



foreSight
2026

Food for Thought

Katy Caldis
Founder: Abundantly by UP

Human Microbiome

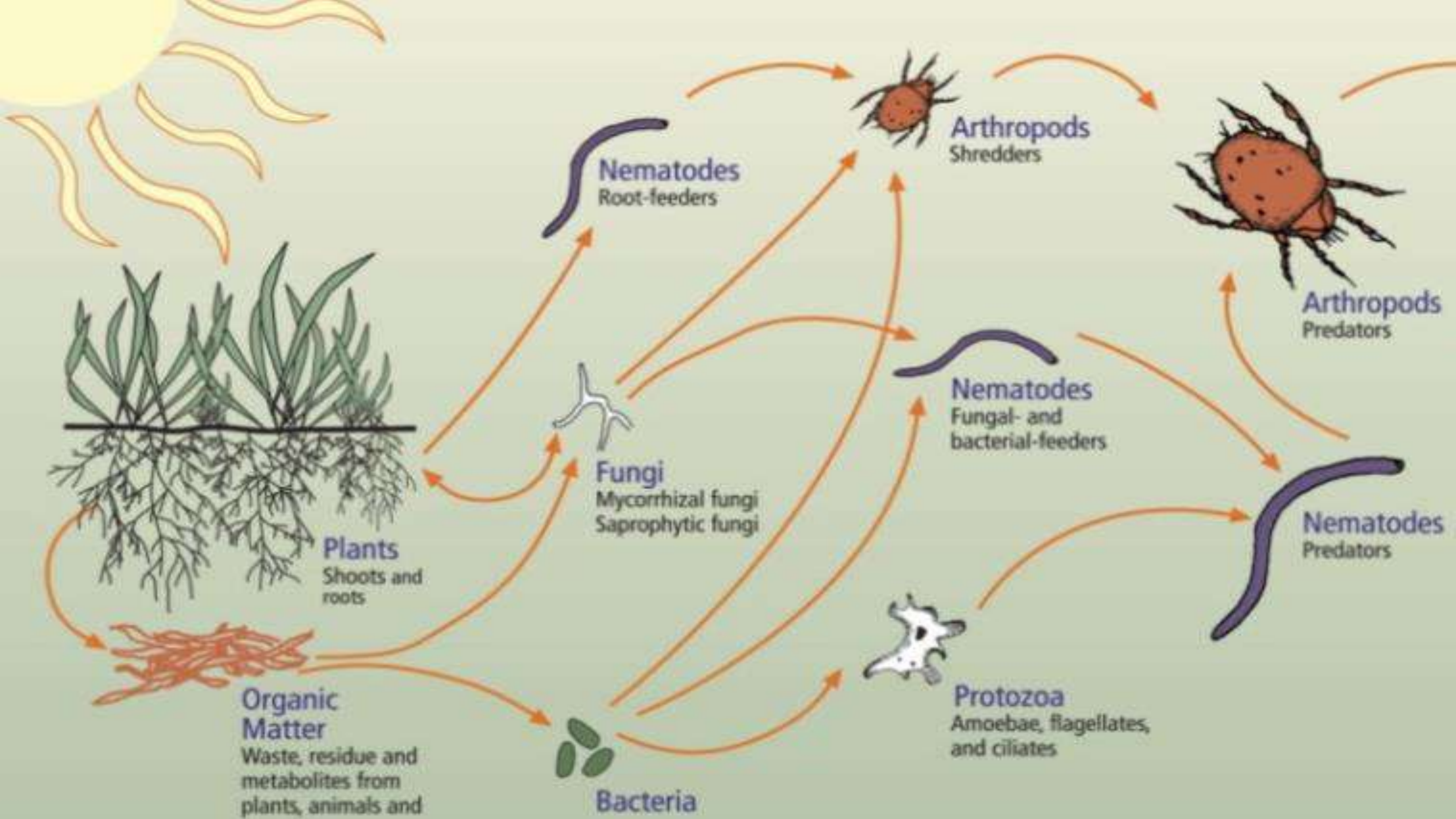
“Dysbioses in the microbiome have been associated with numerous diseases, including inflammatory bowel disease, multiple sclerosis, diabetes (types 1 and 2), allergies, asthma, autism, and Cancer”

Lloyd-Price, J., Abu-Ali, G. & Huttenhower, C. The healthy human microbiome. *Genome Med* 8, 51 (2016). <https://doi.org/10.1186/s13073-016-0307-y>





Our health is dependent
on the health of our soil



Nematodes
Root-feeders

Arthropods
Shredders

Arthropods
Predators

Nematodes
Fungal- and
bacterial-feeders

Fungi
Mycorrhizal fungi
Saprophytic fungi

Plants
Shoots and
roots

Nematodes
Predators

**Organic
Matter**
Waste, residue and
metabolites from
plants, animals and

Bacteria

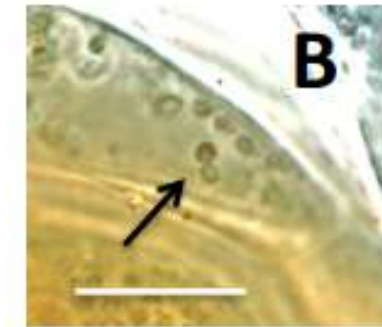
Protozoa
Amoebae, flagellates,
and ciliates

Plant Cell Entry Zone

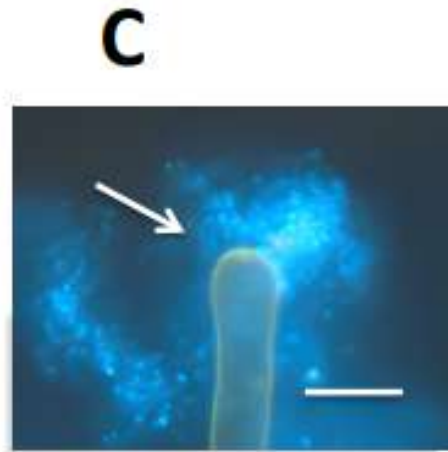
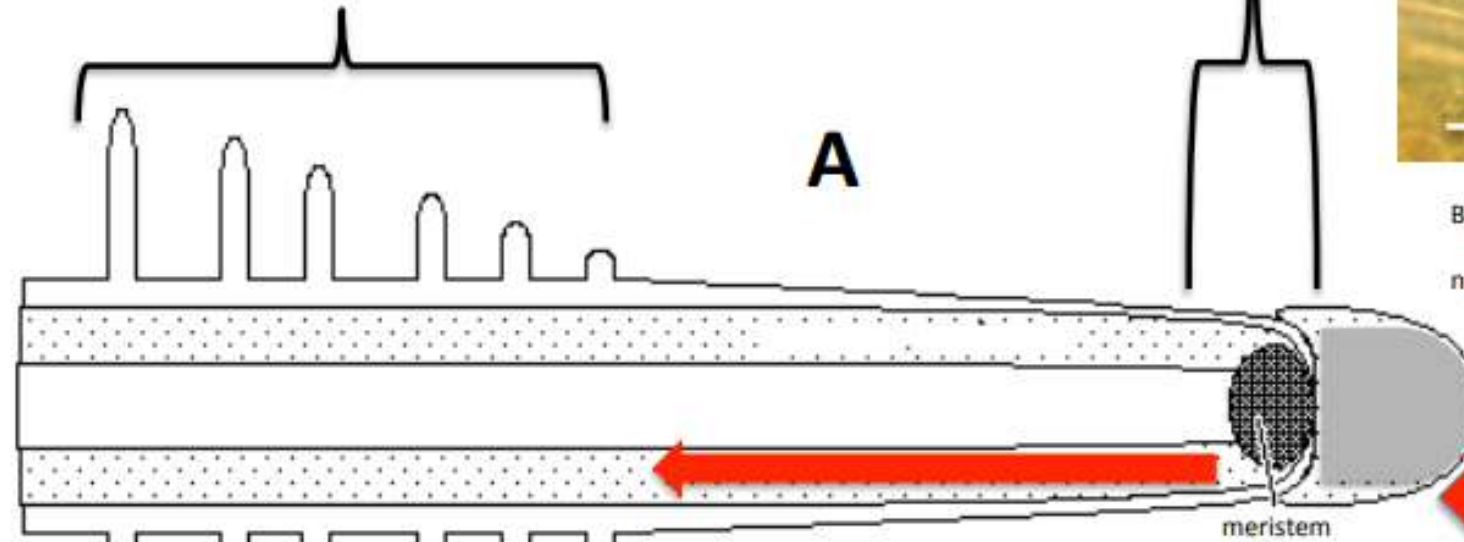
Microbes become intracellular in meristem cells as wall-less protoplasts.

Microbe Exit Zone

Microbes stimulate elongation of root hairs and exit at the tips of hairs where walls are thin. Microbes reform cell walls once outside root hair.



Bacteria (arrow) in root parenchyma cell near root tip meristem.



Bacteria (arrow) emerging from root hair tip of millet seedling.

Nutrients Extracted from Microbes By Reactive Oxygen Produced by NOX on Root Cell Plasma Membranes

Microbes Exit Root Hairs Exhausted of Nutrients

RHIZOPHAGY CYCLE

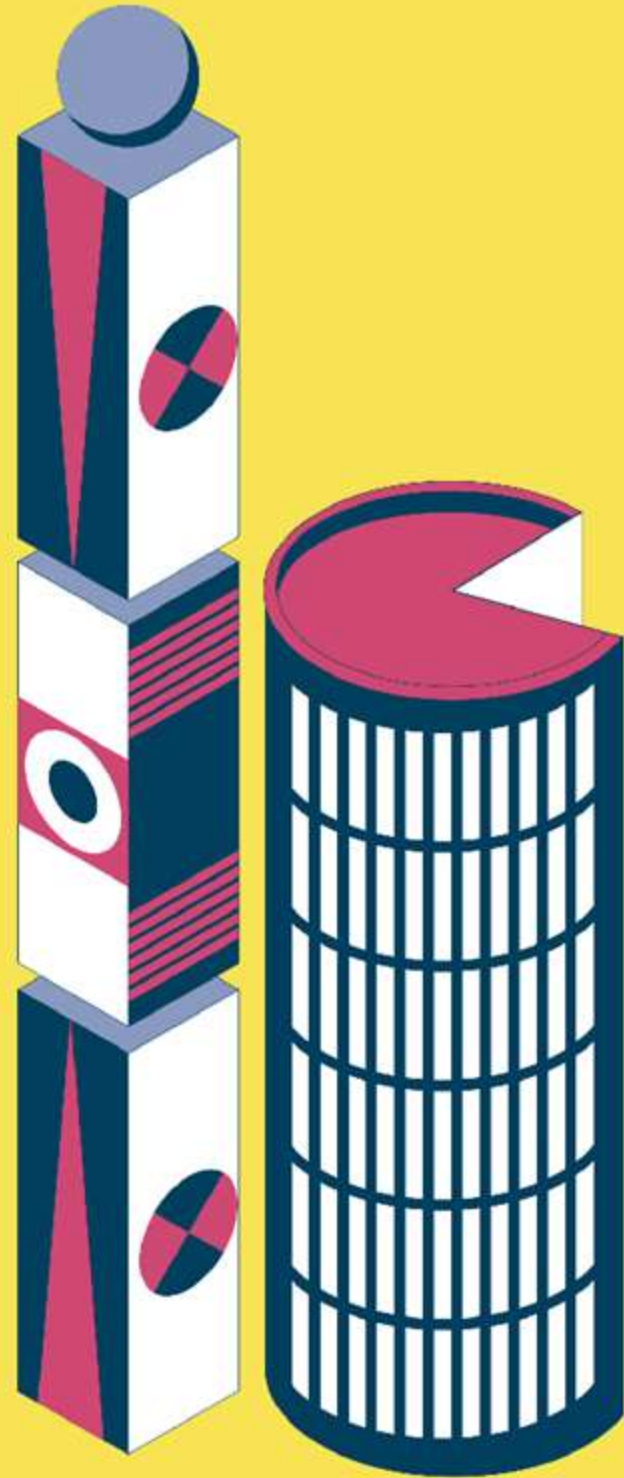
Microbes Enter Root Cell Periplasmic Spaces Carrying Nutrients From Soil

Microbes Recharge with Nutrients in the Rhizosphere









“The thin layer of soil that forms the patchy covering over the continents controls our own existence and that of every other animal on the land.”

Rachel Carson, Silent Spring



Industrial agriculture and
monoculture is killing us
and life on our planet

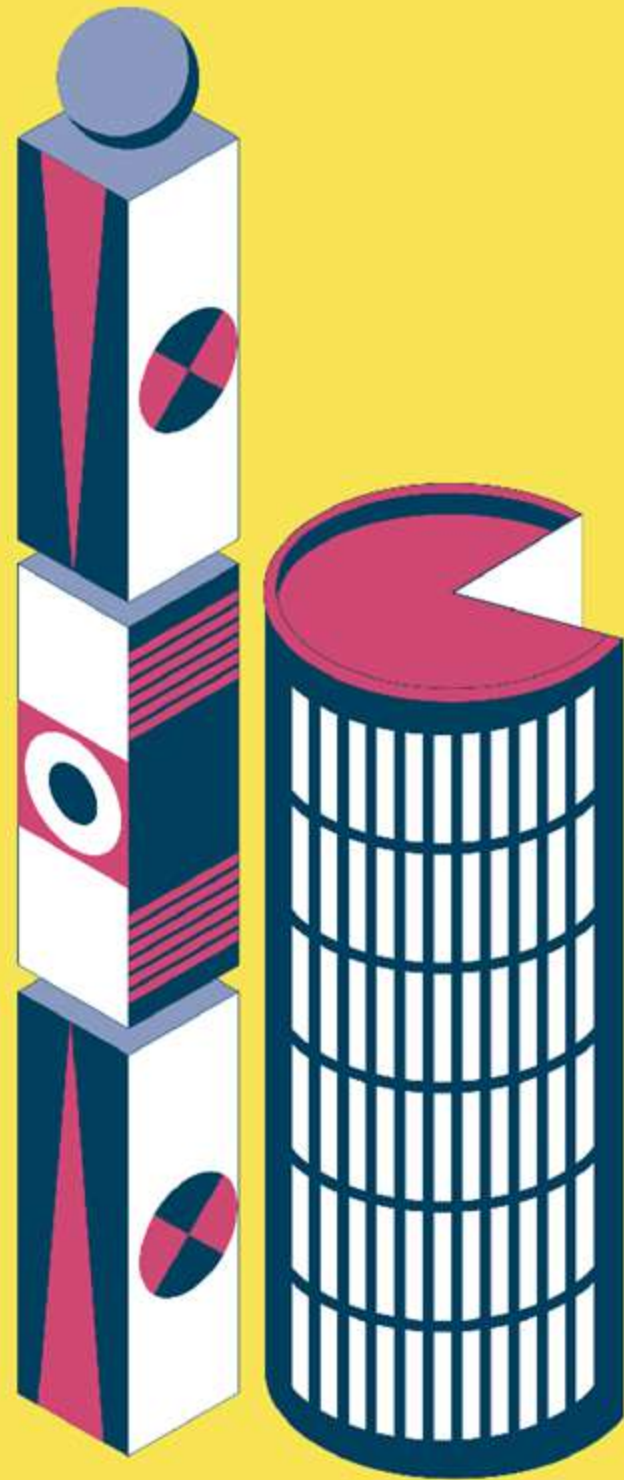




Industrial agriculture

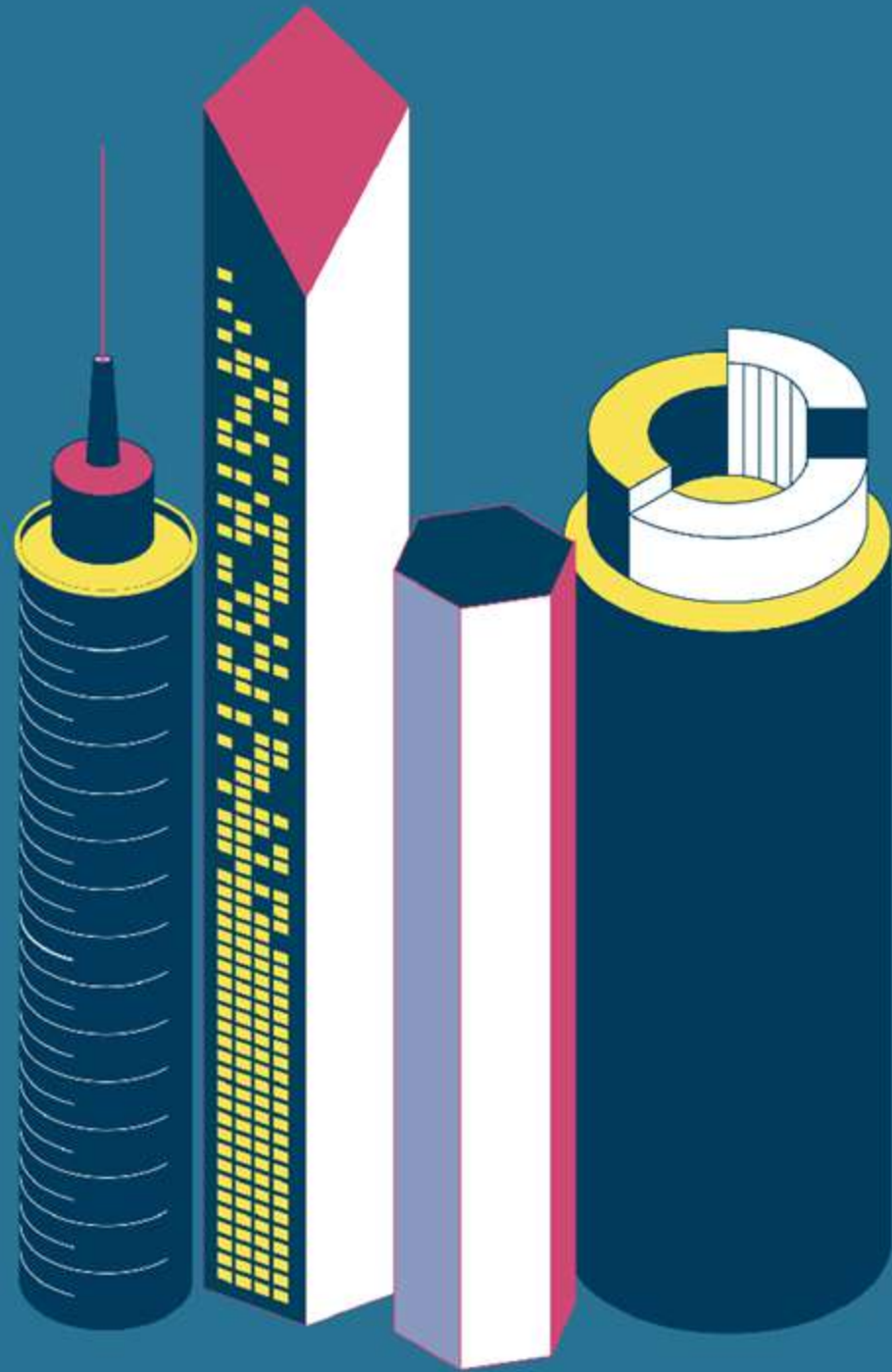
- Tillage – kills micro-organisms
- Fertilizer – weak plants, kills micro-organisms, chemical runoff
- Monoculture – a ready made feast for insects. hence pesticides, fragile system
- Pesticides kill ...
- Destruction of the soil
- Expensive in terms of water and energy utilization
- Destructive to biodiversity loss and chemical runoff and carbon & nitrogen loss to the atmosphere,
- Nutrient deficient food
- Factory farming is a huge contributor to climate chaos





If there is no microbiology in the soil we are not feeding our own microbiome.

If there is no soil and only dirt what quality of plants/meat will you grow in the future?

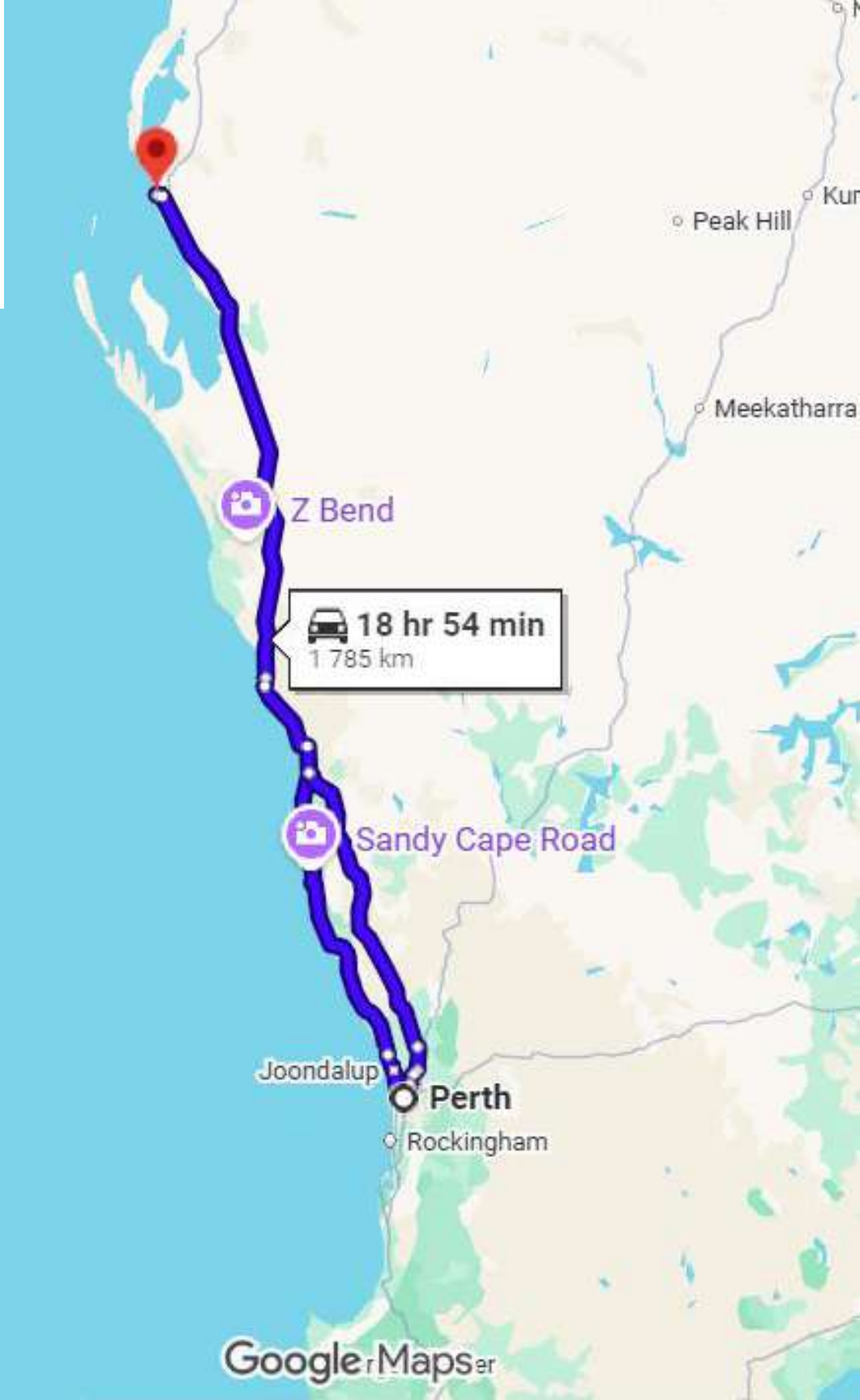


Globalisation of our food supply



- Carnarvon, Western Australia 6701, Austr
- ⋮
- Perth, Western Australia, Australia
- ⋮
- 📍 Carnarvon, Western Australia 6701, Austr

18 hr 54 min
1,785 km



Mongolia has 10 times more dairy animals than people...



... yet its supermarket shelves carry more European than local dairy products.

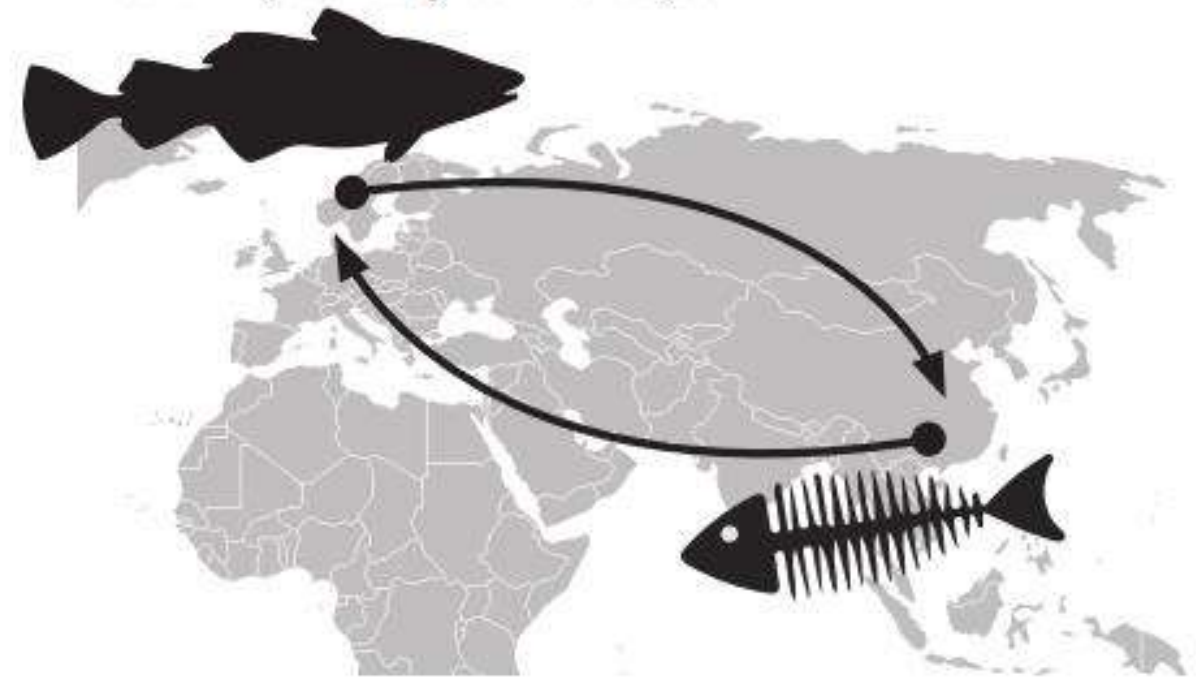
“California imports as many cherries and almonds as it exports.”

- A Place-Based Perspective of Food in Society, 2015

In 2007, Britain and Australia exchanged 20 tons of bottled water just with each other.

<https://www.localfutures.org/wp-content/uploads/Insane-Trade-Factsheet-Final.pdf>

Meanwhile, cod caught off Norway...



...goes on a 10,000-mile round trip to be fileted and returned for sale on the local market.

1. France - \$1.5 Billion USD

France leads the way as the world's largest importer of butter and ghee, with an import value of \$1.5 billion USD in 2023. The country's thriving [food industry](#) and high demand for dairy products make it a key market for producers around the world.



Butter Exports by Country

Below are the 15 countries that exported the highest dollar value worth of butter during 2024.

Dairy & Eggs

1. Ireland: US\$1.78 billion (17.3% of total butter exports)
2. Netherlands: \$1.75 billion (17%)
3. New Zealand: \$1.72 billion (16.8%)
4. Germany: \$863.4 million (8.4%)
5. France: \$784.7 million (7.6%)
6. Belgium: \$721 million (7%)
7. Denmark: \$438.5 million (4.3%)
8. Poland: \$416.5 million (4.1%)



Tariffs, tax rebates,
subsidies, trade
agreements, share prices

What are you paying for?



Seeds of life



Traditional Rice Varieties


- “about 200,000 varieties existed in India until the advent of the Green Revolution” – Richaria and Govindasamy (1990)
- Diversity in taste, nutrition, pest-resistance, drought/flood resistance, adaptability to a range of conditions...
- Bio-diversity loss due to quest for high-yield hybrids
- High yield but what about high nutrition
- Alternative uses – eg straw to feed animals or make thatch for houses



The eternal tomato

- Tomatoes have been bred to have a shelf life up to 30 days
- Initial motivation was loss of 40% crop due to spoiling
- Tasteless
- Lower nutrient value
- Sterile patented seeds
- Karnataka India, child labour, women earning below minimum wages
- Yet \$350 000 per kg Summer Sun Tomatoes

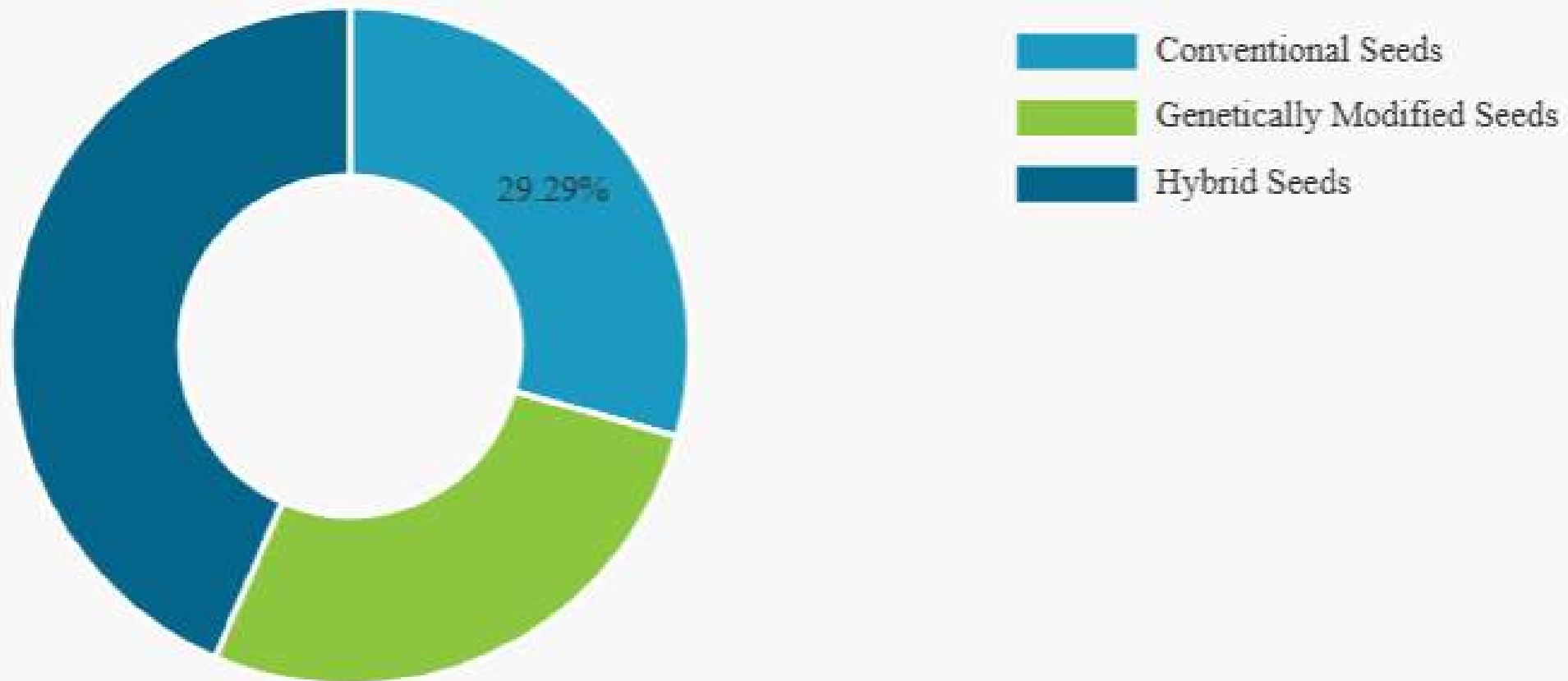
HYBRID vs. HEIRLOOM



Calcium	-63%
Magnesium	-29%
Vitamin C	-72%
Lycopene	-58%
Polyphenols	-56%

The privatisation of nature

Global Seeds Market Share, By Seed Type, 2025



www.fortunebusinessinsights.com

Impacts

- Indebted farmers
- Only large commercial farms which are destructive in nature are financial viable
- Food security
 - Food affordability
 - Climate resilience
- Nutritional quality
- Taste
- Health
- Biodiversity loss

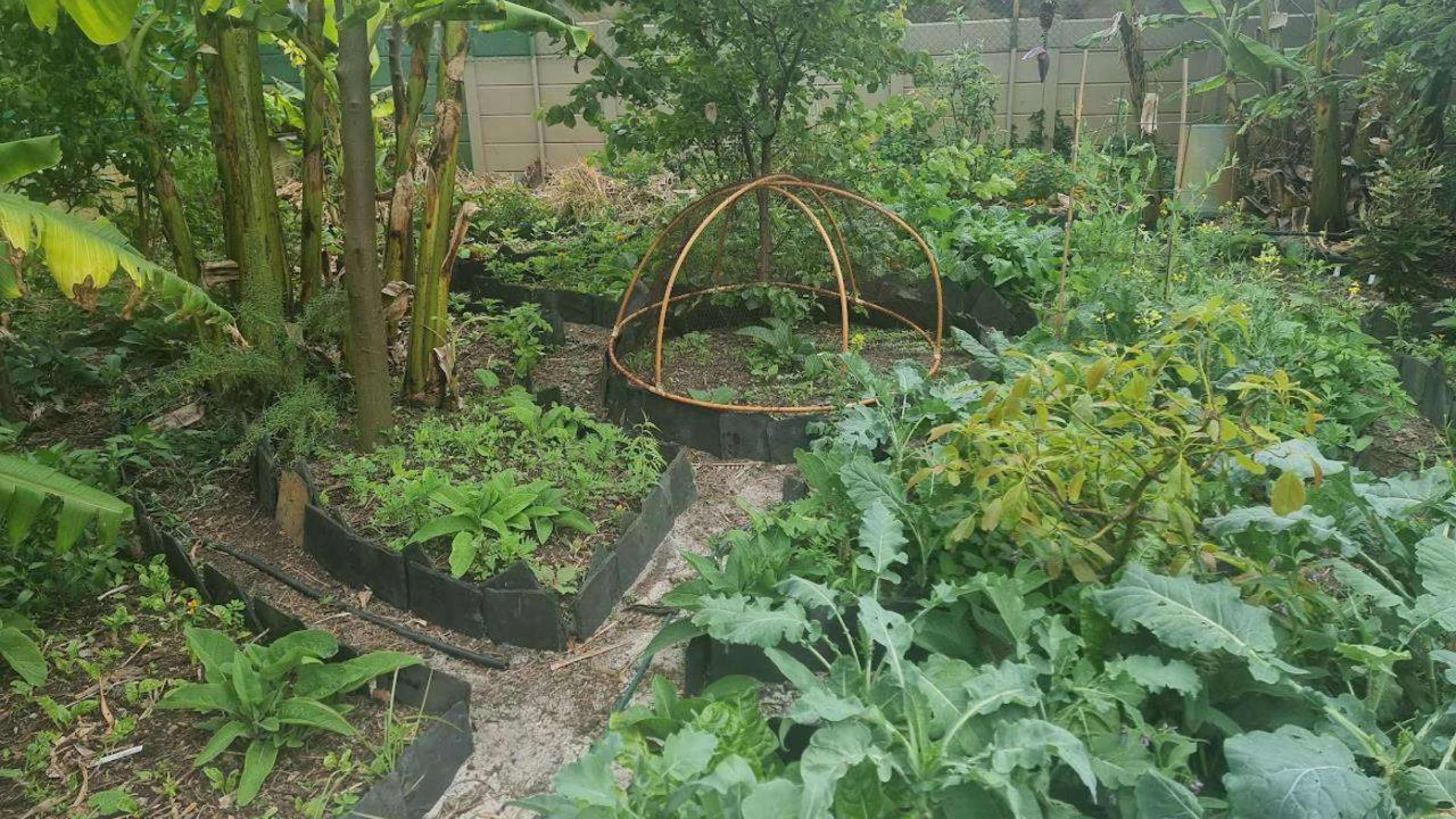




Do you trust 5 global multinational with our future access to seed?



What can you do?





Buy mindfully

Knowledge

- Know how your food is grown
- Demand transparency
- What share of your spend gets to the farmer?

Where to shop

- Farmers markets
- Community supported agriculture
- Co-ops
- Organic shops
- Join a food club



YOU ARE HERE



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