There is no Planet B
and the implications for food and farming

Mike Berners-Lee
Here We Are in the **Anthropocene**

For better and worse
Like it or not
Ready or not
Climate progress so far

Annual CO₂ Emissions

Total
Fossil carbon
Land-use change

©Global Carbon Project
Some reasons why
And some more reasons
How much human-edible food do we grow?
Where do the world’s calories go?

- Edible crops grown: 5935
- Grass, pasture and stover eaten by animals: 3612

Grown
Where do the world's calories go?

- Edible crops grown: 5935
- Edible crops after harvest: 5997
- Grass, pasture and stover eaten by animals: 3812
- Harvest losses: 336

Total: 12254
Where do the world’s calories go?

- Edible crops grown: 5935
- Harvest losses: 336
- Edible crops after harvest: 5597
- Post-harvest losses: 332
- Domestic crops available for use: 5265

- Grass, pasture and stover eaten by animals: 3812
Where do the world’s calories go?

- Edible crops grown: 5935
- Edible crops after harvest: 5597
- Domestic crops available for use: 5265
- Edible crops fed to animals: 1738
- Crops for eating: 2522
- Grass, pasture and stover eaten by animals: 3812
- Harvest losses: 338
- Domestic losses: 332
- International trading losses: 73
- Invested: 126
- Non-food uses: 808

Grown | Harvested | Post-harvest | Allocation
Where do the world’s calories go?

Edible crops grown 5935
Edible crops after harvest 5597
Domestic crops available for use 5265
Crops for eating 2522
Crops for eating 2522
Edible crops fed to animals 1738
Animal losses 4956
Meat, dairy and fish 594

International trading losses 73
Invested 126
Non-food uses 808

Grass, pasture and stover eaten by animals 3812

Grown Harvested Post-harvest Allocation Pre-processing and distribution
Where do the world’s calories go?

- **Edible crops grown**: 5935
- **Edible crops after harvest**: 5597
- **Domestic crops available for use**: 5265
- **Crops for eating**: 2522
- **Crops for eating (edible crops fed to animals)**: 1738
- **Animal losses**: 4956
- **Meat, dairy and fish**: 594
- **Household supply**: 2792
- **Processing losses**: 221
- **Distribution losses**: 104
- **Invested**: 808
- **International trading losses**: 73
- **Harvest losses**: 332
- **Post-harvest losses**: 336
- **Grass, pasture and stover eaten by animals**: 3812

**Available for human consumption**
Where do the world's calories go?
Where do the world’s calories go?
Zinc (pre-fortification and supplements)
Iron (pre-fortification and supplements)
Soya vs Beef

- Calories
- Protein
- Iron
- Zinc

100g Soyabeans vs 100g Beef
Outputs/Inputs for sheep farming at Naddle & Swindale Farms, Haweswater

- Financial: 100%
- Calories: 50%
- Protein: 0%
- Iron: 0%
- Zinc: 0%
Asparagus

A 250g pack

0.25 kg CO₂e local and seasonal pack

4.7kg CO₂e the same pack airfreighted from Peru
Respect All People

Respect Truth

Respect The Environment

Three values we can no longer live without
Messages for UK food

- Livelihoods
- Food production
- Climate
- Health
- Biodiversity
Messages for UK food

- Reduce meat and dairy a long way
- Develop agroecology science and practice
- Develop food without photosynthesis
- Increase proportion of food that is eaten by humans
- Incentivise farmers and researchers
- Adopt National Food Strategy Recommendations
A race between tipping points