



THE REBOOT FOOD MANIFESTO

We are standing on the cusp of a revolution, a food revolution, one unprecedented since the dawn of farming 10,000 years ago.

Agriculture today is the largest single cause of biodiversity loss and emits more greenhouse gases than all our cars, planes and ships put together. Most of the damage is caused by livestock farming, which on its own covers 28% of the Earth's surface, more than all the world's forests combined.

The non-human living world is squeezed to the margins, and wild species have been decimated. By weight, just 4% of the world's mammals are wild, 36% are humans and 60% are our livestock.

But it no longer has to be this way. Game-changing innovations in precision fermentation and biotech now make a different future possible, one where we no longer have to cruelly exploit animals for food, and where the majority of the land currently used for livestock can be returned to nature, even as the world's population climbs towards 10 billion and the Global South emerges from poverty.

It's time to Reboot Food.

The four principles of rebooting food are:

1. Make it plant-based

Healthy, whole and varied plant-based foods should be at the centre of everything.

3. Use as little land and ocean as possible, rewild everything else

High yield, low impact farming must be prioritised to make as much space for nature as possible. Farmers should be paid to rewild the spared land.

2. Brew don't slaughter

Animal farming should be phased out and replaced by identical precision fermentation products wherever possible.

4. Open source everything to guarantee a just transition

The benefits of the food revolution should be shared with all, with new technologies made open source and corporate concentration actively mitigated.

Precision fermentation allows us to move from farming macroorganisms (cows, sheep, pigs) to farming microorganisms (yeasts and bacteria). Using genetics, we can programme these microorganisms to produce exactly the same proteins and fats we currently obtain from animals, powered by clean energy from solar, wind and nuclear. This technology is commercially proven and globally scalable, already producing 99% of insulin and 80% of rennet worldwide.

Protein from precision fermentation is up to 40,900 times more land efficient than beef, making it technically feasible to produce the entire world's protein on an area of land smaller than Greater London. Precision fermentation products can supplement a shift to plant-based diets, with everything from non-animal milk, cheese and ice cream to non-fish omega-3s. Many of these products have already reached the market in the United States, and could come to Europe soon. In essence, we are talking about a transition to farm-free foods for everything which is currently only available from livestock.

But this revolution won't happen by accident, and isn't inevitable. Although billions in venture capital funding is pouring into these new innovations, the scale and speed of the transition needs to be supercharged with public money and government support.

This manifesto calls for a dramatic shift in government support for food and agriculture, away from subsidising legacy animal industries and towards encouraging delicious and low-cost animal-free foods, while supporting a just transition for farmers and fisherfolk currently in these sectors.

To Reboot Food, governments must:

- 1. Invest 2.5% of GDP over 10 years into rebooting our food systems**
- 2. Stop subsidies for animal agriculture, pay farmers a land-based subsidy to rewild and sequester carbon instead**
- 3. Bring agriculture into the EU Emissions Trading Scheme (ETS) so emissions are capped and costed**
- 4. Subsidise plant-based food at the point of sale to encourage a mass market**
- 5. Implement a just transition for farming and fishing communities**
- 6. Set land use reduction and rewilding targets, suspend organic targets until yields match those of conventional agriculture**
- 7. Limit patents on food innovation to 10 years and discourage corporate control**
- 8. Legalise gene editing, genetic modification and other new breeding techniques**
- 9. Make sustainability labelling mandatory**
- 10. Ban advertising of land- and carbon-intensive animal-based foods**

We believe that these measures, when combined, will make the food revolution unstoppable and make nutritious and affordable diets accessible to all the world's people, while at the same time allowing an unprecedented regeneration of natural ecosystems on spared land. It is the single biggest thing we can do to stop and reverse the sixth mass extinction of biodiversity. And it is essential if we are to respect the Paris targets for tackling the climate emergency.

The situation is urgent and the time is now. **It's time to Reboot Food.**