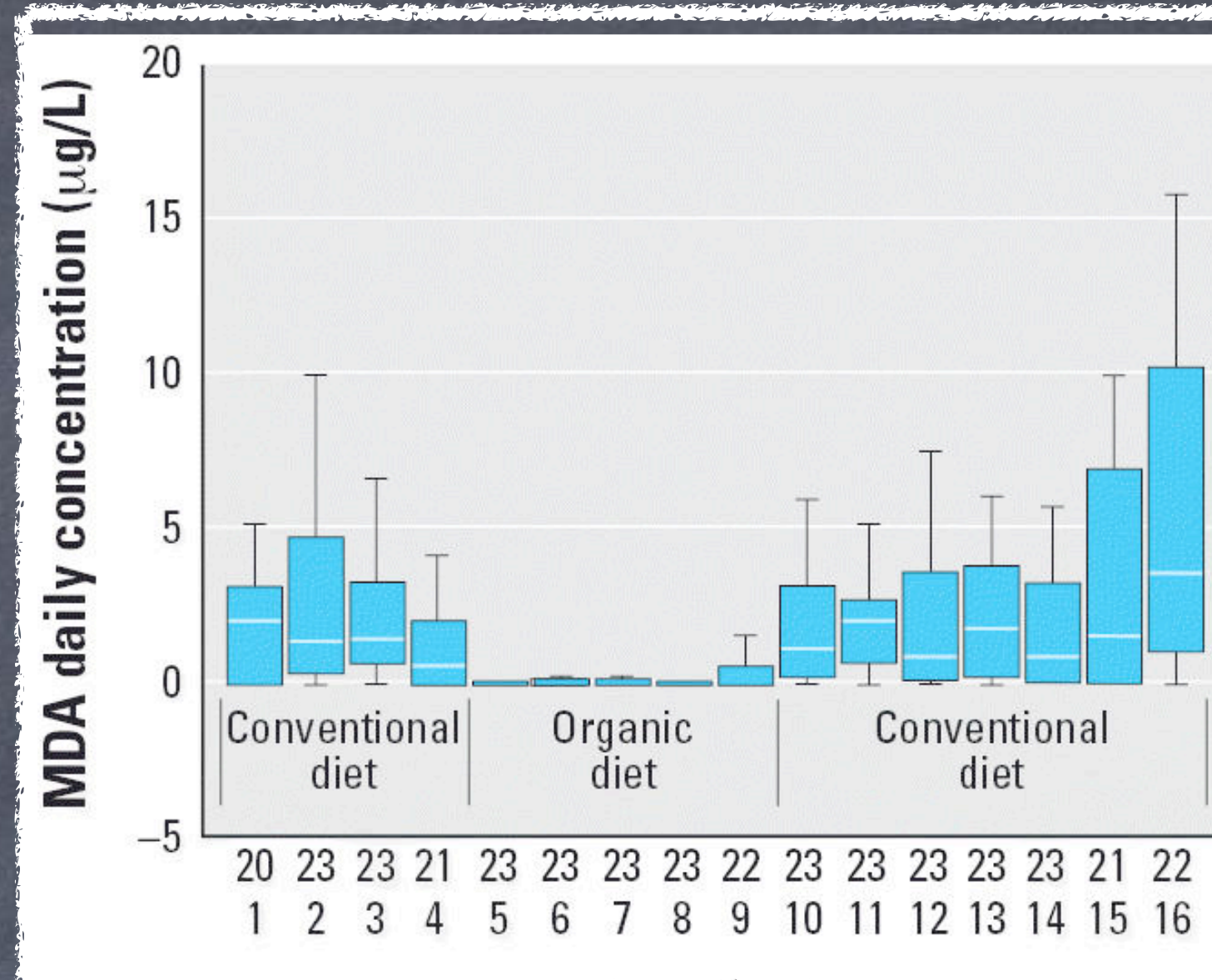
Farming Systems Trial

Cover Crop

- Prevents soil erosion
- currently losing 1% topsoil (40%)
- Adds nutrients/fixes nitrogen
- Protects developing plants



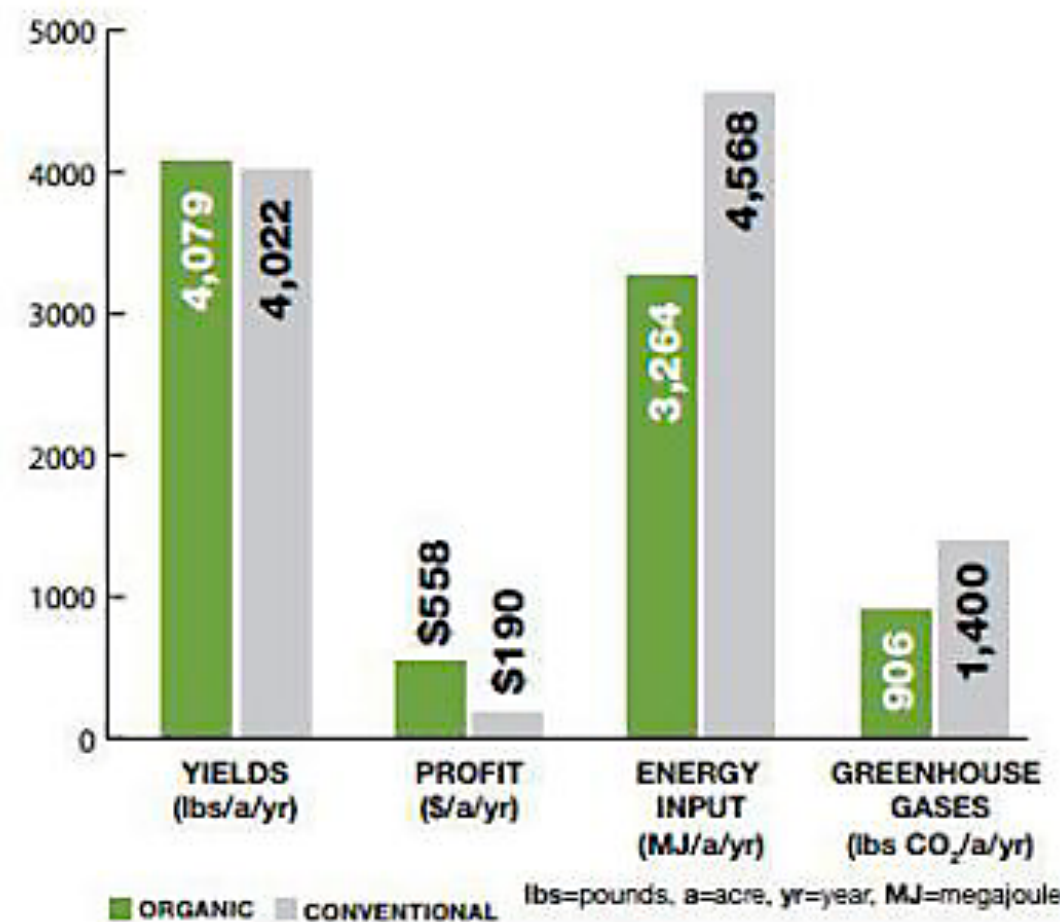
FOOD PRODUCTION WILL NEED TO
INCREASE *BY AT LEAST 60%* OVER THE
NEXT 35 YEARS TO PROVIDE FOOD
SECURITY FOR THE *9 BILLION PEOPLE*
EXPECTED TO BE LIVING ON THE PLANET



Organic Farming and our Future

- Organic yields match conventional yields.
- Organic outperforms conventional in years of drought.
- Organic farming systems build rather than deplete soil organic matter, making it a more sustainable system.
- Organic farming uses 45% less energy and is more efficient.
- Conventional systems produce 40% more greenhouse gases.
- Organic farming systems are more profitable than conventional.

COMPARISON OF FST ORGANIC AND CONVENTIONAL SYSTEMS



“A mere 2 percent increase in the carbon content of the planet’s soils could offset 100 percent of all greenhouse gas emissions going into the atmosphere.”

—DR. RATTAN LAL, OHIO STATE SOIL SCIENTIST

Growing at home (You can become an organic farmer)

- Raised beds
 - Unto 4x yield
 - 30x30 bed 27 hours/season produced 1900 pounds
 - plant in triangles-14% increase
- Window planters
- Home gardens
 - covered soil
 - Grow up-use tower gardens





Thank You!