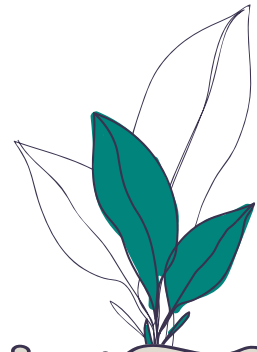


Achieving Climate Goals through Plant-Based Agriculture and Food



Executive summary

Without drastic reductions in greenhouse gas emissions (GHGs) in our food and agriculture, the goals of the Paris Agreement and the 1.5°C or 2°C climate reduction targets cannot be achieved. We must urgently **bring agriculture fully into all climate change policies** – and end “agricultural exceptions”.

We recommend the following three policy objectives:

Policy Ask 1: Consistent leadership from the Global North in the shift towards sustainable, fair, plant-based food systems

e.g. The Netherlands’ reduction of farmed animal numbers, Canada’s investment in plant protein and Portugal’s support for plant-based public sector food.

The Global North must lead

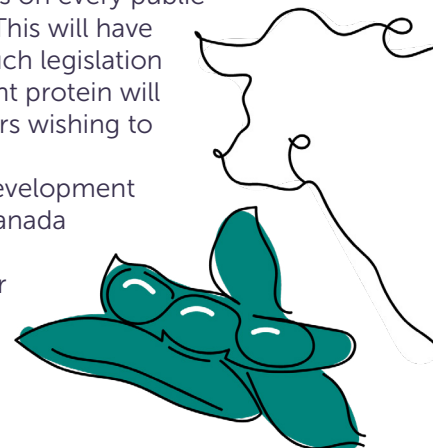
In the Global North, we have already put vastly more than our fair share of GHGs into the Earth’s atmosphere, including around 90% of the excess CO₂. We are also the wealthiest, and thus must cut our own GHG emissions enough to keep the world below the 1.5°C target.

This is why we call for consistent leadership from the Global North in the shift towards sustainable, fair, plant-based food systems. There are examples already in action in countries such as The Netherlands, Canada and Portugal.

In 2019, the courts in the Netherlands ruled their Government in breach of EU law, for not controlling nitrogen in vulnerable natural areas. In response, the Finance and Agriculture Ministry is considering visionary plans to reduce farmed animal numbers by 30%.

In 2017, Portugal passed legislation requiring plant-based and vegan-friendly meals on every public sector menu (e.g. schools, universities, hospitals, prisons and so on) in the country. This will have significant public health benefits. However, another major effect of implementing such legislation will be increasing the market for plant protein and other crops. Diets centred on plant protein will become more affordable to more people. This in turn will support and enable farmers wishing to make the transition to sustainable plant-based techniques.

Canada has invested in legume farming since the 1970s, including research and development of diversified cropping systems and the adoption of improved cultivars. The Pulse Canada organisation of farmers and exporters now has a ambitious “25 by 2025” strategy, to increase the value of their crops by getting 25% of pulse production into new, higher value markets and uses by 2025. In Canada, about 20% of arable land is now in crop rotations including legumes, whereas the figure is only about 1% across Europe. Meanwhile, Europe currently gets most of its protein-rich animal feed crops by importing soya beans from South America, driving deforestation of the Amazon rainforest.



Policy Ask 2: Invest in legume farming and plant-protein food supply chains:

research and develop nitrogen-fixing legume crops – to supply most protein foods, replace nitrogen fertilizers and enable the transition towards plant-based global agriculture, without any harm to human well-being.

Climate Policy needs agriculture to achieve Paris Agreement targets

Even if we stop fossil fuel emissions immediately, current trends in our global food systems will take us past the 1.5°C target, and threaten the 2°C target. Curtailing industrial animal agriculture is justified, necessary, and long overdue.

We support farmers, who produce food for us all. Climate change, public health, food poverty and the needs of animals mean we need to phase out the farming of animals. We call upon political leaders to urgently help land managers and food suppliers to transition to fairer, better, plant-based systems. We need co-ordinated improvement and investment in every aspect of our food systems, to meet our social, health and climate change goals.

Predominantly plant-based agriculture brings a range of benefits for health, the environment, biodiversity, animal well-being and the future habitability of Earth. We must transition in a just manner, in line with e.g. the Paris Agreement's preamble, the SDGs, and the International Labour Organisation guidelines. Farmers, food workers, and wider communities – like coal miners – need government support in this process. A just transition will work toward sound investments, social dialogue, research-based impact assessments, social protection and economic diversification.

Policy Ask 3: Enact Food Sustainability laws in all countries of the Global North in the next five years, embedding commitments such as the Paris Agreement, and the Sustainable Development Goals (SDGs)

with timelines to climate justice, including binding steps to reduce animal farming. This will help to ensure that we take responsibility in the Global North for the carbon footprint of our imports.

Global North food sustainability laws

All countries of the Global North urgently need Food Sustainability laws enacted. These must embed commitments such as the Paris Agreement, and the Sustainable Development Goals (SDGs), as well as timelines to climate justice, with binding steps to reduce animal farming. These national legal frameworks should be in place by 2026, and must take responsibility for the carbon footprint of food imports.

Food Sustainability laws must be backed by legally binding targets and new governance mechanisms. This will recalibrate our relationships with food production and consumption for social, cultural and planetary well-being.

Our vision for a fairer food system

Food is vital to everyone. How each one of us gets the right food is the shared concern of us all, including farmers, food supply workers and politicians. Food and farming policy needs social values embedded within it, and coherent links with economic, health and environment policy across all government and policy-making bodies.

Food and farming policy must improve the experiences of farmers and food producers. They respect the complexity of nature and food; they understand the nuances needed for fair, sustainable

policies. In our recent *Planting Value in our Food System* report, we drew upon extensive interviews with people working across food and farming, to present an evidence-based, realistic plan for fair, sustainable food. We found extensive common ground around human health, food sustainability and affordability, social justice issues and our relationships with non-human animals.

Animals are everywhere in our food systems– under, around and above, in the natural environment, soils, air and waters, as well as in our fields and sheds. We need to fully perceive and honour these facts and these animals.

The farming of animals has become the most polluting and resource-intensive way to produce food, just as coal is the most polluting fuel. Transitioning toward plant-based food and farming is thus long overdue. This transition will significantly lower climate change risks, by significantly reducing emissions of nitrous oxide (N₂O), methane (CH₄), and carbon dioxide (CO₂), and enabling increased tree cover. We will also achieve more responsible use of resources and hence, more sustainable food production.

Agriculture is a harmful omission from climate policy

In the Paris Agreement, 196 countries pledge to limit global warming to below 2°C, ideally 1.5°C, compared to pre-industrial levels. Decent human life and the flourishing of animals and nature depend on total reductions of GHG emissions of 45% from 2010 to 2030 compared to 2010 (IPCC 2018). But the UN Climate Change Nationally Determined Contributions (NDC) Synthesis Report (2021) shows that existing NDCs reduce global emissions by barely 1% from 2010 to 2030. Global North countries are failing their duty to properly include agriculture in their NDCs, causing major global risks.

Animal agriculture's contributions to climate change

Industrial animal farming causes a large share of our GHGs:

- **Carbon dioxide (CO₂):** CO₂ is produced e.g. by building, maintaining, and heating animal housing, and the fossil fueled transport network for: chemical fertilizers for animal feed; the feed itself; animals from breeding to rearing to finishing farms to slaughterhouse; and temperature-controlled animal products until they are finally consumed. Plant farmers also use specialist housing, and transport, process, and store produce. But per calorie of food from crop farming, CO₂ emissions tend to be significantly lower than animal farming.
- **Nitrogen (N):** Agriculture in essence produces edible nitrogen, added through the energy-intensive Haber-Bosch process using fossil fuels, or as animal manures. Vast amounts of nitrogen are lost in farming through over-application, causing pollution including N₂O emissions. N₂O has a global warming potential 265–298 times that of CO₂. Diets heavy in animal protein add to nitrogen losses, as many animals are fed arable crops. We can get more protein, with less nitrogen loss, by eating the crops ourselves.
- **Methane (CH₄):** Our animal agriculture releases as much CH₄ (32%) as fossil fuels, mainly from manure, and ruminants like cattle and sheep. The weight of all cattle on the planet, is now over 60% higher than the combined weight of humans. On a 20 year timescale,

the Global Warming Potential (GWP) of CH₄ is over 80 times that of CO₂. But methane does not remain in the atmosphere for as long as CO₂, so urgently cutting CH₄ emissions can 'buy time' to achieve our climate goals.

Other harms of animal agriculture

Industrial animal agriculture, and diets heavy in animal protein in the Global North are key drivers of:

- **Eco-system degradation:** Use more natural resources; pollute more through manure and agrochemicals; burden ecosystems more due to grazing and feed crops, like soy, on deforested land; destroy flood barriers; reduce space for new tree cover, and thus, reduce carbon capture.
- **Food insecurity:** Disproportionally increase health risks posed by human hunger and food insecurity, as they use more natural resources.
- **Harms to human health:** Zoonotic diseases such as Covid-19 emerge frequently in the cramped conditions of industrial animal farming. Animal farming causes over 40% of deforestation, increasing our contact with free-living animals and their diseases. As antimicrobial treatments are widely used preventatively and to promote animal growth, resistant diseases increase in humans.

Towards a sustainable agriculture

At the international, state, local, or community level, we must include food and agriculture in climate politics and address the risks for society, farmers, consumers, and future generations. To ensure a liveable planet, Global North countries with high per capita agricultural emissions – including the United Kingdom, the 27 nations of the European Union, Australia, New Zealand, Canada and the USA – must cut agriculture emissions drastically. A just transition towards a predominantly plant-based agricultural system will achieve these cuts. We all need agriculture and food systems which improve our health and working conditions, our society and natural environment. We need a Great Food Transformation. What we are proposing is not a compromise: it is a better way of life for all.

Supporting evidence available:
email policy@vegansociety.com to request this.
Go online: plantingvalueinfood.org to read more.



Contact

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**PLANTING
VALUE IN THE
FOOD SYSTEM**

