

DENMARK'S PLANT-BASED FOODS PLAN: KEY ELEMENTS



Introduction

In October last year, Denmark published the world's first National Action Plan for Plant-Based Foods. The programme puts forth a roadmap to radically increase the proportion of plant-based foods in the national diet, with a view to cutting the country's carbon emissions, improving health outcomes for ordinary Danes, and creating economic opportunities for the country's food production sectors in a globally-growing industry.

The term 'plant-based foods' covers all foods derived from plants: leaves, flowers, shoots, seeds and roots as well as edible fungi and nutritious extracts of microorganisms such as yeasts and algae – everything from grains and carrots to seaweed and hi-tech mycoprotein.

Encouraging plant-rich diets has enormous potential benefits. Not only can the Danish state expect to save up to £1.3 billion in health expenditure, there are massive environmental benefits – with national CO2 emissions projected to reduce by 31 – 45%.

Furthermore, according to projections from the OECD, FAO, and the European Commission, demand for plant-based foods is set to continue to rise worldwide – so much so that according to AgriFoodTure, only a small share of the growing global market, roughly 1-3%, would correspond to a market value of between £500m and £1.5bn and the creation of up to 27,000 jobs in the sector.

Strengthening plant-based foods

The University of Copenhagen has found that there are 15 plant-based protein crops suitable for cultivation in Denmark. The Danish Government is therefore focused on making Denmark a global leader to the plant-based transition. Crucially, the National Action Plan intends to:

- *Strengthen the plant-based value chain, with increased coherence between individual links*
- *Sell more plant-based foods abroad – building on the £3.6bn worth of plant-based foods that were sold in Danish retail in 2021*
- *Use Denmark's soft power and diplomatic channels to promote the plant-based sector's export opportunities and development alongside a public-private partnership with Food Nation*
- *Subsidise plant-based produce and support research and development*

A strong plant-based value chain

The plant-based value chain is facing several challenges. As a result, the Danish Government has undertaken a holistic approach – supporting initiatives at all links in the value chain. This includes:

- ***The Plant-based Food Grant:*** *The Plant Grant, empowered to spend approximately £9.5m per year, provides grants for plant breeding and cultivation, processing, sales promotion, education and knowledge dissemination. The grants board develops objectives, strategies and annual action plans for how best to support the development of the sector.*
- ***Network for plant-based foods:*** *Supporting the creation of the Plant Hub, a collection of unified networks, companies, and knowledge institutions that will work to solve issues in the sector – bottlenecks, regulatory barriers, start-up market entry, and the development of new, tasty, healthy plant-based foods.*
- ***Help for plant-based startups:*** *Inno booster (part of the Innovation Fund) invests in knowledge-based development projects in small and medium-sized Danish companies, as well as entrepreneurial companies. Inno booster has already helped finance companies that have gone on to develop new types of plant-based food and edible seaweed. Additionally, EIFO (Danish Export and Investment Fund) helps, among other things, first-time farmers establish themselves, as well as healthy businesses that need long-term, risk-free financing. Innovation Centre Denmark also helps Danish start-ups gain access to both capital and partners and helps them test and adapt their solution and business model in an international context.*

Healthy, tasty plant-based foods for all

A central aim of the Action Plan is to make space for plant-rich diets, with more foods on supermarket shelves, kitchen tables, and restaurants. While shifting attitudes takes time, a considered, nudge-based approach can help instil new habits. Crucially, people need to learn how to cook and prepare plant-based foods – and be given opportunities to sample them.

- **Greener Public Food Agreement:** *SKI, the state-owned public procurement company, has set new green standards for food and catering contractors to the Government. Contractors must abide by new requirements on sustainability and seasonality, along with commitments to ensure the provision of 100% plant-based options in public kitchens, and one or more meat-free days each week. This work is backed up by updated Dietary Guidelines, with a greater emphasis on the health benefits of a plant-rich diet, as well as organic subsidies. Denmark has created a pot of £6m to subsidise professional kitchens switching to organic produce – including the cost of training staff in plant-based preparation and sustainable practices.*
- **EU School Scheme:** *There are plans to increase the amount of fruit and vegetables consumed by Danish pupils by up to 30% under the grant scheme.*
- **Education:** *It takes continuing education to change an ingrained culinary and food culture that places meat products at the centre of the national cuisine. As such the Danish Government has allocated funds for a professional committee on gastronomic education and green chef training, working with the Ministry of Education to do so. Money has also been allocated to develop a diploma training module for nutrition professionals. The labour market education system (AMU) now offers courses aimed at kitchen professionals that cover plant-rich diets – Sustainability in Large Kitchens is one example. Finally, the University of Copenhagen has developed a specialisation in plant-based foods: the MSc in Food Science and Technology.*

Export and internationalisation efforts

The increasing interest in plant-based foods worldwide has created significant opportunity to establish a strong export market. Although competition is fierce, Denmark has observed steady growth in export revenues across a range of foods – including enzymes and additives, beverages, oats, and legumes.

Denmark has launched an Export Action Plan for the Danish Food Cluster, which highlights the growth potential of plant-based food, and seeks to support those businesses by creating and maintaining market access and identifying customers and partners in priority markets. The Ministry of Food, Agriculture and Fisheries is supporting companies' access to exports by negotiating new and expanded market access with third countries and certifying actual exports.

Export opportunities for plant-based foods are also being promoted through Food Nation, an initiative which endeavours to increase the knowledge of Denmark's brands, visits for foreign stakeholders, participation in export promotion, and conferences.

- **Innovation Centre Denmark:** *The ICDK provides Danish knowledge institutions and companies with access to technology, partners and funding in the countries where the centres are located. Innovation Centres – located in South Korea, India, China, Israel, Germany and the United States – are active in this. In the US, bio-solutions researchers are developing alternative plant proteins. In Israel, discussions are underway with AgriFoodTure on climate and environmentally friendly food production, while in South Korea Danish and Korean researchers are collaborating on the development and possible uses of seaweed.*
- **Innovation in Denmark:** *An organisation that attracts foreign companies and investments in plant-based foods for the purpose of bringing new knowledge, innovation and technology to Denmark.*

Production and processing efforts

At present, the Danish government is working hard to shorten the regulatory approval process for new ingredients and novel foods – without compromising food safety.

- **Forum for the Ingredients of the Future:** *A discussion forum to provide the Government with necessary insight into where it can intervene to reduce barriers to innovation, advocate for reforms to EU regulation, and allow for the development of new crops and ingredients*
- **Bio-solutions:** *Working with the consortium Lighthouse Zealand in a public-private partnership, Denmark is funding research into developing and refining plant-based food ingredients for production at scale. Using Denmark's CAP budget, resources have also been allocated for plant-based food production and processing.*

A good food base

Agriculture takes up 60% of Denmark's total land area, of which 18% is used for plant-based foods. One key ambition is for plant-based food producers to primarily rely on crops from Danish farmers. The Government's Strategy for Organic Farming aims to ensure that there are sufficient nutrient sources to increase plant-based food production – alongside a programme of targeted plant breeding to develop climate-friendly food varieties best suited to Danish environmental conditions. Between 2023 and 2027, more funds for agriculture will subsidise farmers to implement green initiatives, including:

- **Eco-scheme varied plant production:** *£65m to support farms that use increased crop diversification and grow a minimum of specific rotation crops.*
- **Eco-scheme organic land support:** *£406m to expand organic land, with the aim of doubling it by 2030*
- **Grass as a plant-based protein source:** *£29m for green biorefining, which covers methods for exploiting protein from Danish pasture and clover fields. These efforts can thereby reduce dependence on soya imports.*
- **Strategy for agricultural plant-genetic resources:** *£112,000 for research to use a diverse plant genetic material to develop and adapt food and food ingredients.*
- **Commercial seaweed production:** *£576,000 allocation to developing Danish commercial seaweed production, which has a low climate footprint and can be grown both in sea- and land-based facilities.*

Research, innovation, and development

Turning Denmark into a world leader in plant-based foods will require ambitious research into the plant-based value chain, and to translate such research into concrete solutions in Danish companies. The Danish Government is therefore investing in research into plant-based food production.

- **Green Development and Demonstration Programme (GUDP):** Supports innovative projects that promote green and economically sustainable development throughout the food and non-food sectors. Projects include developing new technologies and methods to produce plant-based foods and food ingredients, such as fava beans, hemp, oyster mushrooms and seaweed.
- **Agricultural Funds:** Thirteen funds, six of which support projects related to crop production. They support research, advice, disease prevention and marketing promotion with the aim of contributing to the sectors' development and improving Danish competitiveness.
- **The Innovation Fund and AgriFoodTure:** £899m divided between four green missions, funding projects focused on environment-friendly agriculture and food production.
- **Food and Bio Cluster:** A share of 18m a year for the Food & Bio Cluster knowledge centre, for private companies and research institutions focusing on plant-based foods.
- **Approved Technological Service Institutes:** £146m for Approved Technological Service Institutes (GTS), private, non-profit institutions whose purpose is to build and circulate technological skills to Danish business, to implement initiatives in the areas of sustainable food, an industrial bio-economy, and climate and environmentally efficient agriculture.
- **PlantPro:** £1.5m to PlantPro, which researches how to promote plant-rich diets.
- **Government research:** Denmark will launch analyses on the shift to increased plant production, mapping of consumer behaviour and preferences in support of the dietary guidelines, and nutrition research for the sick and elderly. Denmark will also continue to fund research in low-trophic aquaculture with a view to strengthening commercial cultivation of seaweed for human consumption.
- **The Research Reserve:** The Action Plan has been granted £36m for broader thematic publications in the fields of green research, technology development and innovation in seven areas, including projects on agriculture and food production, the environment and the circular economy, as well as sustainable behaviour and societal impacts.

For more information, please visit:

- *Ministry of Food, Agriculture, and Fishers of Denmark: Action Plan on Plant-Based Foods:*
<https://en.fvm.dk/news-and-contact/focus-on/action-plan-on-plant-based-foods>
- *Ministry of Food, Agriculture, and Fishers of Denmark: Multi-year strategy for the Plant-Based Food Grant:*
<https://plantefonden.lbst.dk/the-plant-based-food-grant>

About the Vegetarian Society

The Vegetarian Society is the UK's original and leading voice for the vegetarian and vegan movement. Our aim is to inspire and support everyone to move towards more sustainable and cruelty-free choices in their lives because kindness counts.

Through our education and engagement programmes to campaigning, policy work and product accreditation, we strive for a world without animal cruelty.

We do this by using our knowledge and expertise to work across our membership, communities, business, government, and likeminded organisations to help change behaviour, drive innovation and expand food choice across the industry.

In doing so we continue to build on our 175+ year legacy to grow a community driven by a collective desire to secure a kinder, healthier and more sustainable future for every life on Earth.

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