



VÄXTBASERAT
SVERIGE

Plant-based - For a New Era

Växtbaserat Sverige's/
Plant-food Sweden's
Industry Report

2024

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Summary



A troubling global situation, with several ongoing military conflicts combined with other cross-border challenges, continues to make food security issues concerning both production and consumption affect people's everyday lives with knock-on effects for political decision makers. On top of the recent economic downturn and sharp rises in inflation hitting people's wallets, there are three major challenges impacting the food industry:

- War
- Climate change
- Public health

Legislative developments at both national and European levels have placed greater demands on the agricultural sector to ensure it transitions in order to lower its environmental and climate footprint, which has produced widespread dissatisfaction amongst farmers across Europe. In an opinion piece on food security published in February 2024

to coincide with the presentation of the government inquiry on the same theme, the government-appointed head of inquiry Ingrid Petersson wrote that we must be prepared to eat less and worse in the event of war or other crises (1).

Against such a backdrop, it would be easy to think that the future of the food industry looks bleak, yet there exist good opportunities to rethink and think anew on the pressing issues of curbing global warming, ensuring sufficient food security and resilience levels, and improving public health. It need not actually be the case that we should have to eat either less or poorer in such a situation, however we do need to eat differently and adjust our consumption patterns. There is no single solution, however several factors indicate that a significant part of the solution to the above-mentioned challenges is to increase both the production and consumption of plant-based foods.

This report from Växtbaserat Sverige describes how more plant-based foods can contribute both to reducing Sweden's food supply vulnerabilities and increasing its security of supply, something additionally required by Sweden's recent NATO accession. If a larger proportion of the crops grown in Sweden were used for food for human consumption as opposed to animal feed, we could achieve the above demands whilst lessening our reliance on imports. Through well-considered measures on the political level and investments in developing skills and knowledge, we can support farmers in transitioning their businesses to produce more crops for human consumption, which would strengthen the country's security of supply and reduce the agricultural sector's climate and environmental footprint. Furthermore, consuming more plant-based food is in line with the Nordic Nutrition Recommendations (NNR), which were updated in 2023 and urge us to reduce our intake of red meats both for better public health and tackling climate change.



About Växtbaserat Sverige



Växtbaserat Sverige is an industry association representing companies operating in the food supply chain. Since 2018, we have been working to promote the greater production and consumption of plant-based foods. Our members include both small start-ups and large international companies.

Our members are:

- Alpro/Danone
- DUG/Veg of Lund
- LiveKindly Collective/Oumph!
- Nestlé/Hälsans Kök
- Nordic Seafarm
- Oatly
- Orkla Foods Sverige
- Proteinish
- Stockeld Dreamery



The global market for plant-based foods and beverages

Segment	2024	2030
Plant-based proteins	26,1 miljarder USD	65,2 miljarder USD
Plant-based dairy	18,9 miljarder USD	32,6 miljarder USD
Total market for plant-based foods and beverages	54,8 miljarder USD	110,3 miljarder USD

(2)

According to a market analysis carried out by Ernst & Young, the global market value for plant-based food and beverages is forecast to hit USD 54.8 billion in 2024 and USD 110.3 billion by 2030. The different product segments have varying growth rates, and the overall market also includes plant-based snacks and pastries. In addition, global statistics company Statista forecasts an even higher global market value of USD 147 billion for the plant-based sector by 2030. This would mean the market would have increased fivefold in just 10 years.

The food industry remains in the eye of a global storm

The past five years have been marked by a number of global crises, all of which have affected the global food system; namely the 2018 drought, the pandemic, Russia's ongoing war in Ukraine, and the recent steep inflationary pressures. Now, moreover, global public health issues are coming to the fore.

After some two decades of increasing globalisation and free trade in which access to food in Western countries was viewed as unproblematic, least of all in Sweden, we now find ourselves in a situation where access to food and raw foodstuffs can no longer be taken for granted. Food production and food security now top the political agenda. Furthermore, the global crises mentioned above have reified once more the original purpose of the EU's Common Agricultural Policy (CAP) (3).

At the EU level, during the current parliamentary term and within the frameworks of the Green Deal (4), Farm to Fork Strategy (5) and the European Climate Law (6) regulatory and policy proposals have been put forward in the food area which have a bearing on both production methods and consumption habits. However, several of the decisions and proposals, combined with various national decisions, have led to dissatisfaction and farmers protesting in several Member States. The essence of their disgruntlement lies in their operations' low profit margins combined with the heavy administrative burden of implementing extra measures aimed at combating climate change such as emission reduction targets and, additionally, the recent high prices for fuel and fertilizers following Russia's war in Ukraine.



Many of the protesting farmers have argued that decisions taken have placed an unreasonable pressure on them due to the introduction of far too many rules during a short time period, which has resulted in them being unable to comply without incurring great costs and consequences for their own operations. Most farmers understand the importance of sustainable farming practices as well as their role in mitigating climate change in a broader perspective, however they feel overwhelmed by the current systems (7). As a result of the protests this spring, EU Member States recently backed a European Commission proposal to ease some of the announced green measures affecting the agricultural sector (8). The European Parliament fast-tracked the proposal and in late April decided to allow farmers greater flexibility and more exemptions from, for example, requirements for greater crop rotation and diversification and to exempt smaller farms (under ten hectares) from checks and penalties should they not fully comply with some of the requirements (9).

*"Who would be foolish enough to delegate responsibility for their food?
We have a duty not to allow food dependencies to set in".
Emanuel Macon, Sorbonnetal 25th of April 2024*

This recent political turmoil has led to concerns that decision makers are choosing to pursue a short-term policy instead of prioritising the long-term approach under the CAP. Accordingly, agricultural and climate policy issues will be high on the agenda of both the next European Commission and European Parliament. This is evidenced by French President Emmanuel Macron's policy speech on EU cooperation in April 2024, which highlighted food security, together with ensuring sufficient energy supply, to be of particular strategic importance for the EU in the forthcoming years (10). Decision makers will need to weigh carefully short-term measures to ease farmers' ability to ensure food secure supplies of food against longer-term, yet critical, measures aimed at reducing emissions from the agriculture sector and finding the right tools to facilitate the green transition.





Sweden should invest in plant-based foods

More plant-based food increases resilience and strengthens security of supply

Recent international wars and conflicts have brought the complexity of the food supply chain into sharp focus, which has led to issues of food resilience and security of supply rising to the top of the political agenda. In addition, 2023 was a tough year for Sweden's farmers. An early summer drought followed by heavy rains in late summer contributed to the grain harvest recording a yield 27% below average (11). Meanwhile, Sweden's recent NATO entry has further underscored the importance of ensuring the stable, secure supply of food, as outlined in Article 3 of the NATO Treaty (12) which requires members' resilience and civil preparedness in terms of, inter alia, the supply of food, water, and energy. It states that parties:

"... separately and jointly, by means of continuous and effective self-help and mutual aid, will maintain and develop their individual and collective capacity to resist armed attack".

This may place new demands on ensuring the secure supply of food, water, energy, and transport. Even before Sweden decided to apply for NATO membership as a response to Russia's war in Ukraine, the government then in office set up the inquiry Food Preparedness for a New Era (13). In February 2024, head of the inquiry Ingrid Peterson presented its key proposals and, in doing so, highlighted, inter alia, the Versailles declaration (14) on food, which states that **depending on imports for essential foods and agricultural inputs should be reduced, and one particular means of achieving this is to increase the EU's production of plant-based proteins** (15).

The inquiry additionally underlined the importance of clarifying municipalities' responsibilities, protecting agricultural land, providing emergency storage facilities, and private persons' responsibility to store at least one week's worth of food at home. The fact that many plant-based products' shelf life is long, which makes including them in various emergency stocks valuable, has been noted by the Swedish Civil Contingencies Agency (MSB) and the Swedish University of Agricultural Sciences (SLU), amongst others, as highlighted in a joint report from 2018 (16). This applies to private individuals' emergency storages as well as larger scale food storage.

Notwithstanding the above, the best means of securing Sweden's food supply is to ensure the country has robust, competitive companies in the food supply chain and a well-functioning EU internal market. It is important to bear in mind that Sweden's food resilience can not only be strengthened by building up emergency stocks and focusing on self-sufficiency, as the food supply chain is global in nature and much more complex. In principle, Sweden has insufficient domestic production of inputs such as fuel, plant protection products, fertilizers and, to an extent, seeds. We, in Sweden, need to view ourselves as a natural part of the EU's internal market and nurture and safeguard our access to it. Properly designed, the CAP, together with the free movement of goods in the internal market, can help to increase Sweden's security of food supply.

Producing more plant-based proteins and crops for human consumption reduces food security vulnerabilities

Producing more plant-based proteins and crops for human consumption reduces food security vulnerabilities.

The important role that plant-based foods can play in strengthening food supply resilience must be highlighted and promoted. Greater production and consumption of plant-based foods lowers vulnerabilities as arable land is used more efficiently when we consume the food and drink grown, instead of it being used as animal feed. Take the global production of soy for example; between 75 and 80 per cent of it goes to animal feed and only 6 per cent to direct human consumption. The remainder is used for producing biofuels, amongst other things (17). Similarly, the EU uses the same amount of wheat for animal feed as Russia and Ukraine export together, (42.7 billion tonnes annually). If the land area was instead used to grow, for example, oats and legumes for producing plant-based foods, overall food production would be more efficient.

According to the Good Food Institute, a broader protein shift could make land use more efficient by up to 95 per cent (18). Sweden has decent prerequisites in place to increase its production of crops which are better suited to Swedish conditions. MSB and SLU's above-mentioned joint report drew attention to this perspective back in 2018 (19), whilst also highlighting the various vulnerabilities and solutions needed to ensure greater resilience of Swedish agriculture. The report pinpoints the importance of crop production for human consumption as a central tenet of the solution.

It is, therefore, of the utmost importance that greater crop production for human consumption is considered by the National Food Agency and the Swedish Board of Agriculture in their ongoing work in drawing up a coherent dependency analysis in the cereals and legumes sectors, as well as from primary to consumer (20).



Climate benefits

"The policy instruments for reducing greenhouse gas emissions from this sector are very weak. However, there is potential for lower emissions from the agricultural sector through, for example, higher productivity and better animal health, precision farming, and changing the production mix to entail more plant-based production and less meat production."

The Swedish Climate Policy Council, 21 March 2024

Greater production and consumption of plant-based foods is not only important for ensuring a higher degree of food security but can, in addition, make a positive contribution to reducing the food sector's impact on the climate whilst providing public health benefits. Producing and consuming more plant-based foods can achieve positives in terms of reducing greenhouse gas emissions from the food and agricultural sectors. At present, the agricultural sector is responsible for approximately a third of all global greenhouse gas emissions (22). Similarly, in Sweden, around a third of all Swedish households' emissions, likewise, come from food.

Animal products make up just under a fifth of the world's total calorie intake, whilst animals themselves account for more than 60 per cent of the food sector's impact on the climate (which is more than the entire transport sector) and use up over 80 per cent of cultivated land area (23).



Producing plant-based foods is significantly more resource-efficient, which is crucial considering research clearly indicates most planetary boundaries have already been crossed and that the food of the future must be produced on existing cultivated land in order to achieve both the climate and biodiversity targets set (24). As such, our choices, in terms of both food production and consumption, have a major impact on the climate and the environment (25). The IPCC's latest summary report (2023) clearly shows that the time window for action is fast shrinking and that the world has only seven years to halve emissions relative to 2019 levels (26). Essential to solving this, according to the IPCC, is to reduce methane emissions from agriculture and more carbon capture through, for example, plough-free farming. Future investments in competitive, plant-based agriculture should, therefore, take into account the importance of carbon capture and other regenerative production methods.

Politicians and decision makers are increasingly understanding and considering food production and consumption's impact on climate change and the environment, as reflected in, inter alia, recent EU policy developments. For example, the European Commission has noted that **transitioning to a more plant-based diet which consists of less red and processed meat and more fruit and vegetables will not only reduce the risk of life-threatening diseases, but also the food system's impact on the climate and environment.**



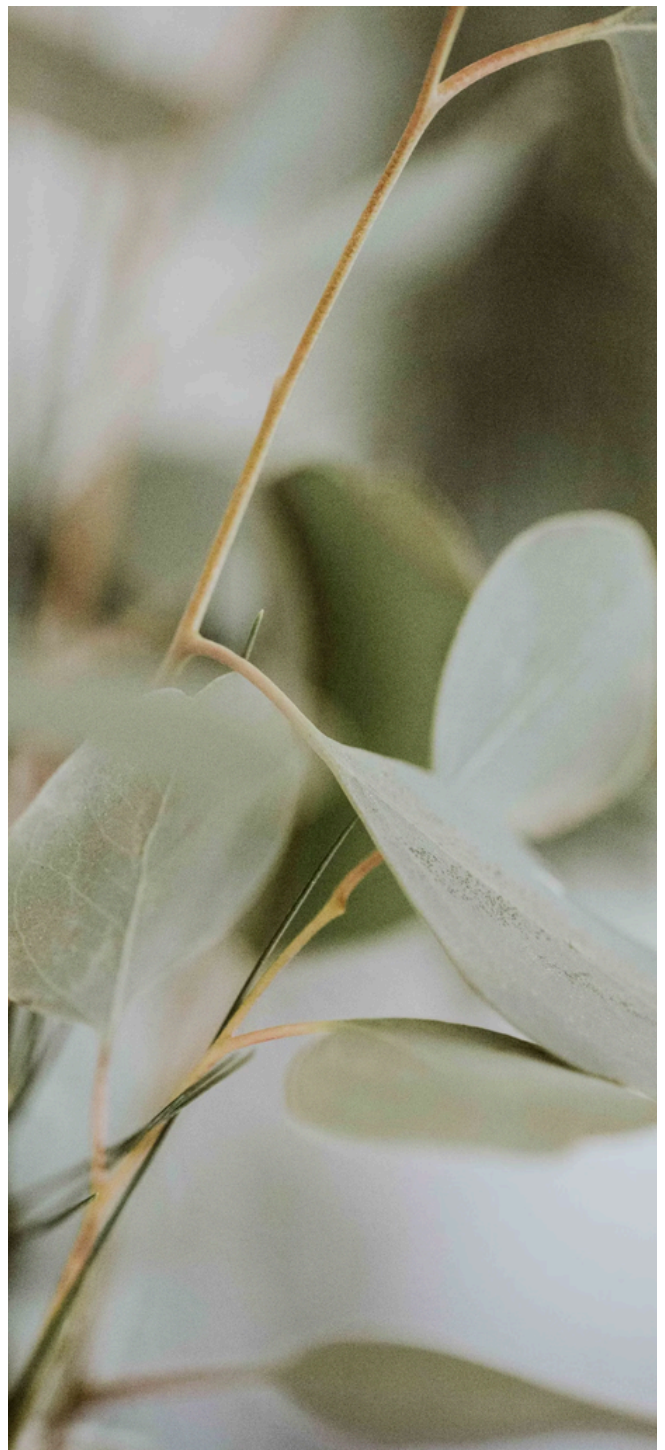


The EU's Farm to Fork Strategy and the European Commission's report on food security both highlight the need for a shift to more sustainable consumption patterns and that a shift to a more plant-based diet would not only improve public health but also reduce the current food system's environmental burden (27). The European Food Safety Authority's (EFSA) strategic recommendations on sustainable food systems, likewise, highlight how more plant-based diets can benefit both human and the planet's health, and that consuming fewer meat and dairy products can potentially lead to the greatest environmental and sustainability benefits. In addition, the recommendations draw attention to the need to amend public policies that bolster food demand and public investments, such as agricultural subsidies, to achieve public health objectives (28).

Unfortunately, Sweden is a step behind both the EU and various individual countries such as Denmark, the Netherlands, Israel, and Singapore in terms of policy developments. In its latest review of the government's climate policy, the Swedish Climate Policy Council criticised the government's policy instruments aimed at reducing the agricultural sector's emissions as weak. The council pointed to the sector's 6.5 million tonnes of carbon dioxide emissions in 2022, which predominantly consisted of emissions of methane from animal digestion, methane and nitrous oxide from manure, and nitrous oxide and carbon dioxide from agricultural land.

The council underscored the difficulty in tackling greenhouse gas emissions from the agricultural sector compared to other sectors, as the impact on the climate of ruminants and fertilizer use cannot be completely eliminated using current technologies. The council raised the importance of transitioning from animal to plant-based production:

"However, there is potential for lower emissions from the agricultural sector through, for example, higher productivity and better animal health, precision farming, and changing the production mix to entail more plant-based production and less meat production". (29)



Public health benefits

Obesity has become one of the greatest public health challenges of our time as it increases the risk of developing cardiovascular disease, type 2 diabetes, and several types of cancer. At present, the most common causes of death for both men and women are cardiovascular disease, followed by cancer[1]. In Sweden, for example, over half of the current adult population is either overweight or obese (31).

Today, a large cross-section of Swedish society consume too few vegetables, fruits, nuts, seeds, fibre, and whole grains (32,33). There is clear scientific evidence that fibre has a positive effect on tackling common health complications such as high blood pressure, cardiovascular disease, type-2 diabetes, and certain forms of cancer (34). Studies show that the high consumption of foods based on fibre-rich raw materials such as grains, legumes, and vegetables can contribute to better public health (35). It is, no doubt, positive that these findings impact nutritional recommendations and dietary guidelines, including the Swedish National Food Agency's updated Food Circle, which recommends people increase their intake of plant-based foods. For example, fortified oat drink and plant-based yogurt are highlighted as nutritionally equal to cow's milk/yogurt (36).

The recently revised Nordic Nutrition Recommendations, which have now incorporated a climate and environmental perspective,

recommend people transition to more plant-based diets (37). For example, the NNR Committee now recommends people eat no more than 350 grammes of red meat and charcuterie per week, compared to the previous dietary guidelines of 500 grammes per week (38).

“Overall, we recommend a predominantly plant-based diet rich in vegetables, fruits, berries, pulses, potatoes and whole grains, ample amounts of fish and nuts, moderate intake of low fat dairy products, limited intake of red meat and poultry, and minimal intake of processed meat, alcohol, and processed foods containing high amounts of added fats, salt and sugar.”(39)

Individuals choosing to change their diets for health reasons is more effective and cheaper than if they were to begin a treatment programme with expensive drugs, such as the recently launched weight loss pills, or allowing them to suffer lifestyle-related diseases that are costly for society in terms of treatments and reduced income from work.



Better conditions for encouraging healthy eating

The Public Health Agency of Sweden and the National Food Agency have submitted their final report on sustainable and healthy food consumption. The authorities note that society's current food consumption is unsustainable and current eating habits increase the risk of people developing diseases such as diabetes, obesity, cardiovascular disease, and various forms of cancer. To reverse this negative trend, they propose introducing national goals and focus areas to support the public health and sustainability work being undertaken by government agencies, regions, municipalities, and the business community. The report proposes ix sub-goals, which aim to change society's food consumption by 2035:

- Consumption of legumes, vegetables, root vegetables, fruit, and berries to increase by 50 per cent by 2035 compared to 2021.
- Consumption of whole grains to increase by 100 per cent by 2035 compared to 2010.
- Consumption of fish and shellfish to increase by 20 per cent by 2035 compared to 2019.
- Consumption of energy-dense and/or low-nutrition food to decrease by 50 per cent by 2035 compared to 2021.
- Consumption of meat to decrease by 30 per cent by 2035 compared to 2021.
- Consumption of salt to decrease by 20 per cent by 2035 compared to 2018.
- Goals and sub-goals should guide government agencies, regions and municipalities, the business community, and civil society's public health and sustainability work.

These recommendations, namely that we should eat a mostly plant-based diet, are in line with NNR's previous recommendations.

The authorities highlight the importance of plant-based foods in benefiting public health and tackling climate change.

"Eating healthily and sustainably with regard to the climate and environment often go hand in hand. Sustainable, healthy food consumption entails low-to-moderate amounts of meat and animal products and a higher proportion of plant-based foods than current, typical diets. In addition, if you reduce the consumption of low-nutrient (and possibly energy-dense) food and reduce the total consumption of food, the impact on the climate can be lessened by 20–70 per cent. In addition, changing food consumption habits has been shown to be one of the most cost-effective ways for high-income countries to limit their climate emissions."(40)



Lower economic development affects public health

Finances and livelihoods are both key prerequisites for good health. When personal finances are under strain, price becomes the critical factor in consumers' choices.[1] Less spending power affects the ability to maintain healthy living habits and, by extension, people's health (42). A recent Swedish National Food Agency report revealed that consumers are buying less fruit and fewer fresh vegetables, vegan drinks, and vegan products compared to previously. If consumers eat less fruit and fewer vegetables, this can lead to negative public health consequences in the long run (43).



The food industry has a major role to play in public health efforts. Despite the fact that the links are well known between, for example, excessive intake of red meats such as beef, pork, lamb, and sausages and a higher risk of developing colorectal cancer, there are still many regulations in place that distort the competition between animal and plant-based products. These include various forms of subsidies including the EU's school milk subsidy, which only covers traditional dairy milk, and rules on vitamin and mineral fortification among other organic products. A recent WWF survey revealed that three-quarters of respondents believe that MEPs should work to lower the cost of sustainable and healthy food, with 62 per cent responding they would, with all other factors being equal, be more likely to vote for a candidate who actively works to make sustainable and healthy food more affordable. Three in every five consumers would additionally like to see sustainable food become cheaper and more accessible (44).

The future is plant-based – consumers are leading the way

Sweden is a relatively mature market for plant-based food and beverages, and Swedish consumers are amongst the highest consumers of plant-based foods per capita in Europe. Plant-based milk alternatives is a category that stood out in 2022, followed by plant-based alternatives to meat and cheese (45).

Consumer-driven transition

In Sweden, young people are a strong consumer group for plant-based foods. The Youth Barometer's latest survey reveals that, today, young people in Sweden view vegetarian diets as mainstream (46). Through 2023 and early 2024, we have additionally been able to see several indications that ever more consumers are testing plant-based alternatives. According to Axfood's latest Vegobarometer, ever more consumers who do not classify themselves as either vegan or vegetarian are now choosing plant-based diets to a greater extent.

According to the Vegobarometer, 86 per cent of the Swedish population eats vegetarian food at some point, 22 per cent eats vegetarian food one day a week and among young people, almost 75 per cent eat vegetarian meals at least once a week, which shows an increase from previous surveys. The current general trend among Swedes is a desire to vary their diets and an interest in testing new vegetarian alternatives on the market (47). Recently launched "hybrid products", i.e. traditional animal-based products where animal- and plant-based proteins are mixed, have proven successful, such as Orkla/Felix's meatballs with protein from Swedish-grown peas as well as Swedish beef (48), ICA's newly launched Hushållsfärs, (49) and Garant's nöt & grönt (50). Many consumers point to simplicity as an important factor in the products' popularity and this demonstrates households' willingness to incorporate plant-based ingredients when it does not involve significantly changing their eating habits.

The market appears to expect further growth in plant-based dairy products, as evidenced by Arla's recent launch of its Jörd brand which contains six new plant-based dairy products.

Likewise, the plant-based sector's global development is driven by changing consumer habits and a growing global consumer group. Several surveys have revealed that consumer habits in this area have shifted greatly in recent years and several factors indicate this will continue strongly both in the Nordics and globally (51). A survey by international food and agriculture organisation Proveg International reveals an increasing willingness among EU households to choose plant-based proteins (52).

where it emerged some 40 per cent of Europeans responded that they are willing to consume more plant-based foods and beverages (53). Likewise, 37 per cent of respondents stated that they were willing to replace traditional dairies with plant-based dairy products. Consumption of all plant-based dairies had increased since Proveg's previous survey carried out in 2021. According to the OECD's 2023 to 2032 agricultural outlook, North America and East Asia will follow similar trends witnessed in Europe (54).

Its market outlook additionally highlights how the strong demand for plant-based alternatives is one reason for the subdued market forecasts for animal-based products.

The sector is in a continual development phase with many initiatives underway to improve both the taste and texture of plant-based products aimed at attracting more consumers. An example of this development is the Lantmännen Research Foundation, which this year has announced it will award SEK 28 million to innovative projects with a particular focus on improving the flavour of plant-based foods through precision fermentation and increasing the market for legumes. They will also explore opportunities to map and separate different proteins found in yellow peas (55).

The transition is attracting investment

More of the population transitioning to plant-based diets is necessary for countries to reach their sustainability, food security, and climate and environment goals (56). An important prerequisite for this is greater product innovation to improve the cultivation, processing, commercialisation, and export of plant-based foods. The sector has a clear, long-term growth trend, yet in recent years the Swedish food supply chain has been severely tested. Investments in new food innovations and foodtech companies have slowed, which has been noticeable, not least, in the plant-based sector.

However, the long-term trend for growth and a forward-looking perspective can be found in the field of research and development, with a number of investments in plant-based products connected to food resilience, sustainability, and developing new products (57, 58, 59) Formas, RISE, Lantmännen's Research Foundation, and Vinnova are some of the organisations exploring and developing the innovations of the future in agriculture, food, and bioenergy (60).

In Denmark, **a new foodtech fund named Kost Capital** has recently been launched to invest in foodtech companies across Europe. A handful of well-known investors and the state-owned Danish export and investment fund, Eifo, are behind the fund, which aims to initially raise EUR 25 million (SEK 280) to invest in sustainable, healthy foods of the future (61).





Kale United, a listed company that successfully invests in leading plant-based and foodtech companies, has also announced it is set to launch a fund for sustainable investments catering to larger, institutional investors. The fund represents an important step for Kale United's ability to further support the companies in its portfolio with greater financing as they expand (62).

The plant-based sector's long-term growth trend is clear. Consumers, investors, and research institutes alike recognise the potential that greater production and consumption of plant-based products provides. The development to date has occurred without political interventions nor state aid. However, now, the political level needs to provide support in the form of tools aimed at facilitating and further promoting this development, not least in Sweden. Our current food strategy neither considers the issue of sustainable food systems from a systemic perspective nor takes into account the complex relationships between individuals' health and wellbeing, healthy societies, and a healthy planet. It is, therefore, welcome to see the government is working on a new food strategy, and we hope it will provide the right tools and incentives required to transition to greater production of plant-based foods to protect and improve both public health and the climate, as well as to strengthen the country's food resilience.



New opportunities for Swedish primary production, but more tools are needed

Primary production and Swedish farmers have a key role to play in greater ensuring Sweden's security of food supply, and plant-based foods form a central tenet in terms of food resilience and a diversified agriculture sector. Sweden has the necessary prerequisites to position itself in the market by increasing the production of crops for human consumption that are well suited for cultivation at our latitudes, thereby strengthening both primary production and companies wishing to source locally grown Swedish crops. However, changing production often requires costly investments for individual farmers, and a critical factor in taking such a decision is profitability, or expected profitability. A farmer must be able to expect any changes implemented will increase profit margins; for example, a decision to grow field beans for human consumption, rather than grow winter wheat for animal feed, is an investment decision that must pass the feasibility test before any such transition is made.

Support farmers wanting to transition to plant-based production

The political level must provide the right tools to make it easier for farmers wishing to adapt their production to cultivate more crops intended for human consumption. Since 2020, SLU, with funding from EU Horizon 2020, has carried out a research project (the UNESCO project) in which farmers wanting to transition their production to become more plant-based could participate (63). The project has investigated how transitioning to using mainly roughage for ruminants and growing more crops for human consumption could increase farms' sustainability levels.

The project's findings reveal specialist dairy and meat farms have the potential to improve their economic resilience and environmental sustainability by including more crops for direct consumption through agro-ecological diversification (64).

Take inspiration from the Danish Plantefondon

An exciting initiative is taking place in Denmark where the so-called Plant Fund (Plantefonden) is being established. The Danish government and parliament have signed an agreement to provide support to the agriculture and forestry sectors' green transition and improve the Danish aquatic environment and biodiversity in rural areas. The agreement aims to reduce greenhouse gas and nitrogen emissions, and a central tenet of the plan **is the transition to plant-based foods, which is an industry the Danish government has identified as a future growth area that will create new revenues and job opportunities.** The Danish government believes that producing more plants is a key element of the green transition and, as such, has decided to put together **an action plan for plant-based foods and set up a fund for plant-based foods** from which DKK 75 million will be allocated annually during 2022-2030 to support development work such as developing plant varieties, cultivation, breeding, promoting sales and exports, education, and spreading knowledge.



Minister of Agriculture Jacob Jensen presents the action plan for plant-based foods at the Hotel and Restaurant School in Copenhagen. Photo: Press image/FVM



At least half of the fund's resources have been earmarked for investments in plant-based organic food, plus the agreement allocates DKK 580 million in 2023-2027 for an ecosystem for plant-based foods. **The parties to the agreement have additionally agreed that investment aid for protein-rich crops, as well as their processing, should be incorporated into the environmental technology scheme under the Danish Rural Development Programme.**

The Danish agreement and setting up the Plant Fund are both clear, implementable measures that should serve as inspiration in the ongoing work to update the Swedish Food Strategy (65).

Ensure plant-based production forms an important part of the forthcoming Food Strategy

The government's ongoing work to update and develop the Swedish Food Strategy should highlight the economic opportunities that producing more crops for human consumption entails for the agricultural sector and, in effect, the entire Swedish food sector. This would additionally provide great public health benefits, contribute to tackling climate change, and improve the environment. In order to put together a food strategy that lessens food supply vulnerabilities, that embraces both animal- and plant-based agriculture, and takes into account public health and climate change, a plant-based action plan should be developed. In updating the strategy, the ongoing work both within the EU and other national initiatives should be considered, such as the previously mentioned Danish initiative and a similar one in the Netherlands (66). Here, Sweden can both inspire and be inspired.

Excellent conditions for Swedish food producers

Swedish exports of plant-based foods have great potential and are well matched to other areas of Swedish innovation. At present, Sweden has all the prerequisites required to become a world leader in the cultivation, innovation, processing, commercialisation, and export of plant-based Nordic foods.

By enabling more primary producers to meet the demand for crops in the food industry, in parallel with measures to support the growth of the plant-based food industry, Swedish exports of plant-based foods to the expanding global market can increase. In addition, the knowledge and expertise amassed within the sector could result in patents and ideas being exported.

Countries choosing to support the growing plant-based food sector will be rewarded with new jobs, higher growth levels, and export opportunities, whilst simultaneously strengthening levels of food resilience and supply.

Sweden has repeatedly demonstrated world-leading powers of innovation, which have then been translated into export successes, most recently witnessed in the tech industry. Similarly, Sweden presently has all the necessary fundamentals in place to become a world leader in the cultivation, innovation, processing, commercialisation, and export of plant-based Nordic foods.



Obstacles to progress - systems and regulations hold back plant-based foods' development

The development of the plant-based sector is demand-driven, having grown organically without political interventions or decisions, which is viewed as a strength. However, there now exists a need to update relevant policies and regulations to ensure obsolete legislation does not inadvertently create unnecessary obstacles. Intensive policy and regulatory developments are currently underway in the food area, both nationally and at the EU level. For example, the government will update the national Swedish Food Strategy, which presents an excellent opportunity to make amendments to ensure the plant-based part of the food supply chain's potential can be fully realised.

The EU's Farm to Fork Strategy sets out the overall framework for policy development and additionally identifies a number of areas where regulatory development should occur. Such regulatory development could be, for example, to the conditions for sustainable food systems, existing rules on consumer information such as nutrient profiles and labelling issues, as well as concerning taxonomy, green claims, regulations on packaging waste and producer responsibility, and school milk subsidies and public procurement.

Some issues which need to be addressed and which should be considered in any forthcoming policy work include:

Research grants and conditions for innovation

- Investments in research often focus on traditional food production and consumption, not least in research on nutrition.
- There currently exists a lack of knowledge and expertise concerning how crops are processed into (new) foods, as well as how to extract high-quality protein from crops, whilst at the same time there is a lack of skills, knowledge, and relevant supporting infrastructure in the processing stage.
- Small startups lack support in terms of accessing test facilities and knowledge regarding scaling up already existing production, which is encouraged in other industries and is often necessary during a company's early growth phase.
- There is no Swedish processing industry for Swedish-grown proteins, which means Swedish beans and peas have to be sent abroad to be processed into plant-based protein and then re-imported to Sweden.

Distortive regulations and subsidies

- At present, there are a number of goals and policy instruments that distort competition by favouring animal-based foods over plant-based ones, which need to be changed. A clearly formulated goal is required that, at the very least, creates a competition-neutral regulatory framework for food, regardless of raw material, so as not to inhibit innovation, growth, and competitiveness (67). Unfortunately, there is an ongoing development whereby national regulations on food designations, such as sausages and burgers, have been presented in several Member States despite the fact that previous proposals for an EU regulation on this were rejected by Member States in the Council of Ministers.
- Many farmers experience difficulties in attracting young people into the industry to succeed them. The financial risk and profit margins needed for individual producers to transition their operations to contain more plant-based production are perceived as too high relative to the potential long-term gains.



How to ensure a strong Swedish plant-based sector

The food supply chain needs to undergo a major transformation, one driven by technological advances and innovations such as new, circular production methods and a higher demand for more sustainably produced products. Sweden's long history within innovation can contribute to finding new solutions in, for example, environmental and climate-related technology and the green energy transition and, further, create jobs in Sweden, new Swedish export opportunities, and strengthen the country's levels of preparedness and food supply resilience. This perspective should inspire political and private investments in the food supply chain and the work towards updating the Swedish Food Strategy should embrace this.

Transition Fund

An active food policy, which both incorporates and promotes the plant-based sector, can create new opportunities for both farmers and food companies in, what is, a difficult time for the industry. If provided with the right tools, Swedish farmers can broaden and diversify their operations and expand into new markets. The work to update the forthcoming Swedish Food Strategy represents a golden opportunity to strengthen the resilience of Sweden's food supply, create new opportunities for Sweden's farmers whilst providing greater opportunities for a forward-looking sector that helps lower the country's impact on the climate and improves public health. As mentioned earlier in the report, inspiration can be drawn from Denmark, where the majority of the parliamentary parties in the previous parliamentary term entered into a climate agreement aimed at transforming the agricultural sector. The agreement was put together in close dialogue between the Danish food industry and various green organisations. Central to the agreement was the setting up both a national action plan and a fund to assist primary production transition to plant-based foods. The Danish government is allocating DKK 70 million annually for the period 2022 – 2030 and the majority of Danish parties agree that transitioning to more plant-based production is key to the overall green transition (68).



Action plan for a strong Swedish plant-based sector

- Highlight and promote food-tech and the entire value chain in innovative, sustainable plant-based foods as a strategically important area that research policy should help strengthen. The policy goal should be for the sector to contribute to increasing Swedish competitiveness and making the Swedish food sector more attractive.
- Implement major, targeted investments in developing skills and infrastructure to support innovative companies in the food supply chain to scale up, invest to improve yields and processing technologies, and strengthen Sweden's security of food supply and degree of resilience.
- Facilitate the transition to a resilient, sustainable agricultural sector by introducing new forms of aid for farmers wishing to transition and diversify their operations and produce plant-based foods but are currently unable or unwilling to do so due to the associated financial risks it entails.
- Ensure policy goals and instruments as well as regulations do not create barriers nor hold back the plant-based sector's expansion. At present, there exist, or discussions are ongoing concerning, political measures that distort competition.
- Set clear, implementable, and measurable goals based on the Climate Policy Council's recommendations and NNR's new nutrition recommendations, amongst others, for reducing greenhouse gas emissions from food provided by the public sector and ensure broad educational efforts to increase the public's knowledge of sustainable eating habits.

Moreover, we believe Sweden needs to adopt a renewed, comprehensive approach by integrating different policy areas (sustainability and climate, public health, agriculture, and nutrition) which, together, aim to promote and facilitate the transition to a sustainable, more plant-based food system in line with the overall goals set and the latest science and research. National targets should be set to ensure a sustainable food sector and reduce the sector's emissions as a whole. Investments and broader efforts also need to be made to make it easier for consumers to make sustainable choices (such as education initiatives and clearly stating the climate impact of a specific food on its packaging based on an industry-wide standard). [Read here.](#)

Växtbaserat Sverige represents companies operating in the food supply chain that support the organisation's goal of promoting the transition to plant-based production and consumption of food. Private individuals, interest groups and other actors can become members.

Feel free to contact us if your company wants to become a member of Växtbaserat Sverige or if you have questions about our business:
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Please visit our website at www.vaxtbaseratsverige.se

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SOURCES

1. [DN Debatt. "Vi måste ställa in oss på att äta mindre – och sämre"](#)
2. <https://www.proteinindustriescanada.ca/uploads/Market-Forecast-and-Competitiveness-Study-EY-for-Protein-Industries-Canada.pdf>
3. [CAP 2023-27 - European Commission \(europa.eu\)](#)
4. [https://www.consilium.europa.eu/sv/policies/green-deal/Den europeiska gröna given - Consilium \(europa.eu\)](https://www.consilium.europa.eu/sv/policies/green-deal/Den europeiska gröna given - Consilium (europa.eu))
5. [Från jord till bord-strategin | Faktablad om Europeiska unionen | Europaparlamentet](#)
6. [En europeisk klimatlag - Europeiska kommissionen \(europa.eu\)](#)
7. <https://iari.site/2024/02/16/le-esportazioni-ucraine-nel-panorama-europeo-inattese-e-cosi-economiche/>
8. [Euractiv: EU Council backs relaxation of CAP green rules, paving way for swift approval](#)
9. [Europeiska unionens råd \(2024\): Stödet till bönderna](#)
10. <https://ie.ambafrance.org/French-President-delivers-speech-on-Europe-at-the-Sorbonne>
11. <https://jordbruksverket.se/om-jordbruksverket/jordbruksverkets-officiella-statistik/jordbruksverkets-statistikrapporter/statistik/2023-12-13-skord-av-spannmals-trindsad-och-oljevaxter-2023.-preliminar-statistik-for-lan-och-riket>
12. https://www.nato.int/cps/en/natohq/official_texts_17120.htm
13. <https://www.regeringen.se/contentassets/fc08dfb51d014b3996b719005beb146f/livsmedelsberedskap-for-en-ny-tid-sou-20248.pdf>
14. I mars 2022 antog EU-ledarna Versaillesdeklarationen om den ryska fullskaliga invasionen mot Ukraina samt om att underbygga europeisk säkerhet och stabilitet.
15. <https://www.regeringen.se/contentassets/fc08dfb51d014b3996b719005beb146f/livsmedelsberedskap-for-en-ny-tid-sou-20248.pdf>
16. [Livsmedelsproduktion ur ett beredskapsperspektiv : sårbarheter och lösningar för ökad resiliens, forskning \(msb.se\)](#) <https://www.msb.se/sv/rad-till-privatpersoner/broschyren-om-krisen-eller-kriget-kommer/>
17. [Soybeans | Union of Concerned Scientists \(ucsusa.org\)](#)
18. [Wheat exports from Ukraine and Russia in perspective, 2021 \(ourworldindata.org\)](#)
19. <https://rib.msb.se/filer/pdf/28493.pdf>
20. https://www.livsmedelsverket.se/globalassets/publikationsdatabas/rapporter/2023/myndighetsgemensam-rapportering-av-uppdrag-inom-civilt-forsvar-2022.pdf?_t_tags=language%3A%20sv%20siteid%3A67f9c486-281d-4765-ba72-ba3914739e3b&_t_hit.id=Livs_Common_Model_MediaTypes_DocumentFile/_4c077f5f-0e7a-4626-8944-846a7ecb8451&_t_hit.pos=25

SOURCES

21. [Klimatpolitiska rådets rapport 2024 \(klimatpolitiskaradet.se\)](https://www.klimatpolitiskaradet.se/rapporter/rapport-2024)
22. [How much of global greenhouse gas emissions come from food? - Our World in Data](https://www.ourworldindata.org/global-greenhouse-gas-emissions)
23. Poore & Nemecek (2018) Reducing food's environmental impacts through producers and consumers. Science.
24. Källor: Steffen et al. (2015) revideringen av Planetary Boundaries; EAT-Lancet-rapporten (2019).
25. IPCC Special Report on Climate Change and Land, IPCC, 2019
26. https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf
27. [SWD_2023_4_1_EN_document_travail_service_part1_v2.pdf \(europa.eu\)](https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&code=sdg_12_2_1)
28. [Advancing food safety: strategic recommendations from the 'ONE – Health, Environment & Society – Conference 2022' | EFSA \(europa.eu\)](https://www.efsa.europa.eu/en/conference/2022/advancing-food-safety)
29. [Klimatpolitiska rådets rapport 2024 \(klimatpolitiskaradet.se\)](https://www.klimatpolitiskaradet.se/rapporter/rapport-2024)
30. <https://www.folkhalsomyndigheten.se/publikationer-och-material/publikationsarkiv/f/folkhalsan-i-sverige-arsrapport-2023/>
31. <https://www.folkhalsomyndigheten.se/livsvillkor-levnadsvanor/mat-fysisk-aktivitet-overvikt-och-fetma/overvikt-och-fetma/statistik-om-overvikt-och-fetma/overvikt-och-fetma-hos-vuxna/>
32. [Riksmaten vuxna \(livsmedelsverket.se\)](https://www.livsmedelsverket.se/riksmaten-vuxna)
33. [Riksmaten ungdom \(livsmedelsverket.se\)](https://www.livsmedelsverket.se/riksmaten-ungdom)
34. [Nordic Nutrition Recommendations 2012 \(diva-portal.org\)](https://diva-portal.org/nordic-nutrition-recommendations-2012)
35. <https://nutritionsfakta.se/2020/02/11/mat-halsa-och-hallbarhet-eat-lancet-i-nordiskt-perspektiv/>
36. [Fler växtbaserade alternativ i nya grönnare Matcirkeln \(livsmedelsverket.se\)](https://www.livsmedelsverket.se/fler-vaxtbaserade-alternativ-i-nya-gronare-matcirkeln)
37. <https://www.helsedirektoratet.no/horinger/nordic-nutrition-recommendations-2022-nnr2022/NNR2023%20Report%20Nordic%20Nutrition%20Recommendations%202023%20Public%20consultation%2031%20March%202023.pdf>
38. https://www.helsedirektoratet.no/horinger/nordic-nutrition-recommendations-2022-nnr2022/NNR2023%20Report%20Nordic%20Nutrition%20Recommendations%202023%20Public%20consultation%2031%20March%202023.pdf/_/attachment/inline/d13cb4c9-c621-430e-b60a-d0a7ae540a12:dd2bd17727acbce6b39f470167024e549ca265b5/NNR2023%20Report%20Nordic%20Nutrition%20Recommendations%202023%20Public%20consultation%2031%20March%202023.pdf

SOURCES

39. [Nordic Nutrition Recommendations 2023 \(norden.org\)](https://norden.org)
40. [Uppdrag om insatser för hållbar och hälsosam livsmedelskonsumtion \(livsmedelsverket.se\)](https://livsmedelsverket.se)
41. <https://www.livsmedelsforetagen.se/app/uploads/2023/02/livsmedelsforetagen-konjunkturbrev-q4-2022.pdf>
42. <https://www.folkhalsomyndigheten.se/publikationer-och-material/publikationsarkiv/f/folkhalsan-i-sverige-arsrapport-2023/>
43. [Hur påverkar höjda matpriser konsumenternas köpbeteende \(livsmedelsverket.se\)](https://livsmedelsverket.se)
44. [2 in 3 Europeans more likely to vote for MEPs who campaign for sustainable food - new survey | WWF](https://www.wwf.org)
45. [2020-2022-Sweden-retail-market-insights.pdf](https://www.ungdomsbarometern.se/ungdomsbarometern)
46. <https://info.ungdomsbarometern.se/ungdomsbarometern>
47. <https://www.axfood.se/nyhetsrum/pressmeddelanden/2022/01/vegobarometern-klimat-och-miljo-allt-viktigare-nar-vegetariskt-fortsatter-oka/>
48. [Nötköttbulle med ärtor - en ny stjärna på menyn | Orkla FoodSolutions](https://www.orklafoodsolutions.com)
49. <https://www.icagruppen.se/arkiv/pressmeddelandearkiv/2024/ica-lanserar-ny-var dagsfavorit--fars-av-notkott-och-arter/>
50. <https://www.axfood.se/nyhetsrum/pressmeddelanden/2023/06/hemkop-satsar-pa-kott-med-minskad-klimatpaverkan/>
51. <https://gfieurope.org/market-insights-on-european-plant-based-sales-2020-2022/> och <https://www.bonafideresearch.com/press/230729771/global-plant-based-food-market>
52. <https://proveg.org/about-us/>
53. <https://proveg.org/report/evolving-appetites-an-in-depth-look-at-european-attitudes-towards-plant-based-eating/>
54. <https://doi.org/10.1787/08801ab7-en> s. 204
55. <https://lantbruksnytt.se/lantmannens-forskningsstiftelse-stottar-framtidens-matsystem-med-13-miljoner-kronor/>
56. <https://foodinstitute.com/focus/plant-based-trends-to-watch-in-2024/>
57. <https://www.stockholmresilience.org/news--events/general-news/2024-04-10-centre-receives-extended-funding-from-mistra-for-food-research.html>
58. <https://www.oru.se/english/our-profile/food-and-health/pan-sweden/news-pan-sweden/sek-48-million-to-study-plant-based-protein/>
59. <https://www.lagpunkten.se/lagar-och-lagbevakning/lagnytt/10-miljoner-kronor-till-v228xtf246r228d ling#:~:text=I%20budgetpropositionen%20f%C3%B6r%202024%20presenterar%20regeringen%20en%20l%C3%A5ngsiktig,finansieringen%20%C3%B6ka%20med%2010%20miljoner%20kronor%20per%20%C3%A5r>

SOURCES

60. <https://www.ri.se/en/about-rise>,

<https://www.lantmannen.se/forskning-och-innovation/forskningsstiftelsen/>

<https://www.formas.se/>

<https://www.vinnova.se/m/hallbara-matsystem/>

61. [Investerar 280 miljoner i foodtech – sågar köttsubstitut \(di.se\)](#)

62. [Kale United tar in kapital för att lansera en grön fond | Kale United AB \(mynewsdesk.com\)](#)

63. [Sweden | UNISECO platform \(uniseco-project.eu\)](#)

64. [Sweden | UNISECO platform \(uniseco-project.eu\)](#)

65. [aftale-om-groen-omstilling-af-dansk-landbrug.pdf](#)

66. [Starkt stöd för vegopolitik i Nederländerna – pandemin en bidragande orsak - Mat och Klimat](#)

67. Exempel på konkurrenssnedvridande regelverk är bl.a. EU:s skolmjölksstöd, differentierade skattesatser mellan animaliska och växtbaserade livsmedel och EU-reglerna för livsmedelsbeteckningar som båda regleras inom ramen för EU:s gemensamma jordbrukspolitik samt regelverket för ekologisk märkning. Förslagen som lades fram i Europaparlamentet om det s.k. vegoburgarförbudet och ytterligare begränsningar att använda mejeribeteckningar är två mycket illustrerande exempel som dessbättre röstades ner, men som påvisar att det finns starka intressen som har för avsikt att motarbeta den växtbaserade sektorns utveckling

68. GFI. 2021. Denmark announces 1 billion kroner for plant-based foods in historic climate agreement. (2021)